(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
31 March 2022 (31.03.2022)

WIPO | PCT

(10) International Publication Number
WO 2022/067228 A1

(51) International Patent Classification:
A61K 48/00 (2006.01) *C12N 15/11* (2006.01)
A61K 31/7105 (2006.01) *C12N 15/63* (2006.01)

(21) International Application Number:
PCT/US2021/052315

(22) International Filing Date:
28 September 2021 (28.09.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/084,027 28 September 2020 (28.09.2020) US

(71) Applicant: **U1 BIO, INC.** [US/US]; 329 Oyster Point Blvd, South San Francisco, California 94080 (US).

(72) Inventor: **NELLES, David A.**; 2646 Post St, Unit 1, San Francisco, California 94115 (US).

(74) Agent: **TOWNSLEY, Alan C.** et al.; Sughrue Mion, PLLC, 2000 Pennsylvania Ave., N.W., Suite 9000, Washington, District of Columbia 20006 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) **Title:** TRANS-SPLICING SYSTEM FOR TISSUE-SPECIFIC REPLACEMENT OF RNA SEQUENCES

(57) **Abstract:** Disclosed are compositions comprising: a trans-splicing nucleic acid comprising (a) one or more replacement domains that encode a therapeutic sequence; and (b) one or more intronic domains that promote RNA splicing of the replacement domain primarily in a specific tissue or cell type; and (c) one or more antisense domains that promote binding to a target RNA molecule, wherein an RNA trans-splicing reaction promotes insertion of the replacement domain into a target RNA. Methods of making and methods of using compositions of the disclosure are also provided, including but not limited to compositions of the disclosure that may be used in the treatment of a disease or disorder in a patient or subject. Example disease or disorders of the disclosure include genetic and epigenetic diseases or disorders.

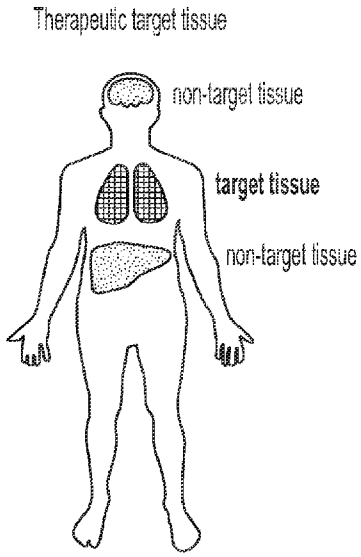


Figure 1A

WO 2022/067228 A1

TRANS-SPLICING SYSTEM FOR TISSUE-SPECIFIC REPLACEMENT OF RNA SEQUENCES

FIELD OF THE DISCLOSURE

1. The is a disclosure directed to gene therapy, molecular biology, and compositions and methods for altering the sequence composition of RNA molecules.

BACKGROUND

2. There is a long-felt but unmet need in the art for, 1) controlling the location and timing of gene therapy activity in patients, and 2) replacing disease-causing RNA sequences. The disclosure provides compositions and methods for restricting the activity of an RNA trans-splicing system to specific and chosen tissues. Specifically, the disclosures provides compositions and methods for insertion of chosen RNA sequences into target RNAs using trans-splicing mediated by introns that induce cell type-specific RNA splicing patterns.

3. Current approaches to achieve tissue- or cell type-specific activity of gene therapies rely on the use of tissue-restricted promoters. But an ideal therapeutic would involve the high expression levels associated with non-specific promoters while maintaining tissue specificity and extend the range of tissue-restricted systems beyond those available using tissue-restricted promoters. Alternative exon choice during RNA splicing follows highly tissue-restricted patterns.

SUMMARY

4. This disclosure provides a composition comprising a nucleic acid sequence encoding a trans-splicing RNA molecule comprising (a) at least one domain that promotes trans-splicing in a tissue-restricted manner ("Intronic Domain"), (b) at least one binding domain ("Antisense Domain") that consists of a sequence complementary to a pre-mRNA present in a human cells ("Target RNA"), and (c) one coding domain that is inserted into the Target RNA via trans-splicing ("Replacement Domain").

5. In some embodiments, the Antisense Domain is complementary to a gene (corresponding disease) that can cause disease in the brain and is selected from the group consisting of: SOD1, TARDBP, FUS, MATR3, SOD1, C9ORF72 (Amyotrophic lateral sclerosis); MAPT, PGRN (Frontotemporal dementia with parkinsonism); CDH23, MYO7A, USH2A (Usher's syndrome); GALC (Krabbe disease); SMPD1, NPC1, NPC2 (Niemann Pick disease); PRNP (prion disease); SCN1A (Dravet syndrome); PINK1, ATPGAP2 (early-onset Parkinson's disease); ATXN1, ATXN2, ATXN3, PLEKHG4, SPTBN2, CACNA1A, ATXN7, TTBK2, PPP2R2B, KCNC3, PRKCG, ITRP1, TBP, KCND1, FGF14 (spinocerebellar ataxias); SCN1A, SCN2A, CACNA1A, GRIN2B, GRIN2A, MECP2, FOXG1, SLC6A1, PRRT2, PTEN, KCNQ2, KCNQ3, STARD7, CLRN1 (genetic epilepsy disorders); ATM (Ataxia-telangiectasia);

GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); UBE3A (Angelman syndrome); SLC2A1 (glucose transporter deficiency type 1); GLA (Fabry disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); and CLN3 (Batten disease).

6. In some embodiments, the Intronic Domains promote trans-splicing primarily in brain tissue and are derived or isolated from a gene selected from the group consisting of: UBB, GFAP, STMN1, RPL13A, UCHL1, TUBB2B, ALDOA, LRRC75A-AS1, DYNLRB1, TPI1, PKM, NDRG2, MT3, RTN3, SKP1, RTN1, NRGN, DBNDD2, BSCL2, ALDOC, S100B, GNG3, FXYD6, PRDX1, HSP90AA1, SRP14, ATF4, NDUFB8, CAPZB, ATF5, ADD1, ERGIC3, GUK1, DCTN1, GSN, MORF4L1, GNAI2, SPP1, CRIP2, RNASE1, EIF4G2, PAQR6, DCTN3, CALB2, COMMD6, MEST, STXBP1, CLDND1, SH3GLB2, NREP, ABCA2, SUN2, UBXN6, DBI, CDK2AP1, NFIX, SF1, HNRNPF, GPM6B, SQSTM1, MOBP, ANAPC11, POLD2, SAMD4B, IST1, TPD52, SHD, STK25, ABR, PQBP1, PHB, SEPT9, S100A13, APBB1, RANBP1, ARHGEF2, DLGAP4, GNAO1, SEZ6L2, FDFT1, CBX1, EIF4G1, FAM213A, MAPK8IP1, PSME1, CCAR2, TKT, SYN1, OGDH, OCIAD1, SLC3A2, SLC1A5, PTTG1, DNM1, MAP6, KDM1A, PTN, FN1, CSNK1E, TMEM9, MATR3, AHCYL1, ATP6V0A1, CDIP1, CYFIP2, SLIRP, SCG5, TPX2, DMTN, SSBP1, PFKL, KIAA0930, CAMTA1, PRC1, CHTF8, TMPRSS3, BIN1, CCT8, AMZ2, TM7SF2, SEC11A, CLPTM1, AMPD2, DHX9, GAB2, CLTC, PSME3, RPP21, DYNC1I2, CDC20, NOSIP, ATP13A2, AIF1L, SURF4, PTPRN2, STK24, SDR39U1, HMOX2, UBAP2L, NRCAM, CCDC3, GPT2, TNPO2, NRXN2, PPP1R7, CAMK2A, UBE2L6, DBNL, ADAR, RNF220, MCM2, DTNA, PDIA6, PSMG2, URM1, SNX17, SV2A, SPG21, REEP2, HSD17B4, GSTO1, TRAPPC3, ZNF385A, SHISA5, FAM107B, MID1IP1, SERPINE2, CDK5RAP3, COMMD4, ANAPC15, CABP1, PTPRA, NPTN, RERE, VPS29, SPTBN2, MT1G, DTX3, GOLGA7, TPD52L2, EPB41L3, SPIN1, FARP1, NUP62, CNOT1, TMEM108, DUT, MAPRE2, PSD, NEBL, UBE2L3, KIF5C, TCF19, WDR54, CPSF7, GIT1, L1CAM, ITPR3, RHPN2, HMGA1, KCNAB2, HID1, SHF, CD99L2, C19ORF25, PAF1, B4GALT2, PTGES2, CAPG, SEMA4D, TTYH2, EXOC7, CNDP1, TACC2, BACE1, GABBR1, LMNB1, SLAIN1, GLG1, APBA2, CADM3, PC, PHLDB1, HHATL, SOGA1, CNTNAP2, RFC2, MAPK8IP3, CD200, REC8, TACC3, SYT13, SRP68, KLC4, CORO1C, ATPAF1, NARF, AP3B2, NUP93, FAM102A, SCN1B, NDUFS2, CBFA2T2, PSMA5, EPB41, and BCAR1.

7. In some embodiments, the Antisense Domain is complementary to a gene that can cause disease in the liver (corresponding disease) and is selected from the group consisting of: GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); PCSK9, LDLR, APOB, APOE (Familial hypercholesterolemia); GAA (Pompe disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDS (Hunter syndrome or Mucopolysaccharidosis 2); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); CLN3 (Batten disease); F9 (Hemophilia B); and F8 (Hemophilia A).

8. In some embodiments, the Intronic Domains promote trans-splicing primarily in liver tissue and are derived or isolated from a gene selected from the group consisting of: ORM1, ORM2, PLG, ALDOB, CYP2C8, CPS1, ADH4, PON1, CFHR3, C6, DBI, ITIH3, ITIH4, C4BPB, PTGR1, C5, LBP, PRDX1, HPD, UBB, HPR, ADH6, RPL15, CXCL2, DPYS, HAL, SLC39A14, AQP9, SERPINA10, ADH1A, HABP2, SERPINF2, ECI2, APOM, KLKB1, ACSM5, SLCO1B3, ASGR2, IL1RAP, PSMA1, GRB14, LRRC75A-AS1, BCHE, EPHX1, DMGDH, MST1, ACSM3, SEPT2, TFR2, NDUFC1, NR1H4, AFMID, HNMT, TTC39C, RDH16, GPAM, SLC13A5, SERF2, PICALM, PCSK6, TOM1L1, ANPEP, EBNA1BP2, RCL1, DEPDC7, BTG1, KRT8, ABCA6, GJB1, KMO, HSD17B13, LEAP2, PECR, LEPR, CTNND1, ENSA, MASP2, KYNU, ABCB4, DNASE1L3, ACSL5, UBE2V1, SPTBN1, RBPMS, RAB13, IL1R1, SERPINA5, FGGY, TMEM220, ACSS2, VNN1, CTAGE5, MS4A6A, MFSD2A, SKAP1, VDAC2, SLC22A7, PPP2R5C, SORBS2, CDV3, CSAD, TRPM8, TOMM5, SLCO2B1, MICU1, NCOR1, GSAP, CBWD5, ENPP1, SPATS2L, FKBP5, NR3C1, IGF2, IGF1, PLSCR4, MYLK, SLC27A5, ALDH5A1, TXLNGY, PSMB5, MOCOS, PET100, SGK1, AZI2, TJP2, FMO4, STEAP1, DMD, RNF14, RBM34, PABPC1L, ZCCHC9, ANO6, AGMAT, MASP1, IL17RB, MRPS27, MLIP, MON2, ETF1, SULT1B1, GBP7, PRKACA, PI4K2B, SP100, TMED6, NFU1, RMDN2, IP6K2, CCNB1IP1, PCBP1-AS1, SLC39A1, and PHF11

9. In some embodiments, the Antisense Domain is complementary to a gene that can cause disease in the heart (corresponding disease) and is selected from the group consisting of: LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); F8 (Hemophilia A).

10. In some embodiments, the Intronic Domains promote trans-splicing primarily in heart tissue and are derived or isolated from a gene selected from the group consisting of: TNNI3, TNNT2, MB, FHL2, CSRP3, FHL1, UBB, MYOM2, CD36, GSN, PDHA1, CRIP2, POPDC2, SORBS2, CPT1B, RYR2, ANXA11, ITGA7, SORBS1, NDUFC1, NEXN, MYH7B, ABLIM1, NEBL, CAST, NME2, CYB5R3, TRDN, TACC2, NDUFA5, MYL12B, FHOD3, CALCOCO2, NCAM1, GPD1L, SGCA, AQP1, AKAP1, ARL6IP4, LRRC39, TTN, TSC22D1, PPP1R12B, OBSL1, MYO15B, PKIG, HMOX2, CDK18, BTNL9, ITGB1BP2, SEPT2, CAV2, DTNA, C15orf41, ATP1A1, BCO2, MYL4, ADCY5, CLIC5, SLC8A1, RRAD, AKAP13, AK3, MYO1C, FGF12, LAMA5, ADAM15, WNK2, SUN1, KLHL7, RNF207, HIF3A, HSPG2, LPCAT4, ADH1B, ENY2, RGS3, FRMD3, CCNB1IP1, PHC2, STAB1, HAND2-AS1, PTPN3, PARVB, PKD1, SPEG, SYNE2, ZNF638, SEPT4, DAG1, SLC12A7, FBXO18, FAM107A, RBM17, MYPN, GRIP2, SCN5A, WFS1, RABGAP1L, SYNE1, HLA-DRB5, SNRPN, MEG3,

RAPGEF3, SEC13, C1QTNF1, UCKL1, FRY, IP6K2, CUX1, ANK3, MYH14, ADCY4, C3orf18, MYLK3, PXN, TSPAN18, PDE1C, C6orf48, BCS1L, ATG4D, HRAS, TENM2, PLXNB1, N4BP2L2, TNXB, LTBP1, MAPK8IP3, COL1A1, GCAT, ACOT11, MTUS2, VPS45, and KCNIP2.

11. In some embodiments, the Antisense Domain is complementary to a gene that can cause disease in the retina (corresponding disease) and is selected from the group consisting of: USHA2A, RPGR, RP2, RHO, PRPF31, USH1F, PRPF3, PRPF6 (Retinitis pigmentosa)

12. In some embodiments, the Intronic Domains promote trans-splicing primarily in retinal tissue and are derived or isolated from a gene selected from the group consisting of: ADGRV1, AMPH, ATP1B2, BSG, CASK, CC2D2A, CEP290, CLTC, DMD, DOC2B, EFR3A, ERP44, FARP2, FN3KRP, GRAMD1B, GSS, HCN1, IFT140, IMPDH1, INTS13, KCTD5, KIF1B, KIF1B, KMT2D, MADD, MAN2A2, MARCH1, MSI2, NAP1L4, PPP3CC, PROM1, PTPRF, PTPRF, RIMS2, SLC17A7, SLC4A7, STXBP5, TTC8, UNC13B, UNC13B, WDR47, and YKT6.

13. In some embodiments, the Antisense Domain is complementary to a gene that can cause disease in muscle (corresponding disease) and is selected from the group consisting of: LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); and F8 (Hemophilia A)

14. In some embodiments, the Intronic Domains promote trans-splicing primarily in muscle tissue and are derived or isolated from a gene selected from the group consisting of: ALDOA, TNNT3, MYBPC1, ATP2A1, NEB, STAC3, CMYA5, MYH7, TNNI1, CA3, ASB5, PLIN2, TRDN, OBSCN, RYR1, RAP1A, SPARCL1, CSNK1A1, NPEPPS, AKR1C3, IDI2, MBNL1, FNDC5, TMOD4, ATP6V1F, DAP3, KPNB1, NOMO2, BEST3, HP1BP3, SEPT2, TIMM23, MYPN, DHRS7C, PALLD, POLR2J3, KANSL3, THOC7, MEF2C, NOMO1, YWHAZ, ZBTB16, SPAG9, CCZ1, MYLK2, ASAH1, GTF2I, CCPG1, SURF4, SMARCA2, CLTCL1, SLC6A6, CHRNB1, MAFG, COMMD6, SLC7A8, CDK11B, and DNASE1L1.

15. In some embodiments, the Antisense Domain is complementary to a gene (corresponding accession numbers in brackets, corresponding disease in parentheses) that encodes a Target RNA that sometimes carry disease-causing mutations and is selected from the group consisting of: TNFRSF13B [ENSG00000240505] (common variable immune deficiency); ADA, CECR1

[ENSG00000196839, ENSG00000093072] (Adenosine deaminase deficiency); IL2RG [ENSG00000147168] (X-linked severe combined immunodeficiency); HBB [ENSG00000244734] (Beta-thassalemia); HBA1, HBA2 [ENSG00000206172, ENSG00000188536] (alpha-thassalemia); U2AF1 [ENSG00000160201] (myelodysplastic syndrome); SOD1, TARDBP, FUS, MATR3, SOD1, C9ORF72 [ENSG00000142168, ENSG00000120948, ENSG00000089280, ENSG00000015479, ENSG00000142168, ENSG00000147894] (Amyotrophic lateral sclerosis); MAPT, PGRN [ENSG00000186868, ENSG00000030582] (Frontotemporal dementia with parkinsonism); CDH23, MYO7A, USH2A [ENSG00000107736, ENSG00000137474, ENSG00000042781] (Usher's syndrome); GALC [ENSG00000054983] (Krabbe disease); SMPD1, NPC1, NPC2 [ENSG00000166311, ENSG00000141458, ENSG00000119655] (Niemann Pick disease); PRNP [ENSG00000171867] (prion disease); SCN1A [ENSG00000144285] (Dravet syndrome); PINK1, ATPGAP2 [ENSG00000158828] (early-onset Parkinson's disease); ATXN1, ATXN2, ATXN3, PLEKHG4, SPTBN2, CACNA1A, ATXN7, TTBK2, PPP2R2B, KCNC3, PRKCG, ITPR1, TBP, KCND1, FGF14 [ENSG00000124788, ENSG00000204842, ENSG00000066427, ENSG00000196155, ENSG00000173898, ENSG00000141837, ENSG00000163635, ENSG00000128881, ENSG00000156475, ENSG00000131398, ENSG00000126583, ENSG00000150995, ENSG00000112592, ENSG00000102057, ENSG00000102466] (spinocerebellar ataxias); SCN1A, SCN2A, CACNA1A, GRIN2B, GRIN2A, MECP2, FOXG1, SLC6A1, PRRT2, PTEN, KCNQ2, KCNQ3, STARD7, CLRN1 [ENSG00000144285, ENSG00000136531, ENSG00000141837, ENSG00000273079, ENSG00000183454, ENSG00000169057, ENSG00000176165, ENSG00000157103, ENSG00000167371, ENSG00000171862, ENSG00000075043, ENSG00000184156, ENSG00000084090, ENSG00000163646] (genetic epilepsy disorders); ATM [ENSG00000149311] (Ataxia-telangiectasia); GLB1 [ENSG00000170266] (GM1 gangliosidosis); GBA [ENSG00000177628] (Gaucher disease); GM2A [ENSG00000196743] (GM2 gangliosidosis); UBE3A [ENSG00000114062] (Angelman syndrome); SLC2A1 [ENSG00000117394] (glucose transporter deficiency type 1); LAMP2 [ENSG00000005893] (Danon disease); GLA [ENSG00000102393] (Fabry disease); PKD1, PKD2 [ENSG00000008710, ENSG00000118762] (Autosomal dominant polycystic kidney disease); GAA [ENSG00000171298] (Pompe disease); PCSK9, LDLR, APOB, APOE [ENSG00000169174, ENSG00000130164, ENSG00000084674, ENSG00000130203] (Familial hypercholesterolemia); MYOC, OPTN, TBK1, WDR36, CYPIB1 [ENSG00000034971, ENSG00000123240, ENSG00000183735, ENSG00000134987, ENSG00000138061] (Open Angle Glaucoma); IDUA [ENSG00000127415] (Hurler syndrome or Mucopolysaccharidosis 1); IDS [ENSG00000010404] (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 [ENSG00000188603] (Batten disease); DMD [ENSG00000198947] (Duchenne muscular dystrophy); LMNA [ENSG00000160789] (Limb-girdle muscular dystrophy type 1B); DYSF [ENSG00000135636] (Limb-girdle muscular dystrophy type 2B); SGCA [ENSG00000108823] (Limb-girdle muscular dystrophy type 2D); SGCB [ENSG00000163069] (Limb-girdle muscular dystrophy type 2E); SGCG

[ENSG00000102683] (Limb-girdle muscular dystrophy type 2C); SGCD [ENSG00000170624] (Limb-girdle muscular dystrophy type 2F); DUX4 [ENSG00000260596] (Facioscapulohumeral muscular dystrophy); F9 [ENSG00000101981] (Hemophilia B); F8 [ENSG00000185010] (Hemophilia A); USHA2A, RPGR, RP2, RHO, PRPF31, USH1F, PRPF3, PRPF6 [ENSG00000156313, ENSG00000102218, ENSG00000163914, ENSG00000105618, ENSG00000150275, ENSG00000117360, ENSG00000101161] (Retinitis pigmentosa); CFTR [ENSG00000001626] (cystic fibrosis); GJB2, GJB6, STRC, DFNA1, WFS1 [ENSG00000165474, ENSG00000121742, ENSG00000242866, ENSG00000131504, ENSG00000109501] (autosomal dominant hearing impairment); POU3F3 [ENSG00000198914] (nonsyndromic hearing loss).

16. In some embodiments, the Replacement domain is derived or isolated from the target RNA.

17. In some embodiments, the Intronic Domains carry binding sites that a preferentially-targeted by RNA-binding proteins with disease-causing mutations. In some embodiments, the dissociation constant of these mutated RNA-binding proteins and the Intronic Domain is lower than the dissociation constant of the non-mutated RNA-binding protein and the Intronic Domain.

18. In some embodiments, the Intronic Domains carry binding sites for RNA-binding proteins that promote trans-splicing primarily in 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more tissues but not other tissues. In some embodiments, the RNA-binding protein binding sites in the Intronic Domain are targeted by RNA-binding proteins selected from the group consisting of: DDX39, DDX3X, DDX3Y, DDX41, DDX5, DHX16, DHX8, DHX9, INTS6, DDX48, HNRNPA0, HNRNPA1, HNRNPA2B1, HNRPA3, HNRPAB, HNRPC, HNRPDL, HNRPF, HNRPH1, HNRPH2, HNRPLL, HNRPM, HNRPUL1, PTBP1, PTBP2, RBMXL2, SYNCRIP, CLK3, CLK4, SRPK1, SRPK2, SRPK3, ARS2, BUB3, C7ORF30, CIRBP, CRNKL1, CSDA, DNAJC8, EEF1A1, EIF3S10, FMR1, GRSF1, GTL3, IGF2BP3, IK, ILF2, ILF3, MATR3, MBNL1, MBNL2, MBNL3, MOV10, MSI1, MSI2, MYEF2, NHP2L1, PABPC1, PCBP1, PCBP2, PCBP4, PPIE, PPIL2, PPIL2, PPM1G, PPWD1, PRPF6, PSEN1, RALY, RBM15, RBM9, RBMS1, RBMX, RDBP, ROD1, SSB, THOC3, THOC4, TNPO1, TOP1MT, ZFP207, EFTUD2, LSM1, LSM2, LSM3, LSM4, LSM7, LSM8, NA, SART1, SF3A1, SF3A2, SF3A3, SF3B1, SF3B2, SNRPA, SNRPA1, SNRPB, SNRPC, SNRPD1, SNRPD2, SNRPG, SNRPN, TXNL4, U2AF1L1, U2AF1L2, USP39, WDR57, PRPF31, PRPF4, PRPF40A, RBM17, NA, A2BP1, ACIN1, ASCC3L1, BCAS2, BRUNOL4, BUD13, BUD31, CD2BP2, CDC40, CDC5L, CRKRS, CUGBP2, ELAVL1, ELAVL1, ELAVL1, ELAVL2, ELAVL3, ELAVL4, FUSIP1, HSPA1B, HSPA5, HSPA8, NCBP2, NONO, NOVA1, NUDT21, PLRG1, PRPF19, PSIP1, RBM8A, RBMS1, SMU1, SNW1, TCERG1, TIA1, TIAL1, TNRC4, WBP11, WTAP, XAB2, YBX1, SFRS1, SFRS10, SFRS16, SFRS3, SFRS4, and SFRS6

19. In some embodiments, the trans-splicing RNA further comprises a 5' untranslated region. In some embodiments, the 5' untranslated region increases the stability of the trans-splicing nucleic acid. In some embodiments, the 5' untranslated region reduces the stability of the trans-splicing nucleic acid. In some embodiments, the 5' untranslated region alters the localization of the trans-splicing nucleic acid. In some embodiments, the 5' untranslated region alters the processing of the trans-splicing nucleic acid.

20. In some embodiments, the trans-splicing RNA further comprises a 3' untranslated region. In some embodiments, the 3' untranslated region increases the stability of the trans-splicing nucleic acid. In some embodiments, the 3' untranslated region reduces the stability of the trans-splicing nucleic acid. In some embodiments, the 3' untranslated region alters the localization of the trans-splicing nucleic acid. In some embodiments, the 3' untranslated region alters the processing of the trans-splicing nucleic acid.

21. In some embodiments, the intronic domains promote trans-splicing of the trans-splicing nucleic acid in a spatially-restricted manner so that trans-splicing occurs primarily in one tissue selected from the group consisting of: muscle cells, cardiac muscle cells, neurons, kidney cells, liver cells, epithelial cells, striatal tissue, basal ganglia tissue, substantia nigra tissue, lung tissue, spinal cord tissue, cranial nerve tissue, optic nerve tissue, oligodendrocytes, astrocytes, ependymal cells, microglia, airway tissue, inner eye tissue, retinal tissue, cerebellar tissue, pineal gland, thymus gland, pituitary gland, thyroid gland, adrenal gland, apocrine gland, holocrine gland, merocrine gland, serous gland, mucous gland, sebaceous gland, naïve T cells, effector T cells, helper T cells, memory T cells, regulatory T cells, gamma-delta T cells, natural killer cells, B cells, dendrocytes and macrophages.

22. In some embodiments, the Intronic Domain promote trans-splicing primarily in 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or more tissues or cell types but not trans-spliced in other cell types or tissues.

23. In some embodiments, the Intronic Domains broadly promote trans-splicing in many tissues but do not promote trans-splicing in a tissue selected from the following group consisting of: skeletal muscle cells, cardiac muscle cells, neurons, kidney cells, liver cells, epithelial cells, striatal tissue, basal ganglia tissue, substantia nigra tissue, lung tissue, spinal cord tissue, cranial nerve tissue, optic nerve tissue, oligodendrocytes, astrocytes, ependymal cells, microglia, airway tissue, inner eye tissue, retinal tissue, cerebellar tissue, pineal gland, thymus gland, pituitary gland, thyroid gland, adrenal gland, apocrine gland, holocrine gland, merocrine gland, serous gland, mucous gland, sebaceous gland, naïve T cells, effector T cells, helper T cells, memory T cells, regulatory T cells, gamma-delta T cells, natural killer cells, B cells, dendrocytes and macrophages. In some embodiments, the Intronic Domains do not promote trans-splicing in 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or more tissues but promote trans-splicing in other cell types or tissues.

24. In some embodiments, the Replacement Domain is comprised of sequence derived or isolated from a human gene. In some embodiments of the compositions of the disclosure, the sequence comprising the Replacement Domain has at least 50%, 55%, 60%, 65%, 70%, 75%, 80%, 87%, 90%, 95%, 97%, 99% or any percentage in between of identity with a human gene. In some embodiments, the Replacement Domain has 100% identity with a sequence derived or isolated from a human gene. In some embodiments, the Replacement Domain comprises or consists of 2 nucleotides, 5 nucleotides, 10 nucleotides, 20 nucleotides, 30 nucleotides, 40 nucleotides, 50 nucleotides, 60 nucleotides, 70 nucleotides, 80 nucleotides, 90 nucleotides, 100 nucleotides, 110 nucleotides, 120 nucleotides, 130 nucleotides, 140 nucleotides, 150 nucleotides, 160 nucleotides, 170 nucleotides, 180 nucleotides, 190 nucleotides, 200 nucleotides, 210 nucleotides, 220 nucleotides, 230 nucleotides, 240 nucleotides, 250 nucleotides, 260 nucleotides, 270 nucleotides, more than 270 nucleotides, or any number of nucleotides in between.

25. In some embodiments of the compositions of the disclosure, the sequence comprising the Antisense Domain has at least 50%, 55%, 60%, 65%, 70%, 75%, 80%, 87%, 90%, 95%, 97%, 99% or any percentage in between of complementarity to the Target RNA sequence. In some embodiments, the Antisense Domain has 100% complementarity to the Target RNA sequence. In some embodiments, the Antisense Domain comprises or consists of 20 nucleotides, 30 nucleotides, 40 nucleotides, 50 nucleotides, 60 nucleotides, 70 nucleotides, 80 nucleotides, 90 nucleotides, 100 nucleotides, 110 nucleotides, 120 nucleotides, 130 nucleotides, 140 nucleotides, 150 nucleotides, 160 nucleotides, 170 nucleotides, 180 nucleotides, 190 nucleotides, 200 nucleotides, 210 nucleotides, 220 nucleotides, 230 nucleotides, 240 nucleotides, 250 nucleotides, 260 nucleotides, 270 nucleotides, more than 270 nucleotides, or any number of nucleotides in between the complementary to the Target RNA sequence.

26. In some embodiments of the compositions of the disclosure, the sequence comprising the trans-splicing RNA further comprises a sequence encoding a promoter capable of expressing the trans-splicing RNA in a eukaryotic cell.

27. In some embodiments of the compositions of the disclosure, the eukaryotic cell is an animal cell. In some embodiments, the animal cell is a mammalian cell. In some embodiments, the animal cell is a human cell.

28. In some embodiments of the compositions and methods of the disclosure, a vector of the disclosure is a viral vector. In some embodiments, the viral vector comprises a sequence isolated or derived from a retrovirus. In some embodiments, the viral vector comprises a sequence isolated or derived from a lentivirus. In some embodiments, the viral vector comprises a sequence isolated or derived from an adenovirus. In some embodiments, the viral vector comprises a sequence isolated or derived from an adeno-associated virus (AAV). In some embodiments, the viral vector is replication incompetent. In some embodiments, the viral vector is isolated or recombinant. In some embodiments, the viral vector is self-complementary.

29. In some embodiments of the compositions and methods of the disclosure, the viral vector comprises a sequence isolated or derived from an adeno-associated virus (AAV). In some embodiments, the viral vector comprises an inverted terminal repeat sequence or a capsid sequence that is isolated or derived from an AAV of serotype AAV1, AAV2, AAV3, AAV4, AAV5, AAV6, AAV7, AAV8, AAV9, AAV10, AAV11 or AAV12. In some embodiments, the viral vector is replication incompetent. In some embodiments, the viral vector is isolated or recombinant (rAAV). In some embodiments, the viral vector is self-complementary (scAAV).

30. In some embodiments of the compositions and methods of the disclosure, a vector of the disclosure is a non-viral vector. In some embodiments, the vector comprises or consists of a nanoparticle, a micelle, a liposome or lipoplex, a polymersome, a polyplex, an exosome or a dendrimer. In some embodiments, the vector is an expression vector or recombinant expression system. As used herein, the term "recombinant expression system" refers to a genetic construct for the expression of certain genetic material formed by recombination.

31. In some embodiments of the compositions and methods of the disclosure, an expression vector, viral vector or non-viral vector provided herein, includes without limitation, an expression control element. An "expression control element" as used herein refers to any sequence that regulates the expression of a coding sequence, such as a gene. Exemplary expression control elements include but are not limited to promoters, enhancers, microRNAs, post-transcriptional regulatory elements, polyadenylation signal sequences, 5' or 3' untranslated regions, and introns.

32. Expression control elements may be constitutive, inducible, repressible, or tissue-specific, for example. A "promoter" is a control sequence that is a region of a polynucleotide sequence at which initiation and rate of transcription are controlled. It may contain genetic elements at which regulatory proteins and molecules may bind such as RNA polymerase and other transcription factors. In some embodiments, expression control by a promoter is tissue-specific. Non-limiting exemplary promoters include CMV, CBA, CAG, Cbh, EF-1a, PGK, UBC, GUSB, UCOE, hAAT, TBG, Desmin, MCK, C5-12, NSE, Synapsin, PDGF, MecP2, CaMKII, mGluR2, NFL, NFH, nβ2, PPE, ENK, EAAT2, GFAP, MBP, H1 and U6 promoters. In some embodiments, the promoter is a sequence isolated or derived from a promoter capable of driving expression of a transfer RNA (tRNA). In some embodiments, the promoter is isolated or derived from an alanine tRNA promoter, an arginine tRNA promoter, an asparagine tRNA promoter, an aspartic acid tRNA promoter, a cysteine tRNA promoter, a glutamine tRNA promoter, a glutamic acid tRNA promoter, a glycine tRNA promoter, a histidine tRNA promoter, an isoleucine tRNA promoter, a leucine tRNA promoter, a lysine tRNA promoter, a methionine tRNA promoter, a phenylalanine tRNA promoter, a proline tRNA promoter, a serine tRNA promoter, a threonine tRNA promoter, a tryptophan tRNA promoter, a tyrosine tRNA promoter, or a valine tRNA promoter. In some embodiments, the promoter is isolated or derived from a valine tRNA promoter.

33. An “enhancer” is a region of DNA that can be bound by activating proteins to increase the likelihood or frequency of transcription. Non-limiting exemplary enhancers and post-transcriptional regulatory elements include the CMV enhancer and WPRE.

34. In some embodiments of the compositions and methods of the disclosure, an expression vector, viral vector or non-viral vector provided herein, includes without limitation, vector elements such as an IRES or 2A peptide sites for configuration of “multicistronic” or “polycistronic” or “bicistronic” or tricistronic” constructs, i.e., having double or triple or multiple coding areas or exons, and as such will have the capability to express from mRNA two or more proteins from a single construct. Multicistronic vectors simultaneously express two or more separate proteins from the same mRNA. The two strategies most widely used for constructing multicistronic configurations are through the use of an IRES or a 2A self-cleaving site. An “IRES” refers to an internal ribosome entry site or portion thereof of viral, prokaryotic, or eukaryotic origin which are used within polycistronic vector constructs. In some embodiments, an IRES is an RNA element that allows for translation initiation in a cap-independent manner. The term “self-cleaving peptides” or “sequences encoding self-cleaving peptides” or “2A self-cleaving site” refer to linking sequences which are used within vector constructs to incorporate sites to promote ribosomal skipping and thus to generate two polypeptides from a single promoter, such self-cleaving peptides include without limitation, T2A, and P2A peptides or sequences encoding the self-cleaving peptides.

35. In some embodiments, the vector is a viral vector. In some embodiments, the vector is an adenoviral vector, an adeno-associated viral (AAV) vector, or a lentiviral vector. In some embodiments, the vector is a retroviral vector, an adenoviral/retroviral chimera vector, a herpes simplex viral I or II vector, a parvoviral vector, a reticuloendotheliosis viral vector, a polioviral vector, a papillomaviral vector, a vaccinia viral vector, or any hybrid or chimeric vector incorporating favorable aspects of two or more viral vectors. In some embodiments, the vector further comprises one or more expression control elements operably linked to the polynucleotide. In some embodiments, the vector further comprises one or more selectable markers. In some embodiments, the AAV vector has low toxicity. In some embodiments, the AAV vector does not incorporate into the host genome, thereby having a low probability of causing insertional mutagenesis. In some embodiments, the AAV vector can encode a range of total polynucleotides from .3 kb to 4.75 kb. In some embodiments, exemplary AAV vectors that may be used in any of the herein described compositions, systems, methods, and kits can include an AAV1 vector, a modified AAV1 vector, an AAV2 vector, a modified AAV2 vector, an AAV3 vector, a modified AAV3 vector, an AAV4 vector, a modified AAV4 vector, an AAV5 vector, a modified AAV5 vector, an AAV6 vector, a modified AAV6 vector, an AAV7 vector, a modified AAV7 vector, an AAV8 vector, an AAV9 vector, an AAV.rh10 vector, a modified AAV.rh10 vector, an AAV.rh32/33 vector, a modified AAV.rh32/33 vector, an AAV.rh43 vector, a modified AAV.rh43 vector, an AAV.rh74 vector, a modified

AAV.rh74 vector, an AAV.rh64R1 vector, and a modified AAV.rh64R1 vector and any combinations or equivalents thereof. In some embodiments, the lentiviral vector is an integrase-competent lentiviral vector (ICLV). In some embodiments, the lentiviral vector can refer to the transgene plasmid vector as well as the transgene plasmid vector in conjunction with related plasmids (e.g., a packaging plasmid, a rev expressing plasmid, an envelope plasmid) as well as a lentiviral-based particle capable of introducing exogenous nucleic acid into a cell through a viral or viral-like entry mechanism. Lentiviral vectors are well-known in the art (see, e.g., Trono D. (2002) Lentiviral vectors, New York: Spring-Verlag Berlin Heidelberg and Durand et al. (2011) Viruses 3(2):132-159 doi: 10.3390/v3020132). In some embodiments, exemplary lentiviral vectors that may be used in any of the herein described compositions, systems, methods, and kits can include a human immunodeficiency virus (HIV) 1 vector, a modified human immunodeficiency virus (HIV) 1 vector, a human immunodeficiency virus (HIV) 2 vector, a modified human immunodeficiency virus (HIV) 2 vector, a sooty mangabey simian immunodeficiency virus (SIVSM) vector, a modified sooty mangabey simian immunodeficiency virus (SIVSM) vector, a African green monkey simian immunodeficiency virus (SIVAGM) vector, a modified African green monkey simian immunodeficiency virus (SIVAGM) vector, an equine infectious anemia virus (EIAV) vector, a modified equine infectious anemia virus (EIAV) vector, a feline immunodeficiency virus (FIV) vector, a modified feline immunodeficiency virus (FIV) vector, a Visna/maedi virus (VNV/VMV) vector, a modified Visna/maedi virus (VNV/VMV) vector, a caprine arthritis-encephalitis virus (CAEV) vector, a modified caprine arthritis-encephalitis virus (CAEV) vector, a bovine immunodeficiency virus (BIV), or a modified bovine immunodeficiency virus (BIV).

36. In some embodiments, the trans-splicing nucleic acid is RNA, DNA, a DNA/RNA hybrid, and/or comprises at least one of a nucleic acid analog, a chemically-modified nucleic acid, or a chimera composed of two or more nucleic acids or nucleic acid analogs. As used herein, the term “nucleic acid analog” refers to a compound having structural similarity to a canonical purine or pyrimidine base occurring in DNA or RNA. The nucleic acid analog may contain a modified sugar and/or a modified nucleobase, as compared to a purine or pyrimidine base occurring naturally in DNA or RNA. In some embodiments, the nucleic acid analog is a 2’-deoxyribonucleoside, 2’-ribonucleoside, 2’-deoxyribonucleotide or a 2’-ribonucleotide, wherein the nucleobase includes a modified base (such as, for example, xanthine, uridine, oxanine (oxanosine), 7-methlguanosine, dihydrouridine, 5-methylcytidine, C3 spacer, 5-methyl dC, 5-hydroxybutynl-2’-deoxyuridine, 5-nitroindole, 5-methyl iso-deoxycytosine, iso deoxyguanosine, deoxyuradine, iso deoxycytidine, other 0-1 purine analogs, N-6-hydroxylaminopurine, nebularine, 7-deaza hypoxanthine, other 7-deazapurines, and 2-methyl purines). In some embodiments, the nucleic acid analog may be selected from the group consisting of inosine, 7-deaza-2’-deoxyinosine, 2’-aza-2’-deoxyinosine, PNA-inosine, morpholino-inosine, LNA-inosine, phosphoramidate-inosine, 2’-O-methoxyethyl-inosine, and 2’-OMe-inosine. In other embodiments the nucleic acid analog is a nucleic acid mimic (such as, for example, artificial nucleic acids and xeno nucleic acids (XNA).

BRIEF DESCRIPTION OF THE DRAWINGS

37. Figure 1 is an illustration of the unmet need addressed by the present invention. Figure 1A indicates that human disease can affect some tissue and not others, or can primarily occur in some tissues compared to others. Figure 1B demonstrates that therapeutic activity in a patient typically occurs in not only affected tissues but also unaffected tissues. Figure 1C demonstrates the present invention which limits the activity of a trans-splicing therapeutic to the target tissue and not others.
38. Figure 2 describes an example embodiment of the present invention along with a schematic to illustrate the activity. Figure 2A describes, in general, human disease caused by genetic mutations. Figure 2B describes a example embodiment of the present invention that involves 2 antisense domains, 2 intronic domains, and one replacement domain. Figure 3C describes the tissue-restricted activity of the present invention so that trans-splicing occurs only in the target tissue resulting in replacement of the defective RNA sequence (top box).
39. Figure 3 is a non-limiting illustration of the origin and structure of intronic domains in some embodiments of the present invention. Figure 3A illustrates intronic domains that are taken from a gene that experiences tissue-specific alternative splicing of an adjacent exon. Figure 3B illustrates intronic domains that are composed of combinations of introns derived from genes that experience tissue-specific alternative splicing of adjacent alternative exons. Figure 3C illustrates intronic domains that are composed of combinations of sequences that comprise binding sites for RNA-binding proteins that promote tissue-specific splicing patterns.
40. Figure 4 provides a schematic of an experiment that results in identification of intronic domains that promote tissue- or cell type-specific trans-splicing. Figure 4A illustrates that two functional components of the experiment: a reporter that reveals tissue-specific trans-splicing activity and a trans-splicing RNA that carries the candidates intronic domains. The reporter carries a promoter and incomplete coding sequence for GFP (N-terminal and C-terminal portions of GFP or “N-GFP” and “C-GFP”) that requires the internal section of GFP from the trans-splicing reaction to form a complete and fluorescent GFP protein. The trans-splicing RNA carries this internal GFP section (“int-GFP”) that is flanked by intronic domains and antisense domains. When the reporter is transfected into a human cell, there is little or no GFP signal (Figure 4B, top). When the reporter and trans-splicing RNA are co-transfected in a non-target cell type, there is similarly little or no GFP signal (Figure 4B, middle). When the reporter and trans-splicing RNA are co-transfected in a target cell type, GFP signal is produced (Figure 4B, bottom). In this manner, intronic domains that promote trans-splicing in target cell types or tissues but not others can be identified.
41. Figure 5 provides a schematic of an experiment that results in identification of trans-splicing systems that reverse the molecular caused of disease LGMD1B specifically in muscle tissue. Figure 5A describes the LGMD1B reporter that carries that characteristic mutation near exon 9 of gene LMNA that promotes inclusion of exon 9 and resulting premature termination of the coding sequence. To reverse this disease-causing mutation, the trans-splicing RNA (Figure 5A, bottom) targets exon 9 and replaces it with a short replacement domain that does not contain a stop codon

(Figure 5C, bottom). In a non-target cell type, the system is not active (Figure 5B, top). In this manner, a high-quality trans-splicing system that can efficiently replace this defective sequence in LMNA can be identified.

DETAILED DESCRIPTION

42. This disclosure provides a therapeutic combination of replacement of disease-causing RNA sequences and tissue-restricted therapeutic activity. Specifically, the disclosure provides compositions and methods for specifically targeting disease-causing RNA molecules in specific, chosen tissues and replacing disease-causing RNA sequences within these RNA molecules. In particular, the disclosure provides a composition comprising a nucleic acid sequence encoding a trans-splicing therapeutic systems comprising (a) at least one domain that promotes trans-splicing in a tissue-restricted manner, (b) at least one binding domain that consists of a sequence complementary to a pre-mRNA present in a human cells, and (c) one coding domain that is inserted into the Target RNA via trans-splicing, wherein the target RNA causes disease, and wherein the intronic domain promotes trans-splicing specifically in chosen tissue but not others, and wherein the replacement domain encodes a non-mutated sequence. This disclosure provides vectors, compositions and cells comprising the trans-splicing compositions and methods of using the trans-splicing compositions.

Intronic domains

43. Compositions comprising intronic domains disclosed herein include any sequences that promote trans-splicing in a manner restricted to specific cell or tissue types or groups of cell or tissue types.

44. Compositions comprising intronic domains disclosed herein include any sequence that promotes trans-splicing primarily in brain tissue. In some embodiments, the intronic domains are derived or isolated from human genes that experience brain-specific alternative splicing events. Exemplary intronic domains that promote brain-specific trans-splicing include without limitation genes such as: UBB, GFAP, STMN1, RPL13A, UCHL1, TUBB2B, ALDOA, LRRC75A-AS1, DYNLRB1, TPI1, PKM, NDRG2, MT3, RTN3, SKP1, RTN1, NRGN, DBNDD2, BSCL2, ALDOC, S100B, GNG3, FXYD6, PRDX1, HSP90AA1, SRP14, ATF4, NDUFB8, CAPZB, ATF5, ADD1, ERGIC3, GUK1, DCTN1, GSN, MORF4L1, GNAI2, SPP1, CRIP2, RNASE1, EIF4G2, PAQR6, DCTN3, CALB2, COMMD6, MEST, STXBP1, CLDND1, SH3GLB2, NREP, ABCA2, SUN2, UBXN6, DBI, CDK2AP1, NFIX, SF1, HNRNPF, GPM6B, SQSTM1, MOBP, ANAPC11, POLD2, SAMD4B, IST1, TPD52, SHD, STK25, ABR, PQBP1, PHB, SEPT9, S100A13, APBB1, RANBP1, ARHGEF2, DLGAP4, GNAO1, SEZ6L2, FDFT1, CBX1, EIF4G1, FAM213A, MAPK8IP1, PSME1, CCAR2, TKT, SYN1, OGDH, OCIAD1, SLC3A2, SLC1A5, PTTG1, DNM1, MAP6, KDM1A, PTN, FN1, CSNK1E, TMEM9, MATR3, AHCYL1, ATP6V0A1, CDIP1, CYFIP2, SLIRP, SCG5, TPX2, DMTN, SSBP1, PFKL, KIAA0930, CAMTA1, PRC1, CHTF8, TMPRSS3, BIN1, CCT8, AMZ2, TM7SF2, SEC11A, CLPTM1, AMPD2, DHX9,

GAB2, CLTC, PSME3, RPP21, DYNC1I2, CDC20, NOSIP, ATP13A2, AIF1L, SURF4, PTPRN2, STK24, SDR39U1, HMOX2, UBAP2L, NRCAM, CCDC3, GPT2, TNPO2, NRXN2, PPP1R7, CAMK2A, UBE2L6, DBNL, ADAR, RNF220, MCM2, DTNA, PDIA6, PSMG2, URM1, SNX17, SV2A, SPG21, REEP2, HSD17B4, GSTO1, TRAPPC3, ZNF385A, SHISA5, FAM107B, MID1IP1, SERPINE2, CDK5RAP3, COMMD4, ANAPC15, CABP1, PTPRA, NPTN, RERE, VPS29, SPTBN2, MT1G, DTX3, GOLGA7, TPD52L2, EPB41L3, SPIN1, FARP1, NUP62, CNOT1, TMEM108, DUT, MAPRE2, PSD, NEBL, UBE2L3, KIF5C, TCF19, WDR54, CPSF7, GIT1, L1CAM, ITPR3, RHPN2, HMGA1, KCNAB2, HID1, SHF, CD99L2, C19ORF25, PAF1, B4GALT2, PTGES2, CAPG, SEMA4D, TTYH2, EXOC7, CNDP1, TACC2, BACE1, GABBR1, LMNB1, SLAIN1, GLG1, APBA2, CADM3, PC, PHLDB1, HHATL, SOGA1, CNTNAP2, RFC2, MAPK8IP3, CD200, REC8, TACC3, SYT13, SRP68, KLC4, CORO1C, ATPAF1, NARF, AP3B2, NUP93, FAM102A, SCN1B, NDUFS2, CBFA2T2, PSMA5, EPB41, and BCAR1.

45. Compositions comprising intronic domains disclosed herein include any sequence that promotes trans-splicing primarily in liver tissue. In some embodiments, the intronic domains are derived or isolated from human genes that experience liver-specific alternative splicing events. Exemplary intronic domains that promote liver-specific trans-splicing include without limitation genes such as: ORM1, ORM2, PLG, ALDOB, CYP2C8, CPS1, ADH4, PON1, CFHR3, C6, DBI, ITIH3, ITIH4, C4BPB, PTGR1, C5, LBP, PRDX1, HPD, UBB, HPR, ADH6, RPL15, CXCL2, DPYS, HAL, SLC39A14, AQP9, SERPINA10, ADH1A, HABP2, SERPINF2, ECI2, APOM, KLKB1, ACSM5, SLCO1B3, ASGR2, IL1RAP, PSMA1, GRB14, LRRC75A-AS1, BCHE, EPHX1, DMGDH, MST1, ACSM3, SEPT2, TFR2, NDUFC1, NR1H4, AFMID, HNMT, TTC39C, RDH16, GPAM, SLC13A5, SERF2, PICALM, PCSK6, TOM1L1, ANPEP, EBNA1BP2, RCL1, DEPDC7, BTG1, KRT8, ABCA6, GJB1, KMO, HSD17B13, LEAP2, PECR, LEPR, CTNND1, ENSA, MASP2, KYNU, ABCB4, DNASE1L3, ACSL5, UBE2V1, SPTBN1, RBPMS, RAB13, IL1R1, SERPINA5, FGGY, TMEM220, ACSS2, VNN1, CTAGE5, MS4A6A, MFSD2A, SKAP1, VDAC2, SLC22A7, PPP2R5C, SORBS2, CDV3, CSAD, TRPM8, TOMM5, SLCO2B1, MICU1, NCOR1, GSAP, CBWD5, ENPP1, SPATS2L, FKBP5, NR3C1, IGF2, IGF1, PLSCR4, MYLK, SLC27A5, ALDH5A1, TXLNGY, PSMB5, MOCOS, PET100, SGK1, AZI2, TJP2, FMO4, STEAP1, DMD, RNF14, RBM34, PABPC1L, ZCCHC9, ANO6, AGMAT, MASP1, IL17RB, MRPS27, MLIP, MON2, ETF1, SULT1B1, GBP7, PRKACA, PI4K2B, SP100, TMED6, NFU1, RMDN2, IP6K2, CCNB1IP1, PCBP1-AS1, SLC39A1, and PHF11

46. Compositions comprising intronic domains disclosed herein include any sequence that promotes trans-splicing primarily in heart tissue. In some embodiments, the intronic domains are derived or isolated from human genes that experience heart-specific alternative splicing events. Exemplary intronic domains that promote heart-specific trans-splicing include without limitation genes such as: TNNI3, TNNT2, MB, FHL2, CSRP3, FHL1, UBB, MYOM2, CD36, GSN, PDHA1, CRIP2, POPDC2, SORBS2, CPT1B, RYR2, ANXA11, ITGA7, SORBS1, NDUFC1, NEXN, MYH7B, ABLIM1, NEBL, CAST, NME2, CYB5R3, TRDN, TACC2, NDUFA5, MYL12B,

FHOD3, CALCOCO2, NCAM1, GPD1L, SGCA, AQP1, AKAP1, ARL6IP4, LRRC39, TTN, TSC22D1, PPP1R12B, OBSL1, MYO15B, PKIG, HMOX2, CDK18, BTNL9, ITGB1BP2, SEPT2, CAV2, DTNA, C15orf41, ATP1A1, BCO2, MYL4, ADCY5, CLIC5, SLC8A1, RRAD, AKAP13, AK3, MYO1C, FGF12, LAMA5, ADAM15, WNK2, SUN1, KLHL7, RNF207, HIF3A, HSPG2, LPCAT4, ADH1B, ENY2, RGS3, FRMD3, CCNB1IP1, PHC2, STAB1, HAND2-AS1, PTPN3, PARVB, PKD1, SPEG, SYNE2, ZNF638, SEPT4, DAG1, SLC12A7, FBXO18, FAM107A, RBM17, MYPN, GRIP2, SCN5A, WFS1, RABGAP1L, SYNE1, HLA-DRB5, SNRPN, MEG3, RAPGEF3, SEC13, C1QTNF1, UCKL1, FRY, IP6K2, CUX1, ANK3, MYH14, ADCY4, C3orf18, MYLK3, PXN, TSPAN18, PDE1C, C6orf48, BCS1L, ATG4D, HRAS, TENM2, PLXNB1, N4BP2L2, TNXB, LTBP1, MAPK8IP3, COL1A1, GCAT, ACOT11, MTUS2, VPS45, and KCNIP2.

47. Compositions comprising intronic domains disclosed herein include any sequence that promotes trans-splicing primarily in muscle tissue. In some embodiments, the intronic domains are derived or isolated from human genes that experience muscle-specific alternative splicing events. Exemplary intronic domains that promote muscle-specific trans-splicing include without limitation genes such as: ALDOA, TNNT3, MYBPC1, ATP2A1, NEB, STAC3, CMYA5, MYH7, TNNI1, CA3, ASB5, PLIN2, TRDN, OBSCN, RYR1, RAP1A, SPARCL1, CSNK1A1, NPEPPS, AKR1C3, IDI2, MBNL1, FNDC5, TMOD4, ATP6V1F, DAP3, KPNB1, NOMO2, BEST3, HP1BP3, SEPT2, TIMM23, MYPN, DHRS7C, PALLD, POLR2J3, KANSL3, THOC7, MEF2C, NOMO1, YWHAZ, ZBTB16, SPAG9, CCZ1, MYLK2, ASAH1, GTF2I, CCPG1, SURF4, SMARCA2, CLTCL1, SLC6A6, CHRNB1, MAFG, COMMD6, SLC7A8, CDK11B, and DNASE1L1

48. Compositions comprising intronic domains disclosed herein include any sequence that promotes trans-splicing primarily in retina tissue. In some embodiments, the intronic domains are derived or isolated from human genes that experience retina-specific alternative splicing events. Exemplary intronic domains that promote retina-specific trans-splicing include without limitation genes such as: ADGRV1, AMPH, ATP1B2, BSG, CASK, CC2D2A, CEP290, CLTC, DMD, DOC2B, EFR3A, ERP44, FARP2, FN3KRP, GRAMD1B, GSS, HCN1, IFT140, IMPDH1, INTS13, KCTD5, KIF1B, KIF1B, KMT2D, MADD, MAN2A2, MARCH1, MSI2, NAP1L4, PPP3CC, PROM1, PTPRF, PTPRF, RIMS2, SLC17A7, SLC4A7, STXBP5, TTC8, UNC13B, UNC13B, WDR47, and YKT6.

Intronic domains that promote trans-splicing primarily in brain tissue

49. In some embodiments of the compositions of the disclosure, there may be an intronic domain that promotes trans-splicing primarily in brain tissue.

50. In some embodiments of the compositions of the disclosure, the intronic domain is derived or isolated from human genes that feature exons that are primarily included in brain tissue during the process of RNA splicing.

51. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSMA5. In some embodiments, the sequences from gene PSMA5 comprise or consist of:
CGAAGGGACTCGTCCGCGGCGCCGGCTCAGACCCACTGTAGCCGACTCATTACCGCCCAAAGT
CCTGGAGCCCTCGACCGGGCATGGAGAACACCGTGGAGGAACCCTAAGAGAGGGAATCCTGCG
AAGAGAAGTCAGGTGGTGGCCTTGCCGGAAACGGGACCAAAGTCCTCTAGCTGGGATTACGGG
AGCCGGCGAGGGACCTATTATGTCAGGGTTCAGACAACCCAGCTCTGCATGCAAGCCTTTCCAA
TTGCCAGTCTTGGGGCGGGCTCACATCTTCTCTACAAGGCGAACTCACTACACGCCTTGGGTGC
CTATCGTCCCTAGCAACCACCCGCGATTTAAGGCGGAAGTACCTCCCTGGTCCTCCTCCTCCTC
CGGACCAACCAAGCCCTCGTGAGGAAGCGCGTTGGCCCAATCACCTAGGCGGGAACTACTACC
AGCCAATAGGAAGCAGGCACAGGAGGGCGGGCTAAAGAGGTCGCGGTCGCACGCG (SEQ ID NO: 1)
52. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GUK1. In some embodiments, the sequences from gene GUK1 comprise or consist of:
TCAAGCGACCGTCCCACGTCAGCCTCCCGAGTAGCAAGGACTACAGGCACAAAAAAGTTTTTAA
ATTTTTTGGTACAGAAGGGGTTTCCCTATGATCCCCAGGCTGGTCTCCAATTCCTGGCCTCAAGC
GGTCCTCCCGGCTCGGACTCCCAAAGAGCTGGGATCACAGACGTGAACCACGCGCCCGGCCAC
ATTCCCCAATTAATGGTTTTTGGAGAGTGGCCGGTTTGGAACGGGCTAGCGGAGTCGTTCGTTA
GTTAGGTCCCTGCAGTGTAGATGGAGGACGGAAACGGCGCTGTGACATAAGCGGGAGGAGGCG
GGCTGAGGCAGCGCTGTGACGTAGCAGATGAAAGCCGGGCCCGCGCTGCACTGAGGTACTTCT
CTGAGTGACAAGCGGGACAAGTACGCCGTGGGCGGGGCCGGCGGGTCGTGATGTTAGTTCGC
GCTGTGTGGAGGCGGGCCGGCGTGGCGCTGTGACGCAGCGGGAGAAGACGGGCTG (SEQ ID NO: 2)
53. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KCNAB2. In some embodiments, the sequences from gene KCNAB2 comprise or consist of:
GGCGCGGCCAGGCGGGGTCCGCGGACTCCGGCCTGGGAAGGATGCGCGCGGACTAGGGCGC
GGGGAGCCAAGGCCCAGAACATCGGTACCGCGCTCCCTTCAGCCGAGGGGCTGCAGAGAGGC
CAGGGGGCAGGGGGCAGGGGGCAGGGGGCAGGGGGCAAAGGGCAAGGGCAGAAAGGAACCC
ACGTAGCCAAACGGCACCCAGCGGCCCCGACCCCAAGTGTCCCGACGAGGGGGGACGCCTGC
GACTAACGCGGGGACAGCCCCCGCCGCGCGCCACCGCCGCACCCCAGGCACCGGGCCCCCAC
GCAGGGACGGCGTGGACCACCCTACCCCCGAACCCCGAGGCTCTGGCCAACACTGAGGCCCC
CTGTGCCTCGAGGCCGCGTCCAACCTCCCCCGCGGCGCCGGCCCACATGGTTCCGCCCGCCG
CGGGCCGCGTTACCTAGGAGACCGACCCGCCGCGGCCGCGCCGGAGGCCACGGAGCCCACG
CTTTTC (SEQ ID NO: 3)
54. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KCNAB2. In some embodiments, the sequences from gene KCNAB2 comprise or consist of:
TGAGTACCGGGGAGACCCCGGCGGGGCGCGCTTTCCACCAAGCTGCTCCGGGACGGCGGCGG
CGGGTATCCGCGAGGCCCGCGCTGCGGCAGGCGCCGCGGTCCCGTCTCCATCTCTTCTTCCCC
GGCCCTGCGTCCCTGCCTCCGCCGCTGTCTCACCTCCTCTCCAGCCTCCTCACCTCCTTCTCCA
TCGTCTCCCTTCCCCCATCCCTTTCTGTCTTTCCTTCCCTGTCCTCCCGCCCGCCCGACCCTTCA
GCTCGCATCCCTGACCCCTGCCCCTGCCGCCGTCCCTCTTCCCGGTGCACCTCTTCCCCATCTC
TGCCCGCTCCGGTCCTAGCAGCCTCGCCCTCCCCTTTCCTCCATCCTCCTCTCATCCCCTCTCC
CGGCCTCTGCGCAGCCCCACCGGGGCGCTGCTGTTCCCGGTCCTCCCCATCTCTCCTCCTGAT
CGCTTCTCAAGGCTCATCCGTCGTTCTCGCTGCCTGTCCCTGTGTCGCTCCGGT (SEQ ID NO: 4)
55. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAMTA1. In some embodiments, the sequences from gene CAMTA1 comprise or consist of:

CGCCCCACCCTGTCCCCCCTGGTTGGGCTCGTACCGGCCAGGGCCCCCTGGCCAGGAAAGGTC
TGTAGCATGTATGTTTCATGTGTTTAATGAATTCTGTAACCATCAGCCATTCCCTGTACCCCAAAG
GGTCTTAACCTAGGCTCTAGGAATGAACTACAGAGTAACTCCAAGCCCCTAAAATTATAGGAAAA
TGCATACGTAGGTACATTTCCCTGGTCCTTGGCTGTCCTGGGTTCTCGACGCCTCTATGGCTCCC
GGAGGGTAAGGCCCCAGCTGCCCATCGAGTCTGCCGGCTGGTGTGTCCCCACGGGGCTTCGTA
GGTGCTGTCCCAGAGCCTTAGTCTTGGAGCTGGAGCCAGACGCAGAGGTGCCCTCGGTCTCCC
TGGGCCGCTGCCAGGCGGCTGTGGCCCCTTCTTGCTCCTTCTCTGTTGCGCCGTCTTCCTTCCT
TCCTTCCTTCCCTCTTTCCAACTGAATTCTCGTTTTTCCTCTCTCCCTAG (SEQ ID NO: 5)

56. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAMTA1. In some embodiments, the sequences from gene CAMTA1 comprise or consist of:
TAGGTGGCTGGGACTGGATTCTTCTTCTGTCTCTGGTGCTCGGGAAGGGTCTGTGGAGGGCACT
GAGGGCGCGGGGCTCCGCATGCGACACGGCTTCGGGCTGAGAGCCCTGGTGAGCTTGCCTAG
GGAGACTTCGGCTGTTGCGGCACTGAGGCCAGCTCAGTGGCTGGGCTGGTGTTGTCATGTGTC
AGGAAGGGGAGAAGGCCTGGTGGCAGGGGTAGCTGTCACCCACTGATGGGAAATAAACCTAGG
TGCTTCCAGCTTCCAAGGCGCCTCAGTTTTCTTTTGATGAGGACAAGAAAGAAGGCCGAGTATCC
TGCCCTGAAATGCCTGTTGGCTGAAAGCTGTACATTCATTTTCTCTCATGGGTTAGTTACAAGGC
ACATGTGGAAAACAGGCTCCCGGAGGTTGCCAGGCACAGCTGGATTGATTGGGATAGCTGTGG
GGAAAGGAGGAAGGAGCTCCGTAATCGATTTGTGATGTCTGCTGTGGCAGGGAT (SEQ ID NO: 6)

57. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RERE. In some embodiments, the sequences from gene RERE comprise or consist of:
GTCAGTATTTGAAATTTTCTCCTTGAGTGGCTATTATAAGAGGATCCCGTAAGAATTGATTACTGT
GAAATTAGCCAACTACATAGTGTATTTCAAAGATAAGGTAAACTGTTGGACTTGTGATTACCTGGT
TTCTGGTATGAATTACTGAACTTATGTTTGTTTTTATGTGCATAGATAAAGCTATATGCTTGATACT
CTTTCAATTATAAACTTAATGGGTTATAAGAATTTATAACTTGGGCTTCATTAAGTGAAGAAGGCG
CTCTTATACTTTGTCTTTTTGTTTTGTTTTCTTTTTTTTTTTCCTTCTTTTGAGACAGGGTCTTGCTTT
GTTGCCCAGGCTGGAGTGGTGCAATTATAGTTCACTGCAGCCTTGACCTCCTGGGCTCAAGCGA
TCCTCCCACCTTGGCCTTCCAAAGTATTAGGATTACAGGTGTGAACTATCATGCCCGGCCTAATT
TATCTTTGTTAAGCTTCACCTGTTCTGTTGATGATA (SEQ ID NO: 7)

58. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RERE. In some embodiments, the sequences from gene RERE comprise or consist of:
GCCTCCTGGGTTCTAGCAATTCTCCTGCCTCGGCCTCCAAAGTAGCTGAGATTACAGGCGCCCG
CCACCATGCCCAGCTAATTTTTGTATTTGTAGTAGAAACGGGGTTTCACCGTGTTGGCCAGGCTG
GTCTCGAACTCCTGACCTCAAGTGATCCGCCCACCTCGGCCTCCCAAAGTGCTGGGATTACAAG
CGTGAGCCACTGCACCCGGCCTTCCTGCTTCTTTATGTTCCGCTATCCGATCCTCACAGCTTCTT
TAAACCTTCCTAATATTGAGAAACATACCCGATGTAAGACACTGTTAAAAAGAATCCAGCATCTGG
GGGAGGTGTTAGGGAATTGAATGTTGCTAAAGCACCAAAGAGAGAGGAGTTTGACTATTTTGAGC
TTGTCTGTGACACCTGTTTTGTTTGGAAAATGCTAATGAAACTAGTTGGCAGAGCTGCATTTTTGA
AGTTGTTTCATTTAGTCACAGTGATAGTCATCTGTCTTCTTTTA (SEQ ID NO: 8)

59. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATP13A2. In some embodiments, the sequences from gene ATP13A2 comprise or consist of:
GTGAGGCAGCCCCATTGCCCCTTCCCAGAAGCCCCTGCTACCCTGGCCTCCCCAACTTCCCCAA
CCCTCGGCCCCCCCATAAAGGCTGACTCTGGCGCCTCCCATCCTAGGGAGGGAAGATGGCTCT
GTGAGCACAGGGAGGTGCCAGGGCAGCTCCCAGAGCTCGAGAGTAACCCTCACCTGCTTCCCC
AGCCTGGAGCCGTCCCCACAGTCCCAGGCAGAGGATGGCCGGAGCCAGGCGGCAGTTGGGGC
GGTACCAGAGGGTGCCTGGAAGGATACGGCCCAGCTCCACAAGAGCGAGGAGGCGGTGAGTG
TCGGACAGGTGGGTTCTGAAAAAGTCCTTGCCCCTCTCTCGGCCTCGGTTTCATGATCTGTGCAA
TGGGAGAGTCAGACTTCATGTTCTCCCACCACCTTTTAGTTCTGTTGTCCCAAACATCCAGGATG

CTGTCTGAGCACGTTTACACTTTCAGGCCTCTCCCCACCTCTCTGTCTGGTGACA (SEQ ID NO: 9)

60. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATP13A2. In some embodiments, the sequences from gene ATP13A2 comprise or consist of:
CTCGCTGCGTTCGCAGAGGCTCAGCGGCTACTGTGGCAGTCCATGGAGGGTCATCGGCTATCA
CGTCGTGGTCTGGATGATGGCTGGGATCCCTTTGCTGCTCTTCCGTTGGAAGCCCCTGTGGGGG
GTGCGGCTGCGGCTCCGGCCCTGCAACCTGGCCCACGCCGAAACACTCGTTATCGAAATAAGA
GACAAAGAGGTGAGAGTCAGGCTGAGCCTGGGGCTAGAGAAGCGCAGTGAGGGTCAGGGTCG
GGGGTGGAGGATGCTTGGGTGCCAACCCGGCCACTGACTTTCCATGGGACATTAGGCAGGTCC
CGCTCTTCTCTGGACCTCAGCTTTCCCATCTGAGCATTGGGCAGAAGGGACGGGTCGGGTGGTT
TCTGGAGGGCTCTCCATAGCCTTGATTTCTGCCTTCTCCAGCAGGGGCCGCCTGGCTGTAGGAC
AGGGCCTGGGAGGGGAGGGGACTCTTCTGAGACTGAGTCCATACCTCTGTGTTCCA (SEQ ID NO: 10)

61. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAPZB. In some embodiments, the sequences from gene CAPZB comprise or consist of:
GTGAGCAGAACGCCTAGGGAGAGTGCTGGCTCCGCTCGTGGTGTTTGTTTTGGTAAAGAAGGCA
GATGCTATCCAGACTTTTGAGGAACCTGGGGTTTCACATAGGCCCCCACAGATAGACCTGCCCT
CCTGCCACTTGACCCTTCTGCAGGACAGGCCCAGCACTTAGGTTGGAAGGGCCAGAGAACTTCT
TCCTGACAGGATCAAGGGATTTTTGGAGCATGTTTGTATGTGGACTTTGGGCCTCAAAGTGTTTT
GAGGACCATGGTTCCTTGTTTAGTCAAGGGATGTTGCTGCTGAACGAGGGTGAGTAGTTGAGAT
GGGTTAAGCTTTCTTTTGATGCCTTCCTGTATGCTGATTAAAAACATGGGCAATGCCACTTTTAAG
GCCTTCGGATTTGTCCAGTAACTTTGGCTGAAAACTCCTTGTTTGGGGAGGTGGGCCTGGCCCC
AGGCCTTGATGGAGAACGACTTCTCCAGGGCAGTGGTGGGTGAGGACT (SEQ ID NO: 11)

62. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAPZB. In some embodiments, the sequences from gene CAPZB comprise or consist of:
AGCTGGAGTCCCACTCACTACCTCTGTGTTCAGGCTGGTCTCTCCCATAGCCCAGGCTAGACCC
TCCCTCCCGAACCGTGTCCCCAGCCAGGCACCCCCTCGGTGACCCTGGCGTGGGCCCCCTTCC
TCCCCCGGTCTAGGGCTAGGTCTGCTTTCCCCCGTCTCTCCGGCCCAGGCTAGGCCGTCGTTTC
TCCCTGCCATGGCCCAGGCTAGGCCGCTGCCTCCCTCTGTCCCTCCCCCTTTGCCTTCTCCATG
GCCTCAGGCTGGACCCCGGTCAGCCCCTTCTGCAGCGGCCTAGGTTTGCTTCCCCTCTTCTCCG
TGGCCTCAGCCTGAATCTCCTCTTCTCTCTGTGAACTTAAATCTGGACCTCCTCTTCTCCGCCCAT
GGCCCCCGTCTGGACCTCACTGCCCCCTCCCCACCATGATCCCCTTCCCTGGACTTTTCGCCAC
TCCTAGCGTAACCTGCGTCAGCCCCGCTCGGTCCCCGCCCTGAGCCTCTC (SEQ ID NO: 12)

63. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KDM1A. In some embodiments, the sequences from gene KDM1A comprise or consist of:
CTAGGTGGAAATGGATGGGGCCTGGTGGCTGACAATCTCACATAATCTCATACAACTGAGCCTC
GGGTTAGAATGGTGTACCGGAGATGCAGTCCTGTCATCTGGTGTCAGTCAAATGTGGCAGCAAT
CTTTTGGTTTGGTTTTTGTTTGTTTGATTTTGTTGTTGTTGTTGTTGTTGTTACTGTTCTGTGTT
TTTCCTTTCCTCTTTTGAGTTTTGCTTTATTCCTCACTGCTTTCTGACACTTCCCCCTCACTCCCCT
GTCTTTTGTTAACTGCCTTTCTTTTGGCCATTTCTGTGCCTTGACTTTCCCATTTGGTCTCTGTACA
ATCTGTTCCTTATTTCTCTGGTGGTTGCAGCTTCTGAGCTAACAGAATGCTTCTGTCATGCTATGT
GTTTAAAGCCTTGATTTTATTGCTGTCATACAAAACTAAACTTGATGTGGCTGTTGGGCTGTTATTT
ACAGTTTATTTCTCTCTCTGCTGCACTGGTTAAAAG (SEQ ID NO: 13)

64. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KDM1A. In some embodiments, the sequences from gene KDM1A comprise or consist of:
TATTTTTTTCATAATTTTTCAAATCATTTTCCTCACTGTTTACAATAACCCATTAAAAGCTTGAAACC

TAAATCTTTTCCTTTCAAAGATCCTCTCCATCATACATTCACACTGGTTTGTTGTTGTAGAGTTGCG
CCTATATGTTGGGCTGGTGCCATTTGAGTTTTTGTCATTGAAAGCACGTGTAAAACATTAGGTTTT
TTGTGGGTGGTGTGGGTGGACTAAGGGGGAAAGTGTAATGAATCCAGTGGGCTGCTCAGCAAAC
AGAGGGAAGAAACAGGTCAAATTTGGTCCCTCTAACCTTGACAGTGTCCCTTTAAATATTTCTCTA
CCACACACCCTGGACCCCAGTTACTGAGCCTGAGTGCTGTGTACTTTTTCAGTATGAACTTCCCT
TTGTGATTGTCATCCTAGTTGCAAAGATTAAAGCTTGTCTGAAGCAAGCCATCCAGTTGACACTG
GAAGAGCTTTAATCTGTACCATTTGCACACTTGTGTTT (SEQ ID NO: 14)

65. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STMN1. In some embodiments, the sequences from gene STMN1 comprise or consist of:
GTTTGAAGATGTCAGTTGCCATGTCAATTTTTATATTATTATTTTTTCCATTTCCTGGTAATGAGAT
GCTATGTTATCTTTATTTATTTATTTATTTATTTGTTAGAGACGGGGTCTCGCTTCGTCGCCCAGG
CTGCAGGGTAGTGGCGCAACTATAAGCTCACTGCTGTCTGGAATTCCTGGGTTCAAGTGAACCT
CCCACCTCAGCCTCAGCAGCTGGGACTAAAGGCACATAATACCACACCCAGCTAATATTTAAATG
TTTTGTAGAGACTGTGTCTCACCATGTTGCCCAGGCTATTCTCCAACTCCTGGCTGAAGCAATCC
TCTGGCCTCAGCCTCCCATATTCTTTTTTAAACAGCTTCTTTAGAGCACAATTTACATACCATAAAG
TTGACCTCTTTTAAAAGTGTACATTGCGCCGGGCGCGGTGGCTCACACCTGTAATCCCAGCACTT
TGGGAGGCCAAGGAGGGTGGATCACGAGGTCAGGAGATCG (SEQ ID NO: 15)

66. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STMN1. In some embodiments, the sequences from gene STMN1 comprise or consist of:
GAAGCCATTTTTCCAAGGTCACATAGAAAGCTAATGATGGAGAATAGACTCAAACTTGCTGCACT
GCCTGAGTTTTGGATTTTCTTTTTTTCCTTCCATTCCTTCCCTCTGCCCTTCCCTCCCACTGTCCT
CCAATTCATATTTGTCACATGCCTACTTTGCACCAGCCCAGTACCCTGACCTCCTTGCCTTAGAAC
CTTAGGCTTCCAGAGCCTAGGTCATCACCACCTCTTCCTATCAAACCTCCTCCCCACACCCCGTT
CCTGCCTGACCTTTCCTACTCGTTAAAAATCCAGATGCCTAGGTTGCTTCCCATACCAACAAGAT
CAGAATGTCTGGGGGTGGGGGCCAGGTGTCAGTATTTTTTAAAGATCCCTGGATGATTCCATTTG
TAGCAAAGTTTGAGAACCACTGTTTTAGCCCTGATGAAGGGCCCCTCCACCTCCTGTCCCTTGGC
CTCTGGGTTGCAGATGACCTGGTGATTTTTCTTTTTCTTCCA (SEQ ID NO: 16)

67. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EPB41. In some embodiments, the sequences from gene EPB41 comprise or consist of:
AACGCCTACTGTGTACCAGACCTATGCTTGACATTTAACTTACATCGCTAATTCTCAGGAAAACAT
TGTAAGATTTATGGTTGACGAAATTCAGATCCAGAGAAGTGACTTGTTCAGGGTCACGCCGGACG
AAGTGGTAGGACAGGCGATCCAGGTGAGTCTCCTCAGGGTCACTTCCCTAGATCCCCTCTGACC
AACCCCTCTACCTAGTAACCTTAGGAGCAGTACCACGTGTCAAATTGCTTCACACTTTTGTCATAT
GACGTCACACCAGTCAATCCAGGAACTCCCTGCCCTTCCCTCCCCTGACCTCTGGGGTCTATCA
AAGCAGCCCCCGGCTCAGTGTCCCCGCCGGACGAGGCTACACCTGCAGCCCCCGCCCCTTCCC
AACTGCGACTCTCGCACTCCTCTGCCCGGGCCTCCCCCTCCCCGCCCCGCTGATCGGCAGTTG
CCTGCGCCAATCAGAGGGCCTAGCGGGCGGGGCGGGGCCTCACGATGG (SEQ ID NO: 17)

68. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EPB41. In some embodiments, the sequences from gene EPB41 comprise or consist of:
TGAGCCTGGACCACCTGGGGGGCGACCCTCGGTCCCCGGGAGGGACGGGGTTAGGGACAGAA
GAACCTACCCCCAAGGGCTCGGACCGTCCCGGGAGAGGCGAGACCAGGGTCGAAGGGTCCAG
GGCTGAGGGGTCCAGCGGTCCCGAATTCCAGAATCCGAACTTGGGGTCCAAAGGAGTCTGGGC
ATCTTAAAGTTCAGGGTGCAGGGAGGGGCGTGGGAGTCTGGAGAGGGGGTCCGGGAGCTCGG
ATCCGGAGCTAGACACGTCCGGGTCCGGCCGGTCCTGGCTGTCTGGGGCGGGGGTCCTGCATT
CGGTGTCCGCGGGAGAGTCCCTGCAGGTCGGCGCAGCCCCCGGCCGCCCCCTAGCCCCGCCT
TGCCCGGCCCCGCATGCTCCTGCCGGGCCCGCAGCAGCGCTGGAGCGGGCTGGCGGCTAGCA
GCGGGAGGGGGCTCCGGGGCCTGGAGCCCCGCGCCCCGCTCCGGCCCTTACGTAACTGACTT
T (SEQ ID NO: 18)

69. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TRAPPC3. In some embodiments, the sequences from gene TRAPPC3 comprise or consist of:
GGGCTTTAACATTGGAGTCCGGCTGATTGAAGATTTCTTGGCTCGGTCAAATGTTGGGAGGTGC
CATGACTTTCGGGAAACTGCGGATGTCATTGCCAAGGTCATTATTCTGGGCCACCTGTCCATGCT
GAAGAATTGCTGCTGAGAGGCACTGCTTACCACTCTTTCTATCTCCCTTAGAGAGGCCTTTAATC
TCCCAAAAGACTGGCTAGGCAGCTCTTTGGGTCAAAAAAACATTCCAGGTCGTTAGGGAATAGCA
TAGATTATTTAATCCCTGTGGATTAAAGCCCCACTGAAATCAAAGCCTGAGCTTTTCCACTGTGAA
GGTGTAGCAGAGTAGCATGGGGGTAAAGAATACAGACTCGGTCGGGCGTGGTGGCTCACATCT
GTAATCCTAGCACTTTGGGAGGCCCAGGCGGGTGGAACACAAGATCAGGAGTTCAAGACCAGC
CTGGCCAAGATGGTGAAACCCCATCTCTACTAAAAATACAAAAGTTTG (SEQ ID NO: 19)

70. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TRAPPC3. In some embodiments, the sequences from gene TRAPPC3 comprise or consist of:
CCCTGCTGCTTTGACCTTGCAGGCCAAATTTCCTGGCTCCTCCAAAGGGGATGATGTTCTTTCCC
TCCAGACACAGTTAGAGGGAATCCTGACAGTTGCATCAAGGCTGGTCCAGACTCTCACCACGCT
TTCTCTTTTGTGCTGCTTGGTCCTGACTGCCTTTTGAATCTCTTTTAGAGCTCTGAGCTCTTCACC
CTGACCTATGGTGCCCTGGTCACCCAGCTATGTAAGGACTATGAAAATGATGAAGATGTGAATAA
ACAGCTGGACAAAATGTGAGTGAGCTCCTTCATAGGAGAGACAGAAATGGGGCCTCCCAGCACA
CTGAGTCTACATTGTCCTTTAGAGCTTAAAACAGGGTTCTCTCTCTTTCTTAGCCAACATTTTGGG
TACATTTCTCACTAAACTCATTTACTGGGATGTTTTTGAGATTATCCCCATTTTCCCTTTACCACCA
ACAACCTTATGTTCAAACATAAGACATTTAGACTCCATCATA (SEQ ID NO: 20)

71. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDC20. In some embodiments, the sequences from gene CDC20 comprise or consist of:
GTGGCACTGGACAACAGTGTGTACCTGTGGAGTGCAAGCTCTGGTGACATCCTGCAGCTTTTGC
AAATGGAGCAGCCTGGGGAATATATATCCTCTGTGGCCTGGATCAAAGAGGGCAACTACTTGGC
TGTGGGCACCAGCAGTGCTGAGGTGCAGGTGAGACGTGTCCAGTGCTGTCATTCTCACCAGTCC
CAATGGGCTTGCACAGCTGGAGGATATTAATGCCAAGTCCCAATCTCTGATCCTAGTGGGCTTCT
CTCTCTAGCTATGGGATGTGCAGCAGCAGAAACGGCTTCGAAATATGACCAGTCACTCTGCCCG
AGTGGGCTCCCTAAGCTGGAACAGCTATATCCTGTCCAGGTCAGTGGTTTTTGTTGGTCTATGGT
AGTCTGATATTTGCCCACCCTCCCCTTGACTGTACACCCCTGAACTGAACCAGCTCTGGCTTGCT
TGCATTTGGTGCTGCCACAGAACCTGATTCCCTTCTTTCCTCCTCCAG (SEQ ID NO: 21)

72. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDC20. In some embodiments, the sequences from gene CDC20 comprise or consist of:
TGAGTAGGGTTGGGCTGAAGCCTCTGCAGACCCTCACCTATAATCTGGGGACTGTTAAGGGGAG
AAGGGATGGTAGGATTGGACTGGGTTAATCTGTGACCCCTAGAGCTCCTTGTCTGGCTCTAGTA
CCTGCTGACCCCACCTTTATTCCATCTAGGCCGTAGCATGGTGTCCCTGGCAGTCCAATGTCCTG
GCAACAGGAGGGGGCACCAGTGATCGACACATTCGCATCTGGAATGTGTGCTCTGGGGCCTGT
CTGAGTGCCGTGGATGCCCATTCCCAGGTAATCTTTTGCCTGTTCCTGCCTCTCCCACATGCATT
CTTACCGGGCAACTACATTCACTCCAATGGCTTCACCAACTCTATGCCCTGGTGATTCCCAAACT
TCTAACTCAGCTCTCACTCATGAGCTTCATTTCCAACAGTCTGTGGCTATCTCCAATCCTATGTCC
TATAGGCACCACCACCTTGATCTGTCCCAAATTAACCTTGTCACTTC (SEQ ID NO: 22)

73. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene B4GALT2. In some embodiments, the sequences from gene B4GALT2 comprise or consist of:
GGATGTATGGCTGTGGAAGTCCAGGAGCAGTGGCCTTGTTTGTGAGTGTGGGACTTAGTGTGTT
ACTGTCACCCGGGTGTGTCTGTGACTGTAGTTCTCTGTGTGTCTGAGTGTGGGTGACCAGCTGG
GACCAGGGTGTCCCTGTGATTCTGTGTGCCTGTGAGACTCACCCTGCTCCCTGAAGCACTGCCA
GAAGTGGCTGCCGCTCTCTTGGAACCACAGCTGGAGCCATCGCCCAGGCAAGACCCCCTTCCT

GCCATGCCCAGTGCTGTGCCCATCTCCAGGCCCAAGCATCCCGTTCCGGGAATCAGAACCAGCT
GTGCTGGGCAGGACCCAGAGTCTTGGTCCCAGTCCCAAGGGGCTGGCTTTGAGGTCTTAAGTG
AGGGGTGTCCCCTGCCTTGCCCCGTATTTTGACGTTTTGCTCCAGTGGGAAGGGATTCTGTAAA
CATCCAGTCTGTATTTGGGCCCCCCGGATGCTGAGGGCAACTTCCCAGCCTGG (SEQ ID NO: 23)

74. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene B4GALT2. In some embodiments, the sequences from gene B4GALT2 comprise or consist of:
TAGGTGCACAGTATTCCGTCTCTTCCCTCTTCCCCAAGCCATGAGTTCTGGGTTAAGGATGCTGC
CATGTGAGGTGTCTGTTCTCAGGGGCACAGGGGCACATGGGGGTCTATAGGTAAACATGTCTCC
ATGCTTAGGTACAAACCAGTGTGGTTAGAGTTCACGTGTCTGTGTTCCTGGGAATGCGTGAGTGT
GTGTGTAGAGTTGTGCAATAAGGGTGAGTGCCTGAGTGTGTGTGTCAGTGAGGTGGAGGAAGGT
AAATGTATGTGGCTTAGTAGTGGGGTGTGCTTGAGGATGTGAGTACTGAGTTGCCGGGAACTGT
GCCTGGGTGTCTGTTTGGAGGTAAATTCTTGAGTCTGTGAGTGTGAAAGGGTATGAGCAGGTCA
GTGTGAGGTGTGGCCCACGAGTGTGAGCAGCTGAGTGGGAGGTAGGTGGGCAGCCTTGCCTGT
CCTGCCCTGACCTGCTGGATCTGTTTCCCTCCCACCCTGCTCAGGCCAGC (SEQ ID NO: 24)

75. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RNF220. In some embodiments, the sequences from gene RNF220 comprise or consist of:
GAGAAGCATTCCAGGAACAAAGCAGCAGGTAAGATTTTTCTGGGAAAAGACAGAGATTTTGAGG
GACCCAGGATTTGGGGGTCATTTAAGCAGCAGTGGATGTCAGTCTTCAAGCTTTGCCCATTTACT
CTTGGTCCCTTTTGGTTCAGGAAAGGAAGAACAACAAGCACGAAACCATTCACTGAGACCTTTGC
GGGTGGGGGAGGAGGGATGTAAACAAAAGCCAACGCTCTCTTTAGTTCACAATGGCTCGCGACC
CCAAGACTTCCAAGCTCTTTGGTGAGGGCCAGCAGGTCTGTTCTCCAGGAGTGCCCTGGGTCTG
GACTTCATTTCCCAGAGTCCCTTAGTGCCCTAATGTATTCAGTGCTCAGAGTGCCTGTATGTGTG
TGAGTGTGAGAGAATGTGTGCGTGCGTGTGTGTGTGCGCGCGTGTGTGTGTCTCCGAGTCCCTG
GGAGAGTGGAGGCTCATTCACTGATTAGATCCAGCGCTGAGAGGCAGC (SEQ ID NO: 25)

76. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RNF220. In some embodiments, the sequences from gene RNF220 comprise or consist of:
TATGGAGATCAGAAAGGGGTGTGGACGTGTGTGCGTACCCAAGAGGGGTGGGTGCGAGGGCG
GCCGGCTTGTTCAGGAACCTGGCTAACTTTCCGGGTCCGTTTCCTAGGGATTCGGGCGGTTCCC
TCTGGACGGGGGCAGGGACTGGGACTCGGACTGGCGCGTCTTGGATCATCGCGACGGAGCCT
CTCGGCATCGGCGCCCTGCGCGCTCCGTGCGCTGCCTCGCTCAAACTTTCCGTCTTGAGTTTTC
CTTAATGTGTTTTATTTGGGGAGGGGGGGAGGTGCAAGGGGGAGGGACCAGACGCGGGAATTG
GACAAGTTGGGAGGGTGAGGGCACTGCAAGGGAAGGGAGCAGGACTTCTTTTCTCCGTCTCTTA
ATAAGCCCCATTCCCACTTTGTTCGGGTCGATATCGAGAATGCCTTCTCGCCGGGCTCTCTGGTG
CACCCCCCGGTGATTTCCGGGCTCCCCTATGTACCCCGCGTTGATTTCCGGCGAG (SEQ ID NO: 26)

77. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PRDX1. In some embodiments, the sequences from gene PRDX1 comprise or consist of:
GCAAGCGTGGACTCGAGTCGAGTCTTCCCCCGGCAACTCGAGCACGTGGCGCGGCGTCTGGGC
GGGCTGGTGGTGGGGGTCTCCGAGACTAGCCTCCTGCCGGACGGGGTGGGTTCGGGAAGCTT
CTGGAATGGACCTGTATCCAGACTCGTGGCTGTAGAAGACAGCCTCTATGTATTTGGCTGTTCCG
GGTCCTGAGCCTTGACTAGCTGCGGAGCTTCGGGTACCCTTTCCCCGTCTTTATTTTCCTGTACG
TGGAATGGAGTTAGCGATGAGCCCAAATGTCCCCGCTGAAGCACTCTCTCTGCTGGTGCTTTCT
CCAGTGCTGGGGAGGGACAGGGGGCACCTGAAGTGGGGTTTAGGGATGTGGCCCTCTACGCTG
GGCAGATCCCCTGAAGGGGCCCGGTGGCGGCCTGAATCCCAGCAGCCTTTACCCCGAATTGGT
TGGGTTTTGTACTTGGGGGCCACTTGGGAAAGAAGGATTGGACGAGAAGGCCAT (SEQ ID NO: 27)

78. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PRDX1. In some embodiments, the sequences from gene PRDX1 comprise or consist of:
AAGCGTTCGGGTTCGGGAGCGGCCACAAGGGCGCCTCACTCCAACCTCAGCCATCCGCAACAG
GGTGGGGTATTAGTATTTTTCCGCACCCGCCCCAACGAGGGAAAGCGCCGAGTCATTCCGGCG
GGGCGCGCCGGGCGGGGCTCGGGCCACATCCCCCTCCTCTCTCTCCTCCTCCGGCACCCCCG
TCCGTTCCGACTCTCGCGAGATCCCTACTGGCTATAAAGGCAGCGCCCCGGAGAGCTCTTGCGC
GTCTTGTTCTTGCCTGGTGTCGGTGGTTAGTTTCTGCGACTTGTGTTGGGACTGGTGAGTGTGG
GCAGTGCGGCCCCTGCGGAGTGAGGCGCGGCGCGCCCTTCTTGCCTGTTGCCTCTTCCTCCTC
CTGTCCGGGGCCCGCCCGCGCTCGGGTGGGGGTGCTGTGATGCGTGAGGCAGCCGGGGGAG
GCCCGGAGTCCGAGACTGCTTGAGCGCTGCGCACACCCCTCTCGTGGGCCCCCCACGTA
(SEQ ID NO: 28)
79. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATPAF1. In some embodiments, the sequences from gene ATPAF1 comprise or consist of:
GTAGTTACAGTAGAAAATTGGGATTCTACATTGTGTTTTAAAGTCAAATTAGAGGTGTTTATTTTAC
TTGGAAAATACTTTTTTTGCCTTGGGTATCCTGAATTTTAAGTGAATCTGCTGAGTCTTAATGACTA
CTACTCATCTGACAAAGGGCTAATATCCAGAATCTACAGTGAACTCAAACAAATTTACAAGAAAAA
AAAAACCCCATCAAAAAGTGGACAAAGGATACGAACAGACACTTCTCAAAAGAAGACATTTATGC
AGCCAAAAGACACATGAAAAAATGCTCATCATCACTGGCCATTGGAGAAATGCAAATCAAAACCA
CAATGAGATACCATCTCACACCAGTTAGAATGGCAATCATTAAAAAGTCAGGAAACAACAGGTGC
TGGAGAGGATGTGGAGAAATAGGAACACTTTTACACTGTTGGTGGGACTGTAAACTAGTTCAAAC
ATTGTGGAAGTCAGTGTGGCGATTCCTTAGGGATCTAGA (SEQ ID NO: 29)
80. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATPAF1. In some embodiments, the sequences from gene ATPAF1 comprise or consist of:
TGAATCCTAACCCTTCCACTTACTAGCTGGGTGACTCTGAGCAAATTGTTACTTCTCCATGCCTCA
GTTTGCTTATCTGTAAAACAGGAATAATAACAGTACCTACTTCACAGAGTTGTGCTGAAGAGATAA
TACCATTTAAAACTCTTTAGCGCCGTCTCTGGCATAAGTACTTAATATATATTAGCCATTATTATCC
TTAAATAGGAATCAAAGCTGAGGAAAAGCATGTTGAAAACTGTGTCTGGGAAGATTATTCTAATGC
AGTGTTTTTCAAACTTTTTGACCATGACCACAATAAGAAATATATTTTACATTGCAATTCAGTACAC
ATGTAGGTATATGATTGTAACTGAAAAAAAAATGTATAAAATAATGCTAACTTTTACAACATGCAGT
CCATTCTTATTACTTTTTATTCTCTTTCATCTTTTAAAAAACTCTGATCACAATCCACTAAATGTATT
TCACAACCTATTATTTGAAAAATTCTAACCTA (SEQ ID NO: 30)
81. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSMA5. In some embodiments, the sequences from gene PSMA5 comprise or consist of:
GTGAGTTGGCTGCCGGTGAGTTGGGTGCCGGTGGAGTCGTGTTGGTCCTCAGAATCCCCGCGT
AGCCGCTGCCTCCTCCTACCCTCGCCATGTTTCTTACCCGGTCTGAGTACGACAGGTCCGTGCA
GCTGGGGGACGTCGGGTGGGAATTATGGGTGGGCAGGCCCGGGACCTGGCCGCGCGGCCTG
GGTTCTGCCGTGTCATGGGGCTCCCCAGGAACCCGAGACTGGCCGGACCTGGGGATGTTATGC
CCTCCTCAGGCGCCCGCCGTCCTTCCCCAAGCTAGACCACATCGGCGGCACTTGTCCTACCGCT
GAGTCACCCCTGGGTCCTAACTCGGTGCGGAAGCGAGAAGCTCCGGCTGGTGCTTGGTAAAGA
AGGCGTGAGGAGCCGGAACTCCTACCTTGAACCCGGAGAAGGCCAAGGGTCACTCTTTGCTCC
GTTCATCTTTTCGTGCCTAGTATGACTGCCTTGAACAAACAAACAAAAAGTTAAACGT (SEQ ID NO: 31)
82. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AMPD2. In some embodiments, the sequences from gene AMPD2 comprise or consist of:
GGAGCAGAGCCAGAGTGTGCAGAGACAGAGGAAAAATCCAAAGAGGCTAGGGTCTCTGTCCCA
GACCCCCAGACAAGGGGGTCTCCTGGCCTTCCTGCCTTCCTGGGAGGTAGCTATTTGGCGACG

GTGGAATTTTCCCGGGACAGGCCCCTCCCTCCTGGGCTGGGATTCTCGGTTCTTCCCCCTCCTC
CCAGAGCTGGGCTACCCCGGGAGCTGAGGGTCAGATGTGGAAGGAAAGTGGGTGCTGGGTTTT
CACGGAGTATGCCTGCCCTGCCCCGGGAGGACTGTGTTTGAGCTTGGACTCGCTCGCTGCTGA
ATTCCTGTTTGTTATTCTTTTTTCTTCCAGGCTAGCTGGAAGGACCAGCTAGCCTGGACTTTGGCT
TCTTTGCCCGGGAGCCCTGGCATGATGGGGTGAGGGCTCTTGGTGGGTTAGTGGAGAGCTGGG
GGCTGGCCCTTCCCCATCTTCTTTTCTACCCACCCCCTCCCCGCCCCCCGCCAG (SEQ ID NO: 32)

83. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AMPD2. In some embodiments, the sequences from gene AMPD2 comprise or consist of:
TGAGTGTGTGCTTCCTGGCCTCAGGATAGATGCTGGGCTCTGTCTTGCCACCTCTCGCCCAAGG
TGCTGGTCCCCTCAGAGGGGGCCACCTCCTCCGGCATCCTCTCTGTGGTGGTGCCCCTCAACCT
CAGTCCCAGGGACAGCCGGCTTGGAAGGTGGGGTGAGGGGTGGTGGGGGGCGGGGGGTGGA
TCTGAGATATCTGTGCCAGGGATGCTGTCCTCTGTCACAAGGAGTGGGCATGGTGTGGGTGCAG
CAAGAGGTGTGTATGCACACGTGTCAGCGTGTGCATGTGCTAAGACTGCGTGTGAAGCATGTGT
GAATGGAGCGGGGGTGTGTGGGACTGACTGTTTTGTGGACTGGCCACTCTGACTGGCGCCTGT
GCCTTTACCAGGCAGGCTTAGGCTGTTCTGTGGCTAGTTCCACTTTTTAGGACCCCACATCTAGA
TCCCCCTCACTGGGGGTCTGACATCTGGGCACAACCATTGCTGGCTGGCATCCC (SEQ ID NO: 33)

84. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AHCYL1. In some embodiments, the sequences from gene AHCYL1 comprise or consist of:
GTGACGTCACGACAGAGTGCCCTTTCTCCCCGCCTCTTCCCCCTCCCGGGAGCTGCCAGTACTT
GACGTGGCGTCACCGCCCTCTACCCTCGCTTTGCGTGCGTGTTTGCGTACAGCGGAGGTGGCG
GCGCGGGCAGGTCGGAGCTCGGAGCTGCTGTTCTGGTTCTCTTGTGGCCGCCGTCGCTGTCCG
GCTGCCTTGGGCTGCCGAACAGACAAGGCGTGGGCCACAGCACCTCAGAAGCCGACGCAGCTC
GACGCAGGGGCCGGCAGGAGGGTGGGCGATCGCGTGTCGGAGGGCGCCGCGCGGGCAGGCG
GGCGGGCGCCAGAGGGGGAAAGAGGCGGGGGCGGCGGGTCAGCCGCTGGCCGGGCCGGCC
GGGGAATGTCGATGCCTGACGCGATGCCGCTGCCCGGGGTCGGGGAGGAGCTGAAGCAGGCC
AAGGAGATCGAGGACGCCGAGAAGTACTCCTTCATGGCCACCGTCACCAAGGCGCCCAAGAAG
(SEQ ID NO: 34)

85. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AHCYL1. In some embodiments, the sequences from gene AHCYL1 comprise or consist of:
TGAGTGGGTAAATCTGGCAGAACTTCCATCAAATCTTTGGGAGCAGTGGCCGCTTTATCCAACAA
CTGCGTGATAGCTGGGAGGCAAGAGAAAAGAATGCGTGAAGCTAGCTCTGATATACAGGTGAAA
GCGATGAGGGTAACATGAAACTGAAAATCTATGATTTTCACTTTCTACAGCATTCCAATTACTTCG
AAATATGTAAGAAATTGACATTTGGAGGTTGGTGACAGCAGACACTGTCATGGATACAGGTGGAT
CCTAGAGTCATGTGAATAGATCACTTAGGCATCCCTGGAGAAAGGAGCTTGGGTGGGTTGGAGT
AGTGGGTGGTAAGGGAAGATTGCTCACTCTTGACTGTACTTTTGAGGCAGAACAAGTTTGATCTA
TTGTGCTGTAGGTTGACTCAAAGGACACCCTTCGAATTCTCTCATAAATGGCAACCTTTGGAGATT
TTAGTCTGACTAGCTCTCCGAGTGGTGGAATTGGGATCCTTATT (SEQ ID NO: 35)

86. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SV2A. In some embodiments, the sequences from gene SV2A comprise or consist of:
GTAGTTGGAATGTGTTGGAGGCAGGGCAGTGGATTCAGGGGAGGGGTGGGGTGAGGAAGGAG
GGCTGAATGGGAAGAGCATCCTTAGGGGTGAGAGGATATACATTTCCATTTTCTCCTCTAAAATC
TGGTAGCTTTGGCCGGGCACGGTGACTCATGCCTGTAATCCCAGTGCTTTGGGAGGCCGAGGC
AGGCAGATCACCTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTGT
ACTAAAAATACAAAAAGTTAGCTGGGTGCCTGTAATCGCAGCTACTCAGGAGGCTAAGGCAGGA
GAATTGCTTGAACCCGGGAGGTGGAGCTTTCAGTGAGCCGAGATCGCACCACTGCACTCCAGCC

TGGGCAACAGAGCAAGACTCCGTCTCAAAAAAAAAAAAAAAGGAAAAAAAAATCTGGTAGCTTTT
GTATCTACTCCTCAAAGTCTTAACTGTTAACCTCAATTTTTGGTCTCCTTTC (SEQ ID NO: 36)

87. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SV2A. In some embodiments, the sequences from gene SV2A comprise or consist of:
TCTCATGTTTTCTGTTTAGGGGGTGCTGCAGGATGGGGTGGGGACTGGCACAGAAGCTTCTCTG
GGGGTAAAGGAGGTAAGCAGAATTGCAAGTGGTTAGGGCACAGGCTTTGAGGTTATGGGTTTTG
AATCTCAGCTCCACCACCTGCCTCTGGCCTCTGGCAAATTACCTCTATGAGCCTGGTTGTTTCCT
CTGCAAAATGGAGGTGATAATAGTACCTGTGTCATAGGGTTGATGTGCTAGATCAATGCATGTAA
AGCATCAATTGCCTTGGCCCATGGCTGGCATTGAATAAATGATGGTTACTGATATTATTAATAAAC
AATTATAAGGGAGGTTGAGGAGGAGTGAAAAGCCTTCCTTTTGGATACCTTGGTTGGATACCTTC
GGAACAAGTCTCATCCTGGGCTATCTGAAAGCCAGCTGATGGGACAGGGTGGGCTGTGGGTGG
GTTTCACTGTGGCCAGGCTCATGTTGCTCTCTCCTCTCCTGGCTCCA (SEQ ID NO: 37)

88. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene S100A13. In some embodiments, the sequences from gene S100A13 comprise or consist of:
AATCGACCACGGAAATTTGACACCTCCGGGCTTGGAAGCAGCTCTCTCCTCCTTCCCCGCTGCT
TATAAACCTCAGCCCTGAGGCTCCAGCTCACTCTACCCCATCTCCTTGCCGGGTGAGTCTCATG
GCTGACCCTGGAGGGAGGCTGGAGATCATTTTTTCTTCCTGGGCTCCCAGGTCCCTCCCCCAGA
GCCAGCTCAGACAGGAATTCAGGAAGGAGCTTTGGATGATCGAGCAACAGCGCGTGCAGGAGT
GTGTGACGGGGTGGACAGAAAAGAGAATGCCTCTTCCAGCCCCACCCGCCGCACCCCAGGGGG
TTGTGAGTGCCTGTACTAAACCCGTCCTGGAGCAGGGAGTCAGAGACGCCCCGTTCCAGGACC
CTTGTCACCGGGAGACAGGAGCGGGGAGGATCTGTGGGGTCCTGGGTTCAGCACTCTGCCCTG
CTGCCGCTGAGGAGAGGTAAGGGTGGAGCGGGGCAGAGAAAATGGGTCTGTTCAG (SEQ ID NO: 38)

89. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene S100A13. In some embodiments, the sequences from gene S100A13 comprise or consist of:
TGGCTGTGCTGGTTGAGCCCGGTAAGGGGGGAATTCTGCTGAGGGGGTCTTAGTCTGTGGCTC
CTCCATGGGGCCTCACTGAGAGGACCCTCAGTGAGAAACTTAGTCTTGGGAGTCTGAGAACCCA
CAGAGGGATTTCAATCCAGGACTCTTCTCTGGGGGTCTCAACCTGGATCCCCCTCTGTGTGTGG
GGCCTCAGCCTGGGGTTCTCTGAGGGATCTTGGTCTGTAGCATCCTTTGTGGGATCTCATTCCAA
GGGGCCTCTGTGTGTGTCTCAGATTGGGCCTCTCAGTGTTGAGCTCCCTTGATTGGTTGCCTCC
CTCTTCCCCCCTCAGCATACACACTCCTGATTAGACATGGGTATGGTGGCAGCAGCCCCCAGTA
TTGAGAGGACTAGGACCCTGGGACCCCTGCCGAACGAGATCTGTCCAGGCAGCTCCTCTCCCT
GACCAAGTGGGGGCGCTCGTGTGGCTGGCAGGGAGCCCGGGTCCAGACCTGA (SEQ ID NO: 39)

90. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBAP2L. In some embodiments, the sequences from gene UBAP2L comprise or consist of:
ACTGAGGCACGAGAATCGCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCCAAGATCACACCA
CTGCACTCCAGCCTGGGCAACAGAGCGAGACTCTGTCTCAAAAATAAATAAATAAATAAATATAAA
TAAATAAAAAATAAAGGACTTTACTTTTTGTAGTGATATGTATAAAATATTTAAACAGAAGTAAAAG
CAAACTAATGGAAGTGTTTTAGACATGGATGCTGAGTGGAGAATGGTTAAGTCAATCAGTCATCC
CAGCTTTCATCTCTAGTGTCCTGATAGCACTCCATATTGATTAGATATGAATGCTCTACCCTTCTA
TAGCATTCCTGGGAGATGGTCGGGAAGAAGAAGGGAGTCTCAGGCCAGAAGGATGGTGGCCAG
ACGGAATCCAATGAGGAAGGCAAAGAAAATCGAGACCGGGACAGAGACTATAGTCGGCGACGT
GGTGGGCCACCAAGACGGGGGAGAGGTGCCAGCCGTGGACGAGAGT (SEQ ID NO: 40)

91. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBAP2L. In some embodiments, the sequences from gene UBAP2L comprise or consist of:

TCAGTAATGTCTAGACTCTAGGGATGTGCCAGGGCCCTGCTAGTCAGGACCTAGGAACCATTATA
TTATCCTTTTGCTTTTCTTGCCGTCGTCTGTTCTGAGACCTTGACATCTCTTGCATGTGGCCTTTT
CTACCAACTGCCACCAGTCTGGCATGAGATTACCCTGTAGTCATTTATAAAGTTAAATTTGACTTG
CAGCTCTCCATTAAGGCACATTACCATTCCCTGAGAAACATGTTCCCATCCTTCCAGCTCATTTTC
TCTTCGTTGTTTTTTTAATTCCCAATACCATATTACATACCATTTATATATTTGTATATATCCTGTTG
ACTGTGCTCTGGCCATCTGTGGTTTGGTTTTTTTGTTGTTGTTGTTGTTTTAATTTTTATTTTTATTT
CAGTTCGAGGTCAGGAAAATGGATTGGATGGCACCAAGAGTGGAGGGCCTTCTGGAAGAGGAA
CAGAAAGAGGCAGAAGGGGCCGTGGCCGAGGCAGAGG (SEQ ID NO: 41)

92. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ADAR. In some embodiments, the sequences from gene ADAR comprise or consist of:
GTAAGAGCCTCTGTCCTTCTCGGCTACACCTGCCTGGGCTGGAACGCGCGGCCCATGCGGCCT
CTCCAGTCTCTGGCGTTGATGTTAGAGGAAGCGTGGGGGCGCCCCGGCAGGGCACTGAGGGTG
GCCGCAGGGCTGGGTGGGGACGCAGCTGGTAGGGGCACAGTGGCCGGTCTCGGCAGCCTTCC
AGGAGGCGGACGCCCGGGCCGGTGTACTTTTGTGCGTGTGTGCGCGCCCGTGTGTGCGCGAG
TGTGGGCGGCAGAGGCTGCGCACGGATGCTCCGGCGCTCGTGCCAGCCGGAGCCCAGCAGCT
GGGTACCAAAGGCCCAACAGCTGGGTACCAAAGGCCCTTGTTTCCCTCTCGCCGGCTCCCCCG
CCTCGGAGAGTGACTGGAGAGTGAGCTGCCTGGGACTCGCCGCGGTAGGCGCTTTTGCTGCGC
CTTCTACCACAAACTGCGTTAGGACCGGCCCTTTATCCCAGAGATAACATCGCCGCCCTGG
(SEQ ID NO: 42)

93. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ADAR. In some embodiments, the sequences from gene ADAR comprise or consist of:
TTCAGGATGGGAGTTACTTCTGATGGAGAGGCAGTGGCACAAGATGGGGACCACTTACAAGCTG
ATGAAAGTTAATTGATAATATTTTAGTTCTTGGTTAGCATGTCAAGTTAAAGAAGGTGTTCATTATA
TTATTTTAAAAATGAATTCGTTTAATTTAATTTAAACGGGCCATTCAAAGACTACTGGTTATAATGT
ATTATTGGCTAATTCTGTGGTCTTTTTAAAAGAGGATTGTACCTACGTATCTTCTCAGGCCTTCCG
GCCCAACCACGTTATAAATGACTAAGGAGTTCAATCAAGGCCATGGGCAAAAATGCAGCATCCTA
AACCCATGTACCTACTCCCCACTGTACCCAAAACAGCGGCATTAACACAACGTAAAAAACCAAGG
AAGACGTAGCAACAAAAACCTTAATTTCCTAGAGCGCAAACAAAAGAGGTTGAATCACGTGGTTC
TTCCTCCCACGCCCGGCGCGCCAATGATGTCACCAATCTG (SEQ ID NO: 43)

94. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ARHGEF2. In some embodiments, the sequences from gene ARHGEF2 comprise or consist of:
GTAAGGGACGGAGCGGGAAGAGGGAGGTGTGTGTCTCGCGGGTGGGGGCGGTGGAAGCTCCG
GCACCTCCTCTCACCCCGGGCCCCACCGGCTTGGGCTTGGCGTGGCGACCCCCCATCACTCCC
CAATCGCTGGCTTGGTCGTTCCCCCTTTGTCCCCGCCATCCGGCGGAGGGGACGGGAGGGGGT
GGTTTCCCGGCTTCCTCCCACCACCACCACCACCCCTCCAAGACAAAAGTCAGCTCCTCCTCTC
CTCGCAAATGGACTTTCCAGCTGTGATTCAGTTCTCCCCTCTGGGTGGGCGGGTGGCTGGGGTC
GGGACGGCCGAGGGACGGCTTACTTCCCCCAAACCATCACCTCTAGGTGAAGGGAGCAGAGGT
CTTTGTGTAGCTGGGCTCCTTTCCTCCATCCTGAGCCCTTCTGCCTGGAACATAGGGCCTCCATC
CCTATCTGCCCCGCCAGCCTCCTAGCTCTTCCTTCTCCCAACCTGAAACCCTTAG (SEQ ID NO: 44)

95. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ARHGEF2. In some embodiments, the sequences from gene ARHGEF2 comprise or consist of:
ACAAACCCTGGCGTCCCGTCCTGCGCGCGGGCACCCCGCCCTCCCTCCGCTCCGCCTACCCCC
TTCCTGAGCTTGGGCGGGGGAGGAGACTCGGGTTTGAGGAACTGGTGCTGGGTGCCGGGCGA
GGGGAGTCAGACTTCCTGTCCCCGAGACCAACGCGTGCGGGCCGAACCCCTCCCCCCGCCTTC
CCCCAACAATACAGGACGCCGGGGTCCGCGCCGCGTCCTCCCTGGTCCCCCCGTCCGATTATG
TCTCGGATCGAATCCCTCACGCGGGCGCGGATCGACCGGAGCAGAGAGCTGGCGAGCAAGGT
GGGCTCGGAAACCCCTCTCCTTTCGCCGCGGTCCTCGGGTGCTCCCCGAACCCCGGCACCCGC

GGTGCATCTCCTGTCTCCCCGCCTGCTTTCTGGGCGCCAAAATCGGGCGGAGCGGTGGATCGG
CGAGCGGCGGGACGGGGTGGGTGGGGACTGCGAGCGAGTGGGTAGGGGTGGGGGGAGCGG
(SEQ ID NO: 45)

96. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PAQR6. In some embodiments, the sequences from gene PAQR6 comprise or consist of:
AGATTCCTCTTCTGGAGTTTATTTGGGAGCAGCTGGGATGATGGGGACCCCACATCCATAGGGC
TGGGAGGTCAGGGCAAGGGCAAGGGGAAGAGGAAAGAAGGGTGCCTGGAGAGGAGCAGAACT
GGGGTTGCCGGCCAGGCCAGCAGAGCGACACCCTAGACCGGGCCGTAGAAGCGCCGATAGGC
CTCCTGAAAGCCGATGTGGTCAGCCAACTCGTCACAGTCCGGATTGAGCTCACACACCTCCCTC
CTGGGCTCCAGGGGATCCGGGTAGGGGACTGGGGCTCTGAGACACCCGACGTGGTGGCATCA
GCCCCCGTGCAAAATGCCCATCCCTCCTCTCCCTACACATGGGGCTCCAGGGTGCCCACCAGG
GCAGGCTGCCTGTACCCCCACCACAACCCAGAGAGGCCACTCCCTGCTGCAGCTCCCCCACAG
ACCATCCCGGAGAGGCAGGGCCTTGGCCCAGCTCTGCCTTTTCTCTCACCCCAGCCATT (SEQ ID NO: 46)

97. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PAQR6. In some embodiments, the sequences from gene PAQR6 comprise or consist of:
GTGCTGGGGCAGGGGCCACGGCTGTGGGCAGGAGGCCCTGAGCACCAGCCATGGCTACCATC
TCTTCTGCGCGCTGCTCACTGGCTTCCTCTTCGCCTCCCACCTGCCTGAAAGGCTGGCACCAGG
ACGCTTTGATTACATCGGTGAGGGCACGCCTGGCCCGGCCCGGGAAGAGGCAGGGGCAGATG
CCTTCCCAGAGCACAGAATGAACTGGGTAAATGGGTATTACAGCCCCAGGATGGAGGCAAATTA
TAGGAGGGACTTCCCTGTCTTCCTATAACGAGAGCATCACTGGAAGGGTCCTCCACCTGCCACT
TCTCAGGTAGCAAAACTAGTAGCATGTGTGCTGGGGCCACATGCACACATGCTCATTCATTCCTT
TCAGTCACTCTGGGAGTCAGGGTTTCTTATTCTCAATTTATGGGGGAGTAGCAGGCCCAGAGGAT
GGGGTGACTTGCACTGGGAAAGGTGTGGCTCTGACCTGCCCATCCTCTCCACA (SEQ ID NO: 47)

98. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CADM3. In some embodiments, the sequences from gene CADM3 comprise or consist of:
AGTATCTCATGAGTTATCTTTCTCCGTGAAAACCATGGGCTAGAGAAGGGGACTGCAGACACCGA
GGGGAACTGTTCCTGTCATCCAGAGGCTGAGAAACATGGTGGTCTGCTGTTTGAGGATGTAACA
AGCCATGAGTTCCCCAACTGGTTCCAGTATTGCAGCTCTGATTTACAGCATGCATAATCTTACAG
GGTTCTGGAGTGACTTCACCCCACAGGAGGAACTCTAACAGGAAGCTGAAGTCAGTGTTGCCCT
AGGTATCTGACAATGAAGCTCACGAAATCCAAACTATTTTCTGAGTAGCTCTTAGGCTACTATGTC
TAATGACCCAGAAAAGTGATTGAATAACTTAAAGACTGCTTAAACTCAGGAGCAGTTATTTTTTCC
CCACCCACCATACTAGACCCCTTCCCCCAAAGAAGCTGGCCTGGGATTGGAAGGTAAACATGAA
AGGTGCCAGTAAAATCCTAGCTTTCCATTCTCTTGATTTCCCCAG (SEQ ID NO: 48)

99. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CADM3. In some embodiments, the sequences from gene CADM3 comprise or consist of:
TGAGACTCCCAAACCCCAGTGTCTCTACAGCATGCTTCCTTGCAAACAAACCTCCCTAGATGGGT
CCCTGAAGCAGCTGGGAGCCAGGCAAGTCTCCAAGCACTTTAGGAAAGTTCAGCCTGTGTTCCC
CTGGCAATGGGATAAAATGTAAAAAGAAATGGGTTTTAATCCTTTGTGCTCTACTTGCTGTTTGAT
CTAGGACAAGGTTCTTACTCTCTTTGAGTCTGAATTTTCTCTTATAACAGAGAGATGATCATACCC
CTTCTACTTACCTCCCAAGATGGTGTGAGGAAAACACAAGACATGCATGTGTTATAATTTCCAAAA
TAAGTACCCCAGTTGCTTACATGCTCTCATCTTCATCCTATATTTCATCCTATATTTCAACTTCCTT
CTTTGCGTCTCTGAGACTCACACTATTTCTGTGGCCACCCAATTGTGCTGTAAGTGGAGGGTCAT
ATATCATGCCTGTGCTATGGCATTGCTCCTCACTGCCATG (SEQ ID NO: 49)

100. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NDUFS2. In some

embodiments, the sequences from gene NDUFS2 comprise or consist of:
GGTGCCCAGGGGTCTGGCTTCTCCAAACTCTCCTCCTGAGCCCTCCTTTCCTGGATCTTTGTCTC
TCCCTGCCTGTGTCTTCTGCAGCTTCTCTGGCCTCTCCCTCTGTAGGACTCTGTCTGGGCCGCTT
CTGTGCCTGCCCTGTCTCTGCCTTCTTCCGCTGTGCCTTTGTCTCTGTCTCTTTCCTCCTCTGTCT
CTCTCGTGCATATGTGTCTGTGGGTCTCCCTGTGGGTTCTCCCCAGCCTCTCTCCGCGCCAGCT
CTTTTAAGCATGGTGAGCCTCTGCGATTGATTGGCTGATCTCTAAGCCACTCAGCTGAGCTCTGT
CGGTGGGACTCAGATGGGTGTATCATCGCTTCCCAAAAAAATGGGACTTGCCCAGGGGAGGGG
AATCTCTAGCAGCCGAATGGATAATAGGCACTGGGCCAGCTGATGACATAGCCTTTTCCCAAACC
CCACAATCAGCCCTCAGCTGTCTCTTTCCCTTTTTGGTGGGACAGA (SEQ ID NO: 50)

101. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NDUFS2. In some embodiments, the sequences from gene NDUFS2 comprise or consist of:
TAAGGAGGCATCAAGAGGGAAGAACAAATAAAAGAGGTAGCTTGACATGGCTCAGGATAGAACT
GAGCAGCTGGGAAGAGTAAAAAAGGCAGAACATTGGGGGAGGCAAGGAGACAGTGATCAGGGA
GTTGACTGCCCAAAGGTAGGATGATCCTGCTTGGAATGAACATAACAGAGGCGGCAGATGACAA
GGCAGGAGGGGTTAACGACTTTTCCTTTTATAGAAGGCGGATCCAGGGTGGCACCTCCTCTTTT
CTAACGTCCCTTCTCTCCCTCAGGATCCCCCTTCCTGAGTTACCACTACCCACCCCCTCCAAAGC
CCAGAACAGCCATTCCGCCTCCATTTCCCCCCAGGGTTCCCCCTCCCCACTTCCTGACTCCCCA
TTTCCCTGGCCCAGCTCCCAGTAGCTTCCCCCAGGCTTTTGGCCCTGCTCCTACCCACTCCCAA
CTGCCCTAAACCCTCCCCCAGCCTCAAGTCAGCCAGCCCCCAGCATAGGCA (SEQ ID NO: 51)

102. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DHX9. In some embodiments, the sequences from gene DHX9 comprise or consist of:
GATCAAAATGATATTTAGAGCATGGTTCCCCCTTCCTCCCACTGTTTTGTTCAATCCTGAATTCTC
AGATATTTCTGGTGTCAGCCTTTTTAAAACCGTCAGGTTGCAAAGGAGTGATACATTTGTTGATGA
TTTGTTTTCTTTCATATTTTGTCTTTCTGAACGCATTGGGCTTGGTAGCACTTGGTGACTTTAAGAA
CAATGAGATACCGAAGTGTGCCTGAAGCTCATCGTTGCAGACATTTTTTGTTATCAGTATCTTATC
ATAGATTTCTGATACAAAGCAGTGAAGAATTCAGGAAAAGACAATGTGGGAGGCACAGACAGTTG
GGGGAGCCAGGACAGCATTGCTCTTTGTATGTCCTTTTATTTAAAGGCATAACAGACAGCAACAC
CAGAGGTCTGTGTTCATACACACATGTGCTGCTGCTTAGGCTGAACTAAGCAATCACATGGGAAA
CTATTGTAAACTGATTTCTGGTGTCGCTGTTCCCCCTAG (SEQ ID NO: 52)

103. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DHX9. In some embodiments, the sequences from gene DHX9 comprise or consist of:
TCAGTTCACACGAGGTATAGGAAGGAGTCTAACATTTATTTTTTTCTTAAGCCTCACCTAGCCTTT
TATTCACACCACCAAGTCTAGGTTAGAATGTATCTGAGCAGTGAAAGGACCAGAATGCATAGTTA
TCAAAGGGCAGTTTTTCCCTTGCTAAAACCTAAATTCATTTTTTAGACTCTGCTAGCAGTTTTAGAT
ATAATGTTACAACATGTGTTTTGTTCTCCAGGACCTGATTTAAATAAATGTGATAAAAATAGGCTAA
GTTTTTTGTCATCCAGGGCTGCTTCCAACTGCAGGCAGATGTGAGAACTCTGCCTCAGGAGCCA
CTGATATGCACAAAGTGTATGTGCATGTGTGAGTTTGCGTATATTAGCTTAATAGATCGCAGTCAT
TAATGGGTGGCCTATGCAAAGGAATCTTAAAATAATTATAACCGTAATGTAAAACATTTGGGGCCT
ACTTTATTTCTTGGCTCCAAGCTAAGTGGAAAATTCCT (SEQ ID NO: 53)

104. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TMEM9. In some embodiments, the sequences from gene TMEM9 comprise or consist of:
GTGAGGTCTGATTATTTGCCCTGTTTAAACAGGCGTGAACGCGGTGCCCCAATCAGGTGGGACA
TTGGTCCAGTGGAACTTGGCTATTGGCTGAGCGGGGCACCCAGCTTGAAAGTCCTGAGGTTCTT
TTTTTCACTCTTCTTCACAGTCTAGGTAGGGCAGGGCTGAGATCAGAAGCCGGCAATGGCCAGG
CATTGTGGAATTAGGAAAAGCATTTGAGAGGGAGTCAGCAAGTCTGGGTTTGAGTCACACCTCCA
CCATCTGGTAGCCTTGGGATCACAGGTGATCTAGCCCAGCAGTTCTCAATCAGATGATTACAGCC
CCCCCAGGGGGCATTTAGAGGTGGGTGAAGGTGCTTTTGTGGTCCCAATAACAGGTGTATTACC

AACACTGTTACAGGGACCATGGATGCTAAATGTCCCACCCAAAATCCCAGAGCACCCACATTGAG
AAACATTGAATTTGCCTCATTAAATCTGTCTTTTCTGTAAAAACAAAA (SEQ ID NO: 54)

105. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TMEM9. In some embodiments, the sequences from gene TMEM9 comprise or consist of:
TGCACATCACCACACCCAGCTAATTTTTTAAATTTTTGGTAGAGACAGGGTCTCACTGTCTTGCCC
AGGCTTGTCTCGAACTCCTGGCCTCAAGCACTGCTCCAGCCTTGGCTTCCCGAAGTGCTGGGAT
TATAGGTGTGAGCTCCATGCCTGGCCTAATGTAGCCCTTTCTGTTCCAGTTTGTAGCATTTTTCTG
CTTGTCCTTTGAAGAGTCTATAAATAGCATTGGAAAATAATTCTCATATTTAAAGGCACTGCTGGG
TCCTCCATCAGGTTTCTCCTTTCGAGGCACATTTAGGGGGCGGTGGTCTTCACTGCTGTCCTTCC
TGCCTATTCCAGGGAGCCCTGTGCTGTAGCTCCTCTGTGTTCTCACCACTCAGGGAAAAAGCAG
CTGTCTGTCCTTCACTCCCAGCCAGTGCCCTGTGCAGACCCAACTCCTTTCATCCACCTGAGGCA
GCCCCTCCTGCAACTGTCATTCTCCTTCTCTGAACTTGCTCCA (SEQ ID NO: 55)

106. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GUK1. In some embodiments, the sequences from gene GUK1 comprise or consist of:
TAAGTACTTCCCTAAGGGGCGGGGAAGAACGAGTGAGACATGGGCGGGGCAGTCGCCTCATGA
CGTCAGTCTCGCGCGCGGGCGGAGGTGGGCCGGTGCGGCGCTGTCACGTAGGTTCAGTGGGC
GGAAGAGGTGGCCCCGGATGCTGCGGCGCCCGCTGGCCGGGCTGGCTGCGGCCGCCCTGGG
CCGGGCCCCACCGGACGGTGAGTACGACAAGCGCGATCGCGAGGGTGACTCGGGTCGAGGCG
GCAGCGGTCCCTGCGCTTTGCGGTCGCCCAGTCCACGCCGCCTCCGGATCTCCTCCTAGCCGA
GACGCCCTGTGCCGCATTCAACTGTGGGCCCTGAGAACGGGGGAGCTCTGGAGGGCGGACGG
GCTGGCAACGCAGCGGAGCCCGGGTCCCGGAGGGCGGGGCGCTCCTCAGGAGCTGGGCAGG
CCGGCAGTTATCGCAGTGTCGAGCTGCTCCCCGGGCGTATAGGAGCGCTCGGTGTCTTCCCGA
CA (SEQ ID NO: 56)

107. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PDIA6. In some embodiments, the sequences from gene PDIA6 comprise or consist of:
GTAAGTAGAGGAAACTCCCAGAGTAGGAGCCTCCATCTGTTCACAACAGCCAAAAGGTGAAAAC
AACCCAAGTGTCCACTAACAGACGGATGGATAAACAAAATGAGGTCTAGTCATATGATGGAATGT
GACTCTGCTTTAAGAAGGAAGGAAATTGACACATGCCACAGCATGAATGGACCTTGAAGACGTTA
GGCTAAGTAAAATCAATCACTCACAAAAGGACAGTACTATAGGATTCTACTTACATGAGATGTCTA
GAGTAGTTAAATTTATAAAGACAGAAAGTAGGATGACAGTTGCCAGGGGTCAGGGGGAGGGGGA
ATGAGGATTTGGCATTTAATGGGGATAGAGTTTCAGTTTGGGGTGATAAAAAGCTCTGGAGATGA
AGGTTGTACAACGATGTGAGCGCATTTAATGCCATGGAACTGTACACTTAAAAATGGTTAAAGGC
CAGGTATGGTGGCTCACGCCTATAATCCCAGCACTTTGGGAGGCT (SEQ ID NO: 57)

108. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PDIA6. In some embodiments, the sequences from gene PDIA6 comprise or consist of:
CTAACCAAGCAAGCCAACAGGATTACCATAGGGTGTTGGAGAAGGGAAAGTTGTAGGTAAGATTT
AAATAAAGCAGTGTTTAATAGGCTCAAAGCAAAACACAACTGTGTATAAAGGAATTACGGTCAGA
CCTGGGCTACGAAGTGGATGGAGGTTCCTCTTTCCTTGGAAATGATGAAGTTAAGACAAATGTGC
AATGTTGTGTCCAGAAGGCCCTGGGTTGGAAATCAAGGCAGCTTCTCAGTGTTAAGATGACCCA
GGTCCTTCAGACAAAAGAAGGATGTTCCATTCTTACTCTATTTATCTCAAATAGCACAGTTTATAA
CAGTCTGTGCTTTTTCAGGAATAAGATTTTTCAGCACTATAACTTTTCGTTGATTAACAAAAGCAGT
TTTAGCAGGTTCACAGATGTAAATACGTGGAGCCTGGCATATGGTGAACATTCGGTAATAGTTTC
CCCATCCCCACCTCACTCATCTCCTCTTCTCTCTCACTTTCA (SEQ ID NO: 58)

109. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SNX17. In some embodiments, the sequences from gene SNX17 comprise or consist of:
TCTCAAACTCCTGACCTCAGGTGATCCACCCACCTTGCCTCCCAAAATGCTGAGATTACAGGCAT

GAGGCCTGTAGAAACTGATTTCTTTGGGCCTCAGTTTCTACAACTGAAAGATGGATTCTTTGATCT
GCAAAGTCCCTTTAAGTCCTAAGATATTTTGTGAACAGACTTAGCTATTAACTGTGCACTTTATAAA
GCCCTTTCCTTCCTTTAAGGGTTCAGTGAACAGTCTTGCTAGGTGGTCAAGGGGCTCCCTATAGG
TCCTGGCCCAGTACAAATCCTCCCCGTACTGTGGAGGGGCTGACTTGTACACAGTAAAATAGAG
CACAACTTATATCTAGGACAGCTCCCTTGAGGTGCTACCGCTGTCAAAGGAATTGTTTCTCAGAT
GACCAGGGTAGACAGGGGAACAGGGACTGAGGGAAGGGAGGGGCACCCAAGAGAACATTATGA
GCATATGTAGATTGCCTCATCTCATTTTCTGTGTTTATGTGAAG (SEQ ID NO: 59)

110. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SNX17. In some embodiments, the sequences from gene SNX17 comprise or consist of:
TTCGGAAGGAGTATGGGGCCAATGTGCTTCCTGCATTCCCCCCAAAGAAGCTTTTCTCTCTGACT
CCTGCTGAGGTAGAACAGAGGAGAGAGCAGTTAGAGAAGTACATGCAAGCTGGTGAGTGGTTGC
AGGAAACTAGGTTGACTATATTGAGGACTATGGGGAGAGACTTAAAAACAGCTGGTTCTGTGGAA
GGGCCTGATTTAATTTCTAGATCTAGGAAGGCTCTTGTTTGATCTGTTATGCAGTTAGCAAAGTAA
ATAGTGTACGAGGATGTGTAACTCTGTGTACTAGCAAAACAATTTGGGCACTAACATCTATGAGA
AATACTAGTATAACACTAGTCTTAATATCAGTGGAGAGAACTTAATTTGTATCTGATGTGCTTTAGA
TTAACATCATTGTTATTTCCCTAGTTCTATAGACTGGACTCACCTAGATGGCAGCCAAGGGTGGG
GCAGGTGAAGAATTTATGCAAACAGTGAGTGAGGTGAGGCCA (SEQ ID NO: 60)

111. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DCTN1. In some embodiments, the sequences from gene DCTN1 comprise or consist of:
GTAGAGACCCACTCTGGCCGGGGGTTACCAGGCTGGTGGGAGTTGGAGCTAAGGGAGCAGGGT
GGAGGGGGAAGCCAGGACTGGAGATGGGTGATGGGGGGATGAGGAAAGGGGAAGAGTAGGAA
TGGAGCCCAATTTTCAACCCTTTCCACTTGGGGCTGATGAGATTTTTTATGGTCCCCACAGGAGC
CATCCCTGGGCAGGCTCCAGGGTCTGTGCCAGGCCCAGGGCTGGTGAAGGACTCACCACTGCT
GCTTCAGCAGATCTCTGCCATGAGGCTGCACATCTCCCAGCTCCAGCATGAGAACAGCATCCTC
AAGGTGAGGGAGCCACGGGGAGGACTGGGATGGGAGATGGAGCATATTTGCCCCATTGATGAT
AGATGACAGGGGCCTCCTAGCACCTCTTACCACTATCCTTCTTTTTTCATCCACAGGGAGCCCAG
ATGAAGGCATCCTTGGCATCCCTGCCCCCTCTGCATGTTGCAAAGCTATCCCAT (SEQ ID NO: 61)

112. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DCTN1. In some embodiments, the sequences from gene DCTN1 comprise or consist of:
AACATAGTTCTGAATTTATGAAACTTCCCACCAAAAAAGAAGGTCTTTTGCCTCAGAGCAATGGG
GAATCCTTAGGAGCAAGGGAGTGTGTTTGCATCCCCAACTTAAGCTTTGCTGCTGGTGAGCACTA
AGGGTGCAGACATATTGGGGTCTCTGGAGCATTCTCCGTGCCCTTCTTGGAGATGGCATCTGAG
ACAGGGAGGCAGGAACAGCCTCATGTTCCAAGTACTTTGTACAGTGCACACTCTCTTTGCCACTG
TTCTTCACACATTGTACCCTGTCTTGTGGCCTCACTCCTGTTTGGTGTCTTTCTTTAACACTTATCT
GCTCGTCCCCAAAGATAGGTGGCAGAGAGTCTTGTTAGAGAAAGTATGATGATTAGGAAAAGGG
TTTTCCTGCAGGTTGTGTCCAGGATTCCTCTGGTGTGTCCCCGTAACCCCCAAATCACCTAACTC
CTCTCTCCTCTTTTCCTGCTCCCCCATGGGCTATCCCGAGCACA (SEQ ID NO: 62)

113. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene WDR54. In some embodiments, the sequences from gene WDR54 comprise or consist of:
GCTCGCCCCGCCCACAGTTGCCCCGGCAACCGCGCCGCCCGCGGCACGTTCCGGCCGCTCAC
CCCGCCCAAGGGCCGTGCGTACGTGCGTCGTCTCTATGGTGGCGGCGGATTTGGAGGGACCCT
ACGAACCAGGAGTCAGGCGAGCCGATCTGGGGCTGCAGGTGTTACCTCTGATCTAGGCCGGGG
GCTTCAGGGATCCGAGCCGAGGGAGAAAGCCTTGGGGGCTTCATCACACTTATTTGGCTCGCG
GGCTTGGGGCCATCGGGTGGTCCTGTGTCATCCCCATTCCTCCTCTGCGATTCCCCCGTCGCCC
CAAAACAGCCCTGGGACTCCCCTGTCTTGCTCCTCGAGACCCTCCCCCATCACCGTCCTCTGGG
CACCCCATCCTATGACCCAGTCTCAGGCATCTTCCGAAATGCTCGATGATAGCCGCCCTCGGGC

ATCTCCGCTGCGTCTGTTTGTAGCGCGCCTGGTGATTCGGCTGCACCCCCACACAG (SEQ ID NO: 63)

114. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene WDR54. In some embodiments, the sequences from gene WDR54 comprise or consist of:
TGAGGCATGGAGCTGGGAGTGATGTTGCTGAACCCAGTCCTACCCCCAGCCTTTTCTCTCCAAA
CCTTCAGGAGCAGGCATGTCCTAACCTCAGAATCTCCCCAGGCATGTCCTAACCTCAGAATCTCC
CCTCTCCTGCCGGGCGCGGTGGCTCACGCCTGTAATCCCAACACTTTGGGAGGCTGAGACGGG
CACTTGAGGCCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCTCTTCTCTACTAAGAA
TACAAAAAAAAATTAACCGGGTGTGGTGGCGTGCACCTGTAATCCCAGCTACTTGGGTGGCTGAG
GCAGGAGAATCGCTTGAACCCAGGAGGCTGAGGTTGCAGTGAGCCGAGATGGCGCCACTGCAC
TCCAGCCTGGGCCACAGAGCAAGACTCCGTCCCCCAAAAAAAAAAAAAAAAACAAACAAACTCATC
TTCCCTGCTTTGATTTTCTCCCTACACTGATGCACCTCCCTCCAGGTCCAC (SEQ ID NO: 64)

115. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAPG. In some embodiments, the sequences from gene CAPG comprise or consist of:
GTAGGAGGAAGAAAGGAAAGTAGGAGTGTTGAAAGGTGAAGGTGGCAGGGTGGCTGCCAGCGC
GGCTGGCTGGTACCCTCCTGGGTGGGCAGGCGAGGGCTGGCTGTGGTGGCCTGGGAACAGAG
ACCCACATTTCTGGATACCACATTGTGCCAGGGTGGAGTTCCCCCAGCCTGCTGTCCTGCCAGC
CTTATGCCAGGCTCCAGGCACCTGATCTGATGGCAGCTGTGAAGCTGCCCGGGAGGATGGGTG
GGCTGTGCCCATGCTGCACATGGAGGAACTCTTGGGTCAGGGCTTGTCCCAGCTGTGCCAGAC
CTCCTGACGGAGGCCACCACACTGCTCCTGAAGGCCCTCAGCCAGACTGGAGGTGAAATCAGAT
TAGAAGCTGCCTGTCCCCAAGACAGGACTGTGGTGTGATGCTATTTGGGTGGGAGTGGCTTGGG
GAGGGGGCAGGGCAGTCCTAGCCATTTGAATTCAAATGCAAGTGGCACATTTGATT (SEQ ID NO: 65)

116. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAPG. In some embodiments, the sequences from gene CAPG comprise or consist of:
AGAATGTTTTATGGCCTCAGCCATTCCCTGAGAACTGAGCTTAGCCAGGTGCAGTAGCCCACGC
CTGTAATCCCAGCACTTTGGGAGGCCAAAGTGGGAGGATTGCTTCAGTTCAGGAGTTCTAGACC
AGCCTGAGTAGCAAGACTCTGTCTCCAGAAAAAATAAAAAAATTAGTCGGGCATGTTGGTGCAGG
CCTGTGGTGTCAGCTGCTCAGGAGGCTGAGGCAGGAGGATCGCTTGAGCCCAGGAGTTCAAGG
CTGCGGTTAGCGGTGATAATGCCACGGCACTCCAGCTTGCGTGACAGTGAACCCTGTCTCAGGA
AAAAAAAAAAAACAAAAAAAACCAAAAAACTGATCTTAAAAAAAATCAAATACTTGCATTCAGGGC
AAGGAGAAAGACAAACTGAGGGAGGAGGAAAAAGTAATGTGAAGCCAGTGACCCTGCCCAGAAA
ATGTGACTAACCCAGCAGCGGTGGGGGCTGTGCCGCGCCTGCCCCAGGC (SEQ ID NO: 66)

117. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DBI. In some embodiments, the sequences from gene DBI comprise or consist of:
CAGCAAAACTAAGCACCCTACTTCCGTTGTCCCCACCTGTTCCCGGCGTCCCCTTCGGCTACTC
CCGGCGTTTGCGCAAGCGGTCCCACGTGGGCTCGGGCGGGGCTAGCGCCGCGGCGGGGGCT
GGGCACGCCCCTAGCGCATAGCTGGCTTCTGATTGGCTTTCCGGTGCTCGCCCGAGCAGGGTT
GGGGCGAGTGGACCGCGCCTCTAAAGGCGCTTGCCAGTGCAATCTGGGCGATCGCTTCCTGGT
CCTCGCCTCCTCCGCTGTCTCCCTGGAGTTCTTGCAAGTCGGCCAGGATGTCTCAGGTACAGCG
CGTGCACAGCCAGGCTGCGAAGGTGCAGCGGGCGGGAGGCCCGTTGGGGGCTCAGCCGGCTG
CCAGAAGCTCTCGGGCTCTTTCCTTCCGTGCCCCTCACTTGCTCATGGGCCCATGCCTAGCCCT
GATTCGTTGGACAGAGCCTTGTGAGCGGGATTTTCCGTTTGGGGATTTCTAAATCTGC (SEQ ID NO: 67)

118. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DBI. In some embodiments, the sequences from gene DBI comprise or consist of:

ACAGGGCAGGACGTCGCGGCGGAGTGGGGAAGCGAGGAGTCCGTGGCCGAGAGCTTGGAGGT
CAGGGGAAGTACGGGGCCGGCTGCTCAGAGTGCGGGACGAGGAGAATCGCGGCCCGGGGAGA
GGTGACCCAGGGGCCCCTCCCTTCTCTCCAGTGTAGACCCTTGTCTGAGACCGAGCTATGTGGG
GCGACCTCTGGCTCCTCCCGCCTGCCTCTGCCAATCCGGGCACTGGGACAGAGGTCGGTGTTG
AACGCGCGGGCCCCAGGGGGAGGGAGGGGACCAACGGGCTCCGGCGCTGACACCGCGGCAC
TCATGCCCTGTCCCCTTTCAGCTGTTTCCAGCATACTGTGCCCCGTCTGTCCTCAGGCCAGGGC
TTCGCTGCAGCCCCGGCCACTCCCTAGTGCCTGGCCCGGTGGTGGCCAGGCAGTTGGCCGCG
CTGCTTCTCCCGCAGAGGGGACCCCCACTGGGGGCGAAGGCTTGGCCTGCCCTCTTCACTG
(SEQ ID NO: 68)

119. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BIN1. In some embodiments, the sequences from gene BIN1 comprise or consist of:
GTAAGTGCCCACCTCCAGCCCCTGTCTGGCTTGTCCCCAGTCTCTAGGGGTGCAGCATGGAAGG
AGAGCCCCGAGGAGGGGTTGCAGGAGGGACCAGGCCACCATGGATGTGAGGGTGAGGACAGG
GTCCTGAGCTAGGCTGCCCCAGCACGGGCTTGTCACCAAGGCTGCCAGGGATGAGTGAGCGCA
GCTGGGCGCATCAGCCCCTCCTGCTTGCCCACCCCAGCCCAGCCTCCCAGCGCAGGAGGAGCA
TTTAGAGCACCTACTGGTTTATGCCAGGCACTTTCCAGAATCTTCTCATTTAATCTTCGTCATCAC
CTTTACAGCCAGACACTTCCTCCTTTTACAGATGAGGAGATGGGGGCTAGGAGGGTTGAGTAAC
TTGGTTCCAGCACTCAGAAGTGGCCAAGTCTGAGTGTCGGCCCAGGTCAGCCCAGCTCTGGGG
TTCCTGCAGGGCCTGCCGTGGTGCCCGTGCTGCGGTGCCCGTGCTGCGGTGCCC (SEQ ID NO: 69)

120. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BIN1. In some embodiments, the sequences from gene BIN1 comprise or consist of:
AGAGGCTCAGGGAAGGCTCAGTACTTGCCCAAGAACTGGTCATGGTAGAGCCAGAATTCCAACA
GGGTCTCCTGGGCTCTGTCCCTGAGACCCCCTGATACAGGCAGAGATGCTGGGAGGGGCAGGC
GGGTGTGCAGGCGCCCTTGGGGCATGCGCTGGCAGCCCAGGCTCCTGGGAGCTCTGGAGGCT
CCACCGCAGGATTTCCCTCTGGAGGAAGCCAGAAAGAGCCAGCCTGGTGCGAGCTGGTAGGGC
CATTTTGACAAGTGGATTTCGGTAGGTGCTGAGCTTGGGCAGCACAGTCACACCTGCCTGTCCC
TTTGACAGTGGTAGGAGAGAGGATGTGGGAGGCGGGTGGCTGGCCGGGCTCCGCTGGTACCC
ACCCTGCCCCCACCAACCCCAGCCGCTGGTGACATTTTCTCTTGTCTTGTGATCCTGCCCATTGC
CTTTCCACCCCGGCCTCCCCGCCCCCTCCCTGTTCTCTCCTCGTGGCCTGTTACCA (SEQ ID NO: 70)

121. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KIF5C. In some embodiments, the sequences from gene KIF5C comprise or consist of:
ACTGCTTTCTTTTCTCTCTGGTAGGTCAGCAAAACTGGTGCCGAGGGAGCTGTTCTTGACGAAGC
TAAAAATATCAATAAGTCTTTGTCTGCTCTTGGAAATGTGATCTCTGCTTTGGCAGAAGGGACAGT
AAGTGATCCTGCCCCCATCTATTAAGTAATATTATGAGAAACCACCTTTTGGGGCCTCATAGTCCC
TTTGCCACACACCCCAAAGGCTGGTTTGTTTTTCTGTTTGGAAGAGGACAGAGGGAATCCTGGCT
ATGGATGCCTGCTTGCTGGGAGTTCCCATCTACTAAAAAGTATGAATGGTGATGCTAATTTCCTAT
GACATAGGTCAAAGAATGGGCATTCTAAACTTTGGCAAGATCCAAAGACCCAGCCACAAATTCTT
GTTTTACTCGGTTTCTAAGCTCAGTGTCTTCATCCCTGACTTGCTTGCCTCTGTGTTTTTCTCAGA
ATGGGCTGTCAAAACCAATACTTTTTCTTTTCCTAAATAG (SEQ ID NO: 71)

122. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KIF5C. In some embodiments, the sequences from gene KIF5C comprise or consist of:
TACGTGTGGTCTCTCAGGACCCATCCTCTGTGCTAGGTCTTGGGTCTTAAGAGTGAATGGCAAG
GCTGGGTGCAATGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGTGGATTGC
CTGAGGTCAGGAGTTTGAGACCAGCCTGGCCCACATGGTGAAACCCTGTCTCTACTAAAAATACA
AAAATTAGCCGGCCGTGGTGGCATGCGCCTGTGGTCCCAGCTACTTGGGAGGCTGAGTCAGGA
GAATTGCTTGAACTCAGGAGGTGGAGGTTGCAGTGAGCCAAGATCATACCACTGCACTCCAGCC

TGGGCGACAGAGCGAGACTGTCTCAAAAAAAAAAAAAAAGAATAGTGAGTGGCAAGGGGCTATT
GTCAGAGAATCACAAAGTAAGGGACAAACAGCCTTTTACTAAATTACATCTAGCAGGTGATATGTA
AACTTGAGGCATCACTTATTGAAGCCAAAGCAATAATTATATTTTAAAAT (SEQ ID NO: 72)

123. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DYNC1I2. In some embodiments, the sequences from gene DYNC1I2 comprise or consist of:
AGCCCACTGTTTTTACTGCAGCGTGTATAAACATTTAGACATAATTTTAAGGTTCAATGAATGTGA
CTATCCTAAAAAACACAGACTTTTAATTAAATACTTATTTCTTTAGTTCCTATATAACTAGGAACTTG
CCTTCTTTTCAGTAGACTGTTAAAAGAAGGGCTTTCAGCTCAACATAAACTGTATTAGTCACTTAA
TATCATACACTGAAAAATTATTTTGAAAAGATACTTGGGATTGGGGACATTTATGATAAAATTTAAC
CAGAAGATGGCAGTGATGATCCTCCTATACTCCCTGCAACGGTAATCAAAAAGTTTTACAAATGT
CATAGCATGAAATGTGCACGTTCAGCTGTTGTTATATAATGTTAAAAGTTGAGGATCTAGGGGAAA
GCACTTGCTGTTTATTTTATATACTATGAAAAATGTGTATTTTTCTATAAGAAGGGATTAAGAATAT
TTTGGGTGTCTGTATCTTTGTCTGTACACTTCAG (SEQ ID NO: 73)

124. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DYNC1I2. In some embodiments, the sequences from gene DYNC1I2 comprise or consist of:
TAAGGAAGTTCCCATAAGTCTTGCCTTGTTTATTTGCATGCATCACTTTATGTTATGCATAATGTCT
AGAAGGCATGCTGTTTTATTGCCTGTTTGCATTTTTCACCCAAATTGCTGGAAACTAATGAACATT
TTAAAGGAGCCATTCCTTTAGCTGCAGTCATTTCTCTAAATTGATATCTTTTTTTGGGGGGGAGGC
AGTGAAATCATTTTAAACATTACTTTTTGAAAGAAAAAATTATTAGACAAAAGTTAATATTTTAAAAT
AAATCTTGAGAAACTAGAGATTAAATAACTTAATGAAACATATTTCAGAGTTGAATTTTGGCAGCAA
TTGTAAATAATATTTATAATCTGGTGATATTAAAAGTGAAAAGTTACAAGGGGGAGAAGGAATGCT
CTCCTTTGAAAATTAGTGGCCACATTTGGTGATGGATGAGATGAAGATGCATCCTTCCATAATCTT
GCCTTTTTAAAAAAATTATAAAGCTCAAATGCA (SEQ ID NO: 74)

125. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FN1. In some embodiments, the sequences from gene FN1 comprise or consist of:
GGGGATTTTGGTTTTGGTTTTGGGTTTTGTTTTTTTGCGGTGGGGGGGCTGGTATTTGGAAGAAT
TTAGCTCTTTATGTTACAGAAATCTTTTTTGCAAGGACTTAGAAATGATAATGCTTAAGATTGTTCT
TGCCCAATGTGGGAAGAGAATCTAAGGTTTTTATATGTCTTGCAACCTCATCAAAGGAAAATTACT
GGCATCATTTTCATAATTTGAAAAAAAAAGCCAAATTAATATATTTCTTTTTTGATTCACTTTTTAAG
TGATCATTTTTAAAACTTTACTTTTGACCCACTGAATTTATTTAGATAGAAGGAAAAGAGATGATGG
GAGGGAAGTTTAGATAAAGGATGGAAGTTGGTTTTATTTAAACAATAGCCCTGTGATTTCCTAATG
AGAAGTGACTAGAAATTGAAGAAACCAAATAAGGAGGATATTGGTCAATTTAGCTTTAGTTTCTCT
TACTCTCTCAAGCCTGCCCTGTTTAACTCCAAAG (SEQ ID NO: 75)

126. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FN1. In some embodiments, the sequences from gene FN1 comprise or consist of:
ATACAATAAGTAAATGAAGTCTGTGTTCTGTATTACATTATTTTTGTAGGATCGTTTCACAATTTTC
TCACAATTCTTACTTTGATAGTAGAGAAAATAAAAGCAAGCCAAGAGACTTTTTTTTAAAAATATAT
TTTATTTGCTATAAACAACTATGATTTGCATTTCTCATGTGAAGAATAATAATTATCGGCTAAAAAT
GGATTTGCTGCATTGATTTTCAACGTAAATATTTAAAAGATTAATGCCAGATAATTTTATTATACTC
ACATTTAACGACAAGCAAAGCTGTTTATAATGATGACTGTCCATGTACACAGTTTTAAGTTGAAGT
GAGTGAATATTCAAGATAATTAAATGCTACATTTTCATTTTCAGGCTCAAGTGGTCCTGTCGAAGT
ATTTATCACTGAGACTCCGAGTCAGCCCAACTCCCACCCCATCCAGTGGAATGCACCACAGCCAT
CTCACATTTCCAAGTACATTCTCAGGTGGAGACC (SEQ ID NO: 76)

127. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SERPINE2. In some embodiments, the sequences from gene SERPINE2 comprise or consist of:
GTGAGTGGCCGCAGTATGTCATTTGATTGCATAGTTTGTGAATGAAGCATGAGTTAGACTCCAGG

GTTCAAAGTGGTGTCTGCAAGTCCAATTCAATGGCCTGTGGGTTGAGAAACTCCTGGACCAAGG
AAGCTCTATTCAGTCTCCCTCCTTCCCCTTCAATCTGCCATTGCTCACTGTGCTCCTGGGAGGTG
TTTCTCCTGTAGTTTGGGCAACAGAACAGAATCCAGCCCCTCCACTGTCTCCTCTCCTTGCCATA
TCTGGTCTCCAGCATCCTTGCCCACAGGCTCTTGTTGATTTTGAAGGTTTTCTTGCTCATTCCTTC
CTGCTTTTGCATCTGCCTCTCCCTTTACCTGGAATGTCCTCCTCATCCTTCCAGGTTGATTGATCT
CTTTGCCTTCCATGCCTCTTGCTTCTGCCATTGCCAAAGACATAGGTACCCTGTTGTCCGTTATGA
TTGGCACATGATTACAACTTTTACACCCCCCCGATTACAGCC (SEQ ID NO: 77)

128. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SERPINE2. In some embodiments, the sequences from gene SERPINE2 comprise or consist of:
GCTTCAGTGGTTAGACTTTAACCCCACTCCCTCCTTTTCTTAAGAAATAGGCCCCTGAGAGAACA
GAAGACTTAGTTTCTTGCTACTCATAGCTATCCTGTTTATACTGTTCTGTTATTTTTATTTTTGAGA
CAGGGTCTTGCTTAGTCACCCAGGCTGTATGCAGGGGCCCGATCATGGCTTACTGCAGCCTCGA
CTTCCCAGGCTCCAGCGATCCTCCCACCTCAGCCTCCTCAAGTAGTTGGTATCACAGGCGTGCC
ACCACACCCAGTTAATTTTGTATTTTTGGTAGAGACAGGGTTTTGTCATATTACCCAGGTTGTTCT
TAAACTCCTGAGCTCAAGCAATCCACCCACCTCAGCCTCTCAAATTGCTGGGATTACAGGTGTGA
GCCACTGCACCTGGCCTATACTGTTCTTACTTGCTGCAACATAAAAGATTTTAAAAACTTTTCTAG
ATTCTTATGGAAGTATTGCTGTATCTTCTGATTTCTCTTTTA (SEQ ID NO: 78)

129. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PPP1R7. In some embodiments, the sequences from gene PPP1R7 comprise or consist of:
GCCGGCTGCGGTGAAGAGAGCGCAGGGTCCCGAGGCGACCCGAGGCGCGGGGCCTCGGCGC
CCACCGGGCAGGCTACACTGAAGGGCACCCCGAAGACGCTGGGGGCGCGGGGCCCAGGGCCA
ACGGCCGCAACCCCGCCGCGATTTGGGCACGGAGAGGACGCGGGCTCGGCGGTGCGCGAAGG
GCGACGGGCGCAGGGGCGGGAGACCCGGGGTCGGGCTGGTCTAAGAGTCGGGCGGCGGATC
CTCCTGGGCCAGGGGCGCGGAGCCGCGCAGGCCCCACAGCCGCCCTGGGGAGATGGCGGAG
CCCGGCCCGCTCTCCCGAGCGCAGGTATCTCACCTGGATCAGGCGAGGGTCACGCCAAGCCGG
CTACACACCACGGAAAGGAGCCCTTCCGCGCTTTTATCCCACCGACCAATCGCACAGCGACTAG
CACCGATTGACAAGCTCCACGGACCAGCCACTTGCGCGTATGGGCGGGACTAAGCTAGCCAGA
GT (SEQ ID NO: 79)

130. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PPP1R7. In some embodiments, the sequences from gene PPP1R7 comprise or consist of:
GCCCCCGGGCCGGGCAGATGCGGTTTCCTCCCGACTCGCGATCAAAATGGGTGAGTAGCGCAG
AGCTCGCCTCTTGGAGGCCTCTTTCTGAAGGCGGAGGACGCGGGGCGGCTCGTTCATGGGCCG
GGTGGCTCCGCAGGGTAGACGAAGGCTGCAGCGTCCGCACTGGGCTGGGAACGACTTGCAAG
GGGAGCCCAGCTGGCGCCCCGGAGCCAGCCAGCTGGCTAGCGGCCCCACCAGCGCAAGTGCC
CCGCACCTGCCCGCCTGCTCCGAGCGTCAAGAGAAGGCGGCATTTCGCATGGGTAAAATCCGC
GCGGGGACGCCGGGAGAATGTTGTTGCTCTTGCCGTTCGGCCCATTGTACAGACGCAGCCAGC
GAGGCTCGCAGAGGTCAGGGATGCACGTAGGACTGGCCCGCACCTTGCAGCCACGGAAAGATC
CGCCTGGCCCGCGGCCCCTCCACGCCTCCGAGGTCGAGACAGTGACATAAGTCAACTCTC
(SEQ ID NO: 80)

131. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STK25. In some embodiments, the sequences from gene STK25 comprise or consist of:
GTAAGGAAACTGAGGCAGGAGAGGCGAAGCAACTCGCCCAAGGAATGGGCTGTGCCGGTAGCT
TCTCCAAGGCCTGGTGCGCCCTGGCCTGTGCGCGTGATCCCGGGCGGGGTCTCAGTACGAACA
GGGGCTTCGCGATGTGGCCAGCGCGGGCTTATCTCCGTGCCGTGACGACAAGGCTAGAAGCCT
GGGCGGCCGCGGTGGATCCTCGTGGCGAGGCGGGGAGGGCGCCGGGCCTCACTGGCCCGCT
CGAACCAGGGCTGCGCAGGGCAGAGCCCAAGGGAGAGGGCCGCGCGGCCGCCGTAACGTCG
GAGACGACGCCTGGCAGGCGCCAGCAAACGCAGAAGACCCGCGAGGGCGAGGCAGGGAGGG
CGCGACGCGACAACGACCACGTGCCCCGCCCGCCCAGGCGCGCGGCCTGCCGGGAGACGCA

GTCCAAACCTTTCGGGAGCAGGACTAGGGGTCCCAGAGAGCCTCGCGGCGCGCATGCGAGCCC
CGG (SEQ ID NO: 81)

132. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STK25. In some embodiments, the sequences from gene STK25 comprise or consist of:
TTTCACCATGTTGGCTAGGCTGGCCCCGAACTCCCAACCTCAAGTGATCTGCCTGCCTCAGCCT
CCCAAAGTGCTGGGATTACAGGTGTGAGCCACTGCTCCCAGCCTCTTCTAGGCACTTCGGAAAA
GTGCAGCGATTACTGACCACACGAAGGCCAGAGATGCAGCAGGCATCTATTTACATGCATTAAAT
ACATATATTATCTTCATGCATTTACACATTCATTCAACAAACATTACTGAGCGCCTGCCGTGGGCT
GGCATGGTCCTGGGCACAGCTCCGCTTGCAGGAAGCCCACTTTCTCCTGGGGAGTCAAAGCAC
AAACAAAGCCAAGTCAGTACGTAAAGAAGCAGGGGTGATGAGAGATGCGGACCCAGGAGGGGT
TCAAGGGGCTGTCCTGGACGCATGACAGGGAAGCATAGCTTCTTAAAGGACTCGGCAGTGCACC
ATGAGAAGACACGCACCAGGGAGCAGAGAGAAACGCCAGAACCCTCTCGA (SEQ ID NO: 82)

133. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MOBP. In some embodiments, the sequences from gene MOBP comprise or consist of:
GTTCAATGGTATGTCTGTGAGATCAAAATGTGTTGATGTATGTCAGCAGGTCAGCAGTTTGTTCTT
TTTCCTTGTGTAGTATTTTATTGCATGAATGATGATTGTTTTAATAATAAATAATAATAAATTTTTTAT
TTTGCTTTTTAGAGAAAAGGCTTTTCCTAACTCTAGAATATTATTTAGTCAAGGATATGTTTGGTTT
TAAATGTTTTCCTATCTTACATGGGTCTCTAAAACATAAGGAAAACAAGAGCCCATGTTTCTTTTTC
TCCTTAAAAACACGATTTTTAAAAATACACAAATGAAAATTAATGAACTGTTAGTTGAGTTCCTTTC
CACAGAGTTGGGGGGAAGTTGGTCTTCCAGGGTGTTGCTCTGTAGGGCCCCCCTGAATGTTACC
TTGGATTATGGGAGTAGCAGGGGGCTTCCAGAGTAGAGGGCTCCCTTTCCTGATGTGCGTTTAT
GTCTCCTCCTGTCTCCTTGCATCGGCGATTTCCAG (SEQ ID NO: 83)

134. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MOBP. In some embodiments, the sequences from gene MOBP comprise or consist of:
TAAGCGGCCGCCCAGCCCCGCGGCACCAGTTGGGCACAGCGCGTGGTCTCGGCTCCCAGCAC
GCCCCTCCCGCTCCGCACCCCACTCTTCCCCCTAGTCGGCTCCGGGTTAGGCTCCGACACCGG
AAGGCACTCCAGGGAGACTGGAAGGTGGGTGGGGGAGCAGGGCCTTCCTACCTGTTTCCAGCT
CCTGCCAGCGTCGCTTAAGCAGCAGAGGAGAGCCCTGGCTCCCGCCTCCAGCTTCTTTTGGCC
CTCTCAGAACCAGCCGCCGTGCCAAGTCCCCTCAGAGGCCCAAGCAACAGCCAGCTGCGCCCC
CCGCGGTGGTCAGAGCGCCAGCCAAGCCACGGTCCCCTCCGAGGTCTGAGCGTCAGCCACGG
TCCCCTCCGAGGTCTGAGCGTCAGCCACGGTCCCCTCCGAGGTCTGAGCGTCAGCCACGGTCC
CCTCCGAGGTCTGAGCGTCAGCCACGTCCCCGCCCAGAGGTCCGACCACCGCCAGCCAAG
(SEQ ID NO: 84)

135. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HHATL. In some embodiments, the sequences from gene HHATL comprise or consist of:
GCAGGGACTGGGATGTGACAGGCTGGAGCTCAGGGACTTGTTGGGGGAATGGGGGTCAGTGAC
AGGCTGGAGGCTTAATGCGAGGATGGAGGCTTGGCTCTAGGGGCAGCACCTGGGGTGGTCATG
GGATCTCAGGGAGGGGAGTGGGAGTCAGAGAAAGGGTCTTAGAGAAGCTGGGGCTTTGTGAGG
AGCTAAGGGAGACTCACTGATCGAGGTGGGGACCCTGCAGGCAGAAACCTGACTGTAGTGATA
GAGGTGGGGTTTCTCCGCACGCAGGTCATGGGGGCCTTGGCAGGAGCGGTTTTGGCAGAGGGT
GGGGCCGGTGCCTCTGGAAGGTATGAAGATGTAAATGAAGGTGAGGGAGGCAGGCTGCGAGTG
AGGGCTCTGCGGGCAAGAGCCTTGATGGGTGGGGTGGGGGCAAGAGCAGCAGCTGGGATGGG
GCACTGGTGTTCGGTGGCCTGTGAACTGTGGGGGGCACAGGGGCAGGCAGAGTGATGGT
(SEQ ID NO: 85)

136. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HHATL. In some embodiments, the sequences from gene HHATL comprise or consist of:

ACCTTGACAGGTCCCTGCCCCTATCTGGCCCATGACCCCTCCATCTGTACGAGGAGACCGTCGG
CTGCTGGGGGGCCCAGGGGAGATGGCTACAGGGCTGGGGATGAAGATTTAGGGGAGGATCAA
GGGTGGGCAAAAGGGCCACATCAGCCACCTCTTGGCCCCGTCAGCCCAAGAGTTGCCTGGACA
TGTTCCCTGCTTCCTCCCTTTAATTTGGGTCCTATGTCTGTATCCATGGAGTCCTTGGGAAGCCC
CTGAGCCAGGCTGAAGCGGGATAGGAAGGGTAAAGGTGCTAGCTGAGCCGTAGTACGGCCCAG
CAGTTCTCCAGGGGACAAGCTAGGCCCCCGCTGGAGGGAGTGGTGAGACTCAGCCGGGGCCT
GATTCTGGTCAGCACCTTGGACAGCAGCCAGTGCCCTCCCTGGCCCCGCCTGGCCCCGCCTGG
CCCCACATCCGCTACTCCTGGGCACCTCCTCAAATAGCACAGCCTCCAGCTGGTGCC (SEQ ID NO: 86)

137. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SHISA5. In some embodiments, the sequences from gene SHISA5 comprise or consist of:
GAGGAGCAGCCGCGCCCTACCCCGCCAGCCAGCCTCCTTACAACCCGGCCTACATGGATGCCC
CGAAGGCGGCCCTCTGAGCATTCCCTGGCCTCTCTGGCTGCCACTTGGTTATGTTGTGTGTGTG
CGTGAGTGGTGTGCAGGCGCGGTTCCTTACGCCCCATGTGTGCTGTGTGTGTCCAGGCACGGT
TCCTTACGCCCCATGTGTGCTGTGTGTGTCCTGCCTGTATATGTGGCTTCCTCTGATGCTGACAA
GGTGGGGAACAATCCTTGCCAGAGTGGGCTGGGACCAGACTTTGTTCTCTTCCTCACCTGAAAT
TATGCTTCCTAAAATCTCAAGCCAAACTCAAAGAATGGGGTGGTGGGGGGCACCCTGTGAGGTG
GCCCCTGAGAGGTGGGGGCCTCTCCAGGGCACATCTGGAGTTCTTCTCCAGCTTACCCTAGGGT
GACCAAGTAGGGCCTGTCACACCAGGGTGGCGCAGCTTTCTGTGTGATGCAG (SEQ ID NO: 87)

138. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SHISA5. In some embodiments, the sequences from gene SHISA5 comprise or consist of:
GTCTAGCTCTTTGGCAGGTTCGGAGCGACCTTGGCCGTTGGCCTGACCATCTTTGTGCTGTCTG
TCGTCACTATCATCATCTGCTTCACCTGCTCCTGCTGCTGCCTTTACAAGACGTGCCGCCGACCA
CGTCGTAAGCGTGCCCACCCTGCCCCACTGTGACCCCCTGGGGTGGTAAGGGAAGCTGACCAG
GCCCTGCTTTGGCTAAGCTGGAGGGATGGGTGGCAAGCCTGGCTCTCAAGACCTGGGGAGATG
GAGGAGGGTCCTGACTGGAATTCTCTTTGCAGCGGTTGTCACCACCACCACATCCACCACTGTG
GTGCATGCCCCTTATCCTCAGCCTCCAAGTGTGCCGCCCAGCTACCCTGGACCAAGCTACCAGG
GCTACCACACCATGCCGCCTCAGCCAGGGATGCCAGCAGCACCCTACCCAATGCAGTACCCAC
CACCTTACCCAGCCCAGCCCATGGGCCCACCGGCCTACCACGAGACCCTGGCT (SEQ ID NO: 88)

139. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GNAI2. In some embodiments, the sequences from gene GNAI2 comprise or consist of:
ACACAGGATTAGCCAGCGACCTAATCCGCCAAGCTATGCAAAAGGAGGCCTCTGCTGACCCCTG
GCGGTCACCAGCCGGAGTCTGGCTGCGCGGTGACCCACCACACGTTGCCCAGCCGTGTGGCTG
GGATGGTCGGTACCCATGGCCGTGCGGTCGAGCCTTGATGCTCCAGGACAGTCCTGGAAGGCT
TCCTGGCAGATCCGTGGGAAGAAAGCCGACAGAAGGGCGGGAGGCGGGAGGGGAAAGGTCCC
CCGGGATGGGTAGGGCCTCAACGCTGGGCATCGGCGCAGGTGTGTACTGCAGGGAGCCAGCC
AGACCCCCCACGGACTGCCTGACCTTGGGGGAAGCCCGGAGTAGAGGAAGAGGCCGGACCCC
CAGACCCGCCATTGACTATGTCCGCCATTGACTATGTGTTCTGAGAGAAATTTTTTTTTTTTTTTT
GAGACTGAGTCTCACTCTTTCGCCCAGGCCGGAGTGCAGTGGCGCGATCTCGGCTC (SEQ ID NO: 89)

140. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GNAI2. In some embodiments, the sequences from gene GNAI2 comprise or consist of:
TAAGCCGATGGCGGCTATCGCGGAGGAGACCCTGGCGAGGTGGGGCCCCGCGCGGGGCAAGG
GGGATGGGGTGCCACAGAGGGCTAGTTGCAAGAGGACGCGTGACGGCTGCAGCTCTGCGGAG
ACCGGGCCTCGACGGCCAAGGAGTGGCAGGTCGGCGGAGGCGGGGGCCAGGCCCGGAGGCA

GAGCGAGACAGGAGAGCAGGCAAGGCGGGGGCCACCGTGAGTGGGGGCCGCGAGGCGGGGG
CTGGGGCGCGGGGAGGTGCTAGGTCGGCCTCGGCTCCCGCGCCGCACCCCAGGCCCGCCAG
GAGGCGCCGCTGCCCCGCGAAGCCGTTCCGGCCTCTCCCGGCCACCGAAATCCCGCGCTCCG
GCCTAGAGAGGCCCCGGAAGAGGCGGTGCAGCGCACCCCGAGGCCGCTTCCGGCTTCGGCTC
TGCAGGAGAGGCCAGAATCGGGGGAGGACGCCTTGGGCGGGGCGTGGGTGAGAGAACCTGGG
GGAGGT (SEQ ID NO: 90)

141. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TKT. In some embodiments, the sequences from gene TKT comprise or consist of:
GGCAATTGCCCCCCACTTAGCTACCCAGCCAGGTCTAGCAGTGCCAGAGGCTGTGCCTGTGTTT
GCCTCAACACCAATTCCAGAGGGACCAGGCATGGGGTGATGTGGTTTGGTCCCAGGGGGGTGC
CCTGGGCTGATGCCTGTTCACCAGTGTGTTGAGGGCAGACCTGGGATTGGAACCTGGGTCTCTG
TGAGTCTAGAGATCCCACCTTCTGTACCCTACTGCCCCTAGGGCCCTCAAAAGAGGAATCATGCA
GTAGGCTCCCAGGAGGGCCCTGGTCCCATAGGATGATGGGAACAGCCTGGGGCTCAGGTCCTG
TGCGTCTCCAGAGCCCACAGGCCCCTGCAGAGAATCTAGAGGCAAATACTGGGACAAGGACAC
CTGAGCCATAGGCACAGGCCCAGCCAGCAGCCTGGTGAGCCCATCTACACTGGCTAGCCATGC
CCCAAGGACCTGGGAGGCCTGGCTAACCCAAAGTAGAGGGACAGGAGGGGCAGC (SEQ ID NO: 91)

142. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TKT. In some embodiments, the sequences from gene TKT comprise or consist of:
TGTCTGTCTCTTTAAAATAAAAAAAATCAATGAGTTATGTGATGGGCTCATGGCTACAGGTGGAGA
AAGGCAGTGCATATGCAGCCTCCTCCATCCTTGACTAAGGCTGACAGAGGGCTGGGCCCACCAC
TGCTCACCCTGAGGCCTCGTCTTCTGACTCCCCTCCTTTCATTTCTAGGTGGCATTGGTGAGGCT
GTGTCCAGTGCAGTAGTGGGCGAGCCTGGCATCACTGTCACCCACCTGGCAGTTAACCGGGTA
CCAAGAAGTGGGAAGCCGGCTGAGCTGCTGAAGATGTTTGGTATCGACAGGGATGCCATTGCAC
AAGCTGTGAGGGGCCTCATCACCAAGGCCTAGGGCGGGTATGAAGTGTGGGGCGGGGGTCTAT
ACATTCCTGAGATTCTGGGAAAGGTGCTCAAAGATGTACTGAGAGGAGGGGTAAATATATGTTTT
GAGAAAAATGAATTGGCCCTGAAATGTTTTCTTTTTTGATGTGTTTGCA (SEQ ID NO: 92)

143. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CLDND1. In some embodiments, the sequences from gene CLDND1 comprise or consist of:
GTATGTGAGCATTCAATAAGTACTTTTATGAGAATGAGTTTTGTTTTAAGCTTAATTAAAAACATGC
TTGCTTTCTAAAAAAAATTCTTAATGGTTATATGTACGAAGGGATGGGGAATTGGGTAAAGGGTG
CATTTGGAATAATTCAAAATAATCTTTCTTATTTGTCCGTAAACTCTAACTTATCTTCTTTCTTCAAC
TTCTAAACAGAGCAGTCTGAATGCCAGAATGGATAACCGTTTTGCTACAGCATTTGTAATTGCTTG
TGTGCTTAGCCTCATTTCCACCATCTACATGGCAGCCTCCATTGGCACAGACTTCTGGTATGAAT
ATCGAAGTCCAGTTCAAGAAAATTCCAGTGATTTGAATAAAAGCATCTGGGATGAATTCATTAGTG
ATGAGGCAGATGAAAAGACTTATAATGATGCACTTTTTCGATACAATGGCACAGTGGGATTGTGG
AGACGGTGTATCACCATACCCAAAAACATGCATTGGT (SEQ ID NO: 93)

144. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CLDND1. In some embodiments, the sequences from gene CLDND1 comprise or consist of:
TATGTTGCACTGAGGATTTAGGGAGAGAGCAAGATTTCTGTTGAGGAGGTTCAGAAGTATAAGGA
ATCGGGAGAGTAGATAGGAGTGAAGCATTTGGCAGCGTAAAGAAGCTTGGCTTAGCTTTAATGG
ATTAGGGAGAGATTGCTATCTAGCATTATTACATGTTATTGTTCTCTTTGCTATTTTATACACCTAG
AACAACCTTTCCCTCGGGGTTAACAAACATCTTCAACTCTGTTTTCTGTATGGCTCCTGACTCTTA
CCTTTGTTTTAGGAGGCTTCCCTCTTCAGAGGAAACTGGGAGAAGCCAATTTCCACTGCTTCTTTT
TCCTGTGCCTTTTTAACACTCAAACCCAGAACACTTAATCCTCTGCAGCTCGTGCAAAAATTCAGT
CTGTAATTTAAAATGTGTGCACGGTACACTGCTGACCATGGGCATGTCTATTGTTTGTATCTGTAA
TGTGTATGTCCATTTCAGTGTTGTCTGTTTTAGTATGCA (SEQ ID NO: 94)

145. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CD200. In some embodiments, the sequences from gene CD200 comprise or consist of:
TGGAGGCAGACACCTCTGTTCCACCTGCTTCCTTTGTAGATTGTGTATGTGTGTGTTTGTGTG
GAATGCATAGGGCTGCTCCATCTTCTTTACTTACAGTGGTCACTCTGCCTGTTATCCTTTGGCCTT
TTCCTGCTCTTTGCTTCTACTTCTCCAAGCATGGACAAGATTGGTGAAGCTGCTATCCTACCTGG
CAGTTTACATCTTCAATCTCATTGTACCTACTTCGCAGCTTACACAGATCATTCACAATTTCTTGTA
ACTGAGAGTTGCTCTCTTGTTTTTCTACTCTGCTACTATTCTTTAAAGATTGAACAAACATATTTGA
ACCTATATATTTCTCTGGCATCACGTAGGAATGTAAATAAATGTTTTCTTTTTTGCATTTTCTCTTTC
TTTTCTATATTTGACATTGAATATACATTTTATTTATAATCAGGAAAAAGTGTATGTGTGTTACAATC
TTTAAATATAAATGTTCTTTTATGATTCCATAG (SEQ ID NO: 95)

146. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CD200. In some embodiments, the sequences from gene CD200 comprise or consist of:
TGAGAATCTCTGAGAATCATTGTCTGTGTCTGGAAATACTATTTGCAAGAATGTTTGGAATATAGC
CGTAGTGCCCAGTTTTTCAGGATTTTAACCACAGAAAGGGTCATGAGAAGATAGCCTTTCTTGTC
TACTATAGCTGTGTTTATGATTATTTGGAGAGTTCATGGGGCTACACTGAGTTCTTTGGCTGGAG
CTATCTTTTCTCTGAGGGATCCTGCTGTCAACAGGAGAAATTTGAGGACAATGGTGAGGGCAACA
AGTTCTCCATAAGCAGTGATATGATTCAGACCTGGCTTTGCCACTAGCAATCATGCGACCCTAGA
AGGGTCCTATCCACTCTCCACTGGAGTTTCATTGTCTGGACAATAAGTGTGAAATAGATCATTTCT
AGGGTCACTTACAACTTCAACTTTTTGGATCTAAGGACAGAGCCAGATTGGACTAGCCTTGAGCC
AGTTATGATTGTCCTTCTCATTTTGCTTGGGGAGATAGCTCT (SEQ ID NO: 96)

147. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MCM2. In some embodiments, the sequences from gene MCM2 comprise or consist of:
TGGGAGCCCACGGGGTCCCCAGGAGCCGATCTGAGGAAGTCATTGTGCAGCAGAGGGTTCCCC
TCTTCTGCATATCCTGCCAGAGTGGGGAACAGTGAAAGTGGGACCTGGGACACCTGGGTTTCCT
GTTGAGTCATGTTCCTGGAATCACCTTGGATGTTCTCAGAAGGCATGGGAGGAGAGCCCAGTGC
CCCTCTGGCCAGGATGGAGTTGGCTGTTGGTCTCAGCAGCGAATGCGTAAAAGAACCCAGGCTC
TGTCACCCACTGTGTTCTTGGTTTTTCCTCCTGGGGAAGCAGTTATGCTTTCTGTCTAAATTAGGC
TATTTTGGGCCCTGGTTAGGGTAAGCTCTTTGCTGTCTCAGACAGCAGGTGCTAAGTACCCACCT
ATGTCTTCCTCTTCCACTGCCCTCATCCCCTTCTGCCATCAGAGCAGCCTGGGGTCCCTGAGATG
GGAGGATAGGGGAATCCACCCTGATGGAGGTGCTCCCCTGTGTTTCAG (SEQ ID NO: 97)

148. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MCM2. In some embodiments, the sequences from gene MCM2 comprise or consist of:
TATAGCTCACATGTGCCCGGTTTCCATGAACTGTGGTTTGGGGACCTCAGGTGAGGCTTGGGGT
CATACAGTGTGCCCAACACAGGGGACAGGTGCTGCAGGGGCCATAGGCTGTTTTCTAGTCCTGT
TCCCTCGGTCTCTTCTCATGTCCAGAAGTCGCCCTGATTTCTCTTTCCTTCACAGCACCCCCGAC
CCCCACCCTACATAACCCACAATCCACCAAATCCTGTTGTCCCAACTCCTGAGCCTACCCACCTC
CCTCACTTCTGCCTCTGACTTGAGGCACTACCATCATCTGAACTGGCCTCCTGGCACCCATGTAG
ACTGTCTTCCAGTTGAAGGCATAAATCAGATCAGCCCCGTCCTTAACAACTGCTTGAGGCTTTCT
GCTGTCATCAGAATAGAATCCAGGGTCCTCCCCTCCGGCCCGCACCCGCCATCTCTGCAGCTAC
CTCCTCCTCGCTCCCTTCCCTCACCTGCACCTGCACCTGCCCTTCTC (SEQ ID NO: 98)

149. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TMEM108. In some embodiments, the sequences from gene TMEM108 comprise or consist of:
AATGGGATAAACCTGGTTTTCTGAGTGGAGGCAGCTATTGATAATTTTACTTTTCTTATAGCTGAA
GATGAAGGAGATTTGAGGTTCTCTGAGAATTAAAATTCGGCTGGAGTTAGCCTAGGGTGAGACC
CTCAGAGCTGTCTGTTCATGCCATTGCCTCAAGCCTGTGGACGTTTTTTCACCCTGGGGCAAGAA
GAGGCTCCAGTTTGCCCAACTGCTGTGTGTGTTCCAGGCCAGTGTCCAGTGAGGCTGACTTGGC

AGCTGCCCTTTCCACAGCCAGCCAGCCAGCCCCTGAGTGTGTTTTAAAAGATAAGCGACAAAAA
GCCAACCCCTTTTAGAGGGGCTGGAACAGGCTAGTAGTTGCTAGGCAAGTTAAAGTAATTCAGC
GTCCTTGCCAAACGTCTGCCAGGCAAATAGGGAACTTTCAGAGAAGGGGAGTGAGATGGTGGTG
TGTGTTGGTTGCCATAGGAATGTTTCCCTGATTGGAACAAGACCACAG (SEQ ID NO: 99)

150. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TMEM108. In some embodiments, the sequences from gene TMEM108 comprise or consist of:
TAGGTATTTTGTATTTATGTAAATATTATGTCAGATTATGTCTTTATTTTAGCTCTTAAGGTAGTAAT
TAAATATCTGTTCATGAATTATAGTTTTTATCGAGTTCTGATTTATAGGGGGAAAAGGCACAGTTG
ACCAAATTGTATGAAACCTTGGACCTTGAAGAGACCCTCTGATGTGGGCTTTACTGCCGCATTAA
CAAGCACCCTGTGCATCTGGTGGCAGCTTCCAGAATGACAGCTGAGGGTCTGAGTGGAAATAAG
TGGCTTTTAGCAAATGTTGAACCTCGAATGTGCTATTTAACCTCCCTGATTAATTGATTATCCAGC
TCCGAAAATAAGAGGTGATATAGCTATCCCCTTATCTCAGCATGGATGCTGTTCTCATTTGAATAC
AATTTGGGGGGTAGGTGGGGGTAGTATCAGATCCTAGGGTACATGCTATGATAATGACAGGCTT
AATTATCAGTCAGTCAATATTGTTTAGAACAAATGTTTTC (SEQ ID NO: 100)

151. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EIF4G1. In some embodiments, the sequences from gene EIF4G1 comprise or consist of:
GCCAGGTGAGGGGCTGTGGGGAGGGGAGTAGGGGACCTGGGTGGGAGCAGTGGAAAGCTTTG
GCCAGTTTAGGTCTAGGATGGAAACTGGAGGCCCCATACCTGGCCTTAATCCTCTGTGTTCTTTC
ATGCGGCTCTGCGCCTTGCCCTGTTGATTACTCACGGTGGCTGGTCCCTTGGATAGTATGTTGTC
AATGAGGGTGGCATTACTGGGATCCTAGTGCCTCTGAGAATTGGGGGCAGTGCTTTGGGCCCTG
CTGCCAGCTCTTGCTTTCCTATTTGCTCCTTTTACCGGAGGCTGCTATTGCTCTATTGCTCTCTCT
GCTTTCTCTTTGGACTGTGGTGAGGTAAACACTCCAGCTGGTCCTTGCCTTTCTCTGTTCCCCAG
CTTCTTCCTTACTAAGTGGGAGGATTCTTGTCCTGTCTTATTGCCTTCATTCCCTCCCCCCGCCAT
CACCTTGGGGGTAATTCTCTTCTTTCCTATCCCCATGTGCTCTCAG (SEQ ID NO: 101)

152. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EIF4G1. In some embodiments, the sequences from gene EIF4G1 comprise or consist of:
TAATATCCCTTTCCCAACCCTGGACAGTCTTCTGGTCTCATCCTTACCCTCCACCCTAGTCAGGG
GCTAGACACAGGGAATGGGGATCTTCAGGGTAGTGACTTGTTTGGTGTCCAGGTTCTCAGTTGG
AGGCCGAGTGATGCATGTTAGGGGCTACATCTTGAAGAACGCGCATCTGGGGACTGGGATGCT
GTTGCATGTTATGGTTAGCTCCTCATTACATGCTGGTGGAGCAGTGCATGCTGGGGATATGTTGC
CCGAAAGGGCCTTACTTAGGCATGATGCATCTCGGTGTTAGGAAGCCTCTGCAGAGGGGTAGTT
TGGTAGAGGTGACGTGTGTATGCATGGCAGTGAGAGAGTAAATCTCTGCAGGATGCAAAGTGTA
CATCTGAATTTGGAGGTTTGGAGGGCATGTGTGTGTACAAGAAGCCGCTTAGCCATTTGGTCAAG
TGGTCTTGGAAGGATTGGTCGCCATGTTCTGAAGCCCACAGTACTTCTT (SEQ ID NO: 102)

153. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TACC3. In some embodiments, the sequences from gene TACC3 comprise or consist of:
CTATGTCTAGCAGCAGCCTCTGTAGGTGTCTGGCAGGACGGGAACACCAGGCCTCATCTGGCCT
CCCAAAAGCTTGGGCTCCTGGAGGTGCTACTGTGGGGATCTGTCTTAGGCTGAGTGTCAGCCGG
CGGCAGGTGACCGCCTGGCCCTTGCAGTCCCTCCAGGACCACCACGAAGCACGACGCACATCC
TGGAGCTCGCCATACCGGCTCCCAGGCCTCACCCTAGGCTCTAGGGTGTTGGGCGCCGCCTCT
TCAGGGACCTCTGGCCCAGGCTCCAGTTCCCTGCGGATCTGATGTGGAGGAAACAGCTGTTTCC
TGGGCTTTGCATCCGGCCTAGAAGATCCTGGGTGGAGGGACCCATCACCCTCCGAGGCTCACA
CCCACTGCCCACCTCTCCTCCTGGCGCTCGAGTCCCTTGCCTCATTCCTTGGGCTGTCTCTGGC
ACCCATCGTTTCGGTTGCCTCCTCATCCTGAACGTTTGCTTTTCTTTTCTCAAG (SEQ ID NO: 103)

154. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TACC3. In some

embodiments, the sequences from gene TACC3 comprise or consist of:
TATGTCTCCGCCACCCTGGTGTCCTCACCTCGGAGGCTGATGGACTCATGGTCCAAGCCAGCGG
GGCTACAAGCTGCTGTCTTTGCACCTTGGTCCTTGGCCAAGCCTCCCCTTGCCACGGGGGCATG
GGATGACCTGTGAACGAGACAGGGTGCAGGAGTCACAGCATAGCTGGTTTGCGAGGCAGCTGA
GGGCGGCAGGAGGCAGAGTGAGCAGGGAGGCCATCTGAGCCGTCCGCTGTTGTGTGACAGAC
GACTCGGCTATGATCAGGCATCTGTGAGATTTGAGACAGCGCTGGTGCACCGGGGCCTGGGGC
ACCTCGGAAAGGTGTCTGGGCTGTCCGAGCGCTTGGGTCCCAAGGGTTGGGGACCCAGGGCAT
GCAGTATCCAAGGCGGGAGGCCCACTGAAAGGTGGTCACGGCTGTGCAAGGCCACCCTGGTGT
CCTCCTGGCCACGGGACTCTGAGCGCCCCCCACCTTCTGTGCTGGGCAAGGCCCACA (SEQ ID NO: 104)

155. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ADD1. In some embodiments, the sequences from gene ADD1 comprise or consist of:
GCCGGCCGGGGTGTACTCCGCGCGGGACCCTGGGCCTCCGCAGGCCCCGGCGGGGTCGCCC
CGAGGCGGGCCTGGCGAGTCCAATCGCCCTGCCCGCAGGGGACCCGCCCCTCATGGGTCCCG
CCAATCGCAGGGTACGTTGCTCGGCAGTGCTGCGCGGCTTGGCCTATGGGACGGCGCGTTGTT
GGGCTGCAGCGCCGCAGGCCGCACCCAGGTCGGGCGGTGGGGGCGAGCGGAGGGGCTGAGG
GGCGGAGAGGCCTGGCGGGCCGCTGCTGCGGGCCAGGGGACGGGGGCGGAGCCGGAGCCG
GAGCCGACGGGCGGTGGCCGCACTGGGACCCCGGAATCCCGCGCGCTGCCCACGATTCGCTT
CTGAGGTGAGGCTAGCTAGCGGGGGCGGCGGGGGCCCGGTTCGGGCTGAGGCGGCGGCGGG
GGCGCGGGGAACTGGGCCGCGGTTGCGGCGGGCGGGGGCCGCGGGGCCTGCGGCGGCCCG
GGCAGCCTC (SEQ ID NO: 105)

156. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ADD1. In some embodiments, the sequences from gene ADD1 comprise or consist of:
TAAGTTAAAGAAAGATTTTTTGTGTGAAAAATTGACTGAGATCTTAATGGGGATAGGAAATAGAAT
GCTGATAGGTCGACTGTGTCTATGAGTAGAGGCGCCTAGTGAAAACAAGCTTGGAGTGGATGAG
TAGGAGTTCAACAGGCACCAGAGAGAGGAGGGCATTTCAGGCAGAGGGTGTGAATTGTATGAAA
GTGAGTTTGTAAACTTTGGAGCCTTGAATGGACAAAGGCCCGCGATGATACCTTTTTTTTTTGAGA
CGGAGTCTCGCTCTGTCGCCAGGCTGGAGTACAGTGGCGCGATCTCCAGTCACTGCAATCTCCG
CCTCCCAGGTTCAAGCAATTCTCCTACCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCGCGC
CACCACGCCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTGGCCAGGATGG
TCTCAGTCTCTTGACCTCGTGATCCGTCCGCCTAGGCCTCCAAAAG (SEQ ID NO: 106)

157. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UCHL1. In some embodiments, the sequences from gene UCHL1 comprise or consist of:
CCTCCCGAGTAGCTGGGATTACAAGTACACACCACCACACCTACTAATTTTTATATTTTTTGTAGA
GATGGGGTTTCACCATGTTGTTCAGGCTGGTCTTGAACTCTTGTGAGCTCAAGTGATCTGCCTGC
CTCAGCCTCCCAAAGTGCTAGTATTGCAGGTGTGAGCCACCGTGCCTAGCCAGATCTCAGTGTC
TTTATAACTACAACTGGCTGCCACTTTCTAGCATTGACCTTGGTTGAGATAGTTAGCCTCTCTAAG
CCTCAATTTTCTCCTCAGTAAAAATCCTGTAGTAATAGCATCCTCATAGAGTTGTTCTGACAGTTA
ACAGTATATTTACCTTAGTGGGCTTAGAATAGGGCTTAATGTAAGACATACATTAAATATTAGCTAT
AATTTCTAAAAATCAAGTCAGTTCAAGCACATTTCACTTGAATTGCAAGATAATTTTTAAAATACAG
CTTACACTCATTTTCAAAAATTTCTTGACTTTCTTTAG (SEQ ID NO: 107)

158. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UCHL1. In some embodiments, the sequences from gene UCHL1 comprise or consist of:
TATGTTTTACTCCATTTTTGGAACCCAGTGTAGTTTCATGTGTTCTTTCAGACTGAATTTCTCTTGA
TATATTGTGTGACTTTATGGCACTTGGCATATCATTGTTTATAAAGCCACAATAACAAAGTATTCTC
ATGAGGGCACTTAACCCCTTATCATCCCCAGAGCAACTTCCTCAGGCAACTGACTAGCATCCCCT
AGTATCATCCTTTCTGGGCAAAGAGTACGTCTGAAAAAGGATCAGTGCCTGAATATGACCTTACT
TGTCTAAAAAGAATCTGAACATGTTGGAATAACTTCTATTAACTAGTTTATGGCATCAAGAAAGAC

GACCCACCTTGTAAGATTCATTCCTTTTGTATTAATGGAGAAAGACTTGTAACTCTTGTCTCAAGC
CAAGATACGACCTACAGGCTTACAAAGGCAAAGGAATAGTGAAGGCAATCTACAGTCATTGGAG
GGCAGATAAAATCTCAGGCGTCTCCTCCTCTCGCCTCCA (SEQ ID NO: 108)

159. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene OCIAD1. In some embodiments, the sequences from gene OCIAD1 comprise or consist of:
ATTCCTAGGCTGCTGGCTCTCAGACCCGCAGTGAGGTCTGACGTCATTTCCTGCCGTAAGTATAC
AGTGCCTCCGGGTCGCGGTCATTTTGAGCCCCTGTCTGGATGACTTCTTGCGGCTGTTCTACCC
CTCCCCCTCCCCGCGGTACCTTGCACTTTTCTCCCTCCCTGCCCCCTCTCGAGTCCACCCTCCG
GGCCTTCTGCCCCTGATCGCTTGGTTTTCCTTGCAGTCGCCTGCTGCTGTCGTCGGGAGGTGGG
TGAGGTGACGCAAACAGCCCCGTTGTTGCCCTCCGCGTATCCCCTCACCACCTTTGCGGCCATC
CACGACTTTCGCACCTTCCGCCATTTTCCTGCCTGTGAGGGTGGACAGATCGCGCTCGGGTCTC
GGCCTCCTGAGTGCCGGTGACTGCGGGAGGCGACGGAGTGCTTCTGGGGGTGTGAGCTGGGG
AAGTTCGTGGTCACGGATGCGTGTGGGGTTGCTGCTCAGTCTGTAACGGCAG (SEQ ID NO: 109)

160. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene OCIAD1. In some embodiments, the sequences from gene OCIAD1 comprise or consist of:
TAATCAGCGGTTGTAGGCCGCTTAGGCTTTAATCCAGCGTTGTTTTGTGTAAAGAACTTAAAATG
GTATTGTCTTAAGCGCCGTGTCAGCCCTGACAGTCTTCCTGGTGTTTCTAGGAAGGATGCCGTTA
TGGGAAATAAGAGGGTTTCATTTTTTCTCATACGGTTGTAGGGTAAAGGTAGTTTATTCAGCAGG
CTCCATCCATCCATGAATTCAGCTGACCTTTTTTATTTCTTTTCTCTAATTAAGGGGTTGGCATGTA
GTAGGCCTTCATGGCTTATTGACTGAATGAATTATGGAAGGGCTCAGTTGCTGTCCTCATTGTGT
ATGCCATTTCCTGTTTCCATGCAAATTGTTTTTAAAATGAGAATAATCATGATCCCACGTAAACGTT
CTGTAAAATACGGTTACTTGATCTGTTGGTCTGAGTCCCAATATATGAGTTTTTAAAAAAAGAACC
AAATAAAAAATGTATATTCTTGGAATTTTATGCATTTTT (SEQ ID NO: 110)

161. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPP1. In some embodiments, the sequences from gene SPP1 comprise or consist of:
ACGTATTTGCTGCGATATTACTTATCTTCTCAGTCAAATCCATTGGTTTACAAGTATTGATTGACTG
CCTGCTATGAATCTAGGCCAGTACCAAGCACAGTATAGTTTTTAATAAATATAAGTTTATAAAACC
AACCCAGATATTTTAAATATAATAATATCTAGGCATGTATGATGAGTTATCGCATGTAAGATAAGTT
ATATGAAGTTGTGTGACTTTTTTTCCATTAGTCCACATACTGATCTAAAAGCAGAAAATTCCAGCTT
TTGCTTTGTTTAGTGGATTGCTAAGTTTAAAATTCACATTGGATATTAGTCAGAACTGTTTGTATGA
CCATAATATTCACAATATTGTCTGAGATATTAGCTGAGAAGCCCATTGTGAAAAGAAAGTCTATGT
GTGCTGTTTGTATCTATTGTGATTGTCAGCTGATGTTAGATCACATTTTCTAACCAAACATAAGAC
CAACCAAACTCTTTATTATAATTATTTGACCAG (SEQ ID NO: 111)

162. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPP1. In some embodiments, the sequences from gene SPP1 comprise or consist of:
TATTCTGTGTTCGTTTGTGTGTGGAGGGGTGTGTGTGTCTGTTTTTCAACTGATTTGAAAATACAG
GTGTTGAATCCTAATAATAAACCAGAAAAATTAACATCTCCAGAGAAGATAGAGGTCATACTATTT
GAGGCAAGAATTAGCGTCTTTTTAATAAACGAAAATATGGCAAAGATGCATTTTAGAAGGCACGT
GGAGCTATAACAATTTAAGAAATACGTGAAGAGCTCAAGGCTCAGCCTTCTAGAATCCCAGAAAC
TTAAAGCTAGTAAAAAATTGGGGAAGTCTCTAAGGATATATGCCTGAAAATACACACTGGTTATCT
GTGAGTGTTAGGATTACTGGGTGGTTTTTAGTCTATTCATTTTGCTTACCTTTATTTTCTTCATATT
AGTTTTTAAAAATTATAAATGTAACTTATACATCCATTCTCTCTGAGCCTGTATTACATGTGTCATG
AGAATAGATAGATAGATATGAAAAAGTGAAGAGAAAA (SEQ ID NO: 112)

163. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NREP. In some embodiments, the sequences from gene NREP comprise or consist of:

GCAGGGAGATGATCTCCTCCTCCTTTTTCCAAGGCTGCACTTCTTGGAAGTGAAGCCGGTTTGG
GTTTTGTTTCCCTTCCCCCTCCTCCCTCCTCTTCCTCCACCCCTTTCCCCTCCCCCTCCCTCCCC
CAATCCCCCCTCCCCCCCCAATCTGTCTTTCTAGCATGTTGCCCTTTTTCAACCACATTTGTGTTT
CAGGTGTAGAGAGGAGAGAGAGTGAACAGGGAGCGGGGCTTTTGTCTGTAAGTATATGCCATTC
CTATCCCCGGCTGGGAGCGCTGGTTTCTCTTTTGTGTCGATTCCTTGCCGTTGCTCTTAGCTGGA
CCCTTCAACCCTGCAGAGTTCATGCTTCTTCCCTCTAAATTTTAAAGAGCTGAAGCGTGTACCTTG
GAGAAATTCTGGCATTTTGGTTGTGCTGCATTCAGGCTGGAATTTAACTTGGGTTTTTTCTAAAAT
GCACAAGTTCGGAGGGAGAAATGAATTCTTTTGGGAAGGGGTG (SEQ ID NO: 113)

164. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NREP. In some embodiments, the sequences from gene NREP comprise or consist of:
ACGGCCCTGGCGGGCCGCCGGGCTGTGCAGCACCCTGGCCGCCTTCACGCTTGGCGCGCCCC
CAAACCGCCTCCTCCACCTCCTTATTTGTCTGAAAAGCAACCGCACGTCGAGGCGGAGAGGCTG
GCCGGGGGCGGGGAGGAAGGCCGGGGATTTGCGCGCGCCGTGCTCCCGGGGCGGGGCCGG
GGCGCAGAGCTGCGGGTCCGCTTTGTCTCCCCGGGGCGCCGCGCGGTGCAGTGGGGACGGCG
CGGCGAGCGGGGCGCCCGGGGCGCGGGTGCGGGGTGTCGGGGCGCGCGCGCCTGTTGGCC
GCTCGCCGACGGGGCCCAGAGCCGCCGATTCCTGCCGAGTAAGCAGTCTGGCTCCTAGGCGG
CTGCACAGTGGCAGCAAGGCTGGGGCGCTGGCTCCGCGCCAGCTCCATCAGAATTAGCTCATT
GTTCACTAGCACCCTAGCGGGAGAGAGAGGGAAAGGGAGAGAGAGAGACTCTTAGAGAAAGAG
AGA (SEQ ID NO: 114)

165. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HSD17B4. In some embodiments, the sequences from gene HSD17B4 comprise or consist of:
CAAATCTTTACCATCCCTAAGGGGGACTTTCCTTCCCAGGGGCTATCTCTGGAAGCCCCTCAAGG
ATAGGGGCCGCATGCTGTTTCTCTAGGTCAGCAACTAAACCCAGAAAACGTTTATTGAGTGAATG
ATGAAACGACAGGTGAATAGATGAACGCAAGGTGTCGAGTTAACTATTCTTCTACACAAGTCCTA
GCAGCTCCCATTGCTTCCAGCCGCAGAAATGGCCCCTGGAAGGCAAGTCTTCCAGCGAGTGGA
GTCACTCTTAACTACATTTCCCAGGATTCCAAGGGAGCCGCGCGCTCTGCGCTCATCTTCCTACC
AGAAATCGGCAAGTCACTGACCCTCGTCCCGCCCCCGCCATTCCCCGCCTCCTCCTGTCCCGCA
GTCGGCGTCCAGCGGCTCTGCTTGTTCGTGTGTGTGTCGTTGCAGGCCTTATTCATGGGCTCAC
CGCTGAGGTTCGACGGGCGGGTGGTACTGGTCACCGGCGCGGGGGCAG (SEQ ID NO: 115)

166. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HSD17B4. In some embodiments, the sequences from gene HSD17B4 comprise or consist of:
TACAGCCCGCTTCTCCCCAGCACCCCGGTGTGGGCTTCCCAAGGTCCTGCCTGAGAGGAGAGG
CCAGGCTGGGCTGCTGATTGCAAAACTGGGTGAAAGTTCTCCCTGACCCTTATCTGTGGGCATC
GATTGTTACTCTTCCTGCAATTAACTCTCTTAGATCTTTGCCTAGTCTTTTAAAGGACTGAAAAGC
CGCGAGGGGCGGGGGCTGGAATTCGCCCCCTGAAGCGCAGAGATGTCAGCTCCTGAAAAGTCA
TTCGGTCGTTCAGTGTTTGTTTCCCTCTGTCGTAAGATTTTAAGTTCGTGAGAGGACCTTCTTTAA
AGAGGGCGTCTGATAAGAGCCCTTCCCCGTTGGAGTTTGTATGCTTAGCAAGTCACAATCTGTTC
TCGAAATCCACTGGAGTCTTGGCAGAGGTTGTAAGCTCAAATGCGCACAGGGGTCAGGCGTATG
ATGGAGAAAGAAAATGGGAGTAGGATGGGCACATCTGAGGAACTGGAG (SEQ ID NO: 116)

167. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene LMNB1. In some embodiments, the sequences from gene LMNB1 comprise or consist of:
TGGCCGGGGACACTCTGAGTTTCGCGTGTGGCTTTTAGGGACGTTTATATTTGAATTTCCCTGAA
CCGCCGAGTGTGGGCGGTGGCGCAGATCCGTCCCGGAAACCTCCGGGCTCCTTCCCGCCTTTC
TCAGGCCCGGCCCCTCCAAGGGGTCCCCGCGGGGCGGCGGGAGGGCCCTGGGCCCAGAGCC
GCGCGGGTGGGCAGTCCCAGGCGTCCTTCCTTACAGCCCTGAGCCTGGTCCGGGAACCGCCCA
GCCGGGAGGGCCGAGCTGACGGTTGCCCAAGGGCCAGATTTTAAATTTACAGGCCCGGCCCCC
GAACCGCCGAAGCGCGCTGCCTGCTCCCCATTGGCCCATGGTAGTCACGTGGAGGCGCCGGG
GCGTGCCGGCCATGTTGGGGAGTGCGGCGCCGCGGCCCGCGCCACCTCCGCCCCCCGCGGCT

TGCCTCCAGCCCGCCCCTCCCGGCCCTCCTCCCCCCGCCCGCCGCTCCGTGCAGCCTGAG (SEQ ID NO: 117)

168. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene LMNB1. In some embodiments, the sequences from gene LMNB1 comprise or consist of: TGAGTGGGTGTGTGTTTTCTTACAAAGGGTATTTCGCGATCGATCGATTGATTCGTAGTTCCC CCCCGCGCGCCTTTGCCCTTTGTGCTGTAATCGAGCTCCCGCCATCCCAGGTGCTTCTCCGTTC CTCTAAACGCCAGCGTCTGGACGTGAGCGCAGGTCGCCGGTTTGTGCCTTCGGTCCCCGCTTC GCCCCCTGCCGTCCCCTCCTTATCACGGTCCCGCTCGCGGCCTCGCCGCCCCGCTGTCTCCGC CGCCCGCCATGGCGACTGCGACCCCCGTGCCGCCGCGGATGGGCAGCCGCGCTGGCGGCCC CACCACGCCGCTGAGCCCCACGCGCCTGTCGCGGCTCCAGGAGAAGGAGGAGCTGCGCGAGC TCAATGACCGGCTGGCGGTGTACATCGACAAGGTGCGCAGCCTGGAGACGGAGAACAGCGCGC TGCAGCTGCAGGTGACGGAGCGCGAGGAGGTGCGCGGCCGTGAGCTCACCGGCCTCAA (SEQ ID NO: 118)

169. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SKP1. In some embodiments, the sequences from gene SKP1 comprise or consist of: GTACGCAAAGAGAACCAGTGGTGTGAAGAGAAGTGAAATGTTGTGCCTGACACTGTAACACTGT AAGGATTGTTCCAAATACTAGTTGCACTGCTCTGTTTATAATTGTTAATATTAGACAAACAGTAGAC AAATGCAGCAGCAAGTCAATTGTATTAGCAGAATATTGTCCTCATTGCATGTGTAGTTTGAGCACA GATCCCAAACCTTACGGCCAAGTTTCTTCTAGTATGATGGAAAGTTTCTTTTTTCTTTGCTCTGAAT AAAACTGAACTGTGGGTTCTCTATAAGTGGCATTTTGGGCTTTCCCTCTTTTTTGTAAAGCAATGT CTGCCTAGTTTATTGTCCAGTTAACTTTAGTGACCTTTTAAAAGTTGGCATTGTAAATAAAACAACT TGCAAAAAAGTTTTCTGGAATAGAATTAACAAAATATTATCTTTATTCATGAGTTGGAAACTGGAAA AAGGCTTCTTGAAGTAAATGTTCTGAGTGGAGCTA (SEQ ID NO: 119)

170. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SKP1. In some embodiments, the sequences from gene SKP1 comprise or consist of: TATAGTGCTATAACTGCTTACGTTTGAACTCTTTAAGTGTGGACAAATATTTTTGCCAAGACCTGA TGTGGTATTTGTGTGCATGTGTACACACATACACAACAGTAGTGGCCGTTATTTCACATTTGAGCT AGTATAGTTTGGTTAAGGAAGCAGAAGGATTCAACATTATAGAGGTATAACAAAGAAGGTCACAT AAAAGTCTTTCACAGAAGAACTTAGGAGTGATTTATTCTTCTCCCTTTAATTTCTTAAAATTAGCAT TTTAAGCTTTATTAGATACGGAGTGTCAATCATTAACTTTGGATTTAGTTTAAAACATCAAGTATAC TTTAAGGAAAACAACTGTCTCTTTACAGGCTGCAAACTACTTAGACATCAAAGGTTTGCTTGATGT TACATGCAAGACTGTTGCCAATATGATCAAGGGGAAAACTCCTGAGGAGATTCGCAAGACCTTCA ATATCAAAAATGACTTTACTGAAGAGGAGGAAGCCCA (SEQ ID NO: 120)

171. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene REEP2. In some embodiments, the sequences from gene REEP2 comprise or consist of: CCTTTCAGATTAGAAAGGAGCAGTCCCATGAGCCCCATGGGGACCCCAGTGCACTAAGAGTGAG GGGCTGTGCAGGGTCACACATGGGGCCGGTGCTGCTGGACACAGGGCACCTCCCAACTCCCTG CCCTGTACTCTGCGCTTGCCCCTGTCCCAACAGGTTCCCCTTCTACTTTGAACTGAAGATCGCCT TCGTGATATGGCTGCTGTCCCCTTACACCAAGGGCTCCAGCGTGCTCTACCGCAAGTTCGTGCA CCCAACGCTGTCCAACAAGGAGAAGGTTTGCCCCCACTCTCAGCTCACCTCCCAGCCTGCCCCC AGCCAAGGCAGTCCAGAGCCTGCAGCCTCATACAGACTGGCCCTCCCTGTGGGGCCCAGAGCC CAAAGTGACTTGGCAGGGCTGCCGTGGCCTCCCGGAGCAGGCAGGGGCCTCTGTCCAGGGGT GAACAAGGGTAGGGCAGGACCTCTCCTCTTCTCCCTTCCCCTCCAATCCCATAG (SEQ ID NO: 121)

172. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene REEP2. In some embodiments, the sequences from gene REEP2 comprise or consist of:

TGAGATGGGGGCAGGCTCAGACTCCCAGGGCCCCTACCTTGTACAAAGGGCCCTGGCCAGGCC
CCTTTGCATCCACCCTGTACTCGGGGCTGTAGAGACTCTGGGCTCATGCAGCTGGAGGCTCCAG
TCCAGGCTCTACTGCTATCTGGCCGAGTCACTTTGATTGTCCGGCCATTTCCCCATCTGTCCCCA
GAGGCAAAGTGTGGCCCTGCCCCAGCCCTCAGCTCTGTCTGTGTGGGACTGGGTGAGGACAGT
GTGGGGAGGGCACCGAGCCTGGGGCTGCTGCCAGCACCATGGTGACCTCTATCTCCACCCCGC
CCCTTCCCCCCGGCTCTCCCGGTGCGTGGTGGTGACCCTAGGGCCAGGGGGTGCTGTCAGAGA
AGCTCCGCAGCTTCAGCATGCAGGACCTGACCCTGATCCGGGACGAGGACGCACTGCCCCTGC
AGAGGCCTGACGGCCGCCTCCGACCCAGCCCTGGCAGCCTCCTGGACACCATCGA (SEQ ID NO: 122)

173. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MATR3. In some embodiments, the sequences from gene MATR3 comprise or consist of:
CCCTTTGTGGCCCCAATATCTGGCGCTTTCCACCATTCCTTGGCAAACAGAACAACCAGAGAGCA
TAAAAGTCGAGTCTAAGCCAGGGACTCTCGCGAATCCCTTCTAAGGCATACCCTATTTAAACTTT
GTATTATGCTATTCAGGAGGTTGACAAACAGCCTTTTCGGGAATGGGACTCGAACTCGTAAGCCA
CGTCTGTTCCTCCATTTCCCGCCTCAGCTGGATGACGGAGAGGGATCTCCGGGATTAAAGAACA
ACGACCGCAGGCGAGTGCACGAGCGAGGTGCGCGCGCTGAGTAGGGGGAGGGGCCTGGCGC
GCGCCGAACCAGATCGAGGGGGTGGGGGCGAGCTCTCTCGCGAGAGTGGGTTTGTTCTTGGGC
TGCAGCCGCTGCCGCCGCTTCTCGCCAGCGCCGTTGCTGCGGGGGATTGTGGGAGTCTCCGCG
TCCCGCTCGCTGGGAGAGAGGTACCTCTCCTTTTCCCTCTCCCTTTCCCTAAG (SEQ ID NO: 123)

174. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MATR3. In some embodiments, the sequences from gene MATR3 comprise or consist of:
TGAGCGGTCCGGGAGGGAAACACGCGGCCGGCCAAGGGCCCAGGGTGCGGCGGGAGATTTTG
GGTGAAGAGGTGCGCTGACCGGCCGAGCTTCCTGCGCGTCCTGGGCTCGTTGTGGGCGGGGG
CGGGACGACTAGCCCGTTACACGCGGGCCGCGGCGCTGAGGGGGAGGGAGGAGCTCGCTCGA
GGCCTGAGGGACAGACTGTACACTGGGGGCTTGCCGTTTGAGGAGGATGGTTAAGATATCTAAG
TCCTTGGGTAGCGCCAGTGCCAAATAACCCGTTCGCCTTTTTTTCTCTGAAAATGTTCCCCCAAA
ATGGAGGATTTCGCAGACTCTGAAGAGCCTGCTTGTTTGAGCAGCGTTTCTTTCTTTTCCCGGTG
TCTCGGCCTTCACGCCGCTCCTTGCCCATCGCCTCAGAGCGCCCCCTAAGACTCCCGGCCCACA
CGCGCGCGCGCGCGCGGCGTTAGCTGGACATCAGAAACAATTCCTCCCCGCCCCC (SEQ ID NO: 124)

175. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAMK2A. In some embodiments, the sequences from gene CAMK2A comprise or consist of:
GTAACAGGTCCTCACCCTCCACAGTCCTGGCCATGGGACTAGCTCTGCCTGGGTCTCCACAGAG
GCCAGGAGACTCGCTCACTAATTCTTTCCTTCATTGATTCAATAAGCATTTATTGAACACCTACTG
CATACTGGACAGCAGGTTGGGCTTGGGGAGTGAGCGGTGAATGACTGAGCCCTTGCTCTAGTG
GAGAGGACAGACAAGTTCCTGGGGCGTTATGGGGCAGTGGTGAGTGCCATGCCTGGGAAAGCC
TCAAGATGGTGGCAGAATGCAGCAGGACAATGGTATTCTGGGTCTGGAGCCAGGGGCGTTTAAG
CTGAGACCTTGGAGGATAAGCAGGTATTAGCCAAGTTAGAGTCAGAATGGGAAAGTGTGGCCGG
GCGCAGTGACTCATGCCTGTAATCCCAACACTTTGGGAGGCTGAGGTGGGCAGATCACCTGAGG
TCAGAAGTTCAAGACCAGCCTGGCCAATGAGGTGAAACCCTGTCTCTACCA (SEQ ID NO: 125)

176. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CAMK2A. In some embodiments, the sequences from gene CAMK2A comprise or consist of:
TCCCATCGCCGGAATGGGACACTGTCACCCCGGAAGCCAAGGATCTGATCAATAAGATGCTGAC
CATTAACCCATCCAAACGCATCACAGCTGCCGAAGCCCTTAAGCACCCCTGGATCTCGGTGAGC
CTTCCTCAGCAGGACTTCTCCCAGGAGCCCCTCCAGACCTCATGATCCAGGCCCCCACAGAGTT

CTGGCCCTTCCCCTGGCCCATGGGGCCAAGAGGGCTTAATCCAAGAGACTGCCCCTGCTGTGG
TTCTCAGGGGTAATGTGGAAACGAGGAGTGAGTGTTCTGGGTTGGCATACAACTGATGGTGCTA
CTGGCATTGAATGTCTGGTGCCAGGATGCTAAACACCCTGAAGCATCTCCTAGAGCAATGAATCG
TTCTTCCCAAGATGTCAACCACACCTCCATTAAGATGCCCTGCTGAAGGGTACCCTTGGGTGGG
CCTGTCTTCCAGCCTGCCTTCCACTCACAGCCCTCTCCCCTACTTCCTCCA (SEQ ID NO: 126)

177. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CYFIP2. In some embodiments, the sequences from gene CYFIP2 comprise or consist of:
AAACCAGTTTTCAGAGAATTAGAGTTGGATATCAACTGGACAGCACCCACAACAGATTAGACTTG
GATTCTTCCTTTGAGGACTTGAGAGGCCGTCATGAGAAGAGTGCTTCTCGGCTCCTAGGGATGG
TGAGACAGGCCCTCCAACAGGGCTGCAGATGGGGGACTGTCTGAGGCACTGACGGCCACTGTG
GCTGCTTTCCCACAAAGGAAGCCCTGTGGCAGGGATGGTGGGTCACACGTTTCTGTGGCTGCTC
TACCCGCATCAGTGCCAGGCATGTGATGGGGGAGATCCCAGGGAAGCTCCAGAGGCAGCGAAG
ACGAACGCGGTTGCTGGGAGGTTGGAGTGTCTCAGAGGTGGCCCCCGGCAGTCGCGGCGGCT
TTCCCACCGTATACAATACCTCTTGCTTTTCTCTCTCTCTCTCTCTTTCTCTCTCTCCCTCTTCCCT
GTCTCTCCTGCCCTCCCATTCCCTCTTCCTTCTCTCCTATCTATGTCTTAG (SEQ ID NO: 127)

178. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CYFIP2. In some embodiments, the sequences from gene CYFIP2 comprise or consist of:
TATCACACCGCCTGGCTGGGTTGGTTTGGGTACCCTTCTCGAGGAGGCAGCAGGAATGGACTAG
CCTGGCTCCTCAAGGCCCCTTCCAGCCCTAAGATTCACAGACAAATGATGTGGAGAGATCTAGAT
TAGCAAAGAGAACCACCCCACCGCACTTGCATCCTTTGCACTTAAGGCACCCTGTAAGCGGGAG
TTAATTGTCTAGTAGCCTCCTGTGTAAGTACCAATGTTAACCCGCCTTCCACCCTGAACTTCAGCA
GGCTGTGCAGTGCAGCTGATGCCACCAAGGGGGCGCCATCGCTCAGCCATGGGGTCAAAACGC
TGAGGGTCAGGAACAGGTGTGGGAGGGGGTTCGTTCTGATCTTATCCCATTTCTCAGTTCCTCA
GAATGTTAGTGCTGAAAGGGACTGGTGTGAGAAGGCATCTGGTCCAACCCCCTCATGTTACATG
AGACAACTGAGGCCCAGAGTGGGGGCTTTGTTGCCTAAGGTCACACAGC (SEQ ID NO: 128)

179. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTTG1. In some embodiments, the sequences from gene PTTG1 comprise or consist of:
GCCAATTGGGCCGCGAGTTGTGGTTTAAACCAGGAGTGCGCCGCGTCCGTTCACCGCGGCCTC
AGATGAATGCGGCTGTTAAGACCTGCGTGAGTGAATGGGAGGGTCGCGGGTGGTTAGTTGAGC
CGGCTCCGGCGGGGAAGGAGGCGGGCTGCGGCTGCGGCTGGGGCTGAAGCTGGGGCTGGGG
TTGGGGGACTGCCCGGGGCTTAGATGGCTCCGAGCCCGTTTGAGCGTGGTCTCGGACTGCTAA
CTGGACCAACGGCAACTGTCTGATGAGTGCCAGCCCCAAACCGCGCGCTGCTCGGGACCTTAG
AGCCTCTGACTCAGGCTGGAAGATTTGAGAGCTGGATTAAGTACTTGTTGGCTCACGCCCGTGA
CTGTTCCGCTGTTTAGCTCTTGTTTTTTGTGTGGACACTCCTAGGATAGAAAGTTTGGTATGTTGC
TATACCTTTGCTTCTCCCACCTTCCCCAATATCTAATATGTATTTCTCATTCTTAG (SEQ ID NO: 129)

180. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTTG1. In some embodiments, the sequences from gene PTTG1 comprise or consist of:
TAAGTATACAAGGCTGCAGTCGGATACACTGGTATTGTGGACGTGGCCTGGAGCTGGACGAGAC
ATTTAGTGTACTTTTTGGGCAATTGGAGTCGTTTGTTATTGGTCCTTTTTCATTTTTAATATCTTAAT
GAGATGATTTAAGGAAGTTACTGAATCTCTGCTATTAGGCCTATCATAGCCATGCCACTACCAAAA
GTGGGGGGTGGGTTTGGGGGTGAGAGGTCAAGTTTATATACACAGTATTTAAGTTGTACAGGTAT
TTTGCTGCTGGAATATTCTTATGGTAAGACTTTTTCTTCAGCAATCAAAGCCTTAGATGGGAGATC
TCAAGTTTCAACACCACGTTTTGGCAAAACGTTCGATGCCCCACCAGCCTTACCTAAAGCTACTA
GAAAGGCTTTGGGAACTGTCAACAGAGCTACAGAAAAGTCTGTAAAGACCAAGGGACCCCTCAA
ACAAAAACAGCCAAGCTTTTCTGCCAAAAAGGTAAGTGTTG (SEQ ID NO: 130)

181. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SQSTM1. In some embodiments, the sequences from gene SQSTM1 comprise or consist of:
GCCGCGTACCAGGACAGCGAGAGGAAGGCGCACAGGCAGAAGAGCAGCAGCGTCAGGAAGGT
GCCATTGCGGAGCCTCATCTCCTCGGGTGCGCGGCGGGCGCCCGCGGGGCCGAGGCTGCATG
GCCCGGGGGACCGGGGCCGGGGCGCAGGGGTCGGAAGGCGGCGGCGGCGGCGGCAGGGGC
CCCGGCCCCGGGTCGGGGAGGGGCGGGGGGCCCGGGGCCGGGCGGGGACCGGGCCAGGGA
GCGCGCCGGCCGCCCCTCAGGGCGCAAGCTTTGTGCCCTGTACTCAGGGAAGAGGAACAGGCT
CAGAAGGGCAGAGGCAGGTATCAGGCTCACTGCAGATATCAGGGGCGCGGGACACTGGCGGC
CTCGCCTCCGCGGCAGGGCCGGGCCGGGCCGGGCTGGGCTGGGCTGGGCGGCGAGAGCCGC
GGCCCGGCCTGGATCTGGGGCCTGGATCTGGGGCCGCCGCGGAGTCGACGGCGCAGGGCGG
GGCGGCCC (SEQ ID NO: 131)

182. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SQSTM1. In some embodiments, the sequences from gene SQSTM1 comprise or consist of:
TAAGGCTGGAGTGGGAGTGCAGGTCGACCGCAGCCGGGGCGGGGGGCGGGCGGCGGGGGCG
GCGCTCCGGGACCCCGGTACCCTTCTCAGCAACATCTCCTCCGCGCGCGGACCCCGACCCCAT
TCGCACGTTCTCGGGGCTCTTTCCCGGGCGTGAGGGGCTCTGGGTGGCGCGGGGGACTGGGC
GGTTGAAGCCGGGAGCGACCGCTGCCTTCGCTGCCGCCCAGGGCGCTTCCCCGCTCAGGAGC
TTCCTCTGGGCCTCTGGACGGAGGCGCGCAGGGGCCCGGGAGGCGGGAACGATGGGCCTTTC
TAGGCGGTATCAGGGCCGATGCTCGTGGATGCAGAGCAGTGACCAGCCCAGAACCGTACCGGC
TTCCCGGGGCAGGGGCGGCCCGAGAGCGCCGCTAACGGGAGCAACGGGCCCTGCCCCCGGT
GGTGTAGGGGCCACCTCGCCCCGCCCAGCCCAGCCCGATATTGATGGGGGCCCACGCCTTCAT
TG (SEQ ID NO: 132)

183. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TUBB2B. In some embodiments, the sequences from gene TUBB2B comprise or consist of:
GTGAGTGCCTGGTGTGGCTGAGAGCATGAGGGATTCATTTTACGCTGGGCAGTGGAGGCTGAA
GAGGTGTGATTGCCAGAGGGAAAGCATGAAGAACATCCGCGGTGTGCCAACTTAGCTTTAATAT
AGTGTAAAATTGTTTGCCTTTCAGCTGCTAAGAGCTTGGTGTCCTGGCCTTCCTTATTTATAATTA
TATTCATGAACAAATATTTTAACGTTTGGCCATTTTGGTGATAATCTGAAATAGTCTTATCTGAGCA
TTGACTCACTGATCTATATTGAGGGGTTTGAGGTAAGGTATTTAGTACAATCACCGGTGACTTAAG
ATTTCTCTTTCCCTCTGGCAGGCCAGAGTGGAGCCGGGAATAACTGGGCCAAGGGCCACTACAC
AGAGGGAGCCGAGCTGGTCGACTCGGTCCTGGATGTGGTGAGGAAGGAGTCAGAGAGCTGTGA
CTGTCTCCAGGGCTTCCAGCTGACCCACTCTCTGGGGGGCGGCACG (SEQ ID NO: 133)

184. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TUBB2B. In some embodiments, the sequences from gene TUBB2B comprise or consist of:
GAAATGTTGGGTTGTCGGAACTGAGTCGGGGACATTTCATTGTGAGCCTTGGCGTTTCTGGGGG
CATCGTTCATGGCTAAATGCAGCCTTTCTGTCTCAGTTTTGGGAGGTCATCAGTGATGAGCATGG
GATTGACCCCACTGGCAGTTACCATGGAGACAGTGATTTGCAGCTGGAGAGAATCAATGTTTACT
ACAATGAAGCCACTGGTAATCACCCTTGCCCCACCCCCACTCCCTTCAGTTTTTCCACCTTCTCC
CCTTTCCCTTGCGTGGGACCCCAGGGGTGTGGCCCTGGGAGAGGGTGGACTATTCAGTTTAGG
ATCCCCGCTCTTTCCCTGCAGTATTTCATTGGGCTTCCTTATGCCAACAGAGCCCTTTGAGAACC
TGATGGTGGGTCTCCCTTTGTTTGGGGCAACATCTGCATGATGGCAGCAGGCGCCAAGCCCTTC
TCTGCAGAGGTCCTTGCCTGAGGGTCTAAGTCACTGTTGTTCCTTGCA (SEQ ID NO: 134)

185. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GABBR1. In some embodiments, the sequences from gene GABBR1 comprise or consist of:
GTGTGTGGGATGTGGGCAAAGGAGGGCAGGGATGCACAAAGGCAGGAGGGAAGGCAGGGGTA
GAGGGCTTGGAGGGAGAGGGGTCTTTGGAAGAGGAGGTAGAGAGCTTGTCAACCCAGTTTGAA

CACCCTACTCTTTGTTATTGCACTAATCTTTTCTGAGAATAGGGGAGAGTTGCTCTTTTGCTATGA
GGAGCTTAGGGCCCAAAGCACAGAAAGCACAGATGAAGAACTTGTGTTCAGCAGAGGAACAAGT
GGGGGTAACCCCACCTCCAGACTTGACATTATCTTTTAGATCCCCCTTGGCCTTATTAGCATTGTT
CGATTCATGGTCACAAATTGCAAACCTACCCTCTGCCTGGAAAGCCACCTTCCCACCTGTAGGGT
AAGGGTGAGGCATGTGTGGCCCAGACTGGCCTATTTCTAGATATTCAACAAGCCCTTGCCTGACT
GACAGCAGCTTGCCACCATTGCTTTCCTGTGTGAATCCCAGGAAAAAG (SEQ ID NO: 135)

186. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GABBR1. In some embodiments, the sequences from gene GABBR1 comprise or consist of:
GTATGCCACAGTGGGCCTGCTGGTGGGCATGGATGTCCTCACTCTCGCCATCTGGCAGATCGTG
GACCCTCTGCACCGGACCATTGAGGTACCACTGGAGAGGAGGTGCTATGGTCAGGAGAATGAG
CAGGGCTCAGTGGCCATCAGGGCCCTGGGGCTGTGTGTGTCTTGAGGGATGAAGCTACTTGGA
GAGAGTGCCTTCCTCGTATTGGAAGCTCTTCCTTTCCTTCCTAGAAGGAGCCCCTCATAGGCCTC
CAGATTCAGCTGAAGAAAGGAAGGGGTGGGAATCTGGGAAGGGTGTGTAGAACTTCCAGGCATC
AGGGAAAGTGGGGAACAAGCACCTCCAAGGGTTCAGGAAAACATTCTTAGGCCTAGAATGAGAT
TTGGCATCAGCATTGAGGGTCTCATAGGAAAACAGTTGGAAGCCAGAGACTGAGAAGCGTTGAG
GAGAGGAGGGGAGGCTGGCAACCATCTTTCTTGTGACCTTGTTTCTGCCCTA (SEQ ID NO: 136)

187. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RPP21. In some embodiments, the sequences from gene RPP21 comprise or consist of:
TTGAGGAAGACAAAAGCACTGAAAATTCATAAAGGGACCCTGGGCATGGATTGCTGGGGTTGTG
TTTAGAAACCGATGAGTTTGTGAGGCCTCCGGGAGGCTCCCGAGGGCGCGGGGACTACGTTTC
CCAGGAGGCCTCGCGCGGACGCCCGGGCGGGGCTGTGCGAGGGGTGGGGCTGCGGGAGGCC
CTGGAGCGCGGCGGTGATGGCGGGGCCGGTGAAGGACCGCGAGGCCTTCCAGAGGCTCAACT
TCCTGTACCAGGTGAGTCTGCGACAAGGGCCCCACGGGGACGGTGCTCGGCGTCCCAGAGTGA
CTGCTCCCCTCCCGCAGGCCGCCCATTGTGTCCTTGCCCAGGACCCCGAGAACCAGGCGCTGG
CGAGGTTTTACTGCTACACTGAGAGGACCATTGCGAAGCGGCTCGTCTTGCGGCGGTGAGACAG
CCACGGGGCGGGCGGCGGGCGGGACGCGGGAGGAACGCGAGAGGGAGCGCGGGCGCCAG
(SEQ ID NO: 137)

188. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RPP21. In some embodiments, the sequences from gene RPP21 comprise or consist of:
GATCCCTCGGTGAAGAGGACTCTCTGTCGAGGCTGCTCTTCCCTCCTCGTCCCGGGCCTCACCT
GCACCCAGCGCCAGAGACGTGAGTGCTCCAACGGAGGTGGAAGACTGCGGAGCATTGGGGGC
GCGGAGGGGGGCGGGGTGGGGGGCGGGCACTGGAGGCCAACAGCGCCTTTCTCACTGTAGAT
GGATGTTGGGTGTGGGATTCGCAGGAGTCTTCCTTCTTCGGGTTTGGATTAAGTTCCTAACGCCA
CTTGCACAAACTAGGGTTTGGGCTCGGCTGTTTTTTTTTTTTTTCTTCCAGTGTGGGCAATAAATA
ATAACTTTTAAGAGGCAACCCCACCCATGCACAATAATAGATGTTGTTCGGCTTTGTGGAGGACG
ATTCCCATCACCATTCATTTATTAAGCAAATACTTATTTTCTAAAATGTGTCAGGTACTGTGCTAGA
TTCATTATTCTCATTGAAATTACGGTCTGATGGGACAGACTAAGAAAC (SEQ ID NO: 138)

189. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TCF19. In some embodiments, the sequences from gene TCF19 comprise or consist of:
GGAAAACTTGTGAACTAATCAGAAAAAGTGGAAGGCGGGAGATCTTGGGGCGCTGTCCAATGGC
GCGGAAGAGAACACATGAGCTGGCCAATCGGGAACGGCACGGGGGCGGGCTCGCTCGGCGCG
AAGTTCGGGCCCGGGAATTCCGAAGGAGGGGTAGGCGCTGCCCGCGCGCAGAGGCCGCGCCC
CTCCTGGCCCCGGCTTCTTGGCTGTCAAACAGATGCAGCAACGTCGGCTCCTGCCGAGGAGCC
CAAGGGGTCCCGGGATCCGCCGCACAGGCTGGCACTGCTTGAAGAGGAGGCTACTCGGAGACT
GCGCCGCGCGGGTAGATCCGAAACGGGGCTGGGGCGGAGTGGGAAAAGGCCGGGTATGCCTT
GCATGATCGCGGGGAGCTCCTTCCTGTTTTTATCCCACCTAGAGAAGCCGGGAAGTAGGGGTTT

AGGTCCAATTTGTTGGAGTACTTAAGGACTCGTTTGCACTTTCTTTTGGGGGATGACAG (SEQ ID NO: 139)

190. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TCF19. In some embodiments, the sequences from gene TCF19 comprise or consist of:
TTGGAGGCTCCCCAAATATTTTGCGATCTGAGGATCCAGCTCAAGTGAGGTGCCATAGGACGTG
TTCCTGAGTTTGCATTGCACGGAGACCTTCCTGGAATTTTTCATTTGCAAGTCGGCTTAACCAATT
TTGCATTGAGTCCTAGGCTGCTTGCACTCTGAATTTGGGCTATTCAGGTAGTGTGCTCAAAGTTG
AAACCGCATACAGCACAACTCAAGTTTGCATCAGACTGGGAAGCGAACTTAAGCCAGCGGTGCG
TGGCCCAGGAGTGGGAAAGGAAATGGATGCCTGAAGTGGAAGAGGTGGTGCAGAGGGGGCAC
CGCCCATGCTGCCCTGCTTCCAACTGCTGCGCATAGGGGGCGGCAGGGGCGGTGATCTCTACA
CCTTCCACCCCCCCGCCGGGGCTGGCTGCACCTATCGCTTGGGCCACAGGGCCGACCTGTGTG
ATGTGGCCCTGCGGCCCCAGCAGGAGCCTGGCCTCATCTCTGGGATCCACGC (SEQ ID NO: 140)

191. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ITPR3. In some embodiments, the sequences from gene ITPR3 comprise or consist of:
GCGCCGCTGCCCTGCTGGCCCACTCGCTGGCTGCACGTTCCTTCCTCAGCAAGCGATTTCCTCA
GGCACATGTGCTGTGCCAGGCACTGTTTTGGGGCCTAGGGTCCAGTAGGGCACCAGACAGCAG
GGCCGGGTTCATGGGAATGGGACCTGGCCCGGTGCTCACAAGGGCCTTGCACTGGGTTAGATG
CTCTGCTGCTGAGCAAGGGTCCTGCTCTTTCATTCTGCACTGGGCCCTACAAGTTATGTAGCCAA
TCCTTCCACACAAACAAGGTCCCTGCCCTCGTGGAGGTTTCGCTCTGGTGGGAAACAGCCCACA
AGCTAAATAACTATGTAATGTAAGCCACTCTTCTGCCCAGCGATGCTTCCTTTCCTGGACCTCTG
CCTTTCTAGGGTATTGGGTCCTTACCTCGGGGTTTGGGGGCAGCGTTCCAGAGCAGAGCTGGG
CCCTTGGCCCACCTGTGACTCTCTGTGACCCCCAGCCTGTCTGCCCCCCCAG (SEQ ID NO: 141)

192. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ITPR3. In some embodiments, the sequences from gene ITPR3 comprise or consist of:
TGGGCCCGAACCCCCTCCCCGGCCGGCGCCTGCTCCTCCCTCCTCCCTTGCCTGGGTAGAAAC
TCTGCTGGTTGTGTGAACTATTCCTGCACCTGTTGGTAACTGCCACCCTGAATAGCACTGGGTGG
CTCAGCACTGGGAGGCCCTAGCCTCCCTAGCCCTTCTCTGGGATCCCCTAAAATTTGGCCCACT
CTGGCAACAATGGGAATGACTCCTTGTACCACTAGAGGCCCCCAAGACCTTCTCCAGTGACAAA
GTCAGAACCTGTATTGAACCAGTTGTTAAATATTTTGAATATCACCTCGGCCCTTGCGCTTCCTCA
CCCTGTCCGTCTGAACCCCCATCTAGCCTTCCCGGACCCCAGGGTGATGCCCTGGGGCTTTCCC
TCCTTGGGGAGCTGGGAGTCCATCCCACCCATCTCTAAGCCTTGGGAGGGAGCTAGTTCCAGG
GTGGCGGTGCTGCCAGCTGGGGAAGGGGAAGGGTGGGCTCTGTCCTTAGA (SEQ ID NO: 142)

193. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HMGA1. In some embodiments, the sequences from gene HMGA1 comprise or consist of:
CCTGCAACGGCCGGGCGCAGACACTTGCAGAGTCACCCTCGGGCCGGGTCTGGAGCCTGATGC
CTCGGGGGTTTAGCCCTAGCCGCTAGGCGGGTAGGCAAAGTGTCGGGTTGAAAGGGTCTCCGG
GAACCTACTTCTTCCTGCTCGCCAACTTGCTGTGTGACCTTAGGCAACTCAAGGCTTCTCTGGGC
TACTTTTTTACGGGGGACGGGGAAGAAAACAAGGGAACCCCCAAGATAATTTCCTAGGGCCTTTC
CTGCAGAGTCCTTAAGTATTTGAGGAGCACAGTTTGCATGCACAGTGTATGGAGGAGACAGGCT
TGAGGCCCAAGCGGGCTTATTACAAAGTGAGGGATTGGGGTTAGGCCCTAAATGTAGTTCCTCC
AAGACAGGCCTCTGATGTTCAGAAACAGGTGGAAAAGACGAACGTTTCTTGGCCTCACTGGAAA
GGGCCTCGGGCCTTCATTTAGTTCGTGGGGGGTTGGCTGAGGGGATTAAAG (SEQ ID NO: 143)

194. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HMGA1. In some embodiments, the sequences from gene HMGA1 comprise or consist of:
TCAGCACTCGTTTAGTTGATTAATTTTGATGTTTAGTTTGAAGGGGGACCTGTGGTGTAATATAAG
ATTCTAATCACTGCCTGTAATTGCAGAGCAGGCCAAGCCACTAATGACGGAGCAGGATAAATCAC
CAACCACCTTGTTTAAAAGGGTCTCCAAGTCTGAAACATTATAAGATAGAATAATTACCAAAGTCC
TGCTGTCTGGAGGGTCTCTTGATGCTTGAAAATGGAGGTCCTGGGCCCTCTAGAAATCACAAGTT
TGCAAAAATGTTTTTTTCCTCTCATTGGGGTAAAAACTCTTTTTCTTCTTTTTTTTTTTTCTTTTAAAT
TAGACATGGGAGTCCCACCGTATTGTCCAGGCTGGTCTCGAACTCCTGACCTCAAGCAGTCCTC
CTGCTTTGGCATCCCAAAGTGCTGGGATTACAGGCATGAGTCACCTCACCTGGCCCATAAATCAT
TTTCAAATGGTCTAGTTCTTATTTTGGTTAGAGTGAAGA (SEQ ID NO: 144)

195. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KLC4. In some embodiments, the sequences from gene KLC4 comprise or consist of:
TTTGGCTTTCATTTTTCCTCTTTACAGGGTACCTCTCCTCCCTGTTGGGCCTCCCAGATACACCCC
AACAGGGTGCTTCTTTATGTGCCAGAACTCTCACTTTTCCCATACCTAAGCATTTGCTCATCCCTT
GGGATCCTTGTTCCTCTAATCTCTCTTCTGGGGAGTGCTCTCTCCCTCTCTTCCCCCTGCCCCCT
TGCTTCTTATAACTTGTGGCCTCCTCTTGGGATGGCAGTGCCCTGCATTCTGGTATGAGTATGTC
AGTGAAGCCCCCTTACTGTCCACGCCAGGCTTCCTGTCTCCTCATGGAGGTCTCCAATCCTTAAA
TGTACTCAGTCCTTCCAAAGGGAAGGAGGGAAGGAGAAGGCTTGCGGGTTCAGGGTAACTCCTG
TCACTTTTGTCTTCTTCCAGTGACCAGAATAAGTATAAGGAAGCTGCCCACCTGCTGAATGATGC
CCTTAGCATCCGGGAGAGCACCTTGGGACCTGACCATCCTGCT (SEQ ID NO: 145)

196. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KLC4. In some embodiments, the sequences from gene KLC4 comprise or consist of:
AGTAATTTGTAAGGACAATATATACAATGTAATATAATAAGGTAAAAATACAAAACAACAGTAGTTG
TATTGAGTACAACTTTGTTAAAAGAAATAGCAAAGTGGCCTGGGCACAGTGGCTCACGAGTGTAA
TCCCAGCACTAATCCCAGCACTTTGGGAGGCTGAGGAGGGTGGATCACGAGGTCAGGAGATCG
AGACCATCCTGGCTAACATGGTGAAACCCCATCTCTACTAAAAAAAATACAAAAAATGCCGGGCG
TGGTGGCGGGCGCCTGTAGTCCTAGCTACTCGGGAGGCTAAGGCAGGAGAATGGCGTGAACCC
GGGAGGCGGAGCTTGCAGTGAGCTGAGATCGTGCCATTGCACTCCAGCCAGGGTGACAGAGCG
AGACTCCGTCTCAAAAAAAAAAAAAAAAAATGAAAATATAGGTGGACAGGCCGGGCGCGGTGGC
TCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACG (SEQ ID NO: 146)

197. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DBNL. In some embodiments, the sequences from gene DBNL comprise or consist of:
AGTGAGCTCATGCAGCATCCACTCTCCTTGGTGCCCATTACAGATGGTCACACTGAGGCTCGGG
TAAGTTAAGCCACAAGGCTAATGATCGACTGGCTCTGGTGCCCGTCTTTGGCCATGTGCCTAAAA
CTCAGTCCTGGGCAGGGGATTAGGCTGAAGTGGCAGCATAGGGCTGAGCGGGCAGTGGCTCTC
CCTGCAGAAGGAGGAGGAGAACCGTCGGCTGGAGGAAAAGCGGCGGGCCGAGGAGGCACAGC
GGCAGCTGGAGCAGGAGCGCCGGGAGCGTGAGCTGCGTGAGGCTGCACGCCGGGAGCAGCG
CTATCAGGAGCAGGGTGGCGAGGCCAGCCCCCAGAGGTGAGCCAGAGGTGGAGGCTGGCCTG
GGGGACCCACCCTGAGGCATTGCTGGGCACCTGCTCCATCCCATGGAGGCGAGGAGGACTAAG
GGGTGTGGCATGAGAAGCTGTGACTGTGCCTCAGCTGTGCCCCACCCGGCCCTTCCCAG (SEQ ID NO: 147)

198. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DBNL. In some embodiments, the sequences from gene DBNL comprise or consist of:
ACGTGGGAGCAGCAGCAAGAAGTGGTTTCAAGGAACCGAAATGAGCAGGTAAGATGGGGGTGC
TCTACTTGTTTGGACCTGTCCTGGCCACACGCAGAAGTCCCTGATCTCGGATTGAGGGCCCAGC
CCAGACCTGGGCAGAGGCTGCCCTGCAGTCAGCTGGGGCAGGTTGGAATCTGGGCACCTCAAG

AGGTGGCAGTAGAGAGGAAAGCCAAAGGCGGAAGCGTCGGGCTTGGACCACACCTGGTCCTGG
GGGAGGCCCTGGGAGCCCCTTGGCTTCTGTGTTTTACTTCCTTTTTTAACGTTACTTTTTATTTTT
AAATGACTTCTCTCCTGAGAACATGTTTTGCCTCCTGGCCCCACACTCACCTTTGAGGGGCTACT
GGGCCGACAGCTGGAGGGGCTGTGATCTGGGGAGAGGTGGTGAAGGTTTTGCCCACTGCAGG
GGTCAACATGTGCTTCCCTCCAGGAGTCTGCCGTGCACCCGAGGGAGATTTTC (SEQ ID NO: 148)

199. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene POLD2. In some embodiments, the sequences from gene POLD2 comprise or consist of:
GGTGAGACATCGGTATCCAGGCACGATAAATTTCCAAGTGGACACAATGTCTGGTGTCAACTACA
GCTGTTCTCCTTCTTTTCCCAGTATCCTTTGGGTGCAGTGAGACACCAGGAGAGCTGCTGCTTTG
GGGGATGGACAGGGGCAGCAGGAATGCCTTTGTGTTTTCGCAGTGAACCTCCTTGGCCTGGGC
GAAGCTGTGTGGACCAAGCAAGTCAGGAGTGTGGCCATGTTTTCTGAGCAGGCTGCCCAGAGG
GCCCACACTCTACTGTCCCCACCATCAGCCAACAATGCCACCTTTGCCCGGGTGCCAGTGGCAA
CCTACACCAACTCCTCACAACCCTTCCGGCTAGGAGAGCGCAGCTTTAGCCGGCAGTATGCCCA
CATTTATGCCACCCGCCTCATCCAAATGAGACCCTTCCTGGAGAACCGGGCCCAGCAGCACTGG
GGTAAGTGAGAGTTTGGGAAGGTGCTTCCCCCACAGCATCCCTGAACTTAG (SEQ ID NO: 149)

200. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene POLD2. In some embodiments, the sequences from gene POLD2 comprise or consist of:
TCAGCTCTCCTGGAGCTTATGGTCTAGTTGGAGCAGGCAGACAATACATTTAAAATATACAGTTT
GTTAGAAGGTAAATGTTGTAAACAACAATAACAGTTGAAGTACTGGGGAGAGTTGCAGTTGTAAA
TCAGATGGGCAGGGCACAAGGTAACATTTGAGTAAAGATGTAAGAACTTGAAGGAGATGGGCAA
GTGAGCTCTATAAGTATACGGGAGAGGGGCAAGCAAGAGTTCAGAGGCCCCTTGCTGTGGGGA
GGGATCCAAGGTGGAGGAGTGGGAACCAGGAGGGGAGAGGACCAGTGGAGCAGATCTCATAG
GCAGTTGTAAGGACTTGGGGCCTTATTCAATGAAATGAGGACACTTTGGAGAGTTTTGAACAGAG
CAGTGACTGATTTATGTTTTGGTTTTGGTTTAGTTCTATTATTATTTAATAATAGGCTTATTATTTCA
CAGAAGTTTTATTTAATAAGGCAGACCTCTTGTCTGGAAATGAGACA (SEQ ID NO: 150)

201. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene OGDH. In some embodiments, the sequences from gene OGDH comprise or consist of:
TCTTTAAATTTGATTTATTTTAAATTGAGGTGGGATCTCACTGTGTTGCCCAGGTTGGCCTCAAAC
TCCTAGGCTCAAGAGATCCTCCTACCTCAGCCTCCCAAGTAGCTGGAACTACAGGCATGTGCCA
CTGTACCCAGCACCTTAGGGAAATGTTTATGTTCTGAGCTGAGGCAGGCTTCACATTGGAGTAAG
AATTGCCCAGCATATCTCATTTCTGTTTATCCATGGAAACTGTATAAAGATCACAAGAAATGGATC
CTTTCAGACTCCTAAGTTTATCATAACCTGAGTTTATCTCTTTTTTATAAAAGTACATTTATGCACAA
TAGTGCTTTTAAAATAAGTTATTCCAAGACTTTTAAAAACTAATTTTGTCGTATGGGTTTATTGGTG
CTGTGTTCCTCTTTGGAAAAGGTTTGCATAACCTGTGACTCTTTTAACCCTCCCCACAGCTCACTG
GATCTGCTTAATGACTTGCTTGTGTTATTGCTTCCAG (SEQ ID NO: 151)

202. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene OGDH. In some embodiments, the sequences from gene OGDH comprise or consist of:
TGAGAATTAAGCTGTAAATGCTAATTTTAATGTAATTTTACTTTTTTTTTACCCCTTCCCTCTTTTTT
TTTCTTCTGTCCTTTTGTGTGTGTCCTTCCCTCTCATCGTTGGCCACTCATAGATACGAGGGCACC
ATGTAGCACAGCTGGACCCCCTGGGGATTTTGGATGCTGATCTGGACTCCTCCGTGCCCGCTGA
CATTATCTCATCCACAGACAAACTTGGTGAGGGTCTGAGAGCAGTCAGCTGCGTTGCTTGAGCTC
CTCTCGCTGTGCCACGACCTGTGGTAGCCAGGATGTCCAGGCAGGAGGGAAAGGCTCTTAAGTT
TCCTTTCATTCTGATCACTTGAAATTTATCGGTATTGTAGCCTTAGTGTGTTTTGGGCAAGTTATTT
TTATCTTACTTTTTCAGCCAGATTGTCTTAAGTCTCAAAATTTGAAAATAAAATTTTGGACAGAAAG
GTTTGTGGCACAGGGAAAAAGCTTGTCCACCTGGGGCA (SEQ ID NO: 152)

203. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RFC2. In some embodiments, the sequences from gene RFC2 comprise or consist of:
GGCCCTCCAGGAACCGGCAAGACCACAAGCATTCTGTGCTTGGCCCGGGCCCTGCTGGGCCCA
GCACTCAAAGATGCCATGTTGGAACTCAATGCTTCAAATGACAGGTAGGTCTTAGAGTCAGACCT
GTAGGGGGGCGGGTGCTCTGCATTGAGAATTGTTACAGAAACAACCTTTCTCAGCATTGGGTTG
TATGCGAAGCCTTGCCAGCTATGTGATTTCCTCCACCCCTTCCCAGTGAAAGAGCGTTGCTCACT
TGTCAACTTGCCGGTTTATTTTTTTTGTTTTCATGGAAATTTTCAAAAACTGTTCTTCTCAGCCAGG
CATGGTGGCTCACACCTGTAATTCCAGCACTTTGGGAGGCCGAGGCAGGTAGATCACCTGAGGT
CAGGAATTCGAGACCATCCTAGCCAACATGGTGAAACCCCGTCTCCACTAAAAATACAAAACTTA
GCTGGGCGTGGTGCTGGGTGCCTGTAATCCCAGCTACTCAGGAGGT (SEQ ID NO: 153)

204. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RFC2. In some embodiments, the sequences from gene RFC2 comprise or consist of:
GCCTGTTGAGTGTCTCCATGTCTCATCCCACTGTCCGCTGAACTGCTTTCTTGTGCACAGCGCTG
CCTCCCTGGAGAGCCCCTTCCCATTCCCCCGGCAAAGGGAAGTGTTTCACTCTAGTTGGGAGGC
CTGGGGTTGGTTGCTGTATTTTTTTTTATTTATTTATTTATTTTTTTTTCTGAAACGGAGTCTCACTC
TGTCACCCAGGCTAGAGTGCAGTGGTGCAATCTCTGCTCACCGCAACCTCTCCCTCCCAGGTTC
AAGCGATTCTTGTACCTCAGCCTCCCGACTAGCTGGGATTACAGGTGCCTGCCATCACGCCCAG
CTAAGTTTTGTATTTTTAGTAGAGACGGGGTTTCGCCATGTTGGCCAGTCTGGTCTTGAACTCCT
GACCTCAGGTGATCTGCCCGCCTTGGCCTCCCAAAGTGCTGGGATTATAGGTGTGAGCCACTGT
CTCCGGCCAGCTGTATTGATCTGTGTGTGCTGTGGGTGGAATGCA (SEQ ID NO: 154)

205. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NRCAM. In some embodiments, the sequences from gene NRCAM comprise or consist of:
GTAAGAAAGAAAGATTAAAATTGCTTTATAATGCTACATAATAATCCATTAAACTAAAAAGATCATG
GGGGAAATCATGTAGATTGTAATATTTTGTCTTCCCAGAGCCATGAGTTTGGACTTTCTCTTCAAA
TGACTTTTGATCCCTTTTTATATAATGGCAATCTAAACATTGTCAATGATCATAAGGCATTTGGAGG
AGTAAATCAATCAGTTCTCTGAAAACATTAGTGAGCCTACTTTCTTAGACTCCACATAGGTTATGG
ATGCTGAAGTAACACCTAAAACCAACTGGCAAGGAGAGAGTTGCAGGGAAGGTTCATGGAGTTT
TTCAAAGGAAGTAATGCATGAACTAAGTCTTCATATTGTGATGTGTAACATTGCTTTCCCTATAAG
GTAATGGTTTATTCAATTTAGTGGGCCCATTAAATTTATATTTTCTTTACCTGACCATTTTCCCTTC
AGTGACAAGAAAAAAAAAATCTGTGAGAGAATACTC (SEQ ID NO: 155)

206. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NRCAM. In some embodiments, the sequences from gene NRCAM comprise or consist of:
TTAACAGATTTCTAAAAAATACTGAAAATGGCAACAGCCTTGCAAGGACAGTTTAGCCTCTAAAAG
CAGTTCCTTTGAAGAGAAAATACTCAATTAGATGTATACATTCTGTTCTGTTTAAAACTCAGTTTTG
TATTTTTCTCATTATACTTAATGTAAAATGTATCCTGTTAACAGTGAATACTTTAATTGGTTTGGGAA
TTTGTTTTTATTGAGAATATATAGTGAAAATAACTGTGAACACAGTGTTCACCAGGGGTTTTTAGC
ATTTAATGTGATGATTATTCAGATTTCTCTACTTGAATTTTTTAATGAATGAAGATTTTTCAAAGTTA
ATTATTCATATAATTCCTGATTAATAATTGACAGATCCTAATTTGGGGCCACATGTAAAATATATGA
AAGCTCACATAACGTGGCAATTTTTTACTCTGAGAGACTGCAGCAGTTCCCATCTCCCCTTAACCT
ATTGCCACCAACACCATTGATTTGTTTTCCA (SEQ ID NO: 156)

207. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MEST. In some embodiments, the sequences from gene MEST comprise or consist of:
TGGTACGTGCCTAGCAGTTTTTTAGAGGTTACCTAATAAAACAAGCTAGGTTTTGTATCACACAAA
AAATTATTTATAGAAAATATTTTCTTGGGCTGGGTGAGGATGCTCACGTCTGTAATCCTAGCTTTT
TGGGAGGCTGAGGTGGGAGGACTGGTTGAGCCCAGGAGTTTGGCACCACTCTGGGCAACATAG
TGAGAAAAATTTTTCTCTACAGATAATTTAAAAGTTAGCCAAGTGTGGTGTTGCACACCTGTATGT

AGTCTCAGCTACTGAGGACACTGAGGTGGGAGGATCGCTTGGGCCAACGAGTTTGAGGTTACAG
TGAGCTATGACTGCACCACTGCACTCCAGCCTGAGCAAGGGAGAGAGAGACCTTGCCTATTATA
ATAAAAAAAGGAAGAAGAAAACATTTCTTTTCGGAGAGGAGTTAATTTTAGGGTGGGAGTAGAAC
AGATGTGAGAGCTGTTAAGTATTTCATTCCTTTTCTCTTTTCTAG (SEQ ID NO: 157)

208. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MEST. In some embodiments, the sequences from gene MEST comprise or consist of:
TGAGTCTCCCCGAGAGAAGTCTATGTTTTGTTAGTATCTCATCCTGACAGTGGTAAACAGAATTG
CCTGTTGAGGGCTATTGGCTCTAGCCATTGTCTTTAACCTCGCTGGCTGTTCATCCAGGAAACAA
TAAAAAGATTGAGTTGAGGAATCTTATTCTAACATAATTGTAGTATCAAGACATTCAGTTATACGTT
CTCTTGATTTATACATAGTCTGTTTTCACTGTCATGACTGCTACATATTCCTTGGTGTACAAAAAGC
TCTCATGTGAGTCAAAGGTTGAAAGTGGATATACCTACAAAGTGTTTGTTTGTTTTAGTCTGATTG
TAAAGCCAATTCATTGGTTTAGGCTGAGCAGATGGCAAGGAGAGATTGAGAAGAGCTCATTGTG
GAAAAGTGCCTTCTCATTGGTTGCTATTCTCTCTAGGTACTTACTTGGAAGGTATCAGAATATGAA
ATCTTGATTATGTCACATAAGAATGTTCCATACCTTCCT (SEQ ID NO: 158)

209. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTN. In some embodiments, the sequences from gene PTN comprise or consist of:
GTAAGTGAGAGGAACGTACGATTTCTCGGAGGGCTCTTCGATCGAGTTTGCCTTCACCCTGTGC
CACTTTTCTGGGTGCCAGCAGATGATGGTGGTAGGGGTGAGAGAGGCTGCCTGGTGTCTTTGCT
GATAGGACTGCTTTCAAAACTGACTTGCTCCAGAGGCCAAGGGAGGCATATTTTTGGGGTTTCAG
GTTAGGTTAGTTCGGGTGTGCTTAGGTAAGTGAAAGGAAAGAAGTTTTTGTGATGTTAAGCATGT
ATTTGGACCGTGTTCCAGCTACCAGCTGGAGAGCAAGACAGGGTGGGCTGGAGAGTGCATCTTT
GCTTTTTGTAAAACCTGGAGCTTTAGTAGGTGTGTCTCTGGCTGGGTAGGTGCAAAGAAAGTAAG
GCAGCCTGAACAAGCAGCTCTCATTTTCCCAGCCTCTCTCTGATTCTCTGATTGCCCCAGAGCCT
GTCAGCCCATGACTCTTAGCTGGCATTTCTAGGTAAGCTGTGGGGGC (SEQ ID NO: 159)

210. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTN. In some embodiments, the sequences from gene PTN comprise or consist of:
AAGGCACCAAGGAAACCAAAAAAGGAAAGAGCTCTCCCTAAAGGTAAGTAGCACTTAATTGGGAA
CTTTGAGACGTCTGTCACTCTTTGTGACAATTGAGAAAAAGTACTTTGTACATTTTGTGCTTTGCA
GGTGAGATGTGACTGACACCTTACTGTCTCTGTGTTTAGAGAGGGCTTTCGTGGGTGGAAGAAG
AGGCTGGTTTGAAGAGAGTGCTTTTCCATTCTGAATATCATTAAAGGATTGTGGGGGGCCAAAAA
TGTAACCTAAAATGCCATCAATTGTCCATTTAAAATATCCTATTTGGCAAAGTGGCTTTGCACTCAT
CTGAAGAATAGATCATGGGTGGAGTTTGGAAAAGAAATGTTGTGTTTCGTCTCTGCTAAAAACAA
AACAAGGTACCATCTCATGGCCTCTTGGTTCAAATCCGTTTTCTTGCTCCGCAGGGAGAGACTGC
CCCTGGAGTATTCTGCTTTTAATAAGCTTCCCAATCAGCTCT (SEQ ID NO: 160)

211. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SSBP1. In some embodiments, the sequences from gene SSBP1 comprise or consist of:
TTAGAAACCTCATCACATAATTTCATTTCTTTCCAAACTTGAAACCTTCTAAACTTGAAACCTTCTA
AACTTGAAACCTTCCAAACTCACCACTTGGCGGCGTTGATCCATCCGCCCGCGCACAAAGAGAA
GATCGCGGAACTTCAGAGTTAAGGGGAGCCGTTTCCCGCAGCGCTAGCCGGCAGTATTTCCAAG
GCGCAAGTTGCGGAGTTTCTGTTTCCTTTTTCCTCTGGCGAGCTTTGCGTTCCCTGTGCGCCGGA
AGTGATCCCCTGCGTGGCTGGGCTGCTCGGGTTAGATCGTCAGGTGAGGGAGGAAGGGATAGC
CAGCGCGAAGGAAGTGCTGGAGTCGTGTGTTTTGGCTGCGCGTGATCCTGCGTGGGTCGGGAG
GTGTTTCTGTGTAGGTGTCTGGCCCTTTCATCAGTCGTGCGGAGGACCGCGTGATTTCCTTCCA
GTTCTCCTCGGTTTTCAGGTGGTGGCGCCATCTTCGGTAAAGGGTGTCC (SEQ ID NO: 161)

212. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SSBP1. In some embodiments, the sequences from gene SSBP1 comprise or consist of:

TACGTTGTGGTCACAAAATTGGAGTGCATAAAAATTATGAATATAGTTAGGAATTTAGGACTGGTG
AGTTGTACTTTTGCCATAAGAGGTAATGTTTTTTTCTTATTTTGTTTTTTTCCTTCAGGAAAAGCCT
AAAGATTAGACTGTAAGAAAAGAAAATAGAAGCCATGTTTCGAAGACCTGTATTACAGGTAGTCA
CTTGTCTGTATTAATACTGAGATGTATTACTATCAGCCACAGTGATCAGAAGACTTCTTTAGGCTT
TTAACTACAGGGGCAAAAGACCTTTGAGCTCACCCACCCACCTCTATACTCATTTGATATGGAGG
ATTGGGGACGATTTTGCCAGTGTAAATTATGTTCACTAAAACAAAAAAAAAAGTTCAGGTTTATTCA
CACGTAATAGGAATCATTAATTTTTAAAATGTGTGTGTGTTGCTTGAATTTAACCAGTGAGAGGAC
ATTAAAGGTCTTTAGTGACCTAAAGACTGTAGGAATCA (SEQ ID NO: 162)

213. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CNTNAP2. In some embodiments, the sequences from gene CNTNAP2 comprise or consist of:
ATTTCCCTAAAATATCAGTTTCATAAATTGCAAACATATGACCATAGTCCCCACTGAGACCAGAGT
AATATGTTAATTAATGTTGGCATTGACCACCCAGAATAGGACAGAGCATCTCTCTCCCTGACTTAT
GTTCGGCCAGCAGTAGCTTTGCTGTCTTCAGAAAGTCTAGTGATCCACAGTCACACCCACAACAC
ACATACACACTTTACAACTCATGGTCAGCCTATCACATCAGGCTGTCTGGCTGTCAATCCCATGG
TGGAAGCTGCTTGTTATAGTTAGACAGCCAACTGCTGCTCAGTAGTAGGTCTTACACTCCAAGTA
GATCCGTAGTGGTGCATCCAGTCACTGAATCCATGCTCTGCTGCTGTGTGTGAGTTTAGCTTAGG
CTCAGGCTGTGCTTCAAAACTTGTAGAACTATACTTTCATCAGTGGTCTGACATGGATGTTCATTT
TATTCTGTGTTTTCCTCAGAGCCTGTCTTTCTATTTTACAG (SEQ ID NO: 163)

214. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CNTNAP2. In some embodiments, the sequences from gene CNTNAP2 comprise or consist of:
TCAGTGAAACCTATTTGACATTTGTTCCTGAAACTTATTGCAATTTCCAGAGTTAATGTTGTGCTTT
GTTTGGTTTTGCTGGTGTTACACGCTCAGGATTAGGTTTTAATTCAGATCTTCAAGACGCTTACTT
GGTTGTAGTGTGTGCTGATTGAATAAAGAAAACTTGGAAAGTTGTTGAGAGAGCAAGGCATGGGT
GAAGGAGAAAATTGGTTGAGATTGGAAAAGCAAAATCTATTCCTTACCAATGCTAGTTTATTTTTA
ATAGATAAATTGCTCTTCTTTTAAGTGAATAATTTATGTTTAAAAACAAGGAATGTTTATTTTAAAAA
CACAATTGTATCTGGTATCTTTTCTCTTTATCAACATTCGTGTACCTTTTACTATTAGTAACAAGATT
ATACTAATTTTAACTTTAAGGAATATTCCACTGCTGGAATCAGAACTTCAAAATGATCTTGCTAAAA
TTATGCAAATGGTTGGAAAAGAAAACGAAAGT (SEQ ID NO: 164)

215. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTPRN2. In some embodiments, the sequences from gene PTPRN2 comprise or consist of:
GTATGACGCGCGGCCCGCCGGCAGGGCAGTGCGCGCTGAGCGCGCGGCACAGGGGAGCGAG
GCTTCGGTGCTCCTGAGACGCCCCTGGCGCCGAGGGCCGCGTCTGTGTCGGCGCCGCAGGGG
GGAGGGGAAGGGAAGCGAGAGGCGGGAAGACTCCGTTAACGGCACGTGTTAATCGTGAGCGAT
TTTCTAGCTTCAGAGGTATTAAAATGTGAGGGGGAATAGGCATCTTCGAACTGTGGAAATAGGGC
CATTATTTTTGATAAGGTTCTTCAGTTGACAAAGAGCCTAAAGTGTATGTGCCACAGGATATTGAT
GCATAAAGCTCGGATGTTCAGTTGGATTCTCATCTGGCTGCATGGGATGAAAGAGGTAGCGAGC
GCAGGCCCAGATACCACCCTGCGTGATCTTGCAGGGAAGCCCGGAGACACTTAGCCCGTGGCT
GTCTGTATTTTTAGGGCTATTTTGAAACTGACCCTCTTTAAAAAATTCAGTTTTT (SEQ ID NO: 165)

216. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTPRN2. In some embodiments, the sequences from gene PTPRN2 comprise or consist of:
GAAGTGCCTGCGCTGGGGTTCACATCAGCGCGACTCCGTGAGCCTTTTGCTTTTCCTGCTCTAG
ACCCGGGTGTGCGCAGCTGCGACGGAGTCTCACTTAGAGTGGAACCACTGAGCAGAACATGTA
GTCGTGTCGCTGCTTTTGTTGAAAAGTGTAATTTTTCTCTGGTTCCTTTTTTTGAGGGTTTATGTAA
CATGGACATGCAAAAGACAGAAAGTAGGATAGTTTTGGATTGTAACCTTTTAAAAAATTATTTGAC
GCTCAAGCCCCTAAATAACACTAAGCACACACACCCGCACGGAGCTAACTTCAGTGCGTTAACAC
TGGGAAGGTGGGAGGGGGCCGCGAAGCCGAGGGAACCCACCTGCGCTGTAAAATGTGCCCTCT

TCGCAGCGCCCCCTTCTCTGGTCAGACGTGGCCCTGGGTTCCTCAGTGCCTGAGGTTCGGTTCA
CAATGTCCACACCTGTCTCTGTCCCCTCCCTCCGCTCCTCCCTGCCA (SEQ ID NO: 166)

217. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FDFT1. In some embodiments, the sequences from gene FDFT1 comprise or consist of:
TAGAGAGGGGGCAGCTGAAGCTCCAGGAGTGTGTGGGGCTCCCTGGGGCTGGATGGCGGTGG
CGGGCAGGCGAGCTGGGCTGTGCTCGGGTGTGTTACAGTAAAGACGCCCAGCTTGGCGCTGGC
CCGGCCTTTTCACGGTTTTAGGCTCTACAGAGAGCGGCTGCAGAGCTCACCCGGCTGGCAGGA
GCCACCGAGGCCGGACACGTGGGCGACTTATTGACCAAGTGGGGAGGAAGCAGCCCCGCACT
GCTCTCCCGACTGCGGACCACCGTTGGGCTCCTGCGCATCCTAAGCCCCACCGCCTCACCTCC
AGTCCCCACAGCGTTCGCGCTCCCAGCCGGGGTAAGCGGAAGAAAACAAAGGCCCGGCTCCAT
CAGGGCACCAATCCCGCTCGTCGGCCTCTTTCTCGGCCTCCAATGAGCTTCTAGAGTGTTATCA
CGCCAGTCTCCTTCCGCGACTGATTGGCCGGGGTCTTCCTAGTGTGAGCGGCCCTGGCC (SEQ ID NO: 167)

218. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FDFT1. In some embodiments, the sequences from gene FDFT1 comprise or consist of:
TCCAGCCGGCCGGTGAGCGCCTGGGGACCGCAGAGGTGAGAGTCGCGCCCGGGAGTCCGCCG
CCTGCGCCAGGATGGAGTTCGTGAAATGCCTTGGCCACCCCGAAGAGTTCTACAACCTGGTGCG
CTTCCGGATCGGGGGCAAGCGGAAGGTGATGCCCAAGATGGACCAGGTGGGCCGAGCCTCCCT
GCTTGCCCGGGGCGGGGAAGGAGCTCGCTGGGCCGGCCTCAGGGCCTGAGCGGCCGGGCCC
GGATCTGGGGCAAGGGGCGCGGCGAGCAGGGCCGACGCCTGGGTGTTCCCGTCCCCCTTTCC
TCGAGCCTTCCCCCTGTAGGGCCCGGGTGGACGCGGCCGTCCTGGCTGACCTGTCCCTGCCCC
CGCAAGCCGCCCTGGGCATGAGCGACTTTTGCGTGGTTCCCGGTGGTTGCGCTCCCCGTTTCG
TCCCCTCCGTGAGCATCGGCGCTTACCGGTATTTTAACCCGAGGGTTACACATCTGAGGCA
(SEQ ID NO: 168)

219. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DMTN. In some embodiments, the sequences from gene DMTN comprise or consist of:
CATGGTGGGGGACAGTGGGAATGGGGCCTTGAGGAATTGGAAGAGAGCTGTCCCTTGCTCTGA
GTTTTCTCAGGTGGAATGAGAGAGGGTTTGGGACCAGGTGAAGGTGCTCACAGAGACGGCAGA
GGTGTGGGGCCCGCAGCCGCGTGCCCAGTGCAGCCAGCGCCCAGGGGCCTCTGAACCCTGCC
GGAGCAACCCCTCTGGCCCTTCAGCACAAGGACTGTCCCTGCCTTGCTGCCTGTCATTGTCCCG
AGCTCCACACTGGGCTTCCTGGAGTGGGGACTCTCCCCAGTGCTGCATACTCTTCAAGACTGGC
CTGCTCTCCAGCCCTGAATTAGGGTTCTCCTGGGGTCACCCCTAAAGCCAATTCTAGAGCCTTAT
GAAAGGAAGTGGGGGGATGGGGTACTTGGTGGGGTTCACTGGGCACCCTAGCTCCTGAAGCTG
TCCCCTAACCCCCAGCCCCAGCACTGAGGACCCACCCTCAGGCCCCCTCCCTCCA (SEQ ID NO: 169)

220. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DMTN. In some embodiments, the sequences from gene DMTN comprise or consist of:
TACCGAGCACCCTCCCCTCCTTCTCCCCTCCGCCCTTTCCCCTTGACTCCCCCTACTCTGCCCTA
CATGCACTGGCTTCAATAGGAGGAGGCACCCCTCCTCCCAGGCCCAGCGATTCTACCCATTCCT
CATCACCCACCTCGTTCCAGGCCCCTGGCCACAGCTGTCCTTCCTGGCATCAGCTCATTCCAAC
TCTACCTCTGGGGACCCTTGCACCAGAAGACAGCTCTCCTGGGGTGGGGCCTGGTGGGGGAGG
GGCAATACAGGGGAGGAACCCAGGTCGGGGTGCGGCGGGGATCAGGAATTCTAAAGGGCTGA
GGTGTCAAAGCCCCAAGTACCTGGTCCGCTGGAGGGACCGAGAGAGATCATCTAGGGCTGGAG
TGGGGCTGGGGCTTCCCCTCTGTCTCTCAGACTCTGATTAGAGGGAAGTAAGGGTGGGGTTGAA
GGTACAGAAAGCCGAGAGGCTGGGCTGAGGCCGGGCTGGTTGTGGAGCGATGGC (SEQ ID NO: 170)

221. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CCAR2. In some embodiments, the sequences from gene CCAR2 comprise or consist of:
TTTGAGCCCGGAACCAATGATCCGAAGCCTTCTTTCCTGATGGGATTCTTTAGCGAGGACACTAC
CGAGGCGCGACTTCCTGACGCGCATCCGATCCGGGAAGGCGCACTTCCGCTCCCCAGTTGCCG
CGGGATGGCAAGCCGGCGTGGGGGAAGGGAGAGGTCGGCGGAGACGAGGGAGGGACCATAT
CCGGGAGAGCGGCAGCTTCCGACCAGTGGTCGCGCTTCCGGAGAGGCGCTTCCGGTGGCGGC
GGCAGCAGCGGCTGTGGTGGTTCCGGGTGTCTTTGTCCCCCCGGTGTCGCTGCCCTGGCCCGC
AGGTGGGTTGGGGGGCCCCCTGCCGCCCCTCTGCCCCTTCGCCCCTCCGCCCCTCCGCTGGC
CGAGGGGCTGCGAGGGCCGGGCGGCGAAGATGCGTGGGGCGCGGAAGGGGCCGAGCCCCTC
TTTGGACTGCAAGTCCCGTCTCCCTGGCAACGGCCTCGGCCTTGGGGGCGGGCGGGAGGAGG
(SEQ ID NO: 171)

222. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CCAR2. In some embodiments, the sequences from gene CCAR2 comprise or consist of:
TGAGTAGCAGTTTTGTCACTACCTGGTTATGTGGCCCCGGGCAAGTCTCTTGATCTCTCTGAGCA
TCAGTTTCCTTGTCTGTAAAACAGCATGACAGTATCATGCACCACTAGGTTATTGTCAGGGCAAA
CTGGAACAATGTAATTTCTTGTTTCATTTCTTTCTTCTCTATATTCTCTCCATCCATTGCTTTCATTC
ATTCTTATTACCCACCTCCCTGTTTTCCGAAATATCCTTACTTAAGATTCTCCACTTTTCCGGGTAT
AGATGGAAATTTCCCTTATAAGCTGTTAATTTCTTTCTTTTTGGATTGAAGCCTTTTCCCCACGACT
CTGAAAGAGGACAGCGTTCCCAATGTCCCAGTTTAAGCGCCAGCGGATCAACCCGCTTCCAGGG
GGACGCAACTTCTCAGGTGATCACTGTTCTCCCTACCTGGCCTCATCCTGGGAAGTATGTGCTCT
GGAGTTAGTTTGGGGTTTCCCTGGTGGAGAGCAATTTG (SEQ ID NO: 172)

223. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GOLGA7. In some embodiments, the sequences from gene GOLGA7 comprise or consist of:
CCTGCTTTCTACTTCTGAACACAATGAGCAGTTTGTGTTTGAGGGTTTGGGGAGGGGGTGTTGTT
TTTTCTTTATGTTTTGTTTTTTGTTTTGTGTATGAGTTGGGTGGCATAACCCACACGTAAGCTGCG
ACGTCCAATCAAGAACGAAAATGACCCCTCACAATCAGTGATCGGGAACCACCTGCCACAATCAC
TAGGGAAGTGACACAGCCGGGAAACTCCGCCCCTCACACCCCCGCGCGCTCGCGCCGGCCGC
AGCCCCACAGCTCGCCCCGGCCGCAGCCCCACAGCTCGCCCCGCCTCTCTCCTTCCGGAAACA
ATCCCCGCGCGGGCGGAAGGCGGGGTCGGCCCTGGCCCCGCCCACATCATTTCCCTTCCTCGG
CCCAGCCCCACAGCGCGCAGCTTCGGCAGGGTGGCTTTACGGCCGGAGGAGAGGGTGGGTCC
CAGACCTGAGGTAGGAGGCCGAGCTGAGGGGCGGGGAAGAGGCTTTTTGCGGC (SEQ ID NO: 173)

224. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GOLGA7. In some embodiments, the sequences from gene GOLGA7 comprise or consist of:
TTTGTGTTTCCCGGGCCGAACCGGGTTGTGGGGGGCGCGGGGCCTGGGCCAGGCGGCAGCTA
AGGCCCGCGGTGACAGCATGGGTGAAGGGGAGCGGGGCAGAGGAGGCCTTGGGCTGTTTTCG
GCGGCGGGTGGGGGCGAGGGGCTGGCGGGTCAGAGTCCCGGGTCCAGGCCGGGGCTCTGAC
TCGCGGTTGGTGTTCCCCCGACCCCGCAGCGCGGGGTGTCCTGTCCTCGCCATGAGGCCGCAG
CAGGCGCCGGTGTCCGGAAAGGTGTTCATTCAGCGAGACTACAGCAGTGGCACACGCTGCCAG
TTCCAGACCAAGTTCCCTGCGGAGCTGGAGAACCGGGTACGCAACCTGGCTCCCCACGCCTGC
TCTGGCGAGGGAGAGAGACTCACCGGGGACGGGAAGGGTGTGGGCGACAACCGGGCCTTTGA
GGGTCCCGCAGTTCTGGGGAGGTCCAGGCACAGAAGGGGCCTTGGCCAAACGTGTAAGAAGAG
(SEQ ID NO: 174)

225. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPD52. In some embodiments, the sequences from gene TPD52 comprise or consist of:
GTAAAGTATATTTTTATGAAATGTAGTTGGTCTTATGCTTTATTTTTCTTTATTTAGATGTTTAACTT

GAACTGTTCTGAATTAGGGAACTAGAATTCCCCTTGAAACAAGCTGTGTGTTTAACACTCTATCAG
TTTTCAGCTACACTTCCTCTGATGTTGGGATGGGTGCAAGAGATCCGTTAAATGTTTTGATTTTGT
TTTTAAAAAAATTATTTCTATTTTATTTTGTAAAACCTTTGTTTCCTGTCTGAAATCTGTTCACAAAG
TGAGCACTACTTGTTAACAAACCTTCTTTTGTCCCGCCACCTCTGTCTGCATTCGCTTTAGTTACA
TTCTCCTTTTCTTCATCCTTCCCATTTTCACTTCCCCCATCCCACTGTGACATTTGGAGCCAACTAT
GATTTAATTCTACTATCTGCTTTCATTAGCACTTGCAAGTGATATTACCTCACCTAACCTCTCTAGA
GAGTTAGAGGATTTTTAACAATCTGTGCTTG (SEQ ID NO: 175)

226. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPD52. In some embodiments, the sequences from gene TPD52 comprise or consist of:
GGTAACCTTGAACCTGAGTGGTCAGTGAACTGCATTGTCCTTGAGTGGGCAGTTGCCTCCTTGTC
TTACTAAGAGCCCTTCCCTGGCCTTGCTTGTGTGTGTATGTGTGTATGTGTGTGTGTGCATGCTT
CATTTTTGAGGGGAGGCGATAAACACTGAATTAGACCCAAGTTCTATTCTTGATTCTGCTGTGAC
CTACGGTAACTCATTTAACACCTATATGCCTTACAGCTCCGGGTGAAAGCACTTTAGTTTTCAAAG
TGCTGTAAAAATGCAAGGTGGTATTGTTAGCTCTAGTAACTCCTGGGAATTAATTGGCTCCTGAAT
AAAAGTAAATTATGTTGGAATAACTTTGATCCCCTCCACCTCAAAAAGTAGGTAATTCTTCATGGC
GCCAAGAGAATAAAGCTCCTGGGGAGCTAAGTTTTGTCAGCTTTTAATAATGTTGAAGCACCACT
ATACTAACCTTATTTCTATCTCTTTTTAATGCTGCCTCTTA (SEQ ID NO: 176)

227. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DCTN3. In some embodiments, the sequences from gene DCTN3 comprise or consist of:
GACCAGTGTGTGGAAATCACTGAGGAGTCCAAGGCTCTCCTGGAGGAATACAACAAGACTGTAT
CCTTTCTGCTCAACTAGGACCCTAATGGGTGCTGTCCCTAAGCCCTGTCCTTTTGTTCCACCTCT
AGCTCTCTCTCATCCTATCCTACCCACCTATGTTTGCCTGTTCCCCACTTTCCATGAACTTCCTCA
CTCAGATTCCTATTCTCACCTTGACCTACAACCAGACAATGCTTCTCTCCAAGCAATTCGTGCAGT
GGGATGAGCTACTTTGCCAGCTAGAGGCCGCCACGCAAGTGAAGCCAGCAGAGGAGTGATAGC
TGCTCCCCATCCCAAAGTGGGCCTGGGCAGTCAGGCTCCAGGGCCCTATGCCAACCTGCCTTTG
TTACAAGGCAGAGGAAGCTTTGTATTTATTGGCTTCAAGGCCCACCTCTCTGTACTCTGGGCTCT
AAAGTTGGAGGTCAGGTTACCTGAGGTTTGCAATTTGCAACACCCA (SEQ ID NO: 177)

228. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DCTN3. In some embodiments, the sequences from gene DCTN3 comprise or consist of:
CAGCTTCAGGCCTTTCTGTTGTAACCTCAGCAGAAACTTTGGGGTTTATCCTTTATCTTGCATATG
CCCCAGGGAGGTAAAGGGACTTGCCTAGGTTCATGTACAAACTTTCTGCTTCCAGAGCAGGACT
TTATTGGGACACCATAAGGTTGAGGCTGGGAGGTACCCAAGAATTCCTGGGGATGGTATGTCAT
TGACTGTGGGTAGAGGGGCTCTTTTTTCACTATTCCCAGGCCCTAGTGTAAAGTTCAAAGAGAGT
TCAGAAATAAGGACAGAAGAAGAGACATACACTAGGGGGAATGTTTACTTAATGTATGGCCACTC
CCTTTTCCATCCGTCTTTGGACTGCTGTTAGGGCACCCATCCTGGAGCCTGAAAGTGCTCCCATA
GCCATTTGCTCCTTTGGCTTTGGGGTTAAGCGTCATCTTTTTTAGGCTCCATGGGGAGTGGGAGT
CCGTGATGAGGCAGGAAGTTTAGTGGAAGATGTGGGCTTTGCCCA (SEQ ID NO: 178)

229. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPIN1. In some embodiments, the sequences from gene SPIN1 comprise or consist of:
TGGTGAAGACGTCTCTTCCAGGGAGTCACAGGAAGCAAATCCATCCTTTTAAAGGGCTCGCGTC
CCGCGGCCCTGAACCGGCGCGCTGGAGCAGTAATGCGACGTTCTCCGAGGTTCAAGGCTCACG
GCCCAGCCCTGTGATCCAGTTTCCTCAGTCTTCGCGGTGTGCACCACTCAGGACGACTTGCGGC
TTACGTCCAGGACAAAGGGGGCTTGTCCTTTCTTCAACGTCCTACTGCGCAAAAACGAAGCCCTT
CTCAGGCTGCCTGCCTTCCAGGAAAAGCTGCGCCCCCTCAGGAACCTGTGCCCCGCGCGCCTG
CCGCCGCCCATTCCCGGCGCGCACCTGGCAGTCCCGGGCTCGAGCCCCGCCCTGCCGCCAGC
CAGGTGAGAGGGGCCAGGCCCCGCCCTCGCCGGCCCCGCCCCGCCCCACTGCGCCTGCGCAG
TCGGCCGTCGGCGCCAGGCGCCGGGGCGGCGCGGCCGTCGCAGTTCGGCGGGCGCA (SEQ ID NO: 179)

230. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPIN1. In some embodiments, the sequences from gene SPIN1 comprise or consist of:
TGAGGCCCGCGCAGGGCGGGCGTGGGTCGTGAGGGAGTGCGGGCTGCGGGCGGGCCAGCGG
TGCGGCGGTCTGCCCGGGGGCGCAGGTGAGCGCGGCCCGCGCGGGGCCCGGCGGAGCATTG
TCCAGCGGGCGGCGCCCGCATAGCGCCCCCTGCCGGCTGGGCCGCGGCGGGGACCCGGGCT
GGGCGGGCCTGGGCCTCGGGGCGGGCGCGCGCTCCTTTGTTCGCCGGCCCCTACTCCTCCGT
GCCCCCATCCCCGCCGCCCCCCGCCAACATGGCCGCCACCCTCTCGTCCCCAGTTCCCCGGCC
GCCGCCGGCCCCTTAGCGCGCGCTTTGTTTGGAGCCGGGCGGGGAGGCCGGCGGGCAGGGG
GCGGCGGCGCTGCGCAGTCGGGCGCGGGGAGGGGGCGCTGCGCCAGAATGCAGGCGGGGAG
GGGGAACGTTGCATAATCCCGGGCCGGCGACGGGGGCGGGGCGGGGGGAGGGGCGGGACCC
CGGCGCGA (SEQ ID NO: 180)

231. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEMA4D. In some embodiments, the sequences from gene SEMA4D comprise or consist of:
GTAACGGGCTGGGCTGCCCTTCCCCTCTGTTCGTGGGTGGGTGGTTGCACAGCTCCTCCCTCCT
GTCTGCCCCAGTGCTGTCTTCCCCAGCACATGCAAGCCAAGCTGATCCTGCGTCTAAGGAAGTC
TAGAAGGTTTAAACTCACAATAATTTGTTTTCAGTGCCTTTCTAGGAGTGTTGCTGAGTTTAAGTG
GATGCACAGTTTAAGGGCTTAAATAGCCTTGTTTCCCATTATTTTCACAGCAAAGATTTCTGAAGA
CGTCTTTCTAGAAATGACTGGAAAGTTTCAAGAGGCATAAGATACAGGTAAAACCACTTTATTCAT
GATCTGTAATTTCAGTTGAGCAGAGTTGATAATGTGTAGAGGCCTCAGTTGGATCTGGCAGGTGG
TTGGTTGCTTGGTCCCTTGGTCCCTGATATCCTGTGGGGCAAAGCTTCAGACTTGGCTGCCATCC
CTTGGGCCCGGCATGGGGAGGTGGGTGCTGGGCACCCACAGTG (SEQ ID NO: 181)

232. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEMA4D. In some embodiments, the sequences from gene SEMA4D comprise or consist of:
CAAAAAAAGAGCCGTGATCATATAAGCTCTGAAAGCAAAAGGCAAACAAAAAAGAAACCCTCCTC
ACCACAGAATATGCTGGAGTCTGATTCCAAGGTTTAACAATTACGTGGCTCCTGTGTTAATAGAAT
CATGGAGGGATCAGCGTCGGCTCCTGAGCGTCTGCAGTCCTGCACGTGGCTCTGGTTTTGCGAT
TCTGATTCTCTTGATCTAATTGTTGGTGCTGCTACTGCACCCCACGATCCCTGTCTTGAGACTGAT
CTCCCACACTGCAAAGGAGTGACAGCCATGCTATGGAACCTTGCCACACCACGGTGGACACCGT
TCTGTTTGGCTGAAAACCAGCCATCCAAAAATAAAGGAAGATGAACAGCTCTTTAGTGCTTGTAAT
TATGCCATATGTGTTTCTGCTTTTTCCTTCTTTGCCTCATGAAGATGAATTTTAAAGGATACATATC
TGGAGCTAATAGACAATTAGATAGTACTTTTTTGGTTCACA (SEQ ID NO: 182)

233. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GSN. In some embodiments, the sequences from gene GSN comprise or consist of:
TGCTTAATGGTCCACTTTAAGGACCAGGGATGCACTTGGCATTTTCGTTACTTCATTCGGAATGA
GCTGGGAATCGCTCTTCCTCCTTATTCCCTTCCGTGGGAGGGAATCTCCCCTGCTTTGCATGCAG
CCTATGTCACTCTTCGAGGGCTTTGCCTCCTGAAGTCCGTTCTCTCCAGGGCTGAAATCTGCCTC
CGCTGGTGCTAGTTGAGCATTGCTCGCTTGCCCGTCCCATCTGAGCTCTTTGGCCCCAGCCCAG
CTCAGGAGCTGCCCTGGGTCTCCTCCCCGACCCTAGGCCTCTTCAGATCTCCCCTCCGTGCTCC
GGGCCTCAGTTTCCTCCAGGGGAAAGCAGAGGGCTTGGTTTGGTGCCTTCCTGCGAGGTGAAG
CGAGGGGTCCCCCTGGACGAAGGCGAGCTTGGAGCCACCCGCCCAGCAGCCGACGGGAGGGC
CTGGCGCTCCTCCCCCACCCGCCTGCCCGGCCGCCCCGCCCCGAGGGCGGC (SEQ ID NO: 183)

234. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GSN. In some embodiments, the sequences from gene GSN comprise or consist of:
TAGGGGAGGCGCGCGGCCCCGGCCCCGGGCATCTGGGGGTCCCGGGCTGATTTGAGTCCTTC
CTCTCCCTTCCTTCCCGGTCCTATCTCGCCCGCGCCTGGAGCTCGGCCCGGCCGCGGGGGCAT

CGCTGGAAAAGGGCTTCCTCGCTCACTTTTCCCGTCTTCCAAGGGACCAAAGAGTGTGGATGGG
AGTTGGGGGATGGGGAGACGCCGGAGCAGGAGAGGAGAGGGGCCAGGCCTCCACCCCGTGAT
TCCACTGTGCTGCTAGCACCTGAGCTAATAACCTCGACCCCGCCCCCGGGATGGGGGAACTGG
CCCGGGGTCACCCCTGCACTTGGGTTGTCTGACCCGGGCATGCAGGGGACCACCAGCTACGGT
CTGGGCGGTGACTCTGCTGGGGAGTCCACTCAGAGGACCCTTGCCTCCTGGACGATACCTGTG
CCTGCTCTCCTCTCCAGCTGCTTCCTCTTTCTGGGGACTGTTAGAAAGTTCTTCCTTAC (SEQ ID NO: 184)

235. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STXBP1. In some embodiments, the sequences from gene STXBP1 comprise or consist of:
GTCAGGTCACCAGCTCTCCACATAACTGTTTTTCCCTTCTGTTGTGTAGCCCCGGTGATAAAGCT
CTCTGCTCCCTGCTTGCATATGTATTGCATGAATGTAGTGAGTAATTCTGAGCCCAAACACAGCTT
TTCTGGACAGAAGCTGTCACAGCCAGGCTTTGGGTGTAAATCTTCCCCTTCATCTTTAGACCTGA
CTTGAGGTTCCATATATCGGGAGGTGGGAACCTGGGGGTATGCAGTTGCCCATGAAGATTCATG
GAGGGGCCTCGCGCAGACAGCTGACGTCCGCTGTGTGGCCTCCCCTGCTTTGTGCATGCCAGC
CTCCTTGCTACCATGTGTGTTCATGCGCGCTTGTGTGTGTGTGTATGCATGCGCACACATGTGTG
TGTGTCTTGCTTTCTCATACCTCATTGGCTGCATAAAATGTAGGCCTAAGTTGGCATGTTCCTGTG
ACGTACCTTTGTTCAAGCAGTCAGCTGGCCTCTGTTCTCCCACAG (SEQ ID NO: 185)

236. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STXBP1. In some embodiments, the sequences from gene STXBP1 comprise or consist of:
TAAAAGCAGCTTATTACAGAAAAGAAACTCTTCCACTCTGAAGGGCTTTCTTTGATTATTCCGTCA
CTCTTTTTCTTTATTTCTTCCTTTTTAGTTTATTATTTATTTGATTTTGTTTCAACAAGAAAATGCTTG
CAGTTCTCAACACCGATTGAAAATGTGTCCAGTGCTGCCCTCACAGCCCTGCCATGAACCCTCTG
GGCTCTGACCTGCTGGCTCACCCATGCCTTGGGTTCCGCACTGCTTAGTCAGACGCCTGCAGGC
TGCTGGGTGGAAACTAAAAATGATAATGACTGCTGTGAACAGTTGTCAGAGAGGGAGCTGAAGTT
TTGGGGGATGCCTGAGGCACAGTGCCCAACCCTGCTGGTCTGGGATGAATTTGTGGCCCCCAC
AAGGAATGTAGAGTGTCCTGGTTGTGCTGGGTGTGGGGGTCTGAGAGCGAGGCCAGTGGACAT
TCAGGGAACACCATGTCCAGGAAGGCAGGCGGTGGTGGAGATGG (SEQ ID NO: 186)

237. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FAM102A. In some embodiments, the sequences from gene FAM102A comprise or consist of:
CTGGGCTTCGCTGACTTGAACCTGGCCGAGTTTGCGGGCTCGGGCTCCACGGTGCGCTGCTGC
CTGCTCGAGGGATATGACACGAAGAACACTCGCCAGGACAACTCCATCCTTAAGGTACCAGGGA
TCCTGCCACCTCTGCCACCCTGACCACGGGATGGGGACAAACCAGGCTGCTCATCAGAATCCTC
TGGAGGAGGGTTGTTAAAAATACAGGCCTTACCTGAATAGGTAGACATCGGGAAGGGGCGAGCC
CTGGAATCAGGAAACCACTATCAGAGGGAGGCCTGGCTCCGCTGTTGGCCTCAGTTTCCCCATC
AAGTTCAGAGAGGGGGCCCTGACAGTCTCCAGGGTTTGGCAAGCACCTGCAGTGGGTTCACGT
CATGCTGATTGCATGCCCTCTCTTCTCTTGTGGTCCCCTGACAGCAGCCCCACGAGCTGTGGTAT
CTTTGATTAGTCCCAGCTTCAAATGGGAGGGAGTTAAGGCACAGACGTTAAG (SEQ ID NO: 187)

238. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FAM102A. In some embodiments, the sequences from gene FAM102A comprise or consist of:
ACCACCTCGTCTCAATCTCACTTTCCCCTCCAGGTCTAGCAGACTTGGCCTCCATCCACAGGGCC
TTCTTAGCGCATGCCCTCTTCGCACTTACTCCCACTTCCCTCCCCATCCCTCGATCCTCTGTCCA
GAGGTCCCAAGGGCCTGTTCAGACCCTGAACTCTGCCCAGCAGCCCCTCACTCTGTCCTCTACC
AGGGCGCCTTCCCTGGGGCTCCTGCTCATCCTGCAGTGCCCCTCCCCTCCCAACCCCTGTGGG
GGTGTCCCATCACTTTCCCCAGCACCCACTTCCCACAGGCCTTCCCTCCTCCCCTGCCTGCTGA
CCCGGCAGCTCCCGACAGCACGGCCTTGTTTCCCAGGGAACAATGCATCTGTGTCACGGACAAC
AATGTCCTTTCATGTCAGGCGCACTGGCCCCGGTGCACGCCGGGACGTGGCACAAAGGGTGCT

TTGTGCAGCTCAGGGATGTGAGTTCCTGGCTTTGCCATGTTGGTGCTGCCG (SEQ ID NO: 188)

239. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTGES2. In some embodiments, the sequences from gene PTGES2 comprise or consist of:
GTACGTGTTACAGACGGCCACGCCGCCCTTTAGGCGGTCAAGGTGGGGCGAGGAGACGTTCGC
CCCCCTGCAGTCGGCCGGGTCACTACCCAAGAGCCTTTGGAGGCGGAAGCATGGAACGGTCTG
CAAACGTTCCCGAGCGGGCCTCTGCGGCTCTGGCGGGCGTTTCGAACTTGGGCGCCGGGCACA
CGCCCAGTCCCGAGAGCGCTGAGGGTTCCCTTAGCGTCGCCCTCACCCCGGCCAACCCGCGG
GGCGCCAGAGTCCTGGCCCTTTAAACGCCGCGCGTGCCTCGGCGTCTTCGTTTCGCGCGCCCG
CCCGCGGCGCCGGCGGAGCGAACATGGACCCGGCTGCGCGGGTGGTGCGGGCGCTGTGGCC
TGGTGGGTGCGCCTTGGCCTGGAGGCTGGGAGGCCGCCCCCAGCCGCTGCTACCCACGCAGA
GCCGGGCTGGCTTCGCGGGGGCGGCGGGCGGCCCGAGCCCCGTGGCTGCAGCTCGTAAGGG
G (SEQ ID NO: 189)

240. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTGES2. In some embodiments, the sequences from gene PTGES2 comprise or consist of:
CCGAAGCCGTCGTCCTCGCCTTCCGCTCTCGTCTTCACCGGCATACTCAGGTCCCCGCTGGGGA
CTGACACTGCGGGCTCGGTCGCCGCAAGGACTGGAAGGAAGGTGGAAGATGCGGGGCGAAAG
CGGAGCGAGAAGAGTGGGACGCGGCGGAGCAGCAGAGCCGGGACTCAGAGCTCCCCCCTCGC
CCCGCCCCTCTCCCCGCCCACTCTGCGAGTCCCGCCCCCTCTCGGGCGCCGGGCGGGGCCAT
CCCGGGGCTGTCCGCGGAGACGCCTATGCGGTGGAGGCTCCGGGCTTCAGCTAGGGCGGGGG
AGCCCAGCAGAAGGACCGAGCAGCCTGGCACCCCACTTTGCCATCCTCTCCCTGGAAATCTCGG
GGTCGGCGGGCCGGCCGCTTCGCGTGGGCGAAATCAGAGACACGTGGTTTCCAAGGCCCCTTC
GGGTTCGGGAAAATTTTATGGTTCGGGTCACAGTAGGAAGCGGACAATGAGGCGGGAGGG
(SEQ ID NO: 190)

241. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DNM1. In some embodiments, the sequences from gene DNM1 comprise or consist of:
ATGAAGCAAATTCTGGGACACTGGGAAACGTAGAATTGAACAGGATGGGTGGATGAGGTCCTGG
CCTTGTCCTGGCCTGGGTCAGCTCCTTAGGAGAACCCAAGGCTGTGGACAAAGACGGCACTGG
GAGAGAGCAGGCAGCCTCAGTGAGGCCGAGGAGCAGGGGAGCATCCCTGGGAAGAGGATCTG
AACTCAATAGGGGTCTTGTACGGAGCAGGGGCTTGGTCCCTCGTACCTCTGGCCATACCTATGG
AGCCCAGGGGATGCTTGGCAGCACCTGGGAGGTGCCAACCCCGGGTGGCAAGGGAGGGCCGG
TCCCACGCTCACATTGTCTTCTGTTCTCTCTCTCTCTTTATCTGTGTCGATGTCTCTCTCTCTTCCC
CCGTGCCCGTGCCATCCTCTCCACCCCTGGATTCCTGTCTCTGCTTGGCTTTCACCCACTTCTCC
TCCCCACCCACGGCTGCTCCTCCTCCTGTCCCCACCTCCTCCCCGGGTGCAG (SEQ ID NO: 191)

242. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DNM1. In some embodiments, the sequences from gene DNM1 comprise or consist of:
TATGACGGCCGCCTGGGCGGGGCTGGGCCTGGCCGTCCATTCCTTGTGGCCACAGCCTCCCGT
GGGCAGAAGGATCTGCTGAGCCGGCCTCACGGCTACCCGCAGGGACCCAGCCCTAGTGTTTCC
TGCCAGTTTCTAACCCTGGGTACTTGCACTCATGACCCCTCCAGGCCCCCATCCCAGAAGACTT
GACTCCAACCCAAGCCTCCTTGGTGGCACCTATGCTAGTGATGAAGATGATGTTAAGGAGATGG
CAGCTGTTTACTGAGCACCTACTATGTGCCAAGCACACGCTAAGTGCTTGCCCTTACTATCTGAC
TCAGTCCTCTCAACCACCCTAAGACGTGGGTAGTGTTGTTATTCCCATTTTGCAGATGGCAAAAC
AGAGTCTCAGAAAAGAGAAGCAGAGTGTGATTCAGTTTTAGGAAGGACAGAGGAAGGGGTCTGA
GGTCAGGGCCTCCTGGGCAGGGGGAGCTGTCCTAGTTCCTCAAAACCAATT (SEQ ID NO: 192)

243. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene URM1. In some embodiments, the sequences from gene URM1 comprise or consist of:
CTGGAGAGATAAAGGTGGAGGGGGCTCTTCAAGGTCCTCTCAGAAGTCCAGCCATGGCAGTTG
GAGACTGGCTTCCAGGACTTGTGGGTAGGGGCCTGTCTCCTAACCCTTTAGATGCGACAGTCCT
CCCGCCGTCTGCCTTGAATCCCCCCACTATAGGTAAATCCCATTGCCTCTTCTCCAGGACTTCAG
CAGTGCCAGGTGCAGCTTTCTCTGAAGATCCACCTGGCAAGTCACTGGCCTGTCCTAACCTGTTT
CCTCACCTTTGGAATCTACAAGTTCATGGGCTATCACAGCCTGGTCTAAAAGAAGCCCTCTAAAC
ACCGTGTGTATTTCCTTGTGGGCCAGGCAAGGCTCTGGGGGTGGGCAGGTGCTATTTGGGTTTG
ACAAGAGTTTGTTCTGTGCATTCCTTTCCAGGGGACATCCGGAACCTGCTCATCTGGATCAAGAA
GAATTTGCTAAAAGAGCGGCCAGAGTTGTTCATCCAGGGAGACAGCGT (SEQ ID NO: 193)

244. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene URM1. In some embodiments, the sequences from gene URM1 comprise or consist of:
CGGCCAGGAATTCTGGTGCTGATTAACGATGCCGACTGGGAGCTACTGGTCAGTACCTTGGGGG
ACATCCCTCCCCCAGCCCCTGCCCTTGCTGCTTCAGTGGGAAAGCGTTGGGCCTCTCCTCAGGC
ACATATAGAGTGGCTGGGTAATCCTCCGCCCCACTCCAGCCCCACACTGAGGCTGCTGGAGTCT
CCCACTCCAGGTGAGGAAGGGATGGGTAGCTGGGGACATGGGAGTACTCCTCCATCCTGAAGA
TTTGCAGGTTGAGGTATAGGATACCCATTTTTCTGGTAGAGTCTGTCTCTTCCAGAGCAGCCAGT
CCTCAGCCCCTGTTCTCCCAACTCCTGGGGTGGACCTGGGAAGGTGGCCCTGAGGGTCTCCCG
CTCCCCTCTCTCCCGCACCAGGGTGAGCTGGACTACCAGCTTCAGGACCAGGACAGCGTCCTCT
TCATCTCCACTCTGCACGGCGGCTGAGGGCCCTTCTCTGGGCCTGGGCACCC (SEQ ID NO: 194)

245. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SH3GLB2. In some embodiments, the sequences from gene SH3GLB2 comprise or consist of:
GTGAGTAGCCGGGGCTGGAGTGGGGCTCCTGGGGCTGGGGAGGGGAGTTTGCCTCTGGGGTC
CCTTCTGGGACTCCCACCTGCTAAGATGTATCCCTCCTCTCCAGATTTCCCGGCACCTTCGTGGG
CACCACAGAGCCCGCCTCCCCACCCCTGAGCAGCACCTCACCCACCACTGCTGCGGCCACTAT
GCCTGTGGTGCCCTCTGTGGCCAGCCTGGCCCCTCCGGGGGAGGCCTCGCTCTGCCTGGAAGA
GGTGGCCCCCCCTGCCAGTGGGACCCGCAAAGCTCGGGTGCTCTATGACTACGAGGCAGCCGA
CAGCAGTGAGCTGGCCCTGCTGGCTGATGAGGTGGGCCCGGTGCCGCAAGGTGGGGCAGGAA
TGGGCTGGGTGAGGAGCAGCCTGGGCACTGGGATCAGGCACATGGGGCCTGGAGGGGCCCTG
TTGGCAAAGTGGGGACCAGCAGGTTAAAGAGGGCATATCCAGCTCTGAGGAAAGGATCC (SEQ ID NO: 195)

246. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SH3GLB2. In some embodiments, the sequences from gene SH3GLB2 comprise or consist of:
GCCGGAGCAAGGTCTGGTAGAGGACGGGGATGGGGACGGAATTTTTTGTTCTGAGGGCGGGAG
GTTAGAAGTCAGCCTCTGGCCTCTTCCCCGCAGGTGAACCACCTGCGCTGCCTCCACGAGTTCG
TCAAGTCTCAGACAACCTACTACGCACAGTGCTACCGCCACATGCTGGACTTGCAGAAGCAGCT
GGGCAGGTGCGGGGCCAGCACTGCTGAACCCACTGGGGCCCCCTGGCTCCCATACCCTGTCC
GTGGGCAGCATGAGCTCCTCTGGGCAAGTCCTGTGACACAAAGCTGGGTTGGAGGGCTCTGCT
GGAACCCACTCTGGGTGCGGGCATCTCATGTGTATGAGGGTGGAGTGGCTGGCCTTACTGACG
GCCAAGTCCCCTGGAGCCCCTGAGGGTTTCTAGGGAATGCCTGGGTGGGGAGGATGGCAGGGA
CCAGGGGGTGGGGCCATCTCACCCTTCCCTTGCTTTGCTTTTCCCTTTGTGCTGCCA (SEQ ID NO: 196)

247. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AIF1L. In some embodiments, the sequences from gene AIF1L comprise or consist of:
CTAAGCCCCTCCAGCCTCTGTCATGCGTGGGCACACACTTTTGCAAAGCTGCCTGATCGTTGCA

GGGGTGAGGATGGAGAAAATAATGGACCGAATGGCAGGCCTGTCCATTCATTCAATGGATGTTT
TGTTGTTGTTGTTGTTGCTTTTTTTTTTTTTTTTAGAGACAGGGTCTGGCTGGAGTGCAGTGGTGCA
GTCAAAGCTCATTGCAGCCTTCACCTCCTGGATTCAAGTGATCCTCCAGCCTCAGCCTCCCAAGT
AGCTGGGACTACAGGCACGCACCACCACACCCAGCTAATTTTTTAATTTTTTGTAGAGATGGGAT
CTCCCTATGTTGCTCAGGCTGACTTCAAACTTCTGGCCTCAAGTGATCCTCCCTCCTCGGGCTCC
TCAACAGATGTTTATTGAGTGTCTACGATATGCTGGGCACTTCGACGCTAAACCTGTGGCTGGGG
CCCTGCCTCCTCCGAGCTGCCTCCTGATACCCACTTCCTCCTCAG (SEQ ID NO: 197)

248. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AIF1L. In some embodiments, the sequences from gene AIF1L comprise or consist of:
CAAGTTAGTTAACCTGAGTCTCAACTCCTCCACTCATCCTGCACATGTTTATTGAGCGTCTGCTAT
GTGGAACCTACATTCTAGCCGGGGAGGCAGAGAGGGTGTAGTAACCTCAGTAAGCAGTGGCAG
TGGAAATCATGTTTGGAGGTGACCCATCCTAAGGAGCTGGATAAGGGCGATTGGAAGTCGGGGC
AGCTGAAGTGGGCAGGCAGCAGTATAAAACAGGGTGGACAGGGCTGGGCATGGTGGCTCACAC
CTATAATCCTAGCACTTTGGGAGGCCGAGGCAGGCAGATCACTTGAGCCCAGGAGTTTAAGACC
AGCCTGGGCAACAGAGGGAGACCCCATCTCTACAAAAAATACAAACATTAGCTGGGTGTGGTGG
CATACACCCGTAGTTCTAGCTGCTCTGGAGGGCTGAGGTGGGAGGATTGTTTGAGCCCAGGCAG
GTCGAGGCTGCAGTGAGCTGTGATCGTGCCAACAAAGAATAAATAGGGTCG (SEQ ID NO: 198)

249. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SURF4. In some embodiments, the sequences from gene SURF4 comprise or consist of:
GTGAGTTGTGTAATTATTTCATTATGTATTACAACATAATAATAGAAATGAACTGCACACTAAGTGT
AATGTGCTTGAATCATCCCAAAACCATCCTCCCGCCTCCATCTGTGGAAAAATTGTCTTCCACAAA
ACTGGTCCCTTGTGCCAAAAAGGTTGGGGACTGCTATTTTTTTTTTTCTTTCTGAGACAGAGTTTT
GCTCTTGTTGCCCAGGCTGGAGTCCAATGGCGCTATCTTGGCTCACCACAACCTCTGCCTCCTG
GGTTCAAGCGATTCTCCAGCCTCAGCCTCCCGAGTAGCTGTGATTACAGGCATGCGCCACCACA
CCTGGCTAATTTTGTATTTTTAGTAGAGACAGTTTCTCCATGTTGGTCAGGCTGGTCTTGAACTCC
CGATCTCAGGTGATCCGCCCGCCTTGGCCTCCCAAAGTGTTGGGGATTACAGGCGTGAGCCAC
CGAGCCCGGCCAGGGACTGCTGTTCTAAGCCACAGCGGGCTGA (SEQ ID NO: 199)

250. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SURF4. In some embodiments, the sequences from gene SURF4 comprise or consist of:
TAGAGCCTGTGATTTGAGCCAAATCTGGAGAGATGGCCACCAAGCCAGAACTCTGTGCAGAGAC
CAAGTGCTATGGGGCAGGGGGCTGGGCCGGGGATTGCTGGAGGCTGACATTCATCAGAGGATT
GGGGGAGGGAGGGCAGGACCCAGAGGAGGAGATATGAGGATGGAAGCCTGAGCCTAGGGACT
CTCGGAGCCCATAAAAGTCTTAGGAGTCTGTAATCCAGCCTTGTGAGCAGCCTGCTCATGACACT
GGATATTCTAAGCCAGGGGTCCCCAACCTAGTCCGTGGCCTGTTAGGAACCAGGCTGCACAGCA
GGAGGTGAGCAGCAGGCAGTGGAGCAAAGCTTCATCTGTATTTACAGCCGCTCCCCATGGCTCG
CATTACCACCCAAGCTCCACCTCCTGTCAGCTCAGCAGCAGCATTAGATTCTCATGGGAGTGTGA
ACCCTATTGTGAACAGTGCATGTGAGGGATCCAGGTTGCATGCTCCTTATGA (SEQ ID NO: 200)

251. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ABCA2. In some embodiments, the sequences from gene ABCA2 comprise or consist of:
GCCAGCCTTCTACACAGCGGCGCCCCTGACGTCTGCCGGCATCCTGCCTGTCATGCAATCGCTG
TGCCCGGACGGCCAGCGAGACGAGTTCGGCTTCCTGCAGTACGCCAACTCCACGTGAGTGCCC
ACCCGCCCCTCGGAGCACCCACCCCTCCCCAGCCCATCCAGTGAGTGACATCCGCCATGGTGC
AGGGTCACGCAGCTGCTTGAGCGCCTGGACCGCGTGGTGGAGGAAGGCAACCTGTTTGACCCA
GCGCGGCCCAGCCTGGGCTCAGAGCTCGAGGCCCTACGCCAGCATCTGGAGGCCCTCAGTGC
GGGCCCGGGCACCTCGGGGAGCCACCTGGACAGATCCACAGGTGTGCCCTGTGCAGGGAAGT
TGGGGGGCAGGGCTGCGGGCAAAGCTCTGCTGTCACTGGGCTGAAGCCCACATCCACTCTGGG

CCCCTCCACCTGCACTGAGTTCCCAGCCACGCACAGGCTGCAGTGGCAGAGCTGTGGTG (SEQ ID NO: 201)

252. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ABCA2. In some embodiments, the sequences from gene ABCA2 comprise or consist of:
CGGCTTCTGGGCTGAGTCTGGGCTGAGGCTGGGCTGGCCTGGGCTGGGGCTGGAGCGGCCTG
GCTACTCTCCCTTCATACTCCTTCAGGCTCTTGCACTCACTCTGCTAACCAGCTGGCCAGAGGTC
AGAGGTCACTGCCCAGAGGGGGTCCTTTGTCCTCCCCTGGGCTCTGTAGGCAGTGCCACACCT
GAAACGTTTTCGGGGGGGAGAGTGCCAGGGCATGTGGGCCTGCACTGGCTGAAAGGAAAGGAAT
GCTCTGGGAGTTATGGCAGAAGGGGTGGTGAGTGGCTCTTTGACCTCTGACCTGCTGGAGTCAT
TCGCCCCAGAACGCTTGGCCTGTAGCCCAGCTGGGGCCAGGGCTCTGTGCCGCCTTCTCCCTA
ACGCTGCTTCTCCTTCCTGACTTTCTCTAAATTTCTCCTCTCGGCCTCTGTCTCCCTCCCCTTCTG
GATTCCTCTCTCTCTCTCCCCTTTCACCCCCGACCCTGCCCTCTCCCGTGG (SEQ ID NO: 202)

253. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GPM6B. In some embodiments, the sequences from gene GPM6B comprise or consist of:
GTACTTCCTTCTAATTCACCCCTCCCCCAGTTATTTCATTATCCTCTCGTGCATATGTCTGGACCT
AATTATTACATGCGCATCCTTTTAATTGTCATGATCTGTTTCATCCCTTCTATTAGAGTAATTTTATA
CTTTTCCCTTCAATATGCTATTTTCTGGGTGGAAACTTCAGGGAGGCTTTTAGCTTGCTAGGTATC
AAAATTTCGTTATATTTTCATGTTAAGTGTGTAGTGAAAGAAGCTTTTCTTAATATGAAACTACTTTA
TAATGCAGTTCAATCAAAAAAGACTTCTGGATCTCCGCTACAAAAAGATTGTATTTTTTCTTTATTT
TCAGTTTTATAACATCCAACTTTCCATTCAAAATAATATTGCACACATTGTATAATTCAATTAATTTG
CACATCCAACTCCTCAAATCTGGTCTTTTTAAAATGACCAACTGCTTAAACTTCATCTGTATTGAAA
AATACAACATTAGATCCAGCCATATTTTA (SEQ ID NO: 203)

254. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GPM6B. In some embodiments, the sequences from gene GPM6B comprise or consist of:
GGCAATTGCTATTCTCTGTGAGCCAACCTGTTACGAAAAATAAAGGTAACTTTTGAGAAATTAATA
TGAAGTTATAATTCAGTGGTATATGGAATACATCCAGAATCTATCCCATGTTAAGTAGCATGTTCT
GCATTTTCAGAACGGCTATTTAGAAAGAGCACCTCTTGAGAGGCTGCCACTGATTAGCTCTGTGA
CCTTGGATGAGTGAGATCACCTCTTGGGGTCTCCTGTCCTTGTTAGTTAAGAGTGACCCGAAAGG
CCCTGACATTGCTTCGGGCACTCCAATTCTAGATCCTCTAGCTCTGGGGAATGTGGCTGGCTCTT
ACTTCCCCTGCTCCCGTGCTGGCTTTTCCTTCTTGCTACCAATGCCGGGGCGAGGGTCCCCACA
ATGTGTTCCACAGGTCAGTATTGGGCCTGAAAATGCACAATCCTTCCACTTAGGGGACACACATC
TACCTGTTTCAGTGATGATTGTCCTTCCTCTTGTTTTGGCCTA (SEQ ID NO: 204)

255. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MID1IP1. In some embodiments, the sequences from gene MID1IP1 comprise or consist of:
CTCAGACAAGGCTTTTACCGGAAATTTAGCATATAGGATAGAAAGCAGAGACCAAAGACCTCTTG
CTTTGAGGCTGTTGGCGTGCTACAAGGACTCGAAAGTTATTTGTTCAACGGATGACTTCTGTTTT
CTGGAGGCAAACTGAATTCCGGGCAGGTGGCTCAGCACCTCCAGCCTGTTCCAGATCGGGACA
GGGAAGGTGCCTGGGGCAATCAGTGAGGTTTCCAACCTTCCTTAGGCCTGGGCCAGCCCGCTC
CCCTCCCATGTGACCCCAGGCAACCATTTTAATTTTTTTACAGCCAAGCGTAGTGGAGAACTGGC
TGCGCGCCGGTTGCCAGGGACGCGGCAGCCAGCTTGGCGGGGCTGGGGTGAAAGAGGACGCT
GCGTGGGGGAGGGCTCCGCGGCTTCTGACTGGCTGGAGCATCAGGATTCATTTGCATAATATTT
TCTGACGGCTTCTGATTGGCTGAAGCCAGAGGGGCGGTGGTGGGGTGATTCC (SEQ ID NO: 205)

256. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MID1IP1. In some embodiments, the sequences from gene MID1IP1 comprise or consist of:

TGAGTTGTTGCGGGGTCTGGGGGAGCTGGGAGGCCCGGTTTGGGAAGTTTTGCAGGCAGGTGC
ATGAGCCATCTTTCTCTGAAAGTGTTTAAGAAATGTTCAAGAACAGCGGCCAGAGTCAAGAAACT
GGGGGATGAAGGGTTATCTCGAGACTAGACGGAAGGAAACGTATCAGGGGAGGGGTGGAGGCC
AGAAGGAAGGAGTTAGGTAGGGGCCCTCTCCCAAGCTGGCGTTTTTGCTGGGTGGAATCCTTTT
GCTAGATCCCTTGGATTTCCGTTTTCCGTGTGTTATCACACTGTTGGAACTGGGAAGAAGAGAAA
AAGAGGCAAGATTTTGGCATTTAGTAAGTTAAGTCTGAATACCGAGTTTTCATCCGGGTGCATAC
GTACTTAAAATACCAAATGGGTCCAGGAAGGGGGACAAAGTACGCTTTAATTTATGAGAAGATCA
GCTACTAGAAACTGTATATCTGTTTTTCTCGAGTTTTCTTCTTGCAGTG (SEQ ID NO: 206)

257. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SYN1. In some embodiments, the sequences from gene SYN1 comprise or consist of:
GTGAGTTTGGGGAAAATAGAGTGGGCAGGAGGGAAGAGTCATAACTACTGCAATAATATTAAATA
TTGGTATATTATCAGCAGTGCGATATCAAGAGTGTGGCTGCTGTGTGCACGTGGAGTCATGAAGT
TGCTTTGTGATAGGGTCTACCGTGAATTTCCTTATGCTTACAAGGAAAACTAAATCATGATCCATT
CTAATATGTATCAGATCCTGTTACTCATGTTGTCTATTTTTGCCAGTATTAAAAACCTATTTCTAAT
GTGAATTGACAGAATTAATGTAATGAATCAGAATATATTACATATAGAAATTAAGTCATTATTACTA
ACATTATCAAATATTCCTTCTGATAGAAATTTTACCTATATTCAAATTAGGATTGCCAATAACATTTA
TCAATAATAATGTTATAAATTAAATTGTTGGCAAGGCACGGTGGCTCATGCCTGTAATCCCAGCAC
TTTGAGAGGCTGAGGTGAGCAGATCATGAGGTCAG (SEQ ID NO: 207)

258. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SYN1. In some embodiments, the sequences from gene SYN1 comprise or consist of:
GATCACCAGGTGGGCAGAGGGTAGAAAGGGTGCACTAGGCAGAGGGAACAGCTCACACATGTG
TGCAGAGGTGAGAAACCACTTTGCAATTTCTGGGAGCTATGGAGATTTAAAAACTTGGTCTTTGTT
TCGAGAGTGATTGGGAGCTTCTGGGGGAACTCTCAACACTCCTACCCCTGCCACACTAGGTCTC
TGAAGCCGGATTTTGTGCTGATCCGCCAGCACGCCTTCAGCATGGCACGCAACGGAGACTACCG
CAGTTTGGTCATTGGGCTGCAGTATGCTGGAATCCCCAGTGTTAACTCCTTGCATTCTGTCTACA
ACTTCTGTGACAAGCCCTGGGTGGTAAGTAACAGGAAGGGTGCCACTGGCAGAGGGAACAGCT
CATGCATGTATGTGGGAGCTTGAAACCAGTCTGCGATTTGGGGAAGTGAGGGTGTTCAGAAACT
TACAGATTCGTGGTGAAGGACTCACTGACCCAGCTCTCCTGGTTCTCATA (SEQ ID NO: 208)

259. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PQBP1. In some embodiments, the sequences from gene PQBP1 comprise or consist of:
GCGTCTGGCCGCGCAGTCAGGCCACGCCCCCAGCGTAGACGCACACCGGCGTCGGAGCTTTC
CGCCTATTACCGGGCAGCGATTGGGTCGCTATACCGCATGTCACGCCAAGGACGCACTCTCATT
GGCCAATCGAGTTTCTGCCATTTGTTCATTGCCTCCTGAGCGTAGTCCAGTTACTTTCAGGCTCG
GGGAGTGAAGGCCTCGTTGAGAGAAGGTCTCATTCGGTGTTTTGGGAAGAGAGTCGTGTGGGC
CCAGGTATCGTAGCGGCGACACGAGAGAGACGGGCGGTGTGACAGCCTTCCACTACCTGCACG
AGTGTATTGGTAACGTTGGGGTGGGTGCACTCTTTTGGAGCTGGAGGAAGTGCTGCCCTCTGCT
CCCCCATCCCAGCGCTTTGGTTTCTCCCACCCGGCAGTCATGGGGACGCTGGATGAGCCCATTT
CTGAAGTGCGGAGGGGCCGGGCTTCTTAGGCTGTGGGCGGAGCCTGGGCCTGGG (SEQ ID NO: 209)

260. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PQBP1. In some embodiments, the sequences from gene PQBP1 comprise or consist of:
TGCGTATGTTCTGTCCACCCAGCTACTGGTTCATTTGAGTAGATCGGAGTCAGATGAGTACATGT
TTACGGGAGGCGCTTGGTTACGGGATCCAGATAGGAATCTTTATCTGAGCTGCTTGTCAGTTTGT
TCGTCTGTCCCTAGGTCTGTCTGCTATCAGCTATGCCGCTGCCCGTTGCGCTGCAGACCCGCTT
GGCCAAGAGAGGCATCCTCAAACATCTGGAGCCTGGTGAGACAGCTAAAAGCAGATGGTCCTAA
CACGTGCCAGCCTCGACAGGCACTTTTGTTGTTGATACTGACGCTTGATACCTAGCATGGGCCAA
CTGTGCACCAAGCAATGGGGTGGCAGGCATTTTTCGTTGTTAACAATGTGGATTCCTGACATCCA

TCCCTACCGCGTGTCAAGTGGAGGGGGTTGGGGGAATAGATATTTCATTCTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTGAGGCAGAGTCTTATTGTGCACCCAGGC (SEQ ID NO: 210)

261. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CD99L2. In some embodiments, the sequences from gene CD99L2 comprise or consist of:
GTAACGCTGCTTTGCCTTCCTCACTTTCCTTTTGCTTCAGCCTTGATGCTTCCTCATTCGCCCCCT
GCTCTGGCGCTTCCTTGCCGCTCTTCTCCCTCCTGCTTCCCTGGCACTCACCGACGTGGCTGTA
ACCAGGACCATCTTTAGCTTACCCTGATGCGTGTGAGAGGATGCCACCTGCCAGACACTCTGTC
CCCAGGCTGGATGTGGCAGGGGTGGGGGGAGAGTTGAGGTGCCATGGTGAGGACTCAGGTGC
CCACTGGTGGTCATGCCTGGGGAGCACATAGAGGGCCACCCACAGGAAGGAGACGATCCAGCG
CCCACTGGGTTGGCAGCTAGCAGTGATCACGAGGCTCAGGGTGTGTCTCCTGGCCCCCACCTG
TCAGCTGGGAAGGTGCACCTGGGGCAGCTTCCACTGCACTCATCACCTGCCCCGCTCTGCGTG
GGGCCGGCCACACCTGCCAAAGAGCAACGCCCGCATTTGCCACAGGCCCATTTG (SEQ ID NO: 211)

262. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CD99L2. In some embodiments, the sequences from gene CD99L2 comprise or consist of:
CATGGGGCGGGATTGGGCCGGTTGGTTTCTGAGTGTGCGACTCCCAGCTCGCCTTGCCCCCTC
CGTGATCAGGAGTCTCTGGACCGTCCATTCCGTGGCGGGGCTGCGTGTACATCATGTCCCTGGC
ACCTGGCCCGGGCCAGAATCAGGAGGAGTCCCGCAGACGTTTGTGGGGTGGCTGAAAACACTG
AGAAGCTGGGGGTTGGGCCTCCTGTCCCCACTCTTTCCCCTGAGTCTCAGCCACTGCCACATGG
AGATGGCGGTAGAGGGGACCGGGGTGCAGAACACCAAGCTCTGGGGAGACAGCAGGAGGTGG
CTGCGAGGAAGGCCTGCCCCCACCACTGTGGCCCTCAGGTGCTCTCGGCCTCTGCTGCTGCCA
AAAGGCCCATGCTGGGGACCCTTGGCTTCCCTTGCCTTTGCCCTCAGTGTGGAAAGCCCGCATG
TTTGCTGTCAGGAGCGCTCTTACTCCAGGGATTCTAAGCTTTGTGTCTTGCCTTCA (SEQ ID NO: 212)

263. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene L1CAM. In some embodiments, the sequences from gene L1CAM comprise or consist of:
GTAAGGCAGGGGCGGTGGGGAGGGGCCAACAGCAAGGTCTCCCTATAGACAATGTGCGCCTGG
TGTGCCATTGTCCCCTGGCTGCCGGGGCTCTGACAGGACTCTCACTTCCCAGCCCCCAGGCCC
GGCAGCTCCTCATTTCAGGGAGAGGCCAACACGCCCCAGCCCCTCCTCTCCACACAGATACCTT
CACTGCTCCCCTCTCCCCAAGGGAGGCCCCAGACAGCTTCCCAGACAGGAACCAGGCCCCATA
ATCCCCTGGCCGAGCGCACATTTTCTCCCTCACAGTCCCCAGGATCTGGGGAATGCCCAAAGAT
GACAGCTCCAGACCTGCCTGCCAGGGTGGCCAGAGCTGCTCTTTCTGAGCGCATTCTAAACAAA
TGGAAGGCAGGCGGGCGTCTGCCTCACCCCCAGCCAGGCTCCTGCAGGGGCTCGGCAGTGCT
CTCACTCGCACCTGCCCTGTGCCTCTGCAGTGACAACGAGGAGAAGGCCTTTGGCA (SEQ ID NO: 213)

264. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene L1CAM. In some embodiments, the sequences from gene L1CAM comprise or consist of:
GCCTCTGAGCCCCACGTGACGGGGGTGGAGCCGAGGGCAGAGAGGAGCACCTCGCCCCTTCC
ACCCTTCTGCAAGGCCTCCTGGATTCCCCGAGCTCCCCACAAGATGACAGGCGCATGGTGGGG
GCAGGCAGGGGGATCATCCTCCCAGGCCGGGGTTGGGGCAACAGGCAAGTGGTGGCTGGACC
GCAGGGGGTGAGCGGTTTCTTTCAAGGCCTCTTGCCTCTGGGCGCTGTTGAGACAGAGTGCTG
GGGGTGCGGGGCGTAGAGGGGCCTGGAGCCCCGGGTCAGGCTGGGGCGGGAGAAGAAGCTG
TCCCTCTCTGTGTCTCCAGTGAAGGATAAGGAGGACACCCAGGTGGACTCTGAGGCCCGACCGA
TGAAAGATGAGACCTTCGGCGAGTACAGGTGAGCCGGGGCAGGAGTGGGTGCTGGCACTCAGC
TCCACCCTGGCCTTCACATCTCACCCCCTCTCTCTCTTCTCTGTGCTGCCGGGTGACTTCA
(SEQ ID NO: 214)

265. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CCDC3. In some embodiments, the sequences from gene CCDC3 comprise or consist of:
GTAAGTAAGCCATTTGATTTCTGCTGCCTTTGTTTTCCCATAAAAGGGCGTTTAAAAAAATATAATT
CTCCAAGAAATCTCTAGTTGTTTTGAAATAAAAAGTTACTTTTCGCTCTTCATCTCATTTATTCCAG
CTATTCTCTGCTTTGCCCTCCTTGGTTTGTGGAGCCTCATACAAATTCATTAGTACTTTTCCAGCG
TCACAGGTTGGAACTGAGGGTTCCAAAGAGCAAAATGCATTTTGGCTGAAGCAGAGCCAGGAAT
CCATGTTGTTTGCCATTGGCGCCATCCAATTCACTTGTTCTGAATAAGGGAATAAAGTTAATATTT
ATTCCCTTCATGATTCTTGTATTTCAAGAAAAAAAAGTGCTCTACAGGCTTTTTCCCCCCAGCAGG
TACTGATTGATTTGTTTGAATTTTGAGCTGCAATCAAGGATGGAGAATCTAACTGATCTCCTTATT
CACCAAATATTTATGATTTGTGCATAGAATATTGACT (SEQ ID NO: 215)

266. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CCDC3. In some embodiments, the sequences from gene CCDC3 comprise or consist of:
TGATGACTATTACCAGTTTTCTCTAAGCCTAGGCCCAGCCCTGGCCCATGGCCTCAGCCCTTGGA
TTGATATGGCTTATTTAGGTATTTAAAGGTCGACACCTGCCTCCTGCTGTTTAATTCCCTGCAGTC
TGACAGATTCACCAATTACCAAGGAGAAAGCCTGCCTTCCTTGTGCTGTGTGTAAATGAGGCTTC
CATCAGCACAGACACACACACAGGCTGCAAATGGACCAGCCCTGCCCCCAATTCCACACCCACG
GCCACAGCAAAGAATGCTGTGTTCCCCTTCCCCAGCCCTCACACCCAGGTTAATACCTGGGCTC
ACAGCCTCAGCCCCACACCCAGGTTAATACCTGGGCTAATTTCATTTTTTCACTTTTTGGGTTTTC
AGATGTACACCCCAGCGGAATCAAAATGACAGATTTATGTCACATTGTGGGTTTGGATCAGAAAG
CACCCTTGAGCAACACTTTGATTCTGTGTTTCTTCCCGTCCTCA (SEQ ID NO: 216)

267. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FAM107B. In some embodiments, the sequences from gene FAM107B comprise or consist of:
GTAAGAATAAACACTGGGACTTTTCTATGGCTGTTGAATAATGTAGTCCTTCTCTAGAAAATGTTG
TGTGAACTTAGACTTGTTAACACAATAGCAGACTTGTATGAGACTAAATAAAAATTATATGTTGTTA
TAGTGAGTGGTATTGAATAGTGTGTCTTTGCCAGGAAGAGAGCTTTGTAATAGGCTGTGTCTTGT
GTAGTTGTGAACTATTTTTTTTTCCTAAAATTTCTTCAGATGCCAACCATGTCTGTCAAACTCTGGA
TGAGTCGCCTTTTACTTAGCTTTTTAAGAACTCTTTTTGGATTCACTAACTTTTATCTGCATTATTTT
ATCCATGCTCTATTAAGTGTCTAGGATCCTGATAATTATGCATTTTCTCTGAAGATATCTATTTCCA
GTAAAATTTGACTATCTAGTGAAGATTGTAGGCCTGATAATATATTTTGAAGTACTTGTTATGATCT
GAATGTGTGTGTCACCCCCAAAAATGCATATG (SEQ ID NO: 217)

268. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FAM107B. In some embodiments, the sequences from gene FAM107B comprise or consist of:
CGAGAACTTGTCCTCCTCCAATTGGAGGTTGACTCACGCATGCTTCCTGCAGTCAGGTTGTGTGA
GTGTTGCAACCTGGTACCCACCCAGGGCTGGAGAGTCTGCGTGCATATTTGCTTACAAGTAGAG
GAGCTGATTTTTGTACAGACAAGTACATTTCACCAGTGCTGCCAGCACGTTCTCTTGGTCTGGAA
GGTCAGTAACTGGTACCAGAGTTGGTACGGTTTGTTTTTCATTGTTTGCTCTGGCTTCTGTGCCG
GATGAGGTCATTCAGTTGCATACAGTTCCTGCTTTCAGAAGTTGCTAGAGTGTTTCTCTTTGAACT
TGAACTGTGGCTCTTTTGATATCCAGAAAGAGAGTTCTTTGTGGGGATGGTTAATTCTTGTTTTGG
GTGCTTTTCTTCACCGCTCTAAGGAACTACCACAGTCAGAAGGTGCATTCTTACTGCGATCTTTTT
ATTTGCTACCTTGGGCTTAAGGAGCCTGCCTATATCTACTGA (SEQ ID NO: 218)

269. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NEBL. In some embodiments, the sequences from gene NEBL comprise or consist of:
GTAAGCTGACGGCGTTTGTCGGCCGGTGTGTGTGGTCGAAAAGATCATGCTTGCTCTAGCTTCA
GAATTACCCTCTTGAGTCATCTGACTCCTCATCACATGTTGGTTGTGGTACCCAATTTAAAATGGA
CCGCAGGTAAAGTATTATTTTTGTACGATGTGGAATGGGATTTCTGGCATTCACCTGGTATCATCT
CAAGTCTTTTCTATTATTGGAAGCTCTGTCTTTAATACCTTGCTAATTTTAAGAATGTTCCTCCTTG

TATCACACACCAGGGCCTGTTGTGAGGTGGGGGGAGGGGGGAGGGATAGCATTAGGAGATACA
CCTAATGTAAATGACGAGTTAAGGGTGCAGCACACCAACGTGGCACATGTATACGTATGTAACAA
ACCTGCATGTTGTGCACATGTACCCTAGAACTTCAAGTATAATAATAATAAAAAAAAGAATGTTCC
TCCTTGTTAAGCAAAGAAGCAGCAGAGATATGAGTGATCACA (SEQ ID NO: 219)

270. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NEBL. In some embodiments, the sequences from gene NEBL comprise or consist of:
AAAAAAAGTATATTTTGAAGTATAAGTTTTTGTAATTATATTAAAAGTGGTATATATTGTTACCTATA
AAATTTCAAACTGATTTTAAATAATGCCATTTTCATGAATGATTGCCTGGAAATAGATATCACTTTA
TTGCATACTGAAGTTGAAGAGATAGGAAATTTAATTTATATTTAAATTAGTATATTTTAGGAAGTAA
CCAGGATTTGAGAATATGTATTTTTACAAGCTCTCATTAATAATATATATATAGTTTTATATATAATT
TAAAATAGATATGAGCTATAATGATTAAAAACTTTGTGAAAATATCAGCACTTGATTTCTGATGCTA
AGAAACTGAAGTTCCAGACTTTAGTTTTGGAGTATTTGGAAAAGATACATACATGTAGACAATCTG
CACGCAGCCAGTGCAGTGTACACCTGTCATTTAATAAAAATGTTGTGAAAGAGGTAACTATCCGC
AAAATTCAGTATGATGATTTTTCCTTTTTCA (SEQ ID NO: 220)

271. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HNRNPF. In some embodiments, the sequences from gene HNRNPF comprise or consist of:
GTGAGGGGCGGCCGAAGTCTCCGAGGTCGAAGGCCGCACACCCGGGACCTAGCGGGGACCGG
GTCCCCCTGGGGGTGGGGACGGGGGGTGGGATTTGAGATTAGGGAGACTATCCGAAGTCCAGG
GCCCCGTACCCGGACTACCTGGGGACTGGGCCTATTGGGGTGGGGATCGTTGGGCTGGGGCT
GGGATTTGGGATCAGGGAAGAGCGATCTGAGTTTAAGCGCCGCAAACCTGGGACCGAGCGAGG
ACTGCACATAATGAGGGGCCGTGGCGCTGAGATTTGGGTGACGGGATTCGAGGTCGAGGGGCC
CGTACGTGGGACCGGCAAGAACTGGACCCACTGGGATCGGGAGACGCAGCGTCGGAGGTCGA
GAGCCGCACGCCCAGACAGTGGTCCCACGCGGTGAGCACCGCGGGCTGAGATTTTGGAGTCAG
GAAAGCGCGGGGAAGGCACGGACGGCCGGGTGCGTTAGTCCGGCCCCCTGGCGGGGAGCTG
(SEQ ID NO: 221)

272. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HNRNPF. In some embodiments, the sequences from gene HNRNPF comprise or consist of:
CCCTATCCCCTCCCCTCCCCTCCCTTCTCCTCTCCAGAAACGTCCTCGCTTGTCCGCCTCCACCG
CCTCCCCCGCCAGCCGTGTCGGCTCTGCTCCGCGCCCAGCCGGCCAACCGGCGGCTCAGCTCT
GGCGCGTCACAATGCGCCGTCGCGGCCCCGCCCCCGGACGCCGGACGCAGAAACTCCGCCCT
GCCGCGGTCCTTGCGTCCTTCCGGCTCCGTCGTGGAAGCAGGACTGCGCCGCGTCTTCCTCAA
GGTGGGGTTCGGGGGGCCACCGAATCGCTGTCACGCCGGCAGGTAGCAGGGGGTGGGGACGC
GGGCTCCTTGGGCTTCTGTTTCCTGGTGTCCAGGGCAAAGGGCTGAGCCGGGCAGTAGGGCCT
AGTCGGGGCCTGGCTCGCCGGGAGCAGGAGGGCTTCCGGCAAAGCCGCGTGCGCTCGACGGG
CAGGCGCTGAGGATTGGGGCCGGCAGCGCGCCTGACCCCGCCCCTCGTAGGCTCCGCCC
(SEQ ID NO: 222)

273. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FAM213A. In some embodiments, the sequences from gene FAM213A comprise or consist of:
AGGGAGTGTGGGTTGAGGGAAGCCACCGATGTGGCAGAAAAGGAAGGGAAAGCAAAAGGAGGT
AAAGAATAGACAGCAGATGAGGGGCCTCAGAGGTGCCAGCTGACTTTCCAGGCCTGGGGTGAG
GAATGGGGCAAGGGAGCAGGCTGCACGAGGAGCCACAGAGAAAAGGACATCTTCTTTTATTTGC
GCTAGTATGACATGTGGGCTGTGTTACGAGCTTTGCTTCTTTAGTCTGCACCGGATAGCAGAGGA
GTCTGGTGGCACTTGGGAAATGTTATAATCTGCATGACTGCAAATGACTCAAAGCTTTGCTCAAC
TTTTTGAAGGGCTAGGGGGCCTTGGCAGCTTTCCATTTAGATGTTTTCTGGAGACTGACTGTTGG
CAGCTGAAGGAGCCCCAGGGTTTCTGGGTGGCCTGGTCCTGCCTATGGAGTGACTGAGCCTAG
GGACCTAGTCCCGCCTCCAGCCCTCCCCTTGCCGCCTGCCCAGGCCCGTCT (SEQ ID NO:
223)

274. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FAM213A. In some embodiments, the sequences from gene FAM213A comprise or consist of:
TGAGTGCCTTGTTCCCAAGTTTGAAGCGTCTGAGGTTGGGGGTAAGAGACCGTTTGAGGAAGGG
AGTTGCCTTGTATAGGAAAGAGACAGGGTCTCGAAGCTGGAAACTGAATTTGGGGCGGTGGGG
GCAGTGTTGAGGAGCCTAGAATGTTCTGACTCCAAAGTGACCTGTTTTTGTTAGACTCATAGGAT
GTCACTGGGGATCATTAGGAACTTCCTCATGGAGTTGAGAAAAATGGGGCCTGGGGAGGAATTG
ATTCAGCTTAGCCTAGGGAGCCCGACTGGGTCTCGTCCTCTTGCACCCATGTTCAGACCAGAGC
TGCCACTCTGAGCTGCCACAGCTGTTGTTTGTTTGTGGCTTTATCCTACTTCACCTTCTGTGGGA
GAGGGTGGATCAGATAAGCCCAGCAGTGGGGAACTGAATGCTATAGCTGTGTCAGGTGGGGGC
TGGCTCTTCTGTAAACAACCCTACTATTCTGTTTCAGAGAAACTGACCCTT (SEQ ID NO: 224)

275. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NDUFB8. In some embodiments, the sequences from gene NDUFB8 comprise or consist of:
GTGAAGATGGCGGTGGCCAGGGCCGGGGTCTTGGGAGTCCAGTGGCTGCAAAGGGCATCCCG
GAACGTGATGCCGCTGGGCGCACGGACAGGTCCGCGAGAACGGGCGAGACCTCAGTGTGGGA
AGGGGGTACCTGAAATTTGGTGTATCGGGAGGGGGGATCGTAGATGCCGCGGCGGCAGCCTCC
GGGTAGGGAGTGGAGGTGGCGTTGATATATCCAGAAAATGGGGTGGAGGATCGCACTGATCCT
GCGAAGTCCCGGGCTCGGACCTCTGCAGCCCCTGCGACTTGAAGCCTTCGGAGCGGCTGGAGA
GCGGGCTCGCTTCTGACCTGTTCTCTTCTGCGTTCTAGCCTCCCACATGACCAAGGACATGTTCC
CGGGGCCCTATCCTAGGACCCCAGAAGAACGGGCCGCCGCCGCCAAGAAGTATAATATGCGTG
TGGAAGACTACGAACCTTACCCGGATGATGGCATGGGGTGAGACAGAGAGGGTATGCT (SEQ ID NO: 225)

276. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NDUFB8. In some embodiments, the sequences from gene NDUFB8 comprise or consist of:
TGGGTTGAGGTGACTGAGACATGCAGATGGAAACACGGACTGAAACTAAGGAGCCAATTCAGGG
CCGAATTGTGTGTTGCACTGGCGTCTAAGTGAAGATCAACCCATTTGGAGAACAGAACAACAAGC
AAGACCAACAGGTGAATTTGAAGAATGATCATGTTTGGGGATGGAAGGAAGTGCCCGTGAAGGA
GAGGAAAGCAAGCAGCCAGAGAAGAGAGTAAGACAGGCTCATTTCACTAGTACAGCTCCTGGGG
GAGGTGGTTAAGCTGTCTACCTGAGTTGCTCAGGTTCCGAGTTCCCATCATCCCTGGATGGGTC
TAAGTCAGCTCAGGGAGAAAAAGGACACAACATTCTGAAATGTCAGAGACCTGCCTGGTTTTCCC
TTCTTCCCGCTTATCCTTCCCAGCCTCTATCCAACCCTTGGCTTCCCAACTGCGTATTTAAACCCC
GCCCCTGTTGAACCCTTCGGCTTTTCTTCACTCCCGGCTTCCTCCGT (SEQ ID NO: 226)

277. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSD. In some embodiments, the sequences from gene PSD comprise or consist of:
GTGAGTGCCCTCCTCCTGCCCATCCCGGACCCCTTCCCCCACCTCCCATCCTGCTCCCCTCCCT
GTCCCTGGATTTTTTCATTCCTTCTCAGGCCACACTTGAGCCAGGACTGGCATCCTGGGACAGAA
ACCCTGGGCCCAGGTCCCAAAGGGCTGTGCTTTCTCCCCAGGAGCCTGGAGCAGATGCAGTCC
TGGATCACTCGCATCAATGTAGTAGCCGCTATGTTCTCTGCGCCCCCCTTCCCAGCTGCTGTTAG
CTCCCAAAAGAAGTTCAGCCGCCCTCTCCTGCCCAGCGCTGCCACCCGCCTCTCCCAGGTAGCC
CAAGCTCTGTCCACCTAGTGCCAGTGGGATGGAGGGTGTTAGGCTCAGGCCCACTGCACTCAAG
GCTGCTGCGTGTGATCGTGGAGATGTCCCCTGCACCAGGATGCTGGCCACAGGGGTGAGCAGG
GACTGAAATCCAGCCCCCACTGGGTCCCGCTTGCCGGCTGGGAACCCAAAC (SEQ ID NO: 227)

278. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSD. In some embodiments, the sequences from gene PSD comprise or consist of:
GAGGTGATCACACCTGCAGAGACGAGGAGGAGCTGAGACGCTCTCTGTCTGAGTTGGCCGACC
CCAACCCCAAGGTCATCAAGCGGATCAGCGGGGGCAGTGGCAGTGGCTCCAGCCCTTTCCTGG

ACCTGACTCCCGAGCCTGGGGCTGCCGTCTACAAGCACGGGGCCCTGGTGCGAAAGGTGCACG
CAGACCCTGACTGCAGGAAGAGTATGTGGCCGAGTTGCGGGGGGCGGGCGTCTAGGGGATGG
ATGGGAGTGGGCCTGTTCCAGGGCCCCCTGACCTGTCTTCTCTCCCCGCAGCACCTCGGGGCA
AGCGGGGCTGGAAGAGCTTCCACGGGATCCTCAAGGGCATGATCCTCTACCTGCAGAAGGTGC
GGGGTCAGGCCAGGGGGCTGGGGCTGGGACTGAGTTGGCTGGTGGGTGTGGGGTGATGGGTG
GGAATAGGAGGGGCTGGGCCAGGCTGCATTTGGGGCCAGGACAAGATGGACACCCCTGCA
(SEQ ID NO: 228)

279. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GSTO1. In some embodiments, the sequences from gene GSTO1 comprise or consist of:
AGAGGCCCTCCCAGTAGTCACGTTAAGCTAGTACTGACAGAAAAAGGAAAAGCCTGTCCAGGTG
GCTGGGCAACCCTGCAGCGAGGCATAGATGAGCTTGTAAATCAAAGGAAATGACCAAGGTGAGT
CTCAATCCTTTTAGAGGTTTATTTTGCCAAGGTTGAGGACACATCTGAGAAAAAGGAACACAAAAT
CACAGGAACATCTGTGATCTGTGCTCTTTCCAAAGAGGGCTTGAGGACTTCAATATTTAAAGGGA
AAGAGCAGGCAGTAGGGGAAAGTGGAAAGTAAAAAGGGAAGGTAGATAAAAGGGGAGAGTAGT
TGCATTCTTTGGGGCCTTTGATCAGCATTCACTGAATGCGCATGTTACATTCGTGAAAGGAGGTC
GTAGAGGAATAGTCAGTTATGCATTCGTCTAGTGCTTGGTGAATCTGCATTTTTACAAGATTAAAT
ATAGGGTAGAGGAAGCGGTCAAATTGCATTTTTCTCCAGCGAGAGG (SEQ ID NO: 229)

280. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GSTO1. In some embodiments, the sequences from gene GSTO1 comprise or consist of:
TGAGTGAGCCATGAGGTCGGGCCACAGGCTCTGAAGTCGTGAAGCCTTGGGACGGAGCGGGTG
GTGCTTCGAGGTCAGTGTCACGGGAGGGAGGTCAGGGTCAGGGTCAGACGTGGAGCCCCGTG
GAGTGCGGAGTGGTGACCCCTTCGTTCGGGGGCGGAGGGATGACTGAGCATTTATAACTTTTGT
GTATCTCCCCGTGGGTGCAGCCCTTGGCCAGCGAGATGCTTTGACACAGCCCCTTAAGATGTTT
TAAGGGCTATCCCATAAAGCCGGGAAGGCACAACGGGTGGAGCTGGCGGCCGCCGGGGGCAG
GCACTTTTGAGCTAAGGAGGAAGCGGGGGAGGGAAGGAGGGCGGGAAGGACGCGCCACCTAC
TTCCTGAATCCCCTGCAAACCCCAGAGGAGCTCGGCCTGCGCTGCGCCACGATGTCCGGGGAG
TCAGCCAGGAGCTTGGGGAAGGGTGAGGCCTGCCCGCCGCGAAGAGGGGGTGATCTCGG
(SEQ ID NO: 230)

281. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TACC2. In some embodiments, the sequences from gene TACC2 comprise or consist of:
CGTATGCCTTCCTGCAGGATTTCTCTGTCTTCCTGTCCCACTCTTGACCCTTGCTTTAGCCACACT
GGCCTCCTCGCTGTTTCTGTAACGCACCAGGTGCTCCTGCCGCAGAGCCTTTACTCGCACTATT
CCTTCTACCCAGGATGCTTCCTCCCCAGGAGTCCTCCTGTTTCATGCACTTACCTTGATTCTGGC
CTTTGCTTAGATGTCTCCTCAGAAGATCTTGCCTGACTACCTTATTTTAAAAGTGAAACTCTCCTAT
CCCGGCTTTATTTTTCTCCTTAGCATGTATCACCCTCTGAAATTCTGTACATTGTTTGTTTGTTTTT
GAGACAGAGTCTCACTCACTCTGTCACCCAGGCTAGAGTACAGTGGCGCAATCTCGGCTCTCTG
CAACCTCTGGCTCCCAGGCTCAAGCGATTCTCCTGCCTCAGGCTCCGGAATAGCTGGGATTACA
GGCGCTCACCACCATGCCTGGCTAATTTTTGTGTTTTTTTAG (SEQ ID NO: 231)

282. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TACC2. In some embodiments, the sequences from gene TACC2 comprise or consist of:
TGTGAGACACCATGCCCGGCCCTGGTGGTTTATTCGCTATCTTCCCCTGAAGAATGTGACTTCCA
GGAAGGGAAAGGTTTTGTCTATTTCTGTTCCTTGTTGAATCTCTAGTACCTAGAACCATGTCTGGT
CCTGATTAGGCACTTGGTGAATGTTTTTGAATGAATACTCTGAGCTGTTCTTTAATCGGTCCTCAT
GATCCTCATTGTACAGATGAGGGAACTCTGGGCGAACCTGGCCTGGGTCTTGAGCTAATTACGG
GTAGGTCAGGTTCTGTACCCAAGTAGTACACACAGTGATGGGCGGGGTGGCCTGGGGCCGTGG
TTTGTCAACCCCTACGCTGGAGGGTGATGTTTTGGTACAAGAGGAGAGGTGCCCCAATGCGTCC
TGTGTCTGTAATTGATGGCGTTGTCTGTGTTTCCCCAGGATGTGGTTCTGAGACAGTCCCTGTCC
CTGATGGCCCACGGAGCGACTCGGTGGAAGGAAGTCCCTTCCGTCC (SEQ ID NO: 232)

283. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TM7SF2. In some embodiments, the sequences from gene TM7SF2 comprise or consist of: TGCCTAGGGGACGGGCCCTCGCGCTGGAGTTAAGCGGCCGGGGGTGGAGCTCCAGGCCTAGC GGGGAGGTCCACGGAGATTGGCCCCCACCCCAGGCTCCTTTGTGTGCCTCTGTTACGCCCAGG ACAGACGCCGGGGGCTCTCCCTATGCCCCTCGTCCCCACAGCCTTACCCCATTTACTGCTACTC CGTGCACCACAGCAGTGGCTGGGGTGATCCTCTGAAGGCCAGGGTGGCAGCCTAATGCTTGGG GCAGGGTCTGTGGCCCCCCTGAGTTTTGGGCTCTGCGTGTGTTTGCGGGGTGGGGATGTGGAG GCGCGCAGCCCCAGGGCTCACTGTGCGCTGTGGTTCAGGCTTCCAGGCCCTGGTGCTGACAGC CCTGTTGGTGGGGCTGGGGATGTCAGCGGGGCTGCCTCTGGGGGCGCTCCCGGAAATGCTCCT GCCCTTGGCGTTTGTCGCCACCCTCACCGCTTTCATCTTCAGCCTCTTTCTCTACATG (SEQ ID NO: 233)

284. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene APBB1. In some embodiments, the sequences from gene APBB1 comprise or consist of: GAATAGGGCTTGGGATTCGAGGGTGGGAGTTCATCCAGCATCAGAGTCCTCCTCTCTAACTCTG TTATTTGCCTCTCTTGTGCTGCTGGACCCAGAGAGAGGTACTATGCCTATTTTCCCCCTCCTACA CCTGGACCAGATGCCTGGAAGCACCCAAGCTCCCCTCTTCTGCCCTGCCCCTTCCCACCCGCTA TGCTCCACCATTACCCTCCACCTCAGCATGCTTGCCTGTCTACCCCTCCCCCCCAAGAAGGCAG CACCTATGGGGGACCAGCTGTGGGCAGAAGCCCTGGAGGAGCTGTGATGGGCAGGGAGGACG TGGGTGGGGTGGGGACCAGGCTCAGCACTGGATGGTACTGGGAGACACTGAGGTGCCCCTTCC CCAACAGGGACTTTGCCTACGTAGCTCGTGATAAGCTGACCCAGATGCTCAAGTGCCACGTGTT TCGCTGTGAGGCACCTGCCAAGAACATCGCCACCAGCCTGCATGAGATCTGCT (SEQ ID NO: 234)

285. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene APBB1. In some embodiments, the sequences from gene APBB1 comprise or consist of: GGGGAAGTAAGGACCTGAGCCGGGGGTAGGGGGTGGTACTGTGAGAGTGTGAAGGGAATTATG AGAGATGGGAGGTCTGACCTGCCCACAAGCAGGCTGGGGAAGGGGGATATTGGCCCATCCTAA GTGGCAGCCCTGTGGGATGGATGAGCGACCCCAGGCCAGGACCTTGGGAGATAGTCGCCTAAC AACGGTGGAGTCAATGTGAGAGATGACACGTGACCTCCACTAGAGTGAGGCCTGCAGGGCGGG CGGTCTGACACCAAAGCAGGGGCCCCAGAGCTGTGGCTAACATCCCCTGAGCTGCAGGGGTCA GAGATCAGCCACCATCCTGGCTGGAGTCCCACTGAGTGCCTGCTTCTGGTCCTGCAGGGAAAG GATCTGCTACTGCAGCTGGAGGATGAGACACTAAAGCTAGTGGAGCCACAGAGCCAGGCACTG CTGCACGCCCAACCCATCATCAGCATCCGCGTGTGGGGCGTCGGGCGGGACAGTGGAA (SEQ ID NO: 235)

286. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EIF4G2. In some embodiments, the sequences from gene EIF4G2 comprise or consist of: GTGGCTAAACAAAATGTAATTGTCAGTGTTTTGAGTACATTTTAGGTTAGTCTTACAGATCTGCAA TGCAGTGACAGTGCCAGGATCTGAAATACGTTGTAATTGAATGAAGGCTTATAGATCTGTATGTTA GCAGTGTCTAATTTTGGTGCTCTTTCTCGTTCCAGGTATTTCATTTCTCCTGTCCCCTCCCCTCCC CACCCCATCTATTAATATTATTCTTTTGAAGATTCTTCGTTGTCAAGCCGCCAAAGTGGAGAGTGC GATTGCAGAAGGGGGTGCTTCTCGTTTCAGGTACTTGTAGATTTATTTTGGGGAATCCTTTTGAAA AGGCCAGTCTCAAAAAGTAGTTAACACAGCAAATAAGTCCGACTTAATGGGCTGCAATTTTCATTT GAAAAGTTCTTAAGTTTTCATTGACAGCCTTCTAAGAACTGCCATCTGAAGAATAAATAAAATCAAT TATTTGCCTTTCCTTTGGGTCCGAGTTCAGTCTTCA (SEQ ID NO: 236)

287. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EIF4G2. In some embodiments, the sequences from gene EIF4G2 comprise or consist of: AGTGTTGGCCAGGCCGCCGTGCGGTCATGGCCGGATGGCCGACGCCTGCAGGGACGAGGCCG

TGGCGGACCGAGGCACGGCTGTGCTCGGACGGCGAGGGAGCGTGGCTCGGACCGCTAGCGCC
GTGGCGGGAGGCACGCGGGCCGGCAGGGAAGGCCAGGCCGTTGGCGCGGGACCAGGGAACC
GCAGGCGTCCCGGAGCCTGGCCTCCCGGCGGGGAGGTGTGTAGGACCTGGAGTCGGCAGGGG
CTGCCCTTCGTCGGGGAGGAAAGAGAGAGTGATGATTTCTGCCCCTTTTGTCAGCAGAGGAGGC
CGTGGCGAGGCGGTTGTCAGTCCCGGGGGGATTTATGGTGCAGGAGGGGGCCCGCTTGGAGG
CGGCGGGTGGGCAGGAGGCCGCCTTCCTGCTTGGAGAACAAAGAGCTGGGCGCCGGGCTGGC
GGGGGTGGCCTCAGCTGCTCCTCCCCGTCGAGCGACCCGGGCCTCGCGGGGAGGTTGTCGGA
AG (SEQ ID NO: 237)

288. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SYT13. In some embodiments, the sequences from gene SYT13 comprise or consist of:
GTAGGGGTCTCCTGCCCCCTGCACTTCCATGGGCAGCACTCCAGTGGGGCTTGTCAATGTCTCT
GTAGATGCTGTGTGTGGCCTGATGAGGAGGCCGAGTGCCCCGGCATTTGACGCTGGCCAAGCA
GATGGGCACTGGGCCTCAGAATTATGGTCCTTTCTTCCTGACAACATGTTGCCATACCACTTCTC
CCCCAGACCGCCAACTTTCCACTGGAAAATGGAGTCCCTTTCTAGTCATATGTGTGCAACTATGA
GAGAGGATAAAGAGCCATGGTTAAAACCATGGGCTTCAGAGTCAAGGGTTTAATTTGCTGCCCTT
TCATACACTTATTGTGTGGCATGGGTCATGCTGTAACTCCATGAACCTCGGTTTCTTCATCTATAA
AATGAGACTAGACTATTATCTGTCTGGTAGGGGAGTTGTAAAGTGTAGATAAAATAACACACATAG
AATGCTTAATTCAGAGCCTGGCACAAAGGAGGTAACAAAAAACAT (SEQ ID NO: 238)

289. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SYT13. In some embodiments, the sequences from gene SYT13 comprise or consist of:
CAGGGAGCTCAGTGACTGGAGATGAGCAAAGGAAGGATTGGGGGCGATATCAGAGAGATGAGC
AGGATCAAGCTAGGCAAGCTGCAAGGAGTCTGGATTTTGTGTGGTGGGAGCCACTGGCATTTCT
GAGCCATTAGGTGGAGAAGAGGAGGGAGGAAGGGAGAAGGGAGAAGGAAGAGGCAAGGGGAG
CAGATGAGAGCAGCAGAGTGGGGACCACCTGCAGCAGGTCCAGGCAATATCCATGGGCGCAGC
CATAGGATGGATGGGCCGATGGATGGAGGAGGTATGGATGAACAAGGCCCACATCTCAGTGGA
TTGTGGATTTGAGTGGGTTTGGAGATGATGTTAGACCTTCCTAGGTTGTGCTCTTCAGAGCAGAA
TGAAACCACAACTCTCCCTCTGCATCCTACAACAGGTCAGTTCACCGTTTCTCCCTTCCATGGGG
GGAAACAGACAAGAGGGCTCCTTTGTGGACTAATCAGAGTAATTTGTGTTTGCA (SEQ ID NO: 239)

290. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAPK8IP1. In some embodiments, the sequences from gene MAPK8IP1 comprise or consist of:
CTGCTAGGTGAACGTGTACTCCAGATCTCAGCCAGCCAGGTGGGGGGCTGAGTGGAAGTGATTT
TAGGTCCTTTTCACGATCAAGCAAAGTGAGGCCCGGCCAAGTTGGGCAGCCAGGGATTGTGGCA
GCCTCTGTGGGCTCTGCCATTCCCCGTGCCTCACCCACCCTCCTTCACTTGGCTGCTCAGCTCC
CTCCTGCTCTTTCTGCCCCTCCTCAATTCACGCTTGCTTTCCAGCCCTGGCCAAAAACAGTGACT
GGGTGGACCAGTTCCGGGTGAAGTTCCTGGGCTCAGTCCAGGTTCCCTATCACAAGGGCAATGA
CGTCCTCTGTGCTGCTATGCAAAAGGTACCTGAGCCCTCTCCCTTCTCCTCCCTTGGATGGGTCC
CTGGGGCAGAGGGACGCAGGTGTCTAGAGGCAGTAAAGGGCTCAGGCCCTGGGACAGGAGGG
ATCAGCAGAGGAACAGACAGCAGCTGACGTGGCTCCATTTGTCACCTGTAG (SEQ ID NO: 240)

291. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAPK8IP1. In some embodiments, the sequences from gene MAPK8IP1 comprise or consist of:
TGACTTCTTCCAACCCAGCCCCTTCCTTCCATGGCCCCAAGCTCTCCCCCAAGACTTGTGATGAA
GAGGCCATCTCCTGTCACCCTCACTGCAGGCCAGGTGACCGCCCTCTTGCTTCTTTTCTCCCTC
CTGTAGGGGAATAAATGTAGCCACTTTTTCCAGTTAAAAAACATCTCTTTCTGCGGATATCATCCA
AAGAACAACAAGTAAGTGGGGGTGGGATGGCAGTGGAGGAGGCACGGGTGGTCTGCAGCCTTG
AGGTGGGTGGGTGTGGGCCGAGCCCCCGTCCCAGCACAGACAGACCTGTCCCTGCAGGTACTT
TGGGTTCATCACCAAGCACCCCGCCGACCACCGGTTTGCCTGCCACGTCTTTGTGTCTGAAGAC

TCCACCAAAGCCCTGGCAGAGTCCGTGGGGTACGTGTACACCCTGCTGAGCACCCAGCCCGAG
GGAGCACGCCCAATCCCAGGCCCTGGGGCTGCTTCCTGGCGCTCAGCTTTG (SEQ ID NO: 241)

292. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBE2L6. In some embodiments, the sequences from gene UBE2L6 comprise or consist of:
GTGAGTCCCGGGTCCGAGCCTTCCGCGCGGGGATCGGGCGGTTGTCCGGCGGGTCGTCCTTC
GACGGCCTCCTGGCCTCGCCGGAGCGGGTGCGGGGAGGCCCACGCAGCGACGGCTGGAGGA
GGGGTGGGCGGGGCTGCCGGGGGTGGGGTCCCCGGGGCGGGGCGGGGCGCGCTGTGTCGC
GGGTCGGAGCTCGGTCCTGCTGGAGGCCACGGGTGCCACACACTCGGTCCCGACATGATGGC
GAGCATGCGAGTGGTGAAGGTAACCGCGTATAGGATGACCCCTTTCTCTTGGCTCCCCTCGCCT
CCCGCATTCCCTCCTCCCTCCATCCCCTCCGCGGCTCTCCGAGCACATTTATTTATTTGTCTGGG
CACCAGGGCTGGCTGAATCCCTGTCCTCCCCGCCCTCTACTCAGAGGAGGACTGGCCTGCAAG
AGTGGCCAGAGCTGGGGTTTTGGGGGTTTGGAGGCCTCTGCTTGAGCCGTTCGCGTGGTGAA
(SEQ ID NO: 242)

293. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBE2L6. In some embodiments, the sequences from gene UBE2L6 comprise or consist of:
CTCCAGTCAGGGCGACAGTGAAACTCTGTCAGAAAAACAAGAAACAAAAAAACTGTGAGGTACTG
AGATCACAAACTGGTGCTCAAAATATACTGATTTCCTTTCTCGTCTGGACTAAACGGGGGTAGGG
AAGGGTGAGAAGGAGGGGATCGGCCCTCCCAACAAGTCTCATCTTCCCCAGATGCTGCTTGGTG
CTCAGGGGCTGCAAGTACTCTGTCCTTGCACAGAGGGTTGGGGACTCCAGCTGTGCATGGGGG
CACACATTAGGCCCACAGCTTGTAATGGACCAGTAGTAAAGTAAGGGAGGGGAAGCAGACTCTC
TCTTGGAAAGGAGGCTCCTGAGTCCTTCTTGGGGCTTCCCCCACCAACTGTTTCCCAAACCAGC
ATACAGTAGGCACTTAGTAAATACTAAACCTAGTAAAGGACTGAATGATGGTAGACCGAACCCCC
AAAGCAAAAGAGAAAGGGTCCAACAGCGCCTCCTTGCGGTGCTCTGCCC (SEQ ID NO: 243)

294. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CPSF7. In some embodiments, the sequences from gene CPSF7 comprise or consist of:
GTTTGTCGGGAGGGAGCGGGGCGGGCCTAGCTGGGGGCGAAGAGTAGGCCTGGGTTGGGGG
CAGAGGCGGCTGGAGCTGCTTGACACCTGGGGGCTCTGGCCGGAGCCGCCTTGGGGGCTAGG
CAGGTGCAGCGGATAGGGGCTGCGGGCTTCGCCGCGGTCATTCTTCGCAACGCCGTCCTAGGG
CCACTAGGACCCGAGGGTGGGACTTTTCCGTCGCGCCATAGGCAGCTGCGGCGCAGACGCGG
CGCTACCCGGGTCGGGCCCGAGGGTGATGGGCAGCGACCCCCGGCGGCCTGGGAGAGCGGT
GGGCGGCGCGAGGCCGGGGGCGGGGCGGAGCGGGTGGGGCCGAGCTGGGGCCGCCAGGAT
GCTGCGTCTCTGGAGATGGGAGGTTAGCAATCATTACCCTCTTCCCAGCCCAGGACCCTCGTGC
CTTCTAATTCTTGCATTTTTCCGAATCCCGCAGTGGCATCTTCCTTACTTTGTCCATCCTCCGGAC
(SEQ ID NO: 244)

295. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CPSF7. In some embodiments, the sequences from gene CPSF7 comprise or consist of:
CGATGACTGATCGTTTAAGCAGATATTTCCAGACCGGCACACAGTAGGCTCACCAAAGAATGGAA
GCGACCTTTATTTCCTGAGTTGCAGGATCGGCCTCTCCCTGGGCCTGCCCTTGCCCTGCGCTAT
CGGGCAGACGAACTCTCCCCAAGATAGAGACCACAGAGGAAGACAAAGGGTAATCCCCGCTGC
CGCCCGCCCCGGACGCTAGAACGTTCTCTCTCCTCACCAGCGACGAAGTCGAGAACACTGTAGA
CACCGCCATTTTCCCCACCTGCACCGGAAACCGGCTGCGCGGGCACTTCCGGGAACTCCTAGC
CGCCCGGCCAGCCGACCACGGCAGCCACGGAGGAGCTGAGCCGGAAGGTGCGTCCCTGCGCA
TGCCGGAAGTGGCGGTGCGTGTGACGCCGGCGGCGGGGGGGGCGGGACCTGGGGCGGAGAG
CGGTTCGCGCGCTTCGGGCCTAGTCCGGACTCGCCGCCGCCGCCGCCATATTCCCGG (SEQ ID NO: 245)

296. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BSCL2. In some embodiments, the sequences from gene BSCL2 comprise or consist of:
GGACCCTCCATTTTCCATATCCAGGAAAATGTGATGCGCCACAGGTATCAGCGTCTGGATCGCC
ACTTCACGTTTTAGCCACAAGTGACTCAGTGGAAGATCCAGAGTCAACAGAGGCTCGTCAGGAA
GATGTCTACAGAAAAGGTAGACCAAAAGGAGGAAGCTGGGGAAAAAGAGGTGTGCGGAGACCA
GATCAAAGGACCGGACAAAGAGGAGGTAGGGGCCCTTGTGGGGACAGTCAGCAGAAATATACT
GGAAATAGGTGGGCTGGCGTGAAGGGGGCGGGGGGATGGATTGGTTTTAAGAATTTCATTCATT
TTGAATAGATTACTTCCCACGCCCGCAGCAGTGTGCAAAGATGTACACAACACTGGCCTTGCCTC
TGAAGGACTTTATCTGGGGTGATTAGACGTCTACAAAATAGAAGACTGCCAAAAGCTAGTCTAGA
TAATGTGCTGTGGGGACTCTGAGGGAGAGTGTATCCAGTTAGGGTCAGAGG (SEQ ID NO: 246)

297. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BSCL2. In some embodiments, the sequences from gene BSCL2 comprise or consist of:
GTCATACCCCAATATTTTGTTCCCCTCCTATCCTCCTCCTCCTCCTCCAGTGGACTGTCTCATCCC
TGTATTCCTCATGGAAAAAAATAGGGTGGGATGAGGTGCTCCCCAAACTCCCTCATGGCCTGGG
CCACAGATCATTAAACCTTACACAAATGATTTAAGGCTTTTCAGCCCTTCAAACCATGTGTGTTCC
CAGCTCTGAAGACCTCAACCAACCCTGATGAGGAGGGCACATCACCCCTGTCTGCTCCAGTGAG
CCCCAACAGGAGAAAAACAGGCCATTACTTACCTGAAGCCACAAGCGGCAGTAGCAGCCCTGGG
TGTAGGGTCAGTGGAGGGTACCAAAACCTTCTGCCTGAAATGGGTGCCCCACCCAGTAGGGAGT
TGCAGCTGAAAGTATCTGATGCAGAAGCAGTGACTATACGAAAGGAGGCCCCTGGGGAGGGCC
AGGCCAGAGGTCTGGTCTCAGTTTCTGCAGCTCAAGCACTGTCTGGAT (SEQ ID NO: 247)

298. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GNG3. In some embodiments, the sequences from gene GNG3 comprise or consist of:
CTGCATCAGATACTTTCAGCTGCAACTCCCTACTGGGTGGGGCACCCATTTCAGGCAGAAGGTTT
TGGTACCCTCCACTGACCCTACACCCAGGGCTGCTACTGCCGCTTGTGGCTTCAGGTAAGTAAT
GGCCTGTTTTTCTCCTGTTGGGGCTCACTGGAGCAGACAGGGGTGATGTGCCCTCCTCATCAGG
GTTGGTTGAGGTCTTCAGAGCTGGGAACACACATGGTTTGAAGGGCTGAAAAGCCTTAAATCATT
TGTGTAAGGTTTAATGATCTGTGGCCCAGGCCATGAGGGAGTTTGGGGAGCACCTCATCCCACC
CTATTTTTTTCCATGAGGAATACAGGGATGAGACAGTCCACTGGAGGAGGAGGAGGAGGATAGG
AGGGGAACAAAATATTGGGGTATGACCACAGCCTTGTAAAGGTTGGTGTGGAGTGAGCATGGAG
GGGGGCCTCCAGCTGAGACTGTGCTCTGAGAGGTCCCTCTTTTTTCCAG (SEQ ID NO: 248)

299. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GNG3. In some embodiments, the sequences from gene GNG3 comprise or consist of:
TAGGTGGGACCCTGGCTGGCTCCCATTAGTTGGCCAGGCTGTGCTGTGCTGCAGGTTCCCAAAG
CTCAAGATAAGAGATGCGTTCTTTCCTTCACTCCCTGAGGTCAGGGGAGGAGTCTGGGGCTCTG
TAGAGAGAGCTGTCCCCAGGCCTCTGGGGGGGATGAGGGAGAAGACAAGTCGTAAGGAGCCCT
GGAGATGGCAAAAGAGAACCCATTTGGGGAGGGAGGCTGCAGTCCCCTTCAGAGGTCCTGGCT
AACAATACCCTTCCTGGCTGTGTCCCAGGTGTCCAAGGCAGCAGCAGACCTGATGACTTACTGT
GATGCCCACGCCTGTGAGGATCCCCTCATCACCCCTGTGCCCACTTCGGAGAACCCCTTCCGGG
AGAAGAAGTTCTTCTGTGCTCTCCTCTGAGCTCCCCTGTCCCTTCTCACAACTCCTCCCTTTTCCC
TCTCCTGGGCCCTTCCTTAGGTCAGTAATTGTTGTGAGCCCCTTAGGCTCC (SEQ ID NO: 249)

300. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLC3A2. In some embodiments, the sequences from gene SLC3A2 comprise or consist of:
ACTTTCTTTATATACTTGGCCCCCTGCATTTCAGGGCTCCACCGCCATCTGTCTGTCTGAGTGTAA
AGTGGACCTTATTGGCATCTGGGCTGCCAAACTGCTTTTTTTCCTTTGCTTTGCCCAGCCTTCTCT

TGAAGGCTAAATTCTTGAAAAATTATATTCTTTGTGTTCCTATAGTAAATATTAAGCTTTATATCAAC
ACATATGGCAGGATCTGAGGCTCTTTACTCACCTCTGGTCCATTTCTCTAGTCTTTTCTCTGTAGT
CTTTTTGTTTTCCTGTCCTCCATCTCCTAATTTATTAGTTTTATTATTATATTTTATATTATTTTTTG
AGACAGAGTTTTGCTCTTGTTGCCCAGGCTGGAGTGCAATGGCGCGATCTTGGCTCACTGCAAT
CCCTGCCTCATGGGTTCAAGTGATTTGTCTGCCACAGCCTCCTGAGTAGCTGAAATTACAGGCAC
GCACCACCATACCTGGCTAATTTTTGTATTTTTAG (SEQ ID NO: 250)

301. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLC3A2. In some embodiments, the sequences from gene SLC3A2 comprise or consist of:
TGAGCCACAGTGCCTGGCAGTTTGTTTTATTTTGGTTGAACAGTTACAAGTCTTGGTTTGTTTTCC
TGCAGCAACAGGTTTATCTTGATATGATACAGCGTTATTTAAATTCCTTTTCATTTTCCTGCCTTTG
TCTTCACATGCTAGTTTTTTTCAGTTGTTTCTTTTTTCTTCTTCCTTTTCTTTTTTTTTTTTTTTGAGA
GATAGTCTTGCTGTGTTGTCCAGGTTGCAGTACAGTGGTGCGATCTGGGCTCACTGCAACCTCT
GCCTCCTGGGTTCAAGTGATTCTCTCACCTCAGCCTCCGGAGTAGCTGGGATTACAGGTGCCCA
CCACCACGCCTGGCTAATTTTTGTATTTTTAGTAGAGACAGCGTTTCACCATGTTGGCCAGGCTG
GTCTTGAACTCCTGACCTCAATTGATCTGCCTGCCTTGGTCTCCCAAAGTGCTGATTACAGGTGT
GATCCACCGTGCCTAGCCTGTTTAGTTGTTTCTAAGAAG (SEQ ID NO: 251)

302. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RTN3. In some embodiments, the sequences from gene RTN3 comprise or consist of:
CTAGTTTTTTTCCTTTTCAGATTGTGAGACTAACAGATTTATAGAGGCAGTCTGTGCTCTGAATTG
TTCAGCTTACAGATTGAAGTCTATCAACCCTTTATAGTATCAGGTTATTTGTTTTGTATAAATTATTT
TGCTTTTGTTGATTAGCTCTATCAAAGAATAAAAAACCTCCCAAGATTTCTCAATCTTACCGCCCTT
CTTTATGCTTTCTCTGTACAATGGAAAAGTAGACCAAAAGTATTTGTCATGAAAATTTTTTATCATT
TGCAGTTTGTGGCATGATATGGCTTTTCTGTTTCACTGTTGGCAGTTTTATGCATGTCCTGTAGGA
TAACTTGATCGTTTTGTTACATATTTATGTGTGTATATATACATCCTGTGTGTGTATATATATATTTA
TGTAATTTAAAAAATAAAAAGCATGCTGCTTGGCTTGGCTAGCTAATGTGTAATTGTACCTGGTAA
ACAATTTTTTTCTTTGAAATTCTGATCATAG (SEQ ID NO: 252)

303. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RTN3. In some embodiments, the sequences from gene RTN3 comprise or consist of:
CAGTTTCCCAGAGCATCCTGCTTTTCTCTCAAAGAAAATTGGTCAAGTGGAAGAGCAAATAGATA
AAGAGACCAAGAACCCAAATGGGGTATCAAGTAGGGAGGCTAAAACTGCATTGGATGCTGATGA
CAGATTCACTTTGCTGACAGCCCAGAAACCACCTACTGAGTACTCTAAGGTAGAAGGCATTTATA
CATATTCTTTGTCTCCATCCAAAGTTTCAGGAGATGATGTTATTGAAAAGGATTCCCCTGAATCAC
CATTTGAAGTAATTATTGACAAAGCAGCATTTGACAAAGAATTTAAAGACTCATATAAGGAGAGCA
CAGATGATTTTGGTAGCTGGTCTGTGCACACTGATAAAGAATCATCCGAAGACATTTCAGAGACT
AATGACAAGCTTTTTCCACTGAGAAATAAAGAGGCAGGACGTTACCCAATGTCTGCATTGCTCAG
TAGGCAGTTTTCACACACAAATGCAGCACTGGAAGAGGTGTCC (SEQ ID NO: 253)

304. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NRXN2. In some embodiments, the sequences from gene NRXN2 comprise or consist of:
GTAGGCGGCGCGGGCCCGCGGAGGAGGCGCGGTGGCGGGGCGGGTGGCGGCCTCTGATAGG
AGTGCGGCCGCACCGGGGCGGGGCTAAGCGGCTCTGGGGCGGGGCTAAGCGGCTCTGGGGC
GGGGCTACTGGAGAGACGAAGCTTGCGAGGCGGGACTAGGGCAGGGGCGTGGCTAGGAAAAG
TCGGGATTTGTGGCGGCGGGGCGAGACCGTGGTGGTGCGAATGCGCCCCCTATGGGGGAGGG
TGCAGGGCTGAGCTGGGAAGGTTGCAAGGCCAGGGTCCAGTTTGGGGGTGGGGGGAGAAGTG
GAGGGAGGGTAGAGGTGAGGAGAATCTGATGCGATTGCGGAAAGGTTGAGTTCAGAAATGAGG
GAGACAGATGCAGAAACAGGAGAGAAAATCCAGAAGTAATATAAAACGTGTCTTGGCAAGGAGA
CAGGGCTGTTACCACGGGCAGAGCCAAGGAAAGAACCGAGGTCCTTATAAAGAGCAAGTCAGA
G (SEQ ID NO: 254)

305. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NRXN2. In some embodiments, the sequences from gene NRXN2 comprise or consist of:
GCCTGCTTGGTACAGAGCATACCAGGGAGGAGAGGCTGGAGACTGGGGACTGGGGAGGGGCT
GGGGGTCAGACCTTCCTCTGGCAGAGGCCGGCTTCTGTGGACTTCTCTGCTGATCTTGCCTTAG
AGAGGCCTCTGCCCTCCATGCCCCGAGCTGGTCCCCAGCTTGGCCCGATCACCCCTGTCTGGG
CCCAGTGGCCCTTGCACAGAGTAGGTGCTCTGTGAATACTTGTGAATATCCAGGACAAACCAAAA
GGCAAGAGACAGGTGTGGTTAGTGGAAGGCGCTCTGGGCCCAGGCTCTGCACGCACCTCCGGC
CTCAAGTTACTCCCTTGCATGTGGGGAAGGGGAGCGAGCCTGCCCACCTCCTCCAGCGGTTGA
GACCTGGGAAAGGTGCCTTAAGTGCTGCGGAGCTGGGCTAGTGGTGGTCACAGGAGTAGCCAC
TAGAAGGGATGAATGGTTGCTCCCTCTGGTCGCTGACCTCCACCTCCATGTCCCCA (SEQ ID NO: 255)

306. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SF1. In some embodiments, the sequences from gene SF1 comprise or consist of:
GTTGGCATGCTTCAGATGATGGTTGGGTCTGATCTTTCTTGGTCTCTTTTGGGGAGAGAATTTTA
GTTTGTTTTTTTTTTTAAATCTGTTCAGTATGTTTAGATCTCAGTCTGATCGGCTGCCCTGTCGCTT
TGTTTTAAAAAGCTTTTCCCTCTGATCCTGTACCCCTTGGGAAATAGAAGGACTCTTTTGTGGCAA
ATGTAGGGAGTTTCTGCCTATGTACGGGGAAAGGAGAACTTGGCTGCTATTGTATAGGTTGTTGA
ATTTTTGATAGATCCTTTTAAGAGTTCAGACCCTCAGTGTCCAACTGGCCAGGAAAACTGAATGCT
GATCTTGGCTAAACTTATGAAGACAAAGGTGATCTTGTTGAAGAATTGGGCTTTTCCCACTTGGTA
GGGTGTAACTAGGTTTAGTTGTGGTCCGGCCTCTCGTACAAAAGTGACTGGTGAGGGGAGTGGA
GGTGGGTGGAGCCCCCAGTCCCATCAGGACTGCTTTACAA (SEQ ID NO: 256)

307. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SF1. In some embodiments, the sequences from gene SF1 comprise or consist of:
CCCGGGCCGCCGCCGCCCCCGCCCGTGGGCTCGATGGGGGCCCTGACCGCGGCCTTCCCCTT
CGCGGCGCTGCCTCCGCCGCCTCCGCCGCCGCCCCCTCCGCCTCCCCAGCAGCCGCCGCCGC
CTCCACCGCCACCGTCCCCCGGCGCCTCGTACCCGCCGCCGCAGCCGCCCCCTCCGCCGCCG
CTCTACCAGCGCGTGTCGCCGCCGCAGCCGCCGCCACCCCAGCCGCCGCGTAAGGACCAGCA
GCCGGGCCCGGCCGGCGGCGGAGGAGGTGAGTCGGGCCGAGAGAGCGCGAGAGGCGTCGCG
CGGACGGGCCCGGCCGCCTGAGGGGCGCGCGGCGGCGGCGACGGCGGCTGCACGCGGCAG
GGGCGCGCGTGCGCGCACGGGGAGGCCCGGGCGGAGGCGCCCCTGGGCGCGCGCGGCCTG
GTTCTAGGGCCTCGAGTGCGCACGCGCGCTGTGGGGGGAGGGCTGGGCGGGCGGGAGGCGC
TCTGTGCGC (SEQ ID NO: 257)

308. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TM7SF2. In some embodiments, the sequences from gene TM7SF2 comprise or consist of:
TGGGGGCGGGGGACTAAGATGGACGCCTGGGAAGGGAACTGGGAGGCAGCGGGGTGCCTGG
GGGCCGAGGGCTGAGGACGGGGTGCGGAGGCGCACTCTGGGAATGCCGAGAGGGTCCCGCA
GAGACGTCAGGGCGCCCGTGCGGGCCGGCGGGGAGCTGGGGGGCTAGGGGCGGACGCCCGA
CGTGATGGCCCTTCCCGCAGGCGCCGCGGCTCTGCTACTGCTGCTGCCCGCCACCATGTTCCA
CCTGCTCCTGGCGGCCCGTTCGGGCCCCGCGCGCCTGCTGGGTCCACCCGCGTCCCTGCCGG
GGCTGGAGGTGCTGTGGAGCCCACGGGCGCTGCTGCTGTGGCTCGCCTGGCTCGGCCTGCAG
GCGGCGCTCTACCTACTGCCGGCGCGCAAGGTGCGGGCCCCGCTCGCGGACGCTCGGGGGAG
GGAAGCGAATGGGCTCGGCGAGGGAAAGGACGCCCCGGGCCTTATCAGAGCCCCCTTGGACC
CGCAG (SEQ ID NO: 258)

309. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPTBN2. In some embodiments, the sequences from gene SPTBN2 comprise or consist of:
GTGAGGGACACAGGACCCCGGATGCCCACTCCAACCTGCTCCCCTGACCTGTGCTGGCTTCTG

CTTGGAGAAGACATGTCTTCTCTCTTCCCACTGCACCAGTGGCCCCCAGATGTGAGCTGAGAGT
GCCATTGTCACCACACCTTTAGGAGGTGTCAGTTCCCCTGGGTGATGCCGAGACACCTTCTCCC
GCTTTGTTTCTTGTCCCCACCATCTTCTCAAATTCTGTTCTCCTCTTATCATATTTCATCAAATTAG
AGTTGAGACATTTCAGCTCTCCCTGTTTCCCTGGCCCTCTTACACGCAACCTTCTACACGCTGAA
TGCAGCATTTTTTGACAGCTAGAGGAGCGGGAGAAGGAGCGAAAGAGAAAGAGGGAGGAGGAG
GAGCGGCGGAAACAGCCGCCTGCTCCCGAACCCACAGCCAGTGTGCCTCCAGGGGACCTGGT
GGGCGGCCAGACAGCTTCTGACACCACCTGGGACGGGTGAGAGCCAGGATG (SEQ ID NO: 259)

310. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPTBN2. In some embodiments, the sequences from gene SPTBN2 comprise or consist of:
TGAGCTGAGATTGCGCCACTGCATTCCAGCCTTGGTGATAAGAGCGAAACTCCGTCTCAAAAAAA
AGAAAGAAAGAAAGAAATCACCTGTCCCCCTGGATGACTCCCCAGGGGCCGTGGAAAGATCTCA
CATCCTGGTGCTAACTCATATCTCTGCCCCCCGCCCCCAGATCTCAGAGAAGCTGTCTCAGCTG
CAGGCACGGCGCCAGGAGACAGCTGAGAAGTGGCAGGAGAAGATGGACTGGCTTCAGCTGGGT
GAGCTGCCAAGGGGGCCCCAGGCCCTGTGGGGAGTGGGGGGCATCCTGCACCCTGTGGGTTC
CAGAGTAGGTGAGACTAGGAACCCTGGGTGTGAAACTCACGATGCCCAATCTTCGTGCTGCCTG
GCACAGCTCTGGGGCAGTGGCTTTCTCTGTGTCCCTGTTCTTGAGGTTGCCATGGCCACTGTGC
CCTGCCAGTGGCCACTCTGACCCACCATCTTCCTGCAACCCCCGATCCTGCCA (SEQ ID NO: 260)

311. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PC. In some embodiments, the sequences from gene PC comprise or consist of:
GTGAGTGTCCGCCGCGCTCCGCACGGTCCTCTTCCCGCGGCGGGTCGGAGCGGGTGGACGTG
CGCCGGCACCGCTGCGAGGGACGCTTATGTAAGGGTCGCGCGCGCAAAGGCGGCGCGGGCTC
CGCGAGTGACGGCTGGAGGAGACAGCGACGGGCTGTGCGCGGTGCGCGACGCGACGCAGCG
GACGGCGCCCCTCCCCCTCGCGCGGGGGCTCGGCCGGCTGGACCCGCCCCCGGACCCGCCC
CCGGCTGCAGCCCCCGAGCGCCCCTCCGCAGCGTCCGCCTGCGGGCTGCCTCATTCTTGCTCT
CGGGCCCATTTTGCAGATGGAGAAACTGACTAAAGCGCCTCGCGCGAGGTCCCTGAGGGTTCG
AACCCAAGTCTGTCAGGATCGGGAGCCCAAGTTGTCCCCATCGTACTGGATGTGGCTCAGCTCT
GCAGGAAGCCGCGGCGTGTAAGGCGAGGGCTTTCCTTGTTCCTTGCTCTCGCACTCCGCCTCC
(SEQ ID NO: 261)

312. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PC. In some embodiments, the sequences from gene PC comprise or consist of:
TCTTCTCCGCTAGCCAGCGCGTATCTGCGTCTAGCCGGGATGCCTGAGCCCCAGTGCGAACTGT
TGTGCTTGCAGCTTCGGGAGACACGTGCTACTCGGGTGAATGAATCGAACGTCCCCACCCCCGC
CGACAGCCAATAACTGCGAGCCACAGCCCGGCCACTTCCGCCTATTGCGGGCGTCGGCTAGGG
TCCGGCGGCCCACGTGAGGCTCCGGAGACAAGGGAGTAGGCGGTGGTGCGCCAGGGGCGGG
CTCTCCCAGCCTCGCCACTTATCCAGGCGCTCGCCGGGGACGGGAGGGGCGGGGCTGACGTG
GGGCGCCAAGGCTTAAACGTGACGGACAGGCGGGCACAGGGAGGAGTCCAGAGCCTAGGGGC
GAGGAGTGACGGAGAACACTGCCCAATAACGGGAGGGGTTGGGCTGTCTGGGCCAATAGGAAG
TCCGTAAGGCGGGGCCGGGACTGCAGCAAGTTCGGTTGCACGGAGACCGCAGCTGTTCTC
(SEQ ID NO: 262)

313. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ANAPC15. In some embodiments, the sequences from gene ANAPC15 comprise or consist of:
GTTAGTTCATCCATTCAATCTTCCATCTACTTATTTATCCACTTATTCATGCCTCCTAGAATGTCTT
ACTGAACCCTGCTTGCATATGCTACAATCCCTCCACCCCGACATTTGGCTGTGATTCATGAGAGG
TCGTTAGTGTCCTAAATTTCTGACACTGGGTGGGTGTGGTATGGGCCATCATAAAGGGTCAAAAA
GCAGGTTTTAGTGTGTGGAGGAGGTAGGGATAGTTTCAGTAGAACCCTGCTACCTCTAATTTTGT
ATAATTTCATAATGCCAGTCTGCATTCTGGATTCCTATCCCTACACTTGACTCCCATTCTCATCCC

TCCTTGAACAGCCTGCAAACAGCTTTGTTGATCCATTATTTACTTAATTATCAGAATAACTTTGACA
GTGGTATAATTGTTATTATCCCCATTTTACAGATGAAGACACTGAGGCTCAGAGAGGTTAAGTGA
CTCAGCCAAGGTCAAACAGCTAGTAAGTGGTGGAGCCAG (SEQ ID NO: 263)

314. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ANAPC15. In some embodiments, the sequences from gene ANAPC15 comprise or consist of:
TGGGTTCTTCCGCTCAGGCTGGGTGAAGCGCTTCCGGGTCGCCGCCGGCAGCAGCCTCCCGGC
GCGGTAAGTACAGACGCAAGGCTGCAACCGTCTCCTTGCCCCTTCATTCCTTTTTCCCCCAGAGA
AACCCATTTCCTTTGACCCGACTCCCCAGGAGCTCCATATTGAGAGTCCTTAACCCTTAAAGAGC
TCCAGCTCATTGGCCGCTTCCTCGAGACTAAGCCCCACCCCGTCACACAAGGTCCGTCATTCATT
GGTGTCACTTCCTGTCACCCAGCATTTCTTTCAGTTAATTGGTCCTACCCAGGCCCCGCTTTTTTC
GCGTTTAGCAACCCTATAAGGCCAAATTTCTGTCTGAGACCCGCCCTGCTTTCTTTCTGTTGGTC
AACTGCATGGTCATTATCGTAATGAGCAAAGAAAGGGCGGTGGCTTTGCGACGGTGGGTTGGGC
TTTCGGAGCCGAGATCGCTGGTCTGTCAGTACTTCTTGGACATGAG (SEQ ID NO: 264)

315. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAP6. In some embodiments, the sequences from gene MAP6 comprise or consist of:
GCAATGTTTCTCTCTGTCTCTGTTGGGCAGGGGTGCATACATGTGTATAGGTGGGCCTGTCAGG
CTCTGCATTCACCCGTCTGGACCAGAGGGGTCTGAGAAGCACCAGTTCCTGTGAGTTGTCAGCA
TGAGATGGGAGTGGGTAGGCGATGCTAGATGGAAACAGGACCCCATCACGGAGGTGGGCAGGA
TAAGGCAAGGGTCAGATACCATGACAGCCTCACAAGAGGTGCCAAATCCCAGCAGGCTGAGCCC
TGGGTAGCTGAGTTGAAGCCTGCAGATGAAACAGGAGCAGGGACCCACCTGGCACAGGGGAAT
TCTGGATGACAGTTGTTTGCCAAGAGCTCAGCCTTAAAGCTCATCCAGGGGTCAAACTTCTTGAG
GAAACCAGGCTCTGATCATAAGTCTCAGGACACTGTATAACCTAACACCTGCTAATCCTCATTCAA
TATCCATGACAGCTCAACTGAGAGCTTCTAAAGAATATACCTAGAGCCAG (SEQ ID NO: 265)

316. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAP6. In some embodiments, the sequences from gene MAP6 comprise or consist of:
CTTAACAAGGGGGTCAGGGAGTCAGGGAGGCAAAAGAACTTTGAAGGCCCTGAGAACAAGAAAA
GAGCACCCTGGCCTGTGGGGGCATCTGGTGGGCAGCTGAGATGGGGCTCCCAGGATGGGCCC
AACGATCCTAGAAGAAAAAGTAGGGACCTGGATGGAATGTGGGGTGGACGGGCTGCTGGGATG
CCTACTGGATGACTCCGAGTCCAGCTACAGTACTGCCATTGTCACCAGCGTGCCACCCCCTGTG
CCACGTGCAGGTTATAATCAATTGGCAAGCACATTGAATGACTGATTCCTGAGCCTTCACCTCAC
CCCCCTCCCTCACCCCCGCCCACATTCTGTACTAAGAACACAGAAATCATATTCTCCTGGCTCTC
CAGCAAGAGCTGCCCGGCCCAGGCTCCACTAGGCCAAGACTTATTAGGCAATCTGTACTCTGCC
CTGTCCCTGCCTGAGCTCTACTCTCACAGTGATCACCTCTCTCTCCTTTGCA (SEQ ID NO: 266)

317. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GAB2. In some embodiments, the sequences from gene GAB2 comprise or consist of:
GTGAGTTTTGGGAAACAAAGAGTATGGCGGGCAAGTACCTAGCAGGTTCTGAATATTTGTTCTTT
AGGAGTCACCATTTAAACAAGACCCCAAGAGTGACATTAGGTGTAACCAAAGTGAAATTGTTGAC
TACTTGATGAGATTCGTGAGGATAGGCATTAAATGATATCTTTTAAGAAACCATTGGCAGTCCTGG
AGCTGATGACCCTAGTGCAGGATCATTATGGTTGCTTCTTTCATCATCTCAATTTGATGACATATT
TGAATTGAACTTAAACTATACCTAAGCCTTAATCCCAGGGTCTACTAGTGATTCAGCTCAGCACAT
CTAAAGGCAATGATTATTCAAGAGGATTACATTGGTATCTCCTGTCACACCAGCATTTAGTATTCT
ATACTTATTCCCTAAATATATCTCGTTGTCATTCTCCGATATTTACCATTTACCAATATTACCAATAT
GCCTAGAGCATAGCAATTGCTCAATAAAAGTGTATTG (SEQ ID NO: 267)

318. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GAB2. In some embodiments, the sequences from gene GAB2 comprise or consist of:

AGGAGGGAGGGTTTATATTGTATTTTAAAGATCAAGGACAACAGCCTAGAGGAGGTGGCATTTAA
GGTAAGCCTTGAAGAAGGAGTTTAATTTCAACAGAGAGTAAGGCTGGGAATAATGCGATGTGAGA
ATGATCTTGAGAAGAGGCACAGAGGGTAGGTTCAGGGCAGATCCGTTGATAGCATTCACTAGAG
TGTAAGCAAAAGGTGAGGAAAACTGAAATTGTAGGTTGAAATTTTTGTTTCTGCGAGTATACTTAT
TTGCATTTGCACAGAAGGTGGTGATCCTTATATTTATTTCTGCTGTGCATCAATAGGGGAGGTGG
AGATAAATAATTTCATTGTTTTGGCTCTGGCCAGAATTCATTAGGCACAGTTTGTTGTCCATAGGG
AGGGGAACACAACACACACTGGCCTTTGTCTCCCTTCCACACAGGCTGGTGGAGATTCTGAGGC
ATTTTTAAACATTGCACTTAGCCATTCAGATGATAACTTGGATC (SEQ ID NO: 268)

319. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BACE1. In some embodiments, the sequences from gene BACE1 comprise or consist of:
GTGAGTCTAGGGATGTTTTGCTGAGCAGCCTGAAAGCAGACTCTAGGATTCCCCTGAGATGAGA
TAAGGTGGTGTTTGGGAGTAAGTTTAACTTAGATCCTTATACCAGTTGTGGTTATGCATCCACAGA
TCTCTGCCTTCTTTCCACAGGTCCAGCACATACCGGGACCTCCGGAAGGGTGTGTATGTGCCCT
ACACCCAGGGCAAGTGGGAAGGGGAGCTGGGCACCGACCTGGTAAGCATCCCCCATGGCCCCA
ACGTCACTGTGCGTGCCAACATTGCTGCCATCACTGAATCAGACAAGTTCTTCATCAACGGCTCC
AACTGGGAAGGCATCCTGGGGCTGGCCTATGCTGAGATTGCCAGGGTGAGAGGAACAGGGCTT
GGCCCTACACACTCTATGCACACTGCACTATACAGAGAAGGAATTAGGAGAGAGAAGGGGAATT
AGCAGAAGGAGGGCAACAATCAGTTTAAAGGATTATTTAACAGGGGTATA (SEQ ID NO: 269)

320. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BACE1. In some embodiments, the sequences from gene BACE1 comprise or consist of:
AAGAAGAAGGGATGAGAGGACACCAATATCTGAGACATCAGTGTGTGCAAACGTGAGTAGAGGC
TTAAATCCTATCCTTGGACTTGTAGGCAGCTGCAAAACGCACCTTCCCTGTTTCCTCTAATGTCCC
AATCTAAAAGAAGCAGTCAGGGAGGAGGGTGCAGGTAGGATCGATGAAAGGGCATTCACTCCAG
TTCCTCGTTCCAGTTCCATCACTGCCCCCACCACACACAGAAGCCCTGGTTAGTGGTGTGATTAA
ACACAGGTGGGGCTGCCACATGTTGAGCACGTTTCACAGAAGTGGTGTGTAATACCAACCTGCT
TTTCTGAGATGCTTGAACAAACCCCTTCTCTAGAACTTGCTGTAGAGGTTCCACATTCACCCTGC
CTGGCACTTTCTCTACCACTCGGATGGTACCACTAGGTTCCAAGGCAGTAAGAGAGTCAATGGTT
CCTTTTCTCGGGGAGCTTGACGGAGCCAGAGGGCGGAAGAGATGCC (SEQ ID NO: 270)

321. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FXYD6. In some embodiments, the sequences from gene FXYD6 comprise or consist of:
GTAAGGACCATCCCCCCAGCTCCCCACCTGGCTCTAGCTGAAAATGACAACTACAACTGGAGCT
GGCTCCTGCGCCCACGACACAGCCATTCATGCTTTTGGTGCACATTCCCCTTAATTACCAAGGCT
CCCAATTAACGTGGGCTGCTGTGTCTGGTGCTGGGTTATTTTCTCCTATTTTTCCGTTCCTCGGG
GTTTACTATTGCAGAGAGACACCAGGTCTGTCATTGTGCCTGTCTTGCTCCCTTCCCACCCTAAC
CAGAGGGAAACCGAAAAGCAACAGCTGATGGCAAATCCGCTCCGGCGCTTGCACGCCTCCTCG
GCGGCAGTCTCCTGTTGCTTCTCGGAGCTTGACTGCCCTTTGGAAAAATCTCTCCGCCCCTCGA
GAGGAGAGAGGAGCAGAGGACGCGCGCGAGCACAGAGCGGGAGGACGGACAGGGAGAGGAG
GAGAGGGGGTCTGCGCGCGGCCGCTACCCAGAAGCCAGCGGACGGCAGCACG (SEQ ID NO: 271)

322. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FXYD6. In some embodiments, the sequences from gene FXYD6 comprise or consist of:
TATATTTCCTGCCTTGGGGTTTTGAGACCTGACCTTTTATTAAAATAATTAGATCATCTAGGGCAG
AGCTGGAAGAGACCTCAGGATCATCTAGTCCATCTCCCTATTTTCCCAAATGAGAAAACAGGCCC
AGAACTGAGGGCAGCAGAGGCAGGGCTAGGTTTCTTCCTAGCAGTACCCATCATCCCCGGCTTG
GGGTTTGTAAGGAACTCTCCGTGGCCCTACCTAGGCTTGGACAATCACAGCCTTTCTCAGTAGCT
CCTCCCTCCACCCGGCTCGGCCATACACACACCTTGACTGAGGCTGGACAGCCTCCATCTCAGC
ATGGCTCCTGGCTACTGACACTTGTGCCTGGCCTCTGCCCCTTCCTACAAGCTCTGCCCCTAATA

GTAAGAGCCAATTTCTTGAGCACTCACTATGAGCTAAGCCTCCCATGGGGTCAGTCTCTAATCAC
CATTTTCCCACGTGAGGAAATAGACTCAGGAGCTGAGTGCAGAGA (SEQ ID NO: 272)

323. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PHLDB1. In some embodiments, the sequences from gene PHLDB1 comprise or consist of:
CTGGGTACCCTCAGTAGATGTTCTGGAGATGTTGAGAGCATGTTGTAGGGGCTTCGATTTGGGA
GGTTCAGTGGGAGCCCGTGGAGGTTTCAGGCATCTAAGGCAAAAAGAAAGAGGGGAGAGTTTG
GGGGAGGGAGAACGGATTGTCAAAAACACCCTCTCAAAAGCGTGTTAAAGCCTGGGAGTGGAG
GGTGGTCTAGGAGAGTCGGGAGGGCAGGGTGGGAGGAGAGGGGGATGTGTGGTGGTGGTGGT
GGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGATGGTGGAGAGCCCAGCTG
CAAAGATGAACAAAGCGGGCGCTGTGCAGGCTGGGGGAGGTGCTGCTGTGGGAAAGGGTGGG
TGGGGGGACCTTGGGCTCCAGCCCCACAAGGGCGTCTTCTTTGGCTGGCCAGGCGGACGGGA
CGGGGGACGGGGGCGGGGACTGGCGGGAGGGGGGCGGGACAGGCTCGCTCTCCTCCTACTT
(SEQ ID NO: 273)

324. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PHLDB1. In some embodiments, the sequences from gene PHLDB1 comprise or consist of:
TAAGAGCGCCCCGTCCCACTACACTTGCGGGTCCCATTCGCTGCGGTGCTAGGACTGGATAAGG
GGAAGTCCCCGGGGCCTGGCGAGAGCCCTGAGATCAGCTCTAGGCTAGGGAGCTCGGCAGAAA
CCCGTGGGGGAGAGAGGGCACCCCAGGTGAGTGCGTGGGGGCGAAAGGAGCGTTATGGGGAG
TTTTCCTGTGAGCCTCTTGCTTTTGCCTTCCTCGGCCGCTGCCAACGCCACCGCCAGAGGGGGC
CGTGACGCTCTCCCCCCCTTGGAGAAACTCTGATCCTGGCCCTATCCAGACTCTCCCGCCGGCA
CCCAGGCGGCCGGGCGGACACTCGCGGGGTATCGGGCGGCGAGCGCGCGCGCGGGTTTTCG
TCCTCCAGCGCCCCACACCTCCCCCTCTCCGCCCACAGCAGGACCTTGGGGCGGGGGTATCTC
CTGTGACGTCTCCCCGCCTGTCCCCAGGCCGGCCGCCTTGATGGACCAGGAAGGGATT (SEQ
ID NO: 274)

325. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NRGN. In some embodiments, the sequences from gene NRGN comprise or consist of:
ACCCAGTGACCCCACAAGAACCCCCCTGCTTCGCCCCCAGGAGAACGCCTGCTCCAAGCCGGA
CGACGACATTCTAGACATCCCGCTGGACGATCCCGGCGCCAACGCGGCCGCCGCCAAAATCCA
GGCGAGTTTTCGGGGCCACATGGCGCGGAAGAAGATAAAGAGCGGAGAGCGCGGCCGGAAGG
GCCCGGGCCCTGGGGGGCCTGGCGGAGCTGGGGTGGCCCGGGGAGGCGCGGGCGGCGGCC
CCAGCGGAGACTAGGCCAGGTGAGGCGGGCGGCGCGCGGCTGGCTGACAGCTGCCCTTCCCC
AGCCCTCCCCAGGAGCAGGGGGAGAATAAGGGCGGGTTGGAGGTGCAGGGGGCGTGGAGGGA
GCTAAGGGTTGGGGGATAGAAATCCGAGATGGGAGGTGGGTGGGAAGAGGCTGAAGGTTGCGC
GGATTCCAGGAGCTCACCTGTTTCTCCCTCTGCATCCTCCCTTCTGCCCCGCCCTGGACCGAAG
(SEQ ID NO: 275)

326. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NRGN. In some embodiments, the sequences from gene NRGN comprise or consist of:
ACTGAGCATTTTCAAAGGTAATGAACACGGCCCCTAGGCGGCGGGGTGGGACCCGTGAGTGGG
AGAAAAGGATCGAATCCCCAGCCCTTCCCTCTGCCCACCCTCACCCCTCCCAGCCGGGGAAAAT
GCACCCTGCCCCTGCGGGTTTTCTGATACATCCAGACGCCCGAGGCTGCGACGGGGACATACC
TGGACCAAGACATGCGCAGCCACCCCATTTGGCTGCACAAGCCCGGCCAAGGGGCAGAAATAC
ATCGCGGCGCGCACACGTACCTGCCGCGGGGCTCATTTCAGCGCTTTGACTCGGGGTGGGGGT
TCTGGGTGACTGGGGCCCTCTGGCACTCACCGCCCAAAGAATCCTGGTACTGAAAGGGGGAAG
GGTGGGGGGAAGAGGAAGTAGCAGAAGAGGGCAGGTTCTCAGACCTTTTCTCTCCTCAGTTCCC
GAGGAGAGATGGATGCCGCGTCCCCTTCGCAGCGACGAGACTTCCCTGCCGTGTTT (SEQ ID
NO: 276)

327. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPI1. In some embodiments, the sequences from gene TPI1 comprise or consist of:
GGGACTCAGTCCCTGCAGTTCCTGCCAGGCCTTGCCAGCCGGGGCGAGGGTTGGGATGATCCT
GGCGGCCTATGCCTGTGTGGGCTGCCCCTCCCGCTGTGAACCCTGCATTTGTCCCGCAAGTTTT
CACTCAGGTAGACTCCCTGGGTACAAGGGTGCCTGCTCAGCAGTCGGGCATGAGCTGCTCCGA
TGGGCGAAGGAGGTTGTCTATCCCACAGTTGGAGAGGGGCCCTCTCTGCCCCAGTGGGCGATC
TGGGCTACGGCCAAGTTGCCACCAGCTAGTTCCGCTTGAAAACCACTTCTGGCCCCGTGGGGGA
CTCAAGTCGCCAAGCGAGGGTTCCCCTGAGCGCCGGAGCTCACAGGTCTCGCCTTGTCCCGAA
AGCCCCGCAATCGAGGCGGAGGCGACCGAGCCCCCGACTCTCCTAGAACGTTGCCACAAGAAG
GGGGAACGTCGGAACAGTGCATCATCGGGCGGCGGCCGGGGCGGCGGCAGGAGGGC (SEQ ID NO: 277)

328. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPI1. In some embodiments, the sequences from gene TPI1 comprise or consist of:
CGCAGACACTGACCTTCAGCGCCTCGGCTCCAGCGCCATGGCGCCCTCCAGGAAGTTCTTCGTT
GGGGGAAACTGGAAGATGAACGGGCGGAAGCAGAGTCTGGGGGAGCTCATCGGCACTCTGAAC
GCGGCCAAGGTGCCGGCCGACACCGGTAAGCCCTCGCCGAGGAGGGGTCTGGCCGGGCCGG
GGCCGGGGCCGGGGCAGGAGTGGCAGCGCCCTCTCCCGAGGCCCCGAGGCCCCGAGGCCGG
TATCCGCGCGGACCTGATGCAGGGCTGTGGGACGAGGGCCGCTGGGGTCCGGGCAGGGGCCT
CGCAGCCGCAGCCCCGTCGGTGCGTCGAGGGGGCAGGGCGGAGCACATGATGCCCCTTGGAC
TATGGGGCAGGTAAGGACGTTTTGGGTCTCCTGGAGGAAGGTGGCCCCGGGGGCGCGCACTGG
GGCTGTGCCCGCCAGGCGACGGGGTTAGGAGCGGAGCCCGAGGCTCTGCGGGAGACCGGGG
GAG (SEQ ID NO: 278)

329. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ZNF385A. In some embodiments, the sequences from gene ZNF385A comprise or consist of:
GTATGAAAGGGGGTGGTGTCTGGAGGGAACAGGAAGGGATCCTGGAGACCTTCTGCTCTAGTAA
AGTCAAGGGAGGACGGGCCAAGCACGCAGCCTCCTCGGTTTGCCTTTGTTCCTGGGAACCCCT
GTTGCTGTCAGGGGGTTACTGGAGCAGTGAAGGGCGGCCAGAACTCCCCAGCTGGTGCACAGC
AGGGTCGCAGAAGGGAGCTGGGCCAGTGGAAGCCCAGAAGGGCTCTGAGGACCTTTGGGCTG
CCCCTTTGGAGTCTGGTGGAGTTCCTCCCGTGACTCTGAGAGGAGGAGGAGAAGGTTTCAGAGA
AGGGTAGTTGAATGGCTGGCCTGGACTTTCATTTCCCCTTGGGGTCAGACCCAGGCATTCCCCG
CCCATAGGCCAGGTCGAGGTTCCTCCTGCAGAACTGGACCTGTAGCTGAGCATTCCTGGTGAGA
CAAAAGGGCATGGGGGAAGACTGAGGAAGGTTGGGAGAAGGGGCTCTGAGAATGG (SEQ ID NO: 279)

330. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ZNF385A. In some embodiments, the sequences from gene ZNF385A comprise or consist of:
ACTGTCCGATTCCTCAGTCACCTATTCCTGCTGCTACCACTCTCCCATCCTCTCACTCACTTTCAT
CTGTCCGTCTCTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTCCTCTCTCCACCCCA
TCCCAACCTTGAAGGTGACAGAGGAGGGAATAGACACAAAGCATACAGACCCCCAGCTACTTAA
GGGTCAAAGCCAAGGATCTTACCCTCTCCTTTAGCCCTGAGAATTCTGAAGCCCAAACTCCCAGT
AGCCTTGACCCCCTGCTCTGTCTCAGTCACCCTGACCACCCATCCTGGCATGGGGTGAAAGAGA
CAGACCCCTCCAGACCTTTCTGGACCAGCTCCCAGCCCCCAGCTGTGCCTGAGCCCTCCCCACC
CCCTCCCTGTCGCCTCAGATTCCCCTAATCCCTGCTCCCCTGCCCTCCCCTCTGCCCCACTTTTC
CAGGATTCTGATTGGCTGATTCTACTGACTGGGCTGAGGGGGAGGG (SEQ ID NO: 280)

331. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DTX3. In some embodiments, the sequences from gene DTX3 comprise or consist of:
ATGGGCTGCTGGGTTGGGGGCCATGGGAATTGGGAGAAGGGGTTTCTCACTTTCCTTCCATTTT

TCCGCCCTACCAGGTCACACGACCTACAAGTAGGGAGCAGGGAAAGAAGAGTGAGCCTGCATG
CCAATTCTAAGCTCTTCAGGATCAAAGTAAGCAAAAAGGAGGGGCAAAGAGTCTCCCTCCCCTTT
AAACAGCCCATTTTTCCCCAAGAGGTGGGAGGGGCAAGTTGTTTCTATGATCTGGGAGAAATGA
CAGGAGAAACAAGACTGATACTTGGCTTAGATGATAATATAGCTCTGGAAACTTTTTTGCTCTTCA
GTGGGTTTTGGGTTTGGAAGATAAGGGGAGACAGAATATGAATTTGGGTGAAGGGTTGGGGATT
AGGCTTTGAGAAAACAGAGGTAATAGAGGGTTTGGAAGGAACCTGAAGTAGGAGGCACTGATAC
TTGTCAAATGGGGACCCCCCACCCTGAGTCCCTTTCACCCTGGGGGCAG (SEQ ID NO: 281)

332. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DTX3. In some embodiments, the sequences from gene DTX3 comprise or consist of:
ATGGCAGCCTGTGGAGGCACCTGCAAGAACAAAGTGACTGTGTCCAAGCCCGTGTGGGACTTCC
TGAGCAAAGAGACCCCAGCCCGGCTGGCCCGGCTTCGGGAGGAGCACCGTGTGTCCATCCTCA
TAGATGGCGAGACTTCTGACATCTATGTTCTCCAGCTTTCCCCACAGGGTCCTCCCCCGGCCCC
TCCAAATGGGCTCTACCTAGCCCGGAAGGCTCTCAAGGGGCTGCTAAAAGAGGCAGAGAAAGA
GCTGAAGAAAGCTCAGAGGCAGGGGGAGCTGATGGGCTGCCTGGCTCTGGGGGGTGGAGGGG
AGCACCCTGAGATGCACCGCGCAGGCCCACCCCCTCTCCGAGCAGCCCCACTTCTGCCCCCAG
GAGCTCGGGGGCTCCCCCCTCCTCCTCCCCCCCTGCCCCCACCTCTTCCTCCTCGCCTTCGGG
AGGAGGCAGAAGAGCAGGAGAGCACCTGCCCCATCTGTCTGGGGGAGATCCAGAATG (SEQ ID NO: 282)

333. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CORO1C. In some embodiments, the sequences from gene CORO1C comprise or consist of:
GTGTGTTTCCCTAATAGCGGGGCAGCTGGCGAGGGACGCAGTAAAAAGGAGCGAGGTGCAGGT
GGGGCCCCGCTGCGCCGAAATGACTGAGGATGAGGTCAGACGTGGAGGGTGGGAATGCAGAA
ACCGAGCTCTCCCGCCTGTCCCCACCGGCGCACGCTCCCCAGCTCTCCGTCTCTCAAATGATTT
GAATGTGTTGGGGGAAGTGGCAGGCTGCGGTGAGAGCTGAGAAGAAAGGGGCTTCCTCTTGGA
GGGAGGCGCTGGCCCTGGCATCCTTTTTTGGGAGTGTTCAAAGGATTTTGAACGCTGGAAAAGG
AATCGTAGGCTTTACTGCATCACGATTTAGAAACACATCCTATATTTGGCCGTAATGTAGGCTGCC
CTTGTTTTGTGGTGTCTAAAGTGCTTGCTCTACATGTTGCAAACGTGGGATTCAGAGTGCGAAGC
AAATTGCAAGTTGTTCATTTCCCCCGGCATGGTAAGATACAAAGGCTTTTCC (SEQ ID NO: 283)

334. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CORO1C. In some embodiments, the sequences from gene CORO1C comprise or consist of:
ACAGGAGCCGGCGGGGCGAGGGGCAGGGCTAGGTGGAGGGGACAGTGCTGGGTGGGCGCGC
GGGGCGCGGGTTCACGGGCTGGGTTGCAAGGGGTTAGGGCCGGGGGCTGCTGTCGGGGGCT
CGGGGAAAGGGAGTTGGGGACCGAACCAGGTGGCGTGGGGAGCGTGAAGCAGGGTCCCTGTG
GGGAGGAGGCTTTCGAGGTCCGGAACGCTCCTGGCCGGGTGCGGAGCCGCGGGCCGAGGTG
GGACGAGGCTGCCCAGGGAAGGCTTTTAGGGGTCAGGGATCGCCTGCTTGGGCGAGGTGCTG
GGAGGGAAGGGCTGCTTCGGGCGAGGCGTAGAGCCCGGGGGCTCCAGGCCTGGGGACTGGG
TTTGGGCCGCCCCAGGGAACGAGTGGGTGGGGGCGGGTAGGGGCCGGGCTCACGTGGGGCC
GGGGCGAGCTGGGCCCTGCGTCGGGAGGGGCGAGGGCGGCCGCCTGGCCTGCGGGTTTCCT
GGCTTTGGG (SEQ ID NO: 284)

335. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene VPS29. In some embodiments, the sequences from gene VPS29 comprise or consist of:
GTACTTTTATGTTGATTACCAGTGAGGGTGGAAACTTCATAGTGGTTTTTAGTTTTACAGATGTTTT
GTCCACTGAGATCTGCATTGAAACAATTAATATAGGTCATACAACAAATACCTGCTGAAACTAGTC
TTTATAAAGAAGAATCTTACTTAACAATTTTAAAGTGTGCTAATTTCATAACCTTGTGTTACTTTGA
GATTACAAACTATGTCCCGATAACTCTGTGTCCTGGTAACGGTTCCTTTTCTTTGCAATAATTTTAA
TTTTTGTTGCAAGATAAATCAAGCTTCTTTTGGTAATCATTTTAATTTCATACATTTTGTTTGTTTGA
TTAATTTTCATTTACAAAGTCTGCAGTGGCAAAACTATTTTGTTTTATCCTATTAGCTATTTAATGGT

TTCTTTGATAATATTAAAGAATAGTCATGCCTTTAAAAGCAGTTAAAGGGCATGTACATTTATGCAT
GCAATATCTGTAAAGGAAAACATTTTGTA (SEQ ID NO: 285)

336. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene VPS29. In some embodiments, the sequences from gene VPS29 comprise or consist of:
TTAAAGGACTCTATCATCTATGTCTATCCCGATTTGTCAAAGTGTGGAATTTGGGCGGGAACATGT
TTCAAAGTATGACACGTGTTATGTAACACTATTTCCCCATAACTTTGTCATCAGCAGGAAACCAGA
GGATTCTGTCCTAGTAAGGATCCCTACTAATTTGAAATGATTGTGTGGTCATTCATACAGTTATAT
CTTTAGACTGCTAATAGTCTTGAGTCTTGGAGATAATCCACAGTACTTTATAGAATTAGGTCATCA
ATCATTATAAAGTACCATGTCTTACTAATGTTCTTTCTGGTACATTCAGATTGAACAGCTCATTCAT
TATTAGTACCAAACATTTCAACCTGTTGTAGACATATACCCTTTTATGAGTTTGGGGTGGTGGTTG
TTGTTGTTGTTCTTCTTCTTCTTTTAAATATAGAAATCTATTATTTTTACCTTTTTCTCAAAGCAAGA
TTCCCATACTAACTATGTACTTCAATCCATATCA (SEQ ID NO: 286)

337. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CABP1. In some embodiments, the sequences from gene CABP1 comprise or consist of:
GGGTCGTCCTAGTCCCCCCGCACGGTATTGGGAGTGGAGGCAGCCCCACACGGAGGCGCTGG
GAGACTTTCCTCCCAGCAGTGTCCTGTCACTGCATTCCGGCCCCTGCGTTTGTAGGCAGTGATG
TCACAGAGTGCCTTCATGCTCCTCGGGTCTCCGGTTCTCCCCGGACCTCTGTAGTCCTCATTGC
CAAAGTTGTACCCCCTGGGGAGTGCACCCTGCCTGCATTTCTGGAGGTTCGGGCGGTTCCGGG
GCTCTGCAGGAGCCTCCAGGCGTGATAAAGAGCGCTGCCGGCACTCCCGGGGTCTCGGCCTCT
TTGGGGCCCATTGCCAAGCCCCTTCCCTCCTCGTGCTCCCGCTCCGCGTTGCAGCGTCCCCTTC
GCCGCCAGGGGCCGCCCGGAAGCGGGGCTCCCCCAGGGCGGGGCGGGGCAAGGGGCGGGG
CGCGGCGGTACCTGGGCCGCCAGGGAGCCGGGGGTGGGCTCTCCGGGGACAGCCGGCAG
(SEQ ID NO: 287)

338. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CABP1. In some embodiments, the sequences from gene CABP1 comprise or consist of:
TAAGGGCCGCGCCTCCCGTCAGCGCTCCCGGGAAAGGCGCTCGGGACCCTGCCGGCCGCGGT
TGCGCGTCCACAGCCTCCTCCCGCGGCCCGTGGTCCCCCACGGATCACGCCTCGGCTCACCTC
GTCCTCCCCGGGCCGGCGCCCTTGCCGGCACTCCTCCTCCCCGTGCCTGATTCAGCACCCCGT
GCGCTGTCCACGCTCCGGGCCTCTTGGGGCAAGGCCCTCCCCGCTAGCCTCCCTCATACCCGC
CAGAACCCGCCAGTCCTGGAAGAGAGCGACCTCTACGACCGTCCTGGAGATTTGCGGGGGTCA
AGGAGGGGCGCTCCGAGCAGGTGGCGCCAAACCCACTCCTCTGGCCTCTGGCCAGTACCGCCA
GGGAGGGACTCAGGAGAGCAAGCGGTTTGGAGTCTGGGGGTCAAGAGAGGGGACCTCAGAGA
ACACAGAATTACTTGAGGGCGAGGGACACTGGCCACTGCCTATCATGTCCCTGAAGGCCT
(SEQ ID NO: 288)

339. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDK2AP1. In some embodiments, the sequences from gene CDK2AP1 comprise or consist of:
GTGAGCGCGGAGTGAACGAAGTTGGCGCAGCTCTGGGGCTGCTGGGGCCCGCGCGCGGGCGT
GGGGGCAGTGGGTCACGTGGACGCCCCATCTGGGAGCCCCCAAGGGCTGGCCCTGGAAGGCC
CTCGATGCAGAAGCCGGGAGGGGCTCCCCTCAAGCTTCCTGGGGCTGCGGCCGCAGCCGGGC
GCTCCCAGGAAACTCCTCCAGAAGTTGTCAGGCAGCTTCGGGCTGAGCCCAGGGGACCGAGGG
AGCCATGGGGAGTGGGCACAACATTGAGGGATTCGTAGGTGCCGGGCTTTGTGACCTCACTGG
GGCCCTTCTTCTCTGACACTTGGTCGGAAACAGACTTCCCAAAAGGCGGTTGTGTTGCGGGGCG
GGATGGGGGGAAGGACTCGACGGGGAGAGGAGTGGCCCCGTTGGTCACCGGTGCCACGCTGG
CTCTCCTGCTCGAGTTTTGGGCCTTGTTTGCAAACGTTGACCTCGTAACCCCCCAAATCGG
(SEQ ID NO: 289)

340. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDK2AP1. In some

embodiments, the sequences from gene CDK2AP1 comprise or consist of:
ACTTGGCCGCGCACATGCCCGCCGCCGCCCTCAACGCCGGTGAGTGAGCCGCGTGCGACGCG
CCCCAAGCGCCGCCAAGTTGGGGGTCCGCGCGCCCGGCCCCGGCCCGGGGATGCCCGGGGC
GCCCGCGGAGGCCGGGGGCGGGGGGCTCAGGGTCCCGGCCCGGGGCAGCGCTGCCGCCGC
CATGATTCCCGAGCCCGCGCCGCGAAAGTTCTCTGGTGCGCCCCGCACGCCGAGGGCCTCGGC
TGGGGGTGCGGGGCGGGCGGCCCGGGGTGACCCCCGCGCCGGCGGCTGCGGATCGCAGGGA
GCGCGGCGGGCGAGGGCGAGGGCGGGGGAGGCTTGTTCTCGGCTCCTTTTTCCTCCGGCTTCT
GGGCGGCTCGGCGAGGGCCCCTGCCGGCGGGAGTCGGGAGCGGCCCGGGCCGCGCCGGGA
GCGGGGCGCGGGGCCCCGCCGCCCTGGGGAGCGGGGTCGTGAAGCAGCCCGGGCGGGGGG
CGCTGCGGG (SEQ ID NO: 290)

341. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene COMMD6. In some embodiments, the sequences from gene COMMD6 comprise or consist of:
GTGAGTTTGACTTTTTTAGATTCCACATATAAGTGAGATCACGCAGTATTAGCCTTTCTGTGTCTG
GCTTATTTCACTTTGCACAATGTCCTCCAGGTTCATCCATGTTGTTGCAAATGGCAGGATTTCCTT
CTTTTTTATGGCTGTGTGATATTCCATTGTGTGTGTATGTATACACATACATAGTATATACATATAG
ACATACATTATAATCATATTAAATATAAATATACACAAAAACATTTTCATTAGAGGCAACTCTTTTAA
AGAGAGTTTTTACATGGCTTAAAACTAACCACGAGATAGCCTGTTAATCACATTACATGACTGAGA
GCTAAGGAACATTCTTTGAGCTTTTAATTTATATCTTTTTGATAACTAAAATTTTGAACATCAGTACA
TATTTTTAAAGAAATAGTTACACTTTGCTTCATTCTGTGACAAATTTGCATATAAATTAAAACAATAC
AAATCCTCTTAAGTAGCAAAATAGAAAATT (SEQ ID NO: 291)

342. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene COMMD6. In some embodiments, the sequences from gene COMMD6 comprise or consist of:
AAAGAGAATACACGTTTTGGTCTTTTTTGTAATTCACAGTGCTGGCCTAATTGTTATTATTCTGTGC
AGCATTTGTGCTGTCCTGATTCCACCTCTAGAAATTTTTTCCTATAGGAAAAAAAAAATCACAATTG
GATTAACTTTTTTTTCCCCAGCTTTATTGAGGTACAGTTGACAAAATTGTGTATTTTGAAGGTTTCAC
AATGTGATGATATGATAAAAGATATACATTGTGTAAAGATTACCACAGTCACTCTAATTAACACATC
CACCCCCACACAGTTACCTTTTTTTTTTTTTGGAGAGAGTGTGTGCATGTATGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGCTGAGGGCATGTAAAATGTTTTTTAGCAAATTTCAAGTAAACAATAACAA
TATTACTGTAGTCACCATATTGTACATTAGATCTCAGACTTACTCATTTTGTAACCAAAAGTTTGTA
CCTTTTTACTAACATTTCCCCATTGACCCCCA (SEQ ID NO: 292)

343. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLAIN1. In some embodiments, the sequences from gene SLAIN1 comprise or consist of:
GGTCATCACTGAGCCTCTTGAATCATTTCACATCATTTTATATACCAAAAATCCACTGAGATAATTG
GTTGAAAAAGATAAAATTGCTCTTTTTTACAAGTTCTTTTTGTTTGTTTTATTCTTTATAAAAGTGCT
TCCTGTTACAATTCTTTAGCTATGTACTGAAGAACAACTAGGATGTGATAGCTTCCACTCCTGTCC
TCCTCCTCCTCCACTGTAACCTTGGGCACTAGTGGAGCATTATTGTTTTGTTAGCCTGCCTTTACA
ATAATTTTCCTCCCCTTTCTGAAAAGCTTCAATGCTAAACAACAATGTAGAGCATTCTTTCTTGCAA
TAGACGCTAATTGTGTTCCTAGTTGGGATCTTGCTGTCATAGCCACAATAACTGTGTCAATTGTGC
AGGGAGGCTGGGTCACAGTGGTTATTGTGCAGAGTGATGAATGCTGCTTACTTGTGATGTGCTG
CCGCCCGCATCTGTGGGTGAGAACACGCAGTTACT (SEQ ID NO: 293)

344. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLAIN1. In some embodiments, the sequences from gene SLAIN1 comprise or consist of:
TAAGTTACGGGTTGGATAAGTGACATATACGACTGGTGTCAATTGGCAACCAGGCTTCACAGTTT
CATGAAATGTGTGGATTCTGAAAGTGTTGTCATTGCGAATGTGGTTTCCTTGCCTAGTTCTTCCAC
ATACTTAAGGAAAAGATATTTTTAATGTAATTGTTAGAATGTGTTGGTACGTAATGATTCTGAAGTA
AAAGGAATTTTTTTTTTTTTTTTTTTAAGTAAACTTGGTGTTTTGCAAGGATCTGAAGAATCCCAGT
TTGGAGCTGATTATTTTCTTGACTGTCCACATCCCACAGTTTTTTTTTTTTCTCTCCATCCCACTGC
CCATTTTAAAGCACTTTTCAGCTGTCTGATTGCTCATTAGCATTGCTCATTAAAAGTGGTCTGGGG

GCATGCATTTCAAAGCAGTCCTTTTAATACTTGGTTTTTCAAGTTTTGTCAAATTCCCAGTGAATAC
AAACCAAGTTATTTCTTGAAGTTTAGCCTTGTTT (SEQ ID NO: 294)

345. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FARP1. In some embodiments, the sequences from gene FARP1 comprise or consist of:
ATCTTATTTCTAGATTTTTTTTTTTCCTAAGCAATCTCTTGAAAAGGAATATCAGTGAGCAGATTTC
TCTGGGGCCATTTGAACTTCATTAAAATTTCAGAGAGGGCTTTTCAATGAGAATATATTCATGTAA
GCACTGGAGAGTTTTGCATAATTTTAAAGTTGAACAGAATTGGGTACAATTAGTGATGAAAATACA
GTCCATCCCAGATTCCTAGCTGATTGCCATTTTGGTTTTCCCAGCAAACACCCTTTCTACCCCACT
TCCTAGCTTTATTGAGATATATCTGGTATATAAAAAATTGTACATAACTAATGTATACAATTTGGTG
AGTTTGGATATAAGTATAGGCTGGTGTTACCATCACCCAGTCAAGGTAATAAACATATCCATCACT
TCCAAAACTTTGCTGTGTCTCTTTATTGTTACTGTTTTTTAAAAAACAACAACAAAAAGCGCCTTTT
CAAGGGAGTAGCATTTGCTCTCCTCTCTTCCCAG (SEQ ID NO: 295)

346. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene FARP1. In some embodiments, the sequences from gene FARP1 comprise or consist of:
ACATGTTTGTCTTACCAGCTTATTGATAAGCACTTTGTGGGATGTTTATGTGAGAACAGTTGATTT
TAATGAGAAAACAGATTTTCAGCTCCCATGTTCAGTGTTTTATGTGACAAAATCATACACTGCAGC
AACTAAGTAATACGAAGTGAGTACTTTAATTGAAACAATTAGAGTGACACAGGAGGCATTTTCTAC
TTGTGTAAACGCAAAGCTTAATTTTTAAAAAGCCTCCCCCAGTTTTCCTTCCTAAAGGAAGTGGAT
GATCAAGCCTGAGCTAGATAGAATAGCAGATGTGTATTTCATTATTAATACAAGAGGAATCTTTTT
GGGTTAATAGAACTATTCTTTAGAAGAAGAACTTGTTTTGTGTTACAAAGGTGTTACATGGTTACT
TACAGTAACAATTTCGAGCAGCACAGAAAATGCAGAAATGTATCCCATTCTTAGGATTTTTGAGAT
AAATTCTTTTTTTTATTTGGAGAGGGAGTCTCACTCT (SEQ ID NO: 296)

347. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STK24. In some embodiments, the sequences from gene STK24 comprise or consist of:
GTAAGGGAGAGGGCATGAAAGCAGCGAGGATAGTAGCTGCTGAAAACGGGGTATGTTTCATTAT
AGCTAAAAAAGGATGCGCTGCTTCCCCCGCATCCCCGAAAGCTGCTCATCCTAGCAGCTTGTGT
TAGAGGAGGTGGAGGTGCAGGTTCAAGGCCGCGTGTAGGGGGAGTCAGGTGGGAGGTACCCA
CCCGGGCATTCTGTGGCATTCCCAAAAGTGACTGGTGATACTCAGCCTGGGGTATTGATAAGCTT
GAAAATAGGAAGAGGAGGATGTTGTAGGGCTGCTCACGAGCTCCAAAAACAGTCTTCACTTGAA
AAAATTATCCTGGGCTTTGATTGTGGGTCATTGACTATCTTGGTAAACCCAGGAGTCTTGGACTG
TGTTTTTTAAAACCTGTAAACACACAGCCAGGCTTCCTCCTAAGTATGACCGTCATAAGACATTTG
AAATGTAGTGCCGTGACTGAAAACAATTGAGCAATTGTTCAGGAAAAAA (SEQ ID NO: 297)

348. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene STK24. In some embodiments, the sequences from gene STK24 comprise or consist of:
TTCCGTGCACACATGTTGAGCTAGAGATGTCTGGGTAGAAAGAGAGAATGCTTGGGAAGCAGCT
GGTCTGGGGGGTTCCTGTTCAGAAGGAAGGCCTGAGCTAGCGCTTTGAAAGCTGTCATGTACGT
GAGTCTTTAACACAGCCTTTCCTTCAAGGTGGCAATTGATCAGAATCCATTGGGGTGTTTTAAAAA
CATGGATTATTCACCTCCTCTTCTGAACTCCCATATATTTCTGCAAGAATGTCAGATGTCCTAGGT
GGTTCTGTTCGGGCAGGTTTGGGAAACAAGGGCCCCAGACCCTGAAACTACCGGGCACCCCTG
GGGAGAAGGAGTAGAGGCCCAGGCTGGGACCTAGAGTAAGGGCCAGCCAAGGTGGAGTCTGC
GTGAAGATCCTTCTGGAACTAGAGGGACTGGAAGAAGCCAGCGGGAGTGGGGCTGTGGATGCT
AAAGGACTGGAAAGTTACCCAGAGGAGGGGGAGGGCGTGGTTGACAAGGCT (SEQ ID NO: 298)

349. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RNASE1. In some embodiments, the sequences from gene RNASE1 comprise or consist of:
GTCACTTTGTAGGTCACCACCTAGAGGGGAGGAAGACCTCGCTTTGGAGAGTGGGAATAAAACG

CTCGTGGAAAAGGGTACACGTGAGTGTCTCATTACACGAAAAACCTCAGGAAGTAGGATGGACG
TCTTTCTGGCTGACCTGAAACAGAAAGTGTAAACCAGGCAAGCCATAGGTGGGAGCTGGAGTTC
TTTTTCTAAGAGGGCTCTTTTCCTTCTCTCTCCTTTTCTCAATTAGGCTTTTCTGGGAAAGTGAGG
CCACCATGGCTCTGGAGAAGTCTCTTGTCCGGCTCCTTCTGCTTGTCCTGATACTGCTGGTGCTG
GGCTGGGTCCAGCCTTCCCTGGGCAAGGAATCCCGGGCCAAGAAATTCCAGCGGCAGCATATG
GACTCAGACAGTTCCCCCAGCAGCAGCTCCACCTACTGTAACCAAATGATGAGGCGCCGGAATA
TGACACAGGGGCGGTGCAAACCAGTGAACACCTTTGTGCACGAGCCCCT (SEQ ID NO: 299)

350. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RNASE1. In some embodiments, the sequences from gene RNASE1 comprise or consist of:
AAGCCAAACCCCTTTGTAATCTGTATAAGGTCCACACCCCGGGAGCTGAGTGATTGCAGAAACTG
GCCTTCCATCTCTCTCAGACACCAAGCTGCAGATCCAGGTAAGCAGCCCAAGAGGTGTTCTCAG
GTGCCGCTTCTGCTTCAGGGTTGCAGAAGAGGGAGCTAGGGCCAGTCCACAGCACTGAGAAAG
ATTGGGTGATGCTAGCGCTGAAAAAATGTGGCCCAGGCAAACATCAGCTGGGGGCAGAGGGGT
CAGGGTGGAACGTGCAGGCTGCAGAGCATCCATGGGACTGGAGAAGAAGGAGCCTCCAAATTG
GGGGAGGCCAGCGTTTCTCTCTGGAATACAATGGAATCTTTTATGATGCCAGTGTCAGGCACTG
GCCTGAGTTCCCTTATGCTCCAAGACAACAAGGCTCTGTCACCCATGGCCCTGGATGTCGGGGA
TACAATTTGGTTCATGATTTATTCAAACTGATGTTTCGATGAGCCATTTGAGC (SEQ ID NO: 300)

351. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NDRG2. In some embodiments, the sequences from gene NDRG2 comprise or consist of:
GTCGTGGATGGGGCGGTGCTGAGGGCAGCCGAGGGATCCCTCTCAGGGCTGAGGGATCCCCG
CACTCCCCACACCGCCCCAATGCGGGGAGGGGGTGGTGGAATGTTTTGGTGAGCCGAGCAGAG
CCTGGAAGCGTCCAGCCGCCCGCCCCTCGCCCCCCGGCCCCAGCACAACCCTTTCCTGAGCGG
CAGTCTGGGCGGGGTGAAAGGGGGGGCGTGTTTACTGGGGGTCTGGGGCGGGTCTGCGGGGA
GCCTAGCGCCCGTGGGCGGGCTGGGGCGGGCCGGGGGCGGGTCTGCGGGAAGCCCGAGCCG
GGGCGGGCCCGAGTCAAAGGCAAGTGAAGGTGGAAGCGGCCGCGGCGGCAGCAGGTAGGGG
GAGGGGCAGGCGAGGGGCCGTAGGGCCTGGAAGGCGCCAGCCGGGCCGGCGGGCGGTGTGA
TTGATCCGCGTCCCCTGGAGCTGGAGGCTCGGGGGAAAGGGCCAGCACGGAGCGGGCGCTCG
GTTG (SEQ ID NO: 301)

352. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NDRG2. In some embodiments, the sequences from gene NDRG2 comprise or consist of:
GTGTGTGTGTAAAGTCTACAGTGGCAAACCCACTCGGGCACCGAGAGGGACGCGGCAGACCCT
GAGACCATCCCCCGGGCATTGCGATTCAGCGGGCCTGAGCTGGTCTCCTATTCTGGGCCGGAC
TGGGAGGGGTTAGCGGCGAAGCCACAGGGTCTCTTGGGTCCCAGCCCAGGACACTGCGTCCTC
CCCAAGCCCCTACTCCACCCCCGCAGGGTTAACTCCGCCCCTGCGCCTGTTTACCCAGGAGTCA
GAGCCTCTGGGGGTCCCCGGCCCCTCCCCCGCGCCCCTTGAGGCATTGACCCCAGAGTCCCTG
TTGGCCATCCTCTCCCCACCCCCCGCCTGCCCGCGATCGCCCTCTATTTATAGCGGCCCCCCGC
ATTCCCCGCCCCCACCTCCCCGCCTTGTTGTCCAACTTCTCCCGGAGCAGCCGGAGAGCAGGC
GTCGGGACGCAGCAAAGAGAGGAGAGGTACCAGGACTCTGGGCACGAGGGAGTCGG (SEQ ID NO: 302)

353. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSME1. In some embodiments, the sequences from gene PSME1 comprise or consist of:
CAGATACCTCGGATTGAGGATGGTAACAATTTTGGAGTGGCTGTCCAGGTGAGAGCGCTGCCCC
ACTTCCCTGCTCTTTTCTAGTCCATGCTTCCTTCCACTTTCCCCCTTGCTTTTTTTCCCTAGGAGA
AGGTGTTTGAGCTGATGACCAGCCTCCACACCAAGCTAGAAGGCTTCCACACTCAAATCTCTAAG
TGAGTGACCACCCATGTGCACACTGTTTTTGTTTTGGGAGACCTCCTTCTTCTACTCCATACACAC
TTCTCCTTCCACAGGTATTTCTCTGAGCGTGGTGATGCAGTGACTAAAGCAGCCAAGCAGCCCCA
TGTGGTAGGTGAGGCCCAGGTCAGGGTGCATGGGGGAAGGACACATGTAAGGTCAGGCCTGAC

CCGAGCTTCCCACAGGGTGATTATCGGCAGCTGGTGCACGAGCTGGATGAGGCAGAGTACCGG
GACATCCGGCTGATGGTCATGGAGATCCGCAATGCTTATGTGAGGAG (SEQ ID NO: 303)

354. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSME1. In some embodiments, the sequences from gene PSME1 comprise or consist of:
CTGTGTTATATGACATCATCCTGAAGAACTTCGAGAAGCTCAAGAAGCCCAGGGGAGAAACAAAG
GGAATGATCTATTGAGAGCCCTCTCTCCCATTCTGTGATGAGTACAGCAGAGACCTTCCTGCTTT
TTACTGGGGACTCCAGATTTTCCCCAAACTTGCTTCTGTTGAGATTTTTCCCTCACCTTGCCTCTC
AGGCACAATAAATATAGTTATACCACTGCCCATCAGCCCAAGTCTCTTTATTGGAACCGGGCCCC
GCTGGCCCTGGCTCAGGCATTTCCATTTCCATTAGTGGGACCAACCCACTGGGTGATTTGAGTG
TTGAGCCGCTGGTTGGTCCAGTCCTGCCGGATGTCATCAAGGTGGCAGTCAAAGTCCACAAGGT
GCTGGTGGGCCCGATCTTCCAGTAGAGCTCCCACCATCTGCCGTGACTCTTCCCAGTCCCTCCA
CATCACTCTGAAATAGTAACCCCCATGGAGGTCAAACAGCAAGTAG (SEQ ID NO: 304)

355. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene REC8. In some embodiments, the sequences from gene REC8 comprise or consist of:
CCAGAGTCCTGCCTTTTCTGTCTCCATTTCCCTATTCTCTGTCCCTGGCACTTGAGCACCCAGTG
GCTTCCTTGAACCTGGCCCTGTGGCATGCCTCTGGGATCCACTCTCCTGGATCCACTTGCCTTTT
TCAGAAATATTATTGAATCCCCTCCCCTTGCTCTTCCTCTCTGGACAGGGTGAACGGGAGCTCCC
AGAGGTCAGCCGCCGAGAACTGGACCTGCTGATCGCAGAGGAAGAAGCTATCTTGTTAGAAAGT
AGGTGTCTCCGGCAGCGTAGGGCCCGCCTGGAGCTGGATAGTCAGACCCCTGGCGTGGGCATT
CTGGGACTGGGCAATGCTCCCATTTCTCTTTTTCTGTCCTCTGAACTCTGATTCTCTCTCCACAGT
CCCGCGGCTCCCACCTCCAGCTCCTGCAGAGTAAGGGCAAGAACTCCTAGACCAGGTAGGGTG
TCAGTGCTGGGAAGGGTCTCCTCATTTCTCTTGCCCATTTCCCCTCAG (SEQ ID NO: 305)

356. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene REC8. In some embodiments, the sequences from gene REC8 comprise or consist of:
TGAGTGCCCACCATGCCCCAGGGGCTTTTCTGGGAGTACCTGGATACTGCTGCAGACAAGGGCT
TTATATCCCAACTTGCTAAAGGGAGGACCCTGCAGTTTCTTGCCCTGGCATCTGCAAGGGGTAAG
GGGCTTATGGGACAGAGCCCCTTGGGTGTTGTTGCAGAGGTGACCCCCCCGGAGGAGCTGCGT
CTGCCAGCCCCACCCAGCCCAGAGGTGAGTAGCCTCCCTTCTAATCCTCCTCCTCCTCCTCTTT
GCCCTCCCCCACAAGGACTGCCTCCCCAAGCCCAGGGCCACTGCTAGCTTACAGGGGTCCTTAA
TGCAGATGATAAAAGATGCCCCTTTCTACGCCCCATCGTATCTGGCCTACGCTTCCCAGATGGGT
ACCCTTATGCAAGGTATGAGCTGCTCAAGTGCATGGAGACCCCGCACAAGCCCTCTCCAGGTTC
CTCTAGGGGCGGGTGTGGGGTCCTGTTAGCAGTCCACCAGAATGACAGGA (SEQ ID NO: 306)

357. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SDR39U1. In some embodiments, the sequences from gene SDR39U1 comprise or consist of:
GTGGCGGGACAGGCTTCATTGGGACAGCCCTAACCCAGCTGCTGAATGCCAGAGGCCACGAAG
TGACGTTGGTCTCCCGAAAGCCCGGGCCCGGCCGGATCACGTGGGTAAGTCCATCCTCTGGAA
GCGGGTGGGAGGGCAGAGTTGGGCGGCGCAGGGCGGGGCAGGGGCACTGTGTGCTTTCTCCG
ACAGGATGAGCTCGCTGCATCGGGGCTGCCGAGCTGCGATGCCGCCGTCAACCTGGCCGGAGA
GAACATCCTCAACCCTCTCCGAAGGTCAGCCCGGGCCCTAAAGCTGATACCCACTAGAGCACAG
GGAGGACAGTGCCCCACTGATGAGAACCTGTGAGCTATGGGTAATGGAGCTCCCAGATTCCGAA
CTAAACCGATATCCCAGACTACTCATTCTGCTCCACTCCTCCACCCCCACCTGCTCCTCCACCCA
GTCAGCCAATTGGCTTAAGTCCTCACGTATAACTCAGGATGCCCAGGAAATGAAT (SEQ ID NO: 307)

358. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SDR39U1. In some embodiments, the sequences from gene SDR39U1 comprise or consist of:

CTTGCTATTGAAACACCCAGCCTATATTTACAAGTTTTTCCGGGTCGCCGAGAAGGGTCACGCAC
AGGATTGCGACCTCGATTGGAACGCGCTTCCCGAAAGGGGCATGCGCAGAGAGGTCGTAGTCG
CGTCTGAGGTGAGGTAAACTCTAAACTTTACGCAGGCGCGTTAGGTCCTAGTCGCTATGCGTGT
GCTTGTGGGTGAGGGAGGGCAGAAAGGGAGAGTGCTGGGCGGGCTTAGTCGGAGATTGAGGA
CTGGGAATCCGCTTCCGGGAGGGCACTGTCTAGTGCACAGGCAACCTGGCCTTGGCCTCCTAG
CCCGAGAAGCCGAATCTCCCTAATCCCTGTGACCTGTGTCACCTCTGCATCGCGAGGAGGGGGA
TAAGTGGGGAGAAGCCTGGTGTCAGATGGGATGGCGCCGGAAGAGGGTGCCACAGCGGGGAC
GGAAGGCGCCCCCACCCCAACTCCACGGGAATATAAACAATTTGTATTTTCCGATC (SEQ ID NO: 308)

359. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RTN1. In some embodiments, the sequences from gene RTN1 comprise or consist of:
GTATAGTTGCTTAAGCTGTTCACTTCACAGTCTTGACTGTTATTTTCCCTAAAGGTGTAATACTGTA
AACTGCTACATCAAGAAGAATAAAAAGCAAGTGCTAATTATATTCTAGAGTCAGAAGACCTCCAGT
TGTATGGCACCATGAACCAGTCTAATCCCTTCATTGTACCAATGATGAAAATGTGGCTGAGACATT
TGTCCAGGGTTGCCCAGTGAGTCACTGGCAGAGCTGGAATCAAACCCAGGTCACATAGCTTCTA
GCTCTATAGTCTTTACAACACACCAGATTGTCTCCTTAAACCATTTTTAGTTCCTCCGACAATTTCC
CAAAATTAATATTAAGATAAAAAATCTAGATAGGGAATGTGAAAACCATATATACTTTTGCATTGAA
GGAAACTCTAGATTCTACTAATATTAATAGTAAGCCCTCCAAGTGTGCTTATGTAGTTACAGCTCT
GAGGCTAGAGGTATGCCCAGCCTCTCACTTGATGAG (SEQ ID NO: 309)

360. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RTN1. In some embodiments, the sequences from gene RTN1 comprise or consist of:
TATGGCCCAGGTCACTTGAGTTTTCAATGCTCTTTCTATAAACCTGGAAGTAAATTCTAGAATTTA
AACATGAATTCTTAGAGATCTGATGAGGAACAGTTGGCAGCTAGGATTTTGAGCTATCTCAACTA
CTTAAAAAAAGATAATTTATCTCCATGAAGTCATGTGTGGAGAATTCAGCAAATGAGCTGATTTGG
CACTAATTTTTTTTCTCTGGTCCCAGCTGGTTTCTCTGAATTTTCAGCCCACCCATGCTGTGTCTT
AGGTAGCCAGAAACAGTCACAATGCTCCACTGAGAACCATGCTTTCTGTGTTCTCAGTGCATGGA
AGCAGGTGTGTACGGTGCCCTGTGGCCCTCACTGGCTGGCATAACCCCCCAGAGATGACTCCT
GCTCTCACCCTCAGAGTGAGAGTAGGAACGCTTAGCTGTTACTGGGGTTCGGCAGCCTGTCTCA
TGATTCCCTCTGACGGAATTTTCTGTGGGAATGGTTTGTTGACA (SEQ ID NO: 310)

361. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLIRP. In some embodiments, the sequences from gene SLIRP comprise or consist of:
ATAGATATTATAAAAAGTAAATCAGTGAAGTACAAGCACTGTAGTTCAGAAGAGAAACAGATCGTG
TAGTTTTTAGTCTTTAAGATTATATACTCTAAATCTTTGAAGTCTCACAGGGCTGGTACATTGTCTT
GTACTGTGATAGGAGCCCAATAAAGTAATACTCAGTGGATGTACTTGGTTTGGGTCTTGAAGGAT
AGTTATAGTGTTACAAGTTAGCCAGGGGGAGATAGGATTACCAACATATGGAGGGGAGAGAACA
ACATATGCAAAGAGGGTAACCCGCAGGACAGATAAAGATAATTCAATTAGTTGTACTAGAGAGTA
ACTAGGGGCTAGCAGTGGGAAATAAGGCAGGAAGGGTAGGTGAGGGCAACTCAACACATTTTAC
TAAATTGTGAAAGACCAGTAAGTTGGGATTTTATTTGGAAATCTTCAGTATACCGGGAAACACACT
GGATTGTAATTTGTCTTTTTCTTCATTGTGATCTGCTCACAG (SEQ ID NO: 311)

362. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLIRP. In some embodiments, the sequences from gene SLIRP comprise or consist of:
TACATTATGGCTTTATAGTCAGTACCATAGCTGCTTCCTAAATCTTAAGCCTTTAAGGAAATGCAA
AGTAGTTCCTGTCCACAAGAAATCTGGTGACCCTGTCTTTCTACAGTCTAAGATAGAGAATCCAAA
ATATAGTAACTACTTTTAATGTTTTCTTCTGCCACACAGGTCAGCTGAAAGAACACTTTGCACAGT
TCGGCCATGTCAGAAGGTGCATTTTACCTTTTGTAAGTATTAAGGAAAAGTAGGTGGGAGGTGGG
GATGGCTAATGGGTACAAAAAAAATAGAATGAATAAGACCTATTTGATAGTACAACAGGGTGACT
ATGGTCAATAATAATTGTACATTTTAAAATAACTCAGAGTGTAATTGGATTATTTGTAACTCAAAGG

ATAAATGCCTGAGGGGATGGATACCCCATAAGTCAAAGGATAAATGCTTGAGGGGATAGATACC
CCATGCTCCATGATGTGCTTAATTTACATTGCATGCCTAT (SEQ ID NO: 312)

363. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HSP90AA1. In some embodiments, the sequences from gene HSP90AA1 comprise or consist of:
GTAAGTGGACTAAGGTTTAAAATTACTATCCTAAACATTTCTAGCTAATGTTAACCATCCATCCAAC
CAACCGGTGGTTGGAGTCACAGAAAGCTAAAACAATGTCACTCTCTTTATTGTTTATTCCCTGCCT
ACCCATCCACTGCATTGACATCTACTGAGGGTCCACTACAGGCCCAGGCAATGTCCAAGAGAGT
CCCAGGTCCCTGCCTGGAGTGCATGTGACAATCATCATAATACAGGGCTATAGCGCATATATGAC
AAAGTGCTGTGGGAGAAAAGAGAAAGACAATCCAATCCCTTGGGCTCCCAGAAGAGGTGGCTTG
TGAGCTGCGCCTTGAGCACCCACTCACGGAGGACAGCATAAGCAAAAGTGGGGAGGAATGTGG
GCAGGAGGGGCGTGAAGAAGCGGGCAGTGGGGTTTGGAGTGACTGAACCCTAGGAGGGTGGT
GGTGGCAAGAGATGATGGGGGAGTGTTGGAGGGGCCTGGGCAGGCTAT (SEQ ID NO: 313)

364. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HSP90AA1. In some embodiments, the sequences from gene HSP90AA1 comprise or consist of:
TTGATGCATTTAGCTTACTTTCCTAAGGGGCTTTCAAGGGGGACACTTCCCCTGGATTCAATTTTC
CCCTTAGCCACTAACTTTGAAACCCAACCAGAATTCCAGACCCTTCAGTGCAGCTCTCCTGCAGT
TGGTTGAGTCATTAGGATAAGTCTGAATGGAGCCTGGAATAATAACAACTAAGTTCTAGTTTTTGC
TGCAGGCCCTCTAGCCCAGTCCAAGAGCACCTGGCCACCCAGAGAAGCACTGCTGGAGTGGGG
GATCAGGCCATACAGCATCCACAGAGAAGCCCAGCTCCTTACTGGGACCCTGGTCCATTTCCCA
AGTTGAACTTCCTGCAGGAAGAGAACATATCACATATTTTAATCCATTTGACAGTCACAGAGGAAG
TCTAAGGAAGCCAGGGCATGCCTGCTTGGGGCTGTCCAAGTTCATCCTCTGCCGCCCTATCTCT
GTTATGTTTGGTTTGGAAGTCCAGAAGATTGTGTTTATGTTCCCA (SEQ ID NO: 314)

365. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CRIP2. In some embodiments, the sequences from gene CRIP2 comprise or consist of:
GTCCCAGCTTCCTTGAGTGGAGTGGTTCTGGTCAGAGGGCTCTAAGCTGGTGCAGCCTTGTGGT
TGGGCTGGTGTCCTGGAGGCTGGCCCTGGCCATGCCCAGAGGGTTGTACCAGGGCCACGGAG
AGCCAGTATTCACAGCCCTCTACCTAGTAGGCCACCTGGGGGATCCCATCTCACTGCCAGGAGC
AGCACCCTTGGGCCTCTCAGAGTGGGCTTCGCCCTAGCCAGATGCCCCTCCCCGATATCTGCCA
GACAAAGGGGGCTGGGCCACTTGCTGAGAAAGGGAGCTGGGAGAGCCACTGGTCCTCGGCCA
CCTGAGGGGCTTGGCCAGATTCTGCCGGGCAGGGTGGGCCCAGCCTGCATGCTCCCTCCCCCC
AGGGCCTGCAGCTTGTCCCCTTCCCTTCAGAATTCCGGCTCTGCTGGGCCCTTCCTGCCCCTCC
CCACCTCTTCCTGCCTGGCTCCCTAGGGAGGCCCCTGCTTCCATCCACTGGGAAGC (SEQ ID NO: 315)

366. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CRIP2. In some embodiments, the sequences from gene CRIP2 comprise or consist of:
TGTGTGAGTGTAAGAGAAGTGTTTGAGGGAATGACAGGTGGGGGAGATGCATATGTGTGGGGG
GAGGCAGGTGTGTGGGGGGAAGCGGGTGTGTGTCTGAGGAAGCGGGTGTGTGTGGGGGGAAG
CGGGTGTGTGGAGGCGGGCGTGTGGGGGAGGCGGGTGTGTGTGTGAGAGGAAGGTGTGTGGG
AGGAGGCAGATTTGTGGGGGGAGGCGGGCGTGTGGGGGAGGCGGGTGTGAGGCGGGTGTCC
GGGAGGCAGGTGTTGGAGCGCGGGCAGGTGTTGGAGCGCGGGCAGGTGTTGGAGCGCGGGC
AGGTGTTGGAGCGCGGGCAGGTGTTGGAGCGCGGGCAGGCTCGAGCACAGGCCCCTTCACCG
CAGGCACTGAGGGGACTAACAGGGCAGCCCCGGGCCCCTTCTCAAAGGCGGCTCTAGCGGGG
TTCCAGGGCTGGGGGCGCTGAGACCCAGAGGGAGAACAGGGCCTGGGGGCGACGGGCTCCTC
CGGG (SEQ ID NO: 316)

367. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene APBA2. In some embodiments, the sequences from gene APBA2 comprise or consist of:

AGGGAGAGGATGGGATAAGCCTGAAGGGGAAGGTACCCAAGATAGTCTTTGAGGGGTCATGGA
TTTAGATTGGGAAGAGTTATTGTCCCTCCTCATTGGTCCTCATTATGTCTTCTTAATGAAAGCTGC
TCATTTTCTTCGTGAGAGCAAACAACCTGATCTTCTGACCATTTGTCTTGGTCACCTGGGCTACCC
AAACTGAGTGAGAAGTCAGGAATGAGCCGGTAGGTTCCTGGGGAGAGGCGTGTGTCCTCGTGA
GTTGCCGGTGCCTCCCTTGACTGCTTTTCCCGGAGCTCTGTGTGCCCTCGTTCTCCTTGGTGTG
GATGCGTGTTGTTCTGATGATGAGTTAGCGGGGGTGGGGATGGCGCACTGTTTGAACAGATGTG
CCCTCACATGGCTGCGGGAGGACGTGGTGGGAGGTGCTGTGGTGAAGTGGCCCCACACATGGC
TGGGCTTTGTGGGGTTTTGACTCTGTCCTTCCCAATGTTCCTCCCCACAG (SEQ ID NO: 317)

368. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene APBA2. In some embodiments, the sequences from gene APBA2 comprise or consist of:
TAGGACCCTGGCTGTCCTGGGGAAGGGAGCAGAGGGGCCCGAGAGCAAGGGACCTCAGGGTA
CAGGCCTTGCAGATGCTGAAGCGAGGCGGTGGGGGGTGCTGGGTGCCTCACAGTTCTAATGGT
GGCTGAGCTCTTCATTGGTCCAGTTGGGAGACATGTTGCGTGGATGCTCCGGCCACTCTTAAGC
TCACCGCTCAGACTCAGGACTAAAGCCGGTTGAGGGCTGAGTGGCAACTCGTGTCTCGCAGAAG
ACACCCCTCCTCCCACCCTAGAAGAGAGGTTCGATTTCTTGCCCACTGCCCTGGTCTGCTCATG
GTGGGGCAGTATGTGTGGGAGAGCCCCTCAATCCTCAGGGGTGTACTCAGACCAGCAGGGCAG
TGGCAAAGACGTGGGGGTGCTGGTGCTCACCCACTGCTGCGGCCAGTGTTGGGTGGCCTGGTG
GCTGGGGTCGGGGCCAGAGTGCATTTCACAATGGACGGGTCTCTGAAAGCCCGGGG (SEQ ID NO: 318)

369. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SCG5. In some embodiments, the sequences from gene SCG5 comprise or consist of:
AATGTTTCCCTGCCACCACTCCCAACCTTCCTGAGCTTCTTGATTTGTGTCTTCCTGACTCCCTCC
TGTTAGACTTTTATTCCCAGAGACTGGGAAAACCCAAGATGCCACTATCTCTTTCTCAAAATGTAA
GCAAGTTTGGTTTATTTGTTTTAGTAAGAGAGGGAGAGAGTGATGAAGTTAGGAGTAATGCAGAA
CTTTCAGGGAGCTACAAGGAGGATAAAAATTATGAGTGAGAACCGCCATTCCAGCCTAGCTTTCT
CAAGAATGCAAACAGAGGGAATTGGATACCTGCAACTGTTTTGTTTAATACCTTTCTGCAATGATG
CTCTGCCTAGCATGGAAACTTAAGACAAAAGCAACCTCCTAAGGATTCTTTGTTACAACCCCTTTC
TGGGTGGTCCTCGAACCACAACCTGGAGTGGTTGCATCATTATAATTGTATTATCACAATTGCCG
ATTGTAGCCTATCAGTATACATTTGGTCTTTTATCTGCAG (SEQ ID NO: 319)

370. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SCG5. In some embodiments, the sequences from gene SCG5 comprise or consist of:
TATTTACTGTGTTCTGATGGTTTGAAGTTTCCGTTAGCATTTTAAATAATATATTTGCACACTTCTC
ACAACAACCTTATAAGTAGATGCCTTTATTATCCTATTTTTTTCAGAGGAGGAAGCTAATTTTTAAG
AGACTCTACTTTCTCATGGTTTTCCCTTTCTTCTTCTACACAGTGTCTACATACTTACATATACACA
CCCACATGAGACTATAAGTCCTGTGAGAGCAGGGACCTTATCTATCTAATTCATAGCTGTAGCCC
TAGCACCTAGCACAATGTCTGGTACATAATAGGTGCTCAATTAATGTTTGTTGAATGAATGAAGGA
GCATCTAGTGTTATCACTAAAGAAAGATTAGAACCCAGACATGATGTTTTCTCCTCACTGCTGATC
TTCAGGAAATTGTGTCATCAGATAGCTGCCTTTTGAGTCAATGCCAGCCAGTACTTGTAAAAGAG
CTTCAAAATGTAGAACCTACAGGATCTGACTTGATT (SEQ ID NO: 320)

371. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SRP14. In some embodiments, the sequences from gene SRP14 comprise or consist of:
GTGAGAAACAAAGCTTTTTTTTTTTTTTTCCCCAAAAGGAGCCTACTGCCTTTCACCTCTTGGTGC
AATTCTCATGTGGAAAAAGATGCAGAGCTCCTTTTCTTGTTCTCTAGGCAGAGGAAAGTAGAGTA
GAAAAATAACCATTCGTGTATTATGAACCCTGAAGTTGGGGAGAAGTATTTTAAAGATAAGGATAT
TGTCTTCCGGAGGCTTTTGAGATACTATCTGGGGTGGAGAAGAGGATGCTTATATGGATAATAGG
TATGACCTCTTTTTTCCTTCTTTTTCAGGTGAGCTCCAAGGAAGTGAATAAGTTTCAGATGGTGAG
TTTTGGGTGTTCCTTATGTTTCCCTTCTCAGGGCAAGAGTCAGTATGATAGTGAACACTGGGTAA

GATTGATACTTGGGTTCACTGCTCTCCGGAGATAAGTTTTACCAGTATGTTTCAAGTAAAAGCTGC
CAGGGTGTGAATTTCAATGCTAATACCGTCTTCCTTTCTA (SEQ ID NO: 321)

372. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SRP14. In some embodiments, the sequences from gene SRP14 comprise or consist of:
CTAGTCTTTCAGTGGAGGTTGAATAAGGCAAAGGAAGAGGCTCCTTGAATTGAGTGAATACTACT
TTATTCTGCTGTGGCAGAAATCACATTAGTGTAGGATACTGACTGCATGAAAATGTAGACTATACT
TAGTTGGAAGTCTTGAGTTATCTTGAGAGGACTTCTACAGTAAAACAAGCTTATGTGGTTTTACAG
ATTAAGTTAGATATCATGAAATAACAAAAACCTAAGGACAAGTTATCTTGAGAGGACTTCTACAGT
AAAACAAGCTTATGTGGTTTTACAGATTAAGTTAGATATCATGAAATAACAAAAACCTAAGGAGTG
TTCTTCAGAGGTAGAATTTATTTTGTGGTAGCTCGCATTGTGCTTAAATATGCTTGAATTAATGGA
AGGCAGGTTTAAAAATAAGATGGGGAGGGAGTAGTTTAAATATATCTTCTATTAATGTATAAAAAA
TTAATACTGAGAAGTCCTCTGACTTTTCTCAGAACCCA (SEQ ID NO: 322)

373. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SHF. In some embodiments, the sequences from gene SHF comprise or consist of:
GTGGGTCCTGGGGGGCTTCTGGCCAGGGTGACATGTCCTCACCCCTCCAGGCCCTGTGGGTTG
GGTTGGAGGAGCTGAGAGGTGGGGCAGGATTTGGAGACCCCAGGAAGAATCTCATTTGGGAAG
AAGGAAGAGACAAAATGCACGTTCCTCCCTTCCCCACAGCTGTGGGATGGTGTCTTCTACAGGG
AGGCCCCTTTCTAATGTGTTCCTCACCATGCTACAAAAATCCACCATTTTAAATTCACTTTGGGGA
GAGCTTTGCTTGACAAGCTCCTTCAGCAATGCAAATACTCCTGAGCTGGGGGTGGGACAGACAC
AGCAAGTGTGGAACTCCTTGGCGCAGAGGAGCAGATCTGACCTTGCATCTGGTGACTGAAAGAG
AGTAAGGGCTTCAAAGTGCTACAAGGAGAGAAAAAGAGCCCAAATGAGGAGAAAGAACGCACTT
AATTCTTCCTCTATGTTCAGTTCTGCCCAGAATGGGCACCCAAGGGTGTGT (SEQ ID NO: 323)

374. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SHF. In some embodiments, the sequences from gene SHF comprise or consist of:
CCTCAAGTCTGAGTAATCCTGACAACCTGAGGCGAGGCTGGCTCTTTCTTGCTGCCTGCGAGTT
CCCAGGCTGTGGGGAAAAGGAGAAAGGGAGGCAAGGCTGTGGGTGCCAGGAGGCTATGGGAA
CCCAGATGTGGTGTTGGGAGGTGCTGGTCACTCTTAGTCCTTCATTTCCTTTGTTCCTGGTACCT
TTGGGCCCTGGAGGCTTGTGAGAGGTCAAATGAAGGGGACCCACGGGCTGACAGTGCAAGCCC
CTGCATCCTGCTGCTTGCCACCCAAGCCTCCCTCCCTCTGACCAGGCCAACCTGGTGTGGTCAA
CGTTGGCTCTGCCCAGCCCTTGAGTGCCTCCCCAAAAGCTGACCTGCCTCTGCCTCTGCCTCTG
CCCCTCCTCATTTCTAGGCTGTCCTGTGTCCTGGCTCTGGGTTTTGGTGTCTCAACCTCTACCTC
TTTCTGTCTCTGTCACTGTCTGTCTCTCTTCTCACTTCTGCTGCTGGCTCCA (SEQ ID NO:
324)

375. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DUT. In some embodiments, the sequences from gene DUT comprise or consist of:
TCCTAGCCAAGGGGTTCCCACTGCGTTTCTGTTGGGTTATCCCAAACCTGTGATAGGATAGTAGC
GCCCTCCCTGCCTCCGGTCGAATAAACACTACAACGTCTGACACTCGGTGCTGAAAGGAAATCG
GGCGCGGTGTCTTGCCCACAGCTTGGGGAGCGGCCCCGGGCGCAATAACTGTCACCGGCGCC
GAGATGCGGTTCCGGCGCTTAGGGCGCCGCTAAACTCAGAGCCCGGGAGTCATGGCTGCGGG
CGGTGCCGCCCCAGGTAAATCAGTCCAGGAGCAGGGCCCGGGCCTGGCGTACACTCTCGGAAA
AATGGGGGCCAGAGCAAACAAGAAGAGCGAAAGCAAGAGGGCTAGGCAGCCAGAGGCGGCAG
CAAGACTCAAGACGCCAACGGCGCCGTCTTCCTGGGGCCCCAGGGCCTGCGCCATCCCTGGGC
TGCCGGGGCACCGCCTCTCCACGCCCCTCGTCCGGCGGCGGCTGCGACTGCTTCCGAG (SEQ
ID NO: 325)

376. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DUT. In some embodiments, the sequences from gene DUT comprise or consist of:

TGCCGAGGACCCAACCAGCCCAAACTCTGGGGGAAATGACTCCCCTCTGCCCTCGCCCCGCGC
TCTGCTACCATTTCCTTACGTCTCTGCTTCGCTCAGCGATGCAAAACGCGCGAGGCGCACGGCA
GAGGGCCGAAGCCGCGGTACTCTCCGGGCCAGGCCCGCCCCTCGGCCGCGCCGCGCAGCAC
GGGATTCCCCGGCCGCTGTCCAGCGCTGGCCGCCTGAGCCAAGGCTGCCGCGGAGCCAGTAC
AGTCGGGGCCGCTGGCTGGAAGGGCGAGCTTCCTAAGGCGGGGGGAAGCCCGGCGCCGGGG
CCGGGTAGGAAAGGCGGGGGAGGGGCTCCGGCCGTCTGGAAGGAATCCACGCGGCTTGAGGC
TGTGGGGGAAGTAGGGTGGCGAGCGGTCCTTCTGCGCGCGGGGGGCGGGGGGGGTGGGGTG
GTCCATTAGGGTCCCCTGGCGAGGGGGCGGCTTTCTAGTGTGTGAGGGCGACGCCCTAGAAGC
TC (SEQ ID NO: 326)

377. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPG21. In some embodiments, the sequences from gene SPG21 comprise or consist of:
GTGAGTCTCCAGCGGGAGGTGGGGGCGGCACAGGGCTTAACCGGGGCATCCTCCTGTAAACCC
ATCCTGGGGCTACACGACTGCAGCCCAGGAACATTTCTTTCTTTCTTTCTTTCTTTTTTTTTTTCTC
AGCAAACTTTTAAGAACTGTGAGCAGAGGCCAGTAATTTTGGAGACAGGACCTCGGCCTGAAAG
TGATAGATGTCTTTGTTGTTACTGAGTGTGGGCCAGGTGTAAGGTTTGTAAACGGGGGATGAGG
AACAGAGCGGGACCGGAGTGTCTCATTTTTCCTCTTCTCGTTTTCCTGGGGAGTTATAAGTTAGA
CATTTATGCTGCTTCCTTTGTCTCCACCTACACTGGTTCAGCTCCTTTTGGCACAAAGATTCAACA
AATTAAGGAGTAACTTTTTTTTTTTTTTTTTTTTGAGACGGAGTCTCGCTCCGTCGCCCAGGCTG
GAGTGCAGTGGCGCCATCCCAGCTCACTGCAAGCTCTGTCTGCT (SEQ ID NO: 327)

378. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SPG21. In some embodiments, the sequences from gene SPG21 comprise or consist of:
TCCCCCCGCGCCCGTCGCCGTGGCGACCGCCGGGGCCACGCAGCACCGCCCCTTCCTCGCGA
CGTGGCCCCGCCCTCTGAGAACCCGGAAGCGGGAGTCTCGCGCCAGCTGAGCGGCGGTCGGG
CGGGGGGAGCGCGGCGGCCCAAGCTCGCTCGGCCACGCGCCCCGCCCCCTCAGAGGCCGGC
CTCCCGCACGCACCGCGCAGCCTGCTGTGCCCGTGGGTCCCGAGTGCTCCGCCGCCCGCCCC
GACCCGGGCCCAGCCGCCTCCACGGCCCGCGCTCGTACTGGAGCGAAGAGCGGCCTCCTGAA
GGAGGGGAAGGGACGTGGGGGCGGCCACGGCAGGTGAGGGTGGGCGAAGCCCTGGGAAGCG
GCTGGGTGTGCGGTATGCGGGGTTGTAGGTGTGTGTGTGTGGCGCGTGGCTGCCTTGGTTGGT
GTGACTTTGTGAGTGTGTTCTGAGTGGGCCGGTCCATGTGACCACGCACGTGATCACGTGCCCT
TG (SEQ ID NO: 328)

379. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PKM. In some embodiments, the sequences from gene PKM comprise or consist of:
GTAAGGGCATCCCTTGGCTTCTTAATCTACGTACTCCAGACCCAGGGCTTGGACCTTTGCTGGTA
CGGGTTAAAGTGAGGCCGACAGTGAAGGTCCACGTGGAGAGAGACATTGGGAAGTTGTCAAAAA
GGCGTTTAGAATCAGGTTTGACTCATTAATTTCCTGAGACTCTGAAGGAGTTCAGCCTCTACACC
TCAGTTTCCCCTGGGAAAACTGGGAGTAACATTTTCCTCATGATGGTTGAAAGGATTCATGCTTA
CGTGGATGTGGCACACTCAGTAAGTGTCTAATCTCTGGCGAAATACCCAGAAGAAAAGCCTGTG
ACTGAATATATTATTTTTGAGCACAATTACTTAGTCCACAATTGAGCATAAGGGCCTTGATCCATT
GTCTTCCTACTGTCCCCAAACGCCTACAGCTAATCGTGAGGAATCAGGCTCTCTGAATAACCACG
TGTCTCCTGGAAACCAGTTCCCCAAGGGATCTGGTTTAATATTGA (SEQ ID NO: 329)

380. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PKM. In some embodiments, the sequences from gene PKM comprise or consist of:
CGGTGCCGTCCCCTGTGGCCGGGATTAGATGGGCGGCCTGCGAGGGCCTGGGAATGGCTCGG
GGCCCGAGAGCTCGACCGGCCCTTGCCGGGTGGCCGCCAGGGACCACGCTCCATCTCGCCGC
GGCCGGGCTGCACGTAGCGGCCGCGCCCAGGGCCCACCCCGCTTCACCGGGCGATGGCCTTG
GGCCTCGTAACGGGCGGGATAAACCTCTGCAGGCTTTGCTGGGGCCTCCTGGCCCTCGCCCGT
TCCGCGCCTCTCCGGCACGTTTCTTTCTTTTCCTTTCTTTTTTCTTTCTTTTTTTTTTTTTTAATTAT
CCGGCACATTTTTTAACAAATGCGTCCTGATTGTGGAACGCGGAGGCCGCGGGGTGGGGTGGG

GATCTGGTTACGGAGGGGGCAGGAAATCTGTCGCGTTCACTGAACGCAAACGGTGTGGGTCAA
GGGCTGTTTGGGGGTCAGAGTTAGAGACCAGGATGACTAGACGAGTCATAGCCCAC (SEQ ID NO: 330)

381. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NPTN. In some embodiments, the sequences from gene NPTN comprise or consist of:
GTGAGTCCAGCACCCTACAGTAGTAGTACTGTAGTCATTAGAGGTGGCCCAATGACCCTTCCCTT
CTGCATCCTTTCCCTCTTCCCCAGTATGATCACTCACCCCACCCCTTGTCTTCGTTTTTTTTTCAAT
CCCATGACCCTTCTGGTTGTAGTGTATGAAAACATCTGTGGCAACTTTTTTTCTTCTTTTCTTTGCC
GTTCTCTCTGCCTCCCTTATCCCCCAACCCTTCTCTGTGTCTTTCTTCTCAGGAACAAAGAACTTG
AGGAAATCCGTGACTGTCCAAAATCATCTGTGTTGGGAAGAGTTGGGGAGGGAGAACTGGGAAG
CTTAAATTAAAACTCATAAAACCAGGCAGTCCAAGGAGGGTAGTGTTGAAATGGTTTTCCCTCCC
CTTTGATTTTGTAGTAGGTTTCCTGCTATACTTTTGCTGATTTCTTCTCTGGTGCCTTTCTATTTTT
GTTTCTCTCCCCAGTCTAACTACTTTTTATTTCTTCTG (SEQ ID NO: 331)

382. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NPTN. In some embodiments, the sequences from gene NPTN comprise or consist of:
TTGTTGAGGCTTGCAAAAGACACTGCATTTCTAACAAAGCGTTTGCCCATCCAAAAGAGAGATCC
TGATTTGGCATATAAAACTACTGCCTCTTCTGGTTATCTTTCATCACTTGCCTGAGTTTAAAAAGGT
AATAAATGGTTTGTGTTCTAAGGAAAGAGGCTCTTCCCAAGACCTGAGGCTTTCTCATTCCTACCA
GCTGGGCCCATTGCTAAAATGCTTTCCAGTGGGCTTGCTTCTGCCTGGCCAGCACCTGGGCTGC
CCCAGCTTGTAATTAGCCTGCCTTTGCTTCATAAGCTTCCCAGGGTGTGGTTCTTCTTCTAAAAGC
TTGTATGAATTGCTGTACTGTCTCTTTATAGTTTAAAAATGAATCCTTTTTTGTTCTTTGCAACTCAT
TTGCTTTTTTCTTTTCTTTTCTTTAAATTACTATTAACACCTGTTGATTCTTTTTTTTTTTTCTGATTG
GCCTGTCACTGCATTCCTGCTCCCCCTCCCTCTA (SEQ ID NO: 332)

383. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene COMMD4. In some embodiments, the sequences from gene COMMD4 comprise or consist of:
TACCTGGGTGCTGGTTATGTGAGGTGTACAGTTGATGAAAACTTATTAAGCTTTATAATAGGTACA
ATTTTCTGTATGTGTAGTAGACGTCAATAGTTTTTAAAATGTCTTTTGCCACAGCCCGCAGCTGTG
AATAATGCTATTCGCTTAACAGTGGAAAACGTGTCAATGACCTGAAACACCCTGGCTCCCGGGAT
CCTACCCCCTTAAGTTAAACAAATGAAATAACTTCCACTGTCTTTCCTAATGTCTTAATTCGGTCCT
CAGTTAAACTGGCGGTTGGCGCCAGTTTTTTCCAGGGAAGGATTCTGGGAGACGGAGGAGGAG
ACGCCAGCATTTCGCCCCCTGCACCTCCAGCGGGCTGCGGTCCGCTCCCGGCCTCACTCGAGC
AGGCCCCGCCCTCCCAGAGGCAGTTAGTCCAAGTCACGTGATCGTCGACTCAGCTGACCCTGC
GGGACCGGAAAAAGAAATTCCCGGGCCCTGGCTTCTTGGCGCGATG (SEQ ID NO: 333)

384. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene COMMD4. In some embodiments, the sequences from gene COMMD4 comprise or consist of:
TAGGGAAAAGTCCACCACTCTCCCGCTCCCGAGACGGGGGCGGGGGTACGGGGCGGGTAAGA
CAGAGCAGGCCGGCCGGCTTAGAGTCCCGGTGCTTCCCTGGCGGAAGGAAGGGCCCCTGCCT
CCCGGGGCAGGAACTAGGGCTTGTCTGGAGCTGGGAGTCCTTTCAGGTCTTCCCCATCCCCAA
GAGGACCTCCCAAGGATACCCCCTTCCCCAGCCCTGCCGTGGGGCTTGTACAAGAAGGTGCTTA
GAATCAGGCTCACTCTTCCACACTGTTAGGAAGCCCCTCCGCTCTTTCCAGAGCCAGAAAGTAGT
AGTTTTGGGGTTGAGACTTATCCATCCATCCATCCAATCCATCCATCCGTACGTTCTAAGCGCCT
GGTCTATACCATGAAGTGTGCTAGGCACTGGGAGGACTTGAGCTGCCAAGGGAAGGGGAAATC
GGAGGCTTGAATTGGAGTCATAGCTAAGGCTCCAGGGGCAGAGACCTAACTGCGC (SEQ ID NO: 334)

385. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MORF4L1. In some embodiments, the sequences from gene MORF4L1 comprise or consist of:

CTCCGCCTTAACCTCCCACGAAATCAAATCCCCGCTTTACCAACCCGCAGCAGCCGGGGGCATG
GAGAGAGAAGCGGGGGTGGGGTGGGGTAGGGTAGCCGGCCCCTCCCCCACCCGGGGGGGGG
GGGGGGGCGCCTCCACCGACTCCGAACTACCAGTCCCGGCGTGCCCTGGGGCGGCGCGGGC
GCAGGGGCGCGTGCGCGGCGGGCTGTCGTTGGCTGGAGCAGCGGCTGCGCGGGTCGCGGTG
CTGTGAGGTCTGCGGGCGCTGGCAAATCCGGCCCAGGATGTAGAGCTGGCAGTGCCTGACGGC
GCGTCTGACGCGGAGTTGGGTGGGGTAGAGAGTAGGGGGCGGTAGTCGGGGGTGGTGGGAGA
AGGAGGAGGCGGCGAATCACTTATAAATGGCGCCGAAGCAGGACCCGAAGCCTAAATTCCAGG
AGGGTGAGTGTGCGCCTTTGGGAAAAAGGCACCTAACGGCGCAGGAGATAGAGGCGGGCTCGA
G (SEQ ID NO: 335)

386. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MORF4L1. In some embodiments, the sequences from gene MORF4L1 comprise or consist of:
TGCGTCATTGTGAGAAAGCGCTTTGTGAAGCGAGAGTGCTGCGCAGGCGTTAGAGTGGGAGAG
AGAGCGTTTGGCGCGTGGCACACCCTCGTCAAGTGTTTGTTATTGTTCTGAGGAAGAGGGCGCG
GAGAGAGCAGCCTATTGTAGGGAGGCGACGGGAGCGCCATGGCGGCGGTTAGGGGAAGTGAT
GTGGCGGCGGGGGGGGGAGGGGCGGTGGCTGTTTCGGGCGGTCCTGCGGCGCGCCCGGCCGC
TTGGGCAGCTACGACGGGTTTTTCGGTGCTTCCTGGAGCCCCGGGGTGGTTGCGTTCGGTGGC
AACTCAGCTGCGGATGGGGGTGGGTTTGGCGCCACGGGGCGGGAGAAGTGCGTTGTAAAATGG
CCGTTGCAAGATGGCGGCGCCATCATGGCCGCCGGCGTCTCGGTCCCGTATGGAGGCACAGCT
TACGGGCAGATGCAGCGCCCCCTTCCACGACGACCAGAAGGTTGCCGGGGCCCTCCGCAT
(SEQ ID NO: 336)

387. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AP3B2. In some embodiments, the sequences from gene AP3B2 comprise or consist of:
GCTGCTGGCTCACCTTTCCTTCTAGGGGTTTGTCAGGAACAACTCTTGTTGAATCCCCAAGGTAA
CCATCTCTGGGTCAGGATGCCTAGGAGTCTGCAGGCATCTCTGTGGAAGAGACATCTGGGCTGG
GGTGGCAAGGCAGAGCTGGAAGAGCACCTTGGTCCTTTTTATAGCCTCTGCAAAAACAAGTCCT
CTTCAATGGCTGGCAGACCCCCTTAGTTCTTCTTACGGTCCCTTGGGAAGGAAGGACTCATAACA
TGGGGACTTCCCCAAACACAGGTGCTCAGTTCAACATATGTCAACTACTCCAGTTAGGGGGCCT
GGAGGCCCCACCTGGCTGGGGTACTGACCCACTGGTCATCTTAGTGGAAGAATAGAAGATGCAT
AACTGTACTTCTCAAACCACTTTGTGGCAAGTCACCTGGGGATCCCATCACATGCAGATTCTATTA
GTAGGTCTAGGGTGGGGTCTGAAATTCTGCATTTTTTTTTTAAGTGA (SEQ ID NO: 337)

388. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AP3B2. In some embodiments, the sequences from gene AP3B2 comprise or consist of:
GATAAAGGCCTGGGTGGGAGGGGTAGAGAGGCTGACAAAGGCTTCCTGAGGGAGGGCCCAGT
CTGAGAGGGAAGTACCTTCTCCCCAAGACTGATGATTTAAATTCTGACCTGCCCTTTGCATGATA
CCTTCCCAGCCTGGGAGAACTTGTTGCTCAGTAAGCAGACCCAGGTGCTGGCCTCTGTACCCAC
CATGGCCTCTGCCCTCATCACGACCTCTACCCCCAGGAAAGCTGATGGGCATGAATGAGATCAC
AGAGAAACTCATGCTGCCAGACACCTGTCGGAGTGACCACATTGTGGTGCAGAAAGTGACTGCC
ACTGCCAACCTGGGTCGTGTTCCTTGTGGGACATCTGATGAGTACAGGTACTAGGCCACCAGTA
GAGGGGAAATGATGAGCATGGGGGCCCTGGTTTGAAGGAGGAGCCCCAGCTGCTGATCCCCTT
CCAAACACAGTCACCCTTAGCAGCTCTTCCTCACCCCTTCTATTCCCACCTCA (SEQ ID NO:
338)

389. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEC11A. In some embodiments, the sequences from gene SEC11A comprise or consist of:
GTGATTATTTAAACTCTCCAATCTCTTTGAGTCTTTGTTTTTCCTCAAATTATAAATGTACAGATTCA
TGTAGAAACATAAGAAAATATCAATAATCAAAAAGCAAAGTCACTTCTTGTCTCCTTTTTCTTGATC
TCCATAAATATTTACTATTAACTTTTTGGTTTATATTAGCCTTTGTGTGTAGAGATAAAAATATTAAT
GAGTACTTTTTTTTGCCTTTTTTTTTTTTTGGAGACAGTCTTGCTCTGTCACCCAGGCTAGAGTGTG
GGTGGCATGATCTCAGCTCACTGCAACCTCTGCCTCCTGGGCTTAAAAGATTCTTGTGCCTCAGC

CTCCCGAGTAGCTGGGATTACAGGTGTGTGTCACCACACCCAGCTAATTTTTTGTATTTTTAGTAG
AGATGGGGTCTCGATATGTTGCCCAGGCTGGTCTCAAACTCCCAGCTTCAAATGATCCACCTGTC
TTGGCCTCTCAAAGTGCTGAGATTACAGGCATGA (SEQ ID NO: 339)

390. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEC11A. In some embodiments, the sequences from gene SEC11A comprise or consist of:
CAGAACAACCCTAATATTCCCATTCTACAGATGAGGAAACATAAATGAGTTAGGTTATGTATCTAA
GATTATACTGATGGTCGTAAGTGGCTGGCTGCATAGTCCACCTTACCATCATACAAAAATTACTAG
CGTAACATTTCTGAAATGGATAGTTGCTAATTCTCACTAGTTAGATGCCACATGGCACTTTTGCCA
CTGTCAGAACCTCTGCTCCTTTTGACCTAGAACAGACTGTATGGATACAGAGTTATTACACCAGTA
AGCAGGTCTGAGATACGCAGTTCCCATAGAGAAGGAAGTATGAGTTGCTAAGTGAAAGCTTCCTC
AGTTACAGCACGAGAGATGCTCAGTTTGGGGCCAAAGAGATCAGATCAGAACAGGTATCATTGT
GCTTTGCCTGCTGCAGAGCTGTGGTTGTTATTGTTGTTTTAATATGTCCCCGCTTTAAGGAACTTT
TCCTTTGATGGAGCTAAAAATACTTTTATAATCCAAATTA (SEQ ID NO: 340)

391. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PRC1. In some embodiments, the sequences from gene PRC1 comprise or consist of:
GTTAGTACAAGAGTGAGGTCTTTGGTTTGTTTGTTTGGAGACAGGTCTTACTCTGTTGCCCAGCC
TAGTCTCAAGTTCCTAGGCTCAAACAATCCTCCCAACTTGGCCTCCCAAAGTGTTGGGCCACCAC
ACCCAGCCAAAAGTGGGGTCTTCATGTGGCCTGCTCACTAGTTTTTAAGACATCCAGACATTCAA
CAGGAAGTATATCCTTTTCTGAACAGATAAAGCCACCTTTTCAAGACATTTAGCATAATTGCCATT
CCTGTATGAAAAAGCATTTGCAAATTTTATTGGGAAATATTGGTCTCTTGCTTTCTGAAGCAATAT
GTCACTGTAGCCTCTAGCTGTGAAGCTTAAGTTTTTATCAGGTGCTTACTTTTTGCCAGGTGCAGT
GTCAAACCCTTAATATTATTTCACATCCTCATGTCAAGAGGTGAGGATACTAAAGCACATAAATGC
TGAGTCATTTAACCCAGAGACATATAATGGTAAATGCCAG (SEQ ID NO: 341)

392. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PRC1. In some embodiments, the sequences from gene PRC1 comprise or consist of:
AAAGCGGTAAGAAACCCAGTGGGTACTGGGTCAGCAGTCTTCTCTTAGCACTTCTGTGTTAGTCA
TAAAGACTGTTGTTGATTTGGCCAGGCTCAGTGGTTCATGCCTCTAATCCCAGCACTTTGGGAGG
CCGAGGCAGGTGAATCATTTGAGGTCAGGAGTTCGAGACCAGCCTGGACAACATGGCGAAACC
CTGTATATACTAGCCAGGTGGTAGTGGCGTGCGCCTGTAATCCCAGCTACTTGGGAGGCTGAGA
CAGGAGAATCGCTTGAGCCTGGGAGGTGGAGGGTTGCAGTGAGCCAGAATCGCGCCACTGCAC
TCCTGTCTGGGCGAGAGAGTGAGACCCTGTCTCAAAAAAAAAAAAAAAAAAAAAAAGTGTTGAT
TTATAATACCTTTGTGGCTTTGCATTATAATTTTACTTAAAAGGGGGGGATCTTTTGCAAACCTGA
GTGAATATAAAACTATGGCAGCCACCCTTAACAAGTTTCTTTCTTTCA (SEQ ID NO: 342)

393. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MT3. In some embodiments, the sequences from gene MT3 comprise or consist of:
TAGGCCTGGCTCGGCCTCAGGCTTATTCTGGGACCCAGGCACATTTCTGCTTCTCTGGCCTCAC
TTTTTCTTATCTGTATAATGGAGGGTTAGGAGTCAAGGATCTGAAGATGCCAGGCAGGACAGCGG
GGAAATGGAACACGCCCCTTGCCAGTGACACTCGGAGGGCGCAAGAGTCAGTGTCGGGCTCAT
CGTGAGCAGGTTCTTTCTGCCCCCAGTTCAGCAACCCGTCTGAACAGATCTGGCGTCCTGGAGA
ATTCTAGAATGAAGGGGAAGAGAGGCAGGGAAGAGCTGGGAAATACGCAAAGCGCCTTTTTCTC
CACTTTCGGAGATGGTACGTGCGCGCTTCCACGCAGTGGCGGCTGCTGCGGCGAGCACGTCCC
CTGCGGGACCCACGCGGGGAGTGGGCTGGCAGTGCGCGCACAGCGGCGGCGAGTGGGTCGT
GCACGCGGATGCGGGGTGGGAGTGGGGGCGCACGCGCGGGCGTGGGCGAGCGGGC (SEQ ID NO: 343)

394. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAPK8IP3. In some embodiments, the sequences from gene MAPK8IP3 comprise or consist of:

CTGTCAGGCACACCCCAGAAGTCAGGGGTCCTTGAAGCCCCTACGAAGCCCAGCCCGGGGTCC
CCTCCCCACGTGGGTGGACAGGCCGAGTCCTGCTCTCTGGCTGCACAGCAGGAGGCTCCGAGG
CCCCACCCAGAGGCTGTCCAGATGCAGCCCCCCAGCCTCCAGGCACAGCCCATCCCCACAGGG
GTGCCTTCTGCCCTCAGCCCCACCCAGCCCAGAATTTGGGGTGAGATGTTAGCTTCCTGCTCCA
CAGGTGACACTGGCCTGGCAGTCTTCATGTAACCCCAAGGATAAACTTTCCAGAAGGAATAGCT
GGCTCCATCCCATCTCCTGCCCTCCTAACTCCCTCCTGCACCCACCCTAACCCAGCAGACCCAG
CTCTGAATTCCTCCCAGCCTGCTGTCCACACGGGCTTAACGCGCTTCTCTTCTCTCCCTTTCTCC
CTCTCCTCCCGCCCTGGTTGCCCATCTCCTGTGGGACGGGGACGGCTCCCTAG (SEQ ID NO: 344)

395. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAPK8IP3. In some embodiments, the sequences from gene MAPK8IP3 comprise or consist of:
TAAGGCTGAGGCCCCGTTCCAGCGTGCGTCGCTCCTCCACCCCGACATGGTCTCCTGCTTCATG
AGCCGTTTGCTTTGTTCTGCATGATGGGGACAGTGTTGGGGCCGCCGGGGTCAGGGGGGCAGC
CCTGAGTGAAGCTCGCTCTGTCCAGGCTGCCTCTGGGCTGTGGGAGGTGGCGACTTCCCCAAG
GGACAGACTTGAAGGCCCGAGGAGGGCAGCCCCAGCCTCTCTGAACCCCACAAGCGCCGGGC
AGACCCTGCCTGTGGGGAGGAAGGCCCATGTTTGAGGCAAGGGAGGTCATAATAGAGACAGCA
GGCAGGACCCCTGAGCCCAGGCACAGAGGCGTGTGATGCTGTTTCATGACTGCATACACAGTG
GGGGAGTGTGTGGGAGGGCAGGACCTTGGAGTTTCTTTCCATCCTTTTGGGGTTTCTGGGGCAT
GCTTGCAGGGAGATCAGTCCAGGTCCACTTGGGGCCTCGTGGTAGAGGAGCCTTCAG (SEQ ID NO: 345)

396. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HMOX2. In some embodiments, the sequences from gene HMOX2 comprise or consist of:
CGGGGTTCCCGCCAGGAGCGACAAAGGACACCCCCATTGTCTATGCATCGAGTATGTGTCGAAG
GGGGCGGCTGGGCCCGGAGCGGCAAGACGCCTGTCCCGAGATATCGGGGTCCCGCGACCCAC
CTCGTGTCCCTTGGGCCCGATCCCCTCCTCCTTCCCGCCTCCCCCGGTTCCAGTCACCCGCCCC
CCGGCCCGGGTCCCACCGGCTGGAGTGACCTCCTCGCCGCGGCCTGGGCGGGACAAGTTCCA
GGAGCCCGGGACCCCGATTCTGCGGCCGAGTCCACTGCAGAGGCGGGGATGGAGCTGCGCGC
TAGGCGCCAACTCCCTCCCCGCAGCTCCGGCCCCACCTGGCAGAGCGCCGCTCACGGAAGCCC
AGCGTCGGAGGACCCCTGGCTGCAGCCGCCAATCCCGACGTGTCGGCCGAAACCCCTCCTCCG
GCGCAGTTGGCTCCTCCTGGATCCCGCGGGACTCGGCGTCGTTTCCGGGTTTGCCCGCC (SEQ ID NO: 346)

397. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HMOX2. In some embodiments, the sequences from gene HMOX2 comprise or consist of:
TATTGGGCGTCAGGCAAAGATAATTAAAGCTATGTCCATGAGTCTTATCCCTTGAGGCCTTGTCC
GCTTGATATTTTCTTTGCCTAACTCACTTTTAAAATTTTATTATTTTTATTTTTTTGAGACAGTGTCTT
GGTCCGTCGCCCAGGCTGGTGTGCAGTGGCGCGATCTCGGCTTACTGCAACCTCCGCCCCCCG
GGTTCAAGAGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAAGCATGTGCCACCAAG
CCCGGCTAATTTTTGTATTTTTTAGTAGAGACGGGGTTTCACCAGGTTGACCAGGCAGGTCTCGA
ACTCCTGACTTAAAGTGATCCACCCACCTCAGCCTCCCAAAGTGCTGGGAGTACAGGTGGGAGC
CACCGTGCCCAGCCCTAACTCACTTCTGAAGTTGCTGCTACTTGCACTGATTTCAGTTTTTTTTTG
TTTTTGTTTTTTGTTTTCAAGGTGGAGTCTTGCTCTGTGGCCC (SEQ ID NO: 347)

398. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDIP1. In some embodiments, the sequences from gene CDIP1 comprise or consist of:
GTAAAGCGGGGCCGGCGGTTGGGGCGCGGCATGGCGGGGCCCGTCCTCCCCTCAGGGCGCT
GCCGAGACCTAGCGCGGCCCTGGGGATGTCGAAGCCGCTGCGGTGGCGGGGCCCGGGCGGG
CGCCCCGCTGTGTGCCGCGGGGTTGTGCGCCCGGAATGGCAGCCTGCTCGCCCGCACGTTTTT
CCGTCAGGGAAGGTTGTGGAAATTGCCATCTCCGTCTTGCAGGGCGAGACGGGGAGGGGAGGG
GTGGGAGTTGTTTTCTCAAGGAAAGGGGGTCGAGGAGGAGCCCCGTGGCCGAGCCAGCCCCTG

CCGAGCCCCGCGGGTGACCTTGGCCGTCCCGGAGCCCAGCAGTGTCCTGCACCCGCGCCCGG
CTCGCCGACGTGTGGAGTCGGGATGTGGCGCTCGGCCGCGCATCCCCGGCGGAGATGGCGAC
GGCCTGGCCTAGCTTGGGGCTAGGAGTCGCGCCTTCGAGGACCTTGGCTTAGCGAGTTCCTTG
G (SEQ ID NO: 348)

399. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDIP1. In some embodiments, the sequences from gene CDIP1 comprise or consist of:
TTCCCTATTCTCCAGCCTCGTGTACATTGGGCAAACAGGCCCCGACCATCCCACGTGCTCAGCC
CCAGCTCTAGGCCAAATCGCCTCCGCTCCCACTGACGTCATCACGGCGCATCACGTGCCTCCCG
AGACCCCACCCCCCACCGTGACGTCCCGGGCCTCGGCCCTGGTCCAAAGTCTACCCGCCTCCT
TGTGACAGAAGTGCGACTGCCAGCTGCCGAGGCGTTCGGTCCTGCTGTTGCGGCCGCTGCCCC
AGGGCTGCGGGGACGGTGAGTCGACTGGACGCATTCGGAGACGGCTTCGCGCGGGAGCCCTC
CTCCCCGGGGGAAGGGTCTGGGCGCCAGCTCTCCTCAGGTCGGGGCGTGACCTCGGACCGTG
GCGCCCCCTCCCCGCCCCCGCCCGCGGCGCCTGGGCGGTGCATGCCGGGCACCGTAGTCCCC
AGCCTCTCAGAGCGGGTTGTGGTGGGGGGGGTGACCGGGCGGACTACAAGTCCTAGAAG
(SEQ ID NO: 349)

400. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEZ6L2. In some embodiments, the sequences from gene SEZ6L2 comprise or consist of:
GTAAGCACCTTGCCTGCCCCTGAAGAGCCACCACTTGGCTCTCCCAGGACTCCATAACCTTCTC
GCAAGGTCTCTGGAATCTCTGTCTTGGGAATTTCAAACTCAGCTGCCCCCAGAGGCCATGTCAAT
GAGCATAGCAAGCCATGTGTATACAATAGGGAGTGGTGAGGACTGTGGCTAAGTGGAGGACTTG
TGCCCCATCTCAAGAATACGGCTCTACCCCATAGTCGAAACTGAGGCACAATTGGCAGATCTTCC
AATTATTCAAGACAAGCCAGAAATTCAGATTTTTGTGTCATTTTACGACACCGTAGGATGAACCAA
ACACATTCACTGGCCCCCCAGCCCCTAGAGGTCAATGTTACTTTAAAACCCAGGATCGTTGCCCC
TCCTCCCATTCGGCTGCCTCTTCCACCCCTATCAGACTCCAACAACTGACCTGATCTCTCTGTCT
TCAGGATACGCGGGAGTATGAAGTTTCCATCTGAACCCCAAGACT (SEQ ID NO: 350)

401. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEZ6L2. In some embodiments, the sequences from gene SEZ6L2 comprise or consist of:
CTGGCTCAGACCCCATCCCCTCCCCCTCCTCTCCCTGCAGTTGCCTATGAGGAGCTCCTGGACA
ACCGAAAACTGGAAGGTCAGTGAGAGCACAGGTGGAGACCCAGGCTGGCCAGGTTGGGAGGG
CAAGGCAGAGGCTGGGGCAGGAGGCCAGGCCTTGGAGGGATGAAGCCCAGGGTTTGAGGCCC
AGGGCAGGAGGCTGGGAGAGCCCAGGACCGGGCCCAGCCACAGCTCACCGGCCTCTCCTCCT
CCTGTAGTGACCCAGACCACAGATCCATCACGGCAGCTGGAAGGGGGGGAACCTGGCCCTGGCC
ATCCTGCTGCCTCTAGGCTTGGTCATTGTCCTCGGCAGTGGCGTTTACATCTACTACACCAAGTA
AGTAGCCTGCTTGGGGACTGCCGGCCAGGGCAGACGTCTTGCGAGCCTGGCACTGGAGCCTGG
GTCAGGGGAGCTCAGGGGCTTACCTGTTGATAAGCTCCTCTGTCCTCTCCCTTTCCCA (SEQ ID NO: 351)

402. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ALDOA. In some embodiments, the sequences from gene ALDOA comprise or consist of:
GGAGGCTGAGGCAGGTGAATCACTTGAACACGGGAGGCGGAGGTTGCAGTGAGCCGAGATCGC
GCCACTGCACTGCAGCCTGGGCGACAGAGCGAGACTCCGTCTCAAAAATAAATAAATAAATAAAT
AAATAAATAAATAAATAAATATAAATAAAATATAAAAAGTAGCATTGATGTTTACAATATCCCTGAG
CGGCAGGCGTTTCTCCCTTTTGCAGATGCTCAGTGGCTTGGCCGGAGATACATCCAAGTGGTGG
GTGTAGCCTGGGGGTTCAATCCTCCTGTGGCGCCCCAGAACCCGGTGCCTCCTCCAACGTCCG
GCATCTGATGAGGATCCGACCCAGGCGGGCGGCGGCGGGATTCGCTCTTCCCCTTCGCTCCCC
GCGAGAAAGCCCCGAGGGCCGCGGCGGCGCAGAGCCGGTGACAGTTGAAGCTTAGGCGGGAA
GAGGGAGGCGCGAGGCGGGAAGAGGGAGTTTGGGCCTCGGCAGCCGCCGTAC (SEQ ID NO: 352)

403. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ALDOA. In some embodiments, the sequences from gene ALDOA comprise or consist of:
TGATGGGTGCTGACCGACTGGGGAAGCCCGGAGTGTGGGGACTGAGGAGGGGAGTGGCCTGG
GGCGCGCTGGAGCCTGCGAGGAAGGCGCCGCCTCGGATCCCCCGCCCCCCATTCCCCTTCCC
GAATTCCACCCTCCGGCCCAGCCATGGCCTCAGTTTCCCCAAACAGGAAAGGGAAGGAGGGTG
GGCACCCCGGTCTAACGGTGCCTCTCAGCCTCTGAGACCCAGAACCTTCCTTCTGCAGCTCCCG
GACTGACTGGCTCTGCCCTTCCCCATGGACGTAAGTCCGGGCCCCTTCCCCTCTCTGGGCCCCC
TCAGCGCCCTCTCCTAACCCCGAATGGGCCTGTCTTCCAGCACGGACTGGGGAGGGGGCTTCT
ACCCAACAGAGACTACAACCTGCCAGCTCAGGACGAGAGCTGTCAGGAAGAGTCCAGGAATGG
ACTTCCCACGGGAGGGCACATTTCTGGTATTCCTGGCAAGATAAGGAGTTGACTAAGT (SEQ ID NO: 353)

404. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GPT2. In some embodiments, the sequences from gene GPT2 comprise or consist of:
CGCTGGGCCCCGGGGAGGCTGGGGCCGCTGAGCAAGGGAAAAACCGCAGCAGCCCCAGCTGG
GGTCCTTCCCACGACGTCCACCCCCATGGCCAGCTCCTCAGTCAGCCAAGCCTGGCTAAAACGA
GAGAATGCCCCCTCCCGCCCGTTCACTTACTGGTGCCCAGCACCGGGCACTCAGTGAGGCCTT
GCAATACGGTTCACTTGTTGAATTGAATTCGTCAATTGTTGAGCGGGCCGTGCTGCCAGGCACC
GCACGTTGTGTGTCTGCCCTACTCTCGTGGAACCAAGGTCCAGTGGAGAGAGGAACATAAGCGA
ATGAAGAAAGAAGCAATAGAGTCTCAGTGATAAGTTCTTGGAAAAAAGTAAAACGGAAGAGGGTT
GGGATGGGGGCGGTGGGAGGGAAACCATTTTAGGTAGGAGGGGAGACGGGGTGGGGGGGGGC
TCTGCGGAAAGTTGGTTCTGTTCCCCAGTCTCTTTCTCCGTGTCTTTGGCCTTTAG (SEQ ID NO: 354)

405. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GPT2. In some embodiments, the sequences from gene GPT2 comprise or consist of:
TGGGGAACCAGAGAGTTGGGCCTGTCGGGCTTTGGTAAGGGGGCCCTGGGACTTTCTTCATCTT
GGTGGTCGGCCGGCTGGCTAGGATCTTGGCTTGAGTTTATAGCTTCATGTAAGGTGAGCCCACA
GCCAGGAAGGATTTCTGCCTCCCCACAACCAGGATGTCTGGGGTGGGTGATAGAGGGGTCCCT
AGGACCTAGGAGAGAGTTATAGCCTGGGTGGAATTCAGGAGGCAGAGCCAGGAGGGGTTATCT
TAAAAAGTAAATACTCCTAAGATTTGTAAGAAGCTAATAATCACCTAGCTGCTTGCTAGAGAGAGT
CTGACTGAGAATAGAAGTGGGAAGGAGGGTTCCTTGATCTTGCCCTCACCCGGGTCACTAGTGT
CCCATGAATGCATGGCAGTAAGCTTCAGGGGGATCATGACACTTGGTCCCATTCCAGTGGGGAC
TTGGGGGTTTTAATGAGCTCCTGGGCCTCCTGAGACCTTGTTGAGACACTC (SEQ ID NO: 355)

406. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GNAO1. In some embodiments, the sequences from gene GNAO1 comprise or consist of:
ACATAGCCCAGTTCTAGGGACTGCATTCCACCCTGTGTAAGAAGTATAGAAAATTACAGCTCAGC
CAAGAACATTGATTTTTTTCTCCCCCGAACAAAATAACCGAGTTTTCAGGATGAAAGCAGAGCTG
CTGGTTGAGTTGGAGGGTGGAGAGCAGAGCCAGGCCCACTCTGCCTTCCTGCTGGTTGAGTTG
GAGAGTGGAGAACAGAGCCGGGCCCACTCTCCCTTCCTGCCCCAGAAAACTCTGGGGCCCCAT
GGGCTGCAGCTTGGAGCTCCTGCTTTAGGACATCCATGTGGTAGAAGGCCCCACGGGCCCCAG
GAACCCCAACTGTGCATGCTCAGGTCGTGGCCCTCCCTGGAGCAGGCTGTGGGCTGAGCTGCG
GTCCTGCTGCACTGGCTGGGCTCTCATCACAGTCCCCGCTAGGGGAGAGCCCTTGGCTGGCAG
AGGTCTTCTGTCCCCACCAAAGCGTCAAAGCCCACCATCCACCTCTCCTCACAG (SEQ ID NO: 356)

407. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GNAO1. In some embodiments, the sequences from gene GNAO1 comprise or consist of:

TGAGTGTCCCAGCGGGCGCATGGCCTGGAGCCGGGCAGTGATGCGGGAGTGGAAGGGACTGG
TGATGGGGATTGGCAGAGCAAGGAGGATTCTCGGCTGAGGTCACGCCTGCCGGGAGATGTTCT
CCCATAGGTAGAGGGTGTCAGGAAGGAATGAGAAGGGGCCTCTCTTCCTGCACCCCAGGAGGA
GAAAGAGGCCAGAGGAGGCAGAGGACGCAAGAGACAACCAAACAGTGGAAATTCCCAGAGGGC
CGGGACCTTGTCACTGGCTTGTCCTGGAGAGTGCCTGGCACTGCAAAAAGACAGCTTTCAAGTG
TAGCAGCTTTGTTTTTTTATAGGGAGCCCCTGACCGCATAAATACAAACCAAAACAACAGCCATAT
AGGCAGAAAAGAAATGGTGCCATTTTGTTTTATTTTAGAAAAAATAATAAGCTTTCCATTCCCCATC
TTTAAAATTAAGAATAAGGAATATGTAAGTCTAATTAATATAATAAATGTA (SEQ ID NO: 357)

408. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MT3. In some embodiments, the sequences from gene MT3 comprise or consist of:
TGAGCCCCCGCCCCCGCTCGCATCCTGCGCACTGCGCGCCCTTGTACCTGCAAAGAAACCCAC
GCCCTGCGCCTTCGCTCAAGGACACTTGGGGGAAGGGCCCCTGATTCCCTATTCTTCACCTCGT
GAAGGGCGGGCATGCCTGTGTCGCGGAGAACAGGGAGACTTGGCACCCCATCTCCTCGTGACA
GGCGTGGGGACCCGAGTTCGTCCACATTAACCCTTCCTGTGGCGTCGCCCTCTCTAGGTGGCTC
CTGCACCTGCGCGGACTCCTGCAAGTGCGAGGGATGCAAATGCACCTCCTGCAAGAAGAGTGA
GTGCGGGGACCCTTCCCCTCTGCCGCCGCCCCCTCTGCTCTGCGGAGTCGGTGTCTCACCACG
CAGGATGTGGAGAGACAGCCAGGCCCCGATCCCGTGGTTTCTGACTCTTGCTGGAATAGAACCA
CCCGGGCAGACATTAAAATACAGATGCCCCTGCCCCACACCCAGGAATTGATGGC (SEQ ID NO: 358)

409. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MT1G. In some embodiments, the sequences from gene MT1G comprise or consist of:
GTAAGGGACGCCCGGGTTCTGTGCCTTGGGATGCCAAATTCCCAGACACCATAGAGAGTGTCCC
TGGGTTTGAGGAGGTCGTATTTTGCTATCAGAGGTAAAGGGGACTCCTTTATTGGTCCAGTGCTT
TCCTGTTGGCCAAGCTCCTGAGGGCATTTTCCTCCTCCCTGTTCCTCTATGTCAGAGTTGAGGGT
CCTGAGGCTCAAGGCTGTCCTGCTCCACGTCACCTGGTTGGTCACAGGGCTGCTGGCTGAGCC
CCAATTCTCTAACCTGACTCTGAGCTACCGGATTGGATAGGAGACATTGGATAGGAGGGGACATT
GCCTCTTCCAGGTTCAGGACAGAAAGTCGAAGTCTTCCTGGGCCATGTCTGCAGCCTGGGACTT
TCCTTTGGAGTAGAAATAGGAGGGTGCTTGGTTTTCCCAGCATGAATGGAGAGGACATGGGGCT
TCTCTTCCTCTGCTCTGAGTGGGAAAGGAGCTCTGAGGGCTGGCTCTGC (SEQ ID NO: 359)

410. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MT1G. In some embodiments, the sequences from gene MT1G comprise or consist of:
GGATACTGCCAGAGATGCGAAGTTCGCACCCTTGGCCTGCCCTTTGCACACTACTCCCTTGCTAT
GCTCCCCGCTTTGGCAGATCCAGAAAGTGGAGCACAAGACTGGGGTTGCCCTCGACTCCAGGA
AAGGCTTAGCTATTGACTAGAGACCTGGGCGTTGGTGAAGGTGAGGGGAAAGCCAGAATACTGG
GGTAGGCGGAACGCCAAGGGGCGGGTGTAGCAGGCAACCTCAGGGAAGCTGGGAAGGCCTGG
CAGGGTGAGAGAAGCCGCACACGGGGGGCACAGCGCCTCCCTCGCGAGCCGGTGCGAAAGGG
GCCGTCCTGCGGTGTGCGCCCAGCTGCGCTCAAGGGACCTTGCACTTGGCCCATCTCCTGCGC
ACAGCCCAGGCCGGGACCGCGGGCGGTGCGGACTCAGCGGGCTGGGTGCAAGGGCGGGGCG
GGGCGTCTGCGCCCGGCCCCGTCTCCTGACTATAAAAACAGCCGCTGGCTGTTGGGCTC (SEQ ID NO: 360)

411. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NUP93. In some embodiments, the sequences from gene NUP93 comprise or consist of:
TAATCTGAATAGTTATTAAACAGTATCAAAATCTTTTAACTACTAAGAGGCCAAACATTTAAGATGG
CGAATTTACTGTTCTGCTTGAAGGACAGTACAATTGACAAGGGCACAATGATCCGAGATGCTTCT
GTATGTTGTATCTACACATACTGTAGACTAAAATGGCAGAATCTGTCTGCTGCTGTATAAAATCTT
TTAACTACCATTTATTTTAGCATCATGGCATGTGCAAATTCCTGCTGCTCAGTTAAGGGACCAGCT
TCACAACTGGTGTTACAATCTGTGGCCACAGCACTGCATCACAATGCAGCAAATGCATTTTCCAC
ATTAACCAAACATGACAGCTGAAGCGATTATTAACCATGCAAGATGTCGGAAGTCATCAAAGATT

CACATCAGAGTAATTGCAGTGGTTTGGGTTGGGGAAAAAAAGTATCATAGCATTCCTTGCCTACA
TGTTGTCTCTCCCCCTCTTAAATCTTAACTTGGTACAGTC (SEQ ID NO: 361)

412. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NUP93. In some embodiments, the sequences from gene NUP93 comprise or consist of:
TAGGATTGGCCGTGTTTTGTAAAGAAATTAAGACAAATGCACCCTGGTAAATAGAGTGGCAGCAT
GTTGTTGCAGTGCCTCTGAAAGACAAGGTCTTGGTTTGTTTGAAAATTTGAGATAAATTTGGAAGC
AGTTAACTCATTTGATAGAAGAAGTACTTGATTCTTCTGAGAATTGTTCAGATTTGTATCTTGCCAT
TCTAATATTTTTTCTTTTAAAAATGTATTGGGTGGGGCAGAATTTGCTTAAATATTTAAATAGTTGG
TTATTGGGATTTTTGTGAACTTCTTCTTTAAGTAGCAAGTAGTGTGGTCTTTAGGATTTTTAAAGGA
GATACATGTGAAGTGCAAAATTCTTGTATGAGGTGGAATATGAAAATAGAATTTATTTTATTTACTA
AAACCAGATCCTTCTTTGGGATTGCAGGTGAGAGTGAGTGAGTGCGTGTGTGTTTGTTTGTGT
CTGTGGTGTGTCTGTGTGTAGGATTCTTTAGGAAT (SEQ ID NO: 362)

413. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CNOT1. In some embodiments, the sequences from gene CNOT1 comprise or consist of:
GTTGGTTTTGAGCTCCTCACCTCAAGTAATCTGCCTGCTTCGGCCTCCCAAAGTGCTGGGATTAC
AGGTGTGAGCCACCACGCCCTGCCATAGTCTCCATATTTCACAGTTTTGTGTCTGTGCACTTGTG
CAGTTGTTCCTTGGTCCCTTGCTATTCTTGGAGGATTGGTTCTAGGACCCACTGGGACACCAAAT
TTTAAGTATGCTTAAGTCCTGTATGTAAAGTGGCATATAACCTTTGCATATCCCCTTAAATGACATC
TGTAGTGCTTATGATACCTAATGTAGTGTAATGCTATTATGGAAATAACTATTTTAAACTATATTAA
TAACTTTTTAAAATTTGTGTTTTTTATTGTTGTATTATTATTTATTTGTATTTATTTATTTATTTTTGAG
ACAGAGTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGCGCAATCTCAGCTCACTGCAACTTC
CGCCTCCTGGGGTCCAGTGATTCTCCTGCCTCAGCC (SEQ ID NO: 363)

414. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CNOT1. In some embodiments, the sequences from gene CNOT1 comprise or consist of:
AGTTCCTTTGTGATTACCATTATGGGTTCTGTGATGTGATCCCACCTAATTGTATCCAGTTAAGAA
ATTTGATCCTGAGTGCCTTTCCAAGAAACATGAGGCTCCCCGACCCATTCACTCCTAATCTAAAG
GTAAGGTTCCAACTAGTTAAAGGAAAACTTATGTCTTAATATTTCAGTCCTTTCTCTGATAAGTAGA
CTGTTCAGCACTTTCCTACCCAACATAACACGCACACTATTAGTTAAGGGTACTCTTTAAAGGAAA
TAATGTTATTAAGCCTGATAGAAGGTATGATATTGTTGCTATTGCTGTTGCTGGTGAATATTGGTT
CACAGCATTTTTCTAGTTGCTAGTTTTCATATTAATTTTGATATTAAATTTAGCTCTATTTACAGAAC
CACAGCTTAGGTGTTGGGGCAGTCATTTGCTGGGTGTGCCCCACATGGCAAAGAATTGCAGAAC
AAACAGACCTTTGTAATCTTTTTCTTTTTTTGAGGCA (SEQ ID NO: 364)

415. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CHTF8. In some embodiments, the sequences from gene CHTF8 comprise or consist of:
GTACGTGCGGGAAGGGGCTCTTCCCGGGGTTGGGAGGGAGCCCAGCCCGCTATGCTTGCGGG
AGCGGAGTAGAACTGGAACCTAGGAAGTAGCGGGAAGAGCAGAAAGGGGAGTTCGGGGTGGG
GGTTAGGACCGTGAGGTTTTGTTCCAGGTAACATTTGTAATCGTGGAGGGGGGAGGCTTCTGGG
AGAGGTAATTGGAAGGGTGGTTGGAGAGTCATTCCAGGTTCTTTTGTGGGAGGGAAGCCGAGAG
ACGAGTGGGGTGGGGTCCTGGAGGAGTGGAGTACTTGAGAACCGGGAACAATTTGGAGAACGA
GGGTGGTAGAGAAAGGACGTTTAAAGAGTAATCTTTGGGAAGAGGGTGAACGGTTTGGAAGACC
ACTCCAGTGGGTGGTGTGGAGGAAGGCGGTTTAAAGAATAGTTTCCCTGGGAGGCAGGAAAAG
GGGTTAAAACAGCTTGTAATTTGGAGGGGGGTGGAGAAGAGGGGGGAAGCGGATTGA (SEQ ID NO: 365)

416. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CHTF8. In some embodiments, the sequences from gene CHTF8 comprise or consist of:
CCCGGTGCTCGCCTCTCTCCGCCCCGGCCCCACGTGCGCGCGCGCTCTCAGGCTCTGCCCCG

GAAGTGCTCCTGGCGCATAGTCGGAAGTGCGCAGGCAGTGCTCGCGGCGGCGGCGACGGCGG
CGGGAGGTTCGGTTGTCGCCCGTTGGCCGCGCGGCGCCGCGCTCGGCGGCCGCCATTGCAGG
TCAGGCCGCGGGCGGGGGGCACGGGAGGCTGCGGGGAGCGAGGGCCGAGCCGGGATTGGG
GGCGAGGGCGCGAGGGAGCGGGAAGCTAGGGAGCCGGGGCCGGGCGGGGCGCGCGGCTCG
GAGAGAAGAATGGCGAGCCGAGGGGCGGGGAGCGCGGGCGGGGGAGGGGTGGCCGGGAAG
GGGGAGGGCGGCGGGAGGGCGGCGCGGAGGTGGGGGCAAGCCCGGAGGGGCCTCCGGGGT
GGGAGGGCCAGGAGTGTGGGGGAAGGGAGCGGTGTGGAGACGGAAGGCGGAGGGAAGGAAG
GGAGCGAGCGGG (SEQ ID NO: 366)

417. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CALB2. In some embodiments, the sequences from gene CALB2 comprise or consist of:
GACCACTGGATTTAGGGCCCACCCCAATCCAGTATGACTCATCTTAACTAATGACATCTGCAATG
ACCCTGTTTCCAAATAAGGTCCCATTCTGGGGGAGCACTCCAACCCGCTACACCTTCTGAACTCC
AGGGACCCCAGTTCTGCCTCTGACCAGGTCCCGCCACTTGCTGATGACCTGTCACACCTCTGCC
ACCTCGTGCTTGCCCAGACATTAAGGACAGATTCGGAAGCTGCCAACTTCTGCTCTCCTCTGTCC
TCTCGGACCCTGTGCTAGTTCCTCCCAGTATTTTCTAGCTGCTGAATGTATGTTGTTCATCTTGGA
TCTCTAGGTGCAAATGCCCTGAGGGCTGGACCCACACCCCTAGCTCCACTGGCCTAGACACCTG
CCTGTTGGCCAGCTGGGAGAAGACATTCTCCACGAAGCCCCCGACATGCCCACCCCGTGCCCC
CCTTACTATTTAGTGCTGAGATTGATTTTTTCTCTCTCTTTTTACAG (SEQ ID NO: 367)

418. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CALB2. In some embodiments, the sequences from gene CALB2 comprise or consist of:
TAAGCCCAGCCCTGTCTCCGATTGTGTGGGATTTTCCTGACCTATGCCTTTGAGCATGCTGTGTC
CCAGTTATGTATGCCATAAGCAGGCCTCATATCGCTGGTCTTGACACAGCATTTTATTTGTAAGGA
TAAAAAATAGACTGTCCCCTAAGAGTACCCTATCTCAATATCCTTGGGTGTCTGGGATTGAGGGG
TATTCATGAGTGGACACCAGGGGTTGATGAATCCTCCTGCAAAGCTGCAAAGCTTTGTCTGCGTA
TGCGTATATTAATATATATGTAGTATTTTTTTGTCCCTAGGGACAGAGTCCATAGCTTCCCTCAGG
TGCTTAGGGGTCATGATTCCAGATTGGATGCCCAGGAGGTTTCAAGTGCCCTGATTCTAGACCA
GAGTTTCTCAGCCTCAGCGCTGTTGGCATTTGAGGCTGAATAATTTGTTGCAGGGGCTGCCCTGT
GCGCTGTAGGAGACTAGCAGCATCCCGGGATCTACCCATGAGA (SEQ ID NO: 368)

419. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene IST1. In some embodiments, the sequences from gene IST1 comprise or consist of:
GGTATGTGCCTACACGCCTGGCTAATTTTTTCTTTTTTTTGTATTTTTTTTAGTAGAGACGAGATTT
CACAATGTTGGTCAGGCTGGTCTTGAACTCCTGACCTCAGGTGATCCACCTGCCTCAGTCTCCC
CAAGTGCTGGGATTACAGGCATGTGCCACCGCGCCTGGCATGGAACCTGGTTTTATCTTGAAAT
GTTGCAAACGTTTATAAAGATACAGTATTTCTAAATTCACATCAACATCTTATGATAAGGGCTAGCT
CCTACTTGTCATATGACTGCCCCGGTACAAGCATTAGATGCAGCCTCCACAGCAGGGAGCAGAT
GACTTCCTTCTGGAGGCCCCTTTTTCTTTTTTCCCTTTTTTTTTTTTGAGACGTTTCGCTCTTGTTGC
CCAGGCTGGAGGGCAATCGCCGGATCTCGGCTCACTGTAACTCGAGAATCAAGCGATTCTCCTG
CCTCAGCCTCCGGAGTAGCTGGGATTACAGGCTTGCGCCACC (SEQ ID NO: 369)

420. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene IST1. In some embodiments, the sequences from gene IST1 comprise or consist of:
TGATACACCTGCCTCGGCCTCCCAAAATGTTGAGATTACAGGCGTGAGCCACCGCACCCGGCCC
TTTTTCTTTTTTTCTGTAGCCTAGGCTGGAGTGCTGTGACGTGATCACGGTTTACTGCAGCAGCG
ACCTTCTGGGCTCAAGCGATCTTCCTGCCTCAGCCTCCCGAGTAGCTGAGACCACAAGTGCTCA
CTGCTGCTCCCCTAATTTTTAACTTTTTTTTTTTTTTTTTGTAGCGATGCGGTTTCACTATGGTGT
CCAGGCTGGTCTGCAACTCCCGGGCTCAAGCGATCCTCCCGCCCCGCCTCTCAAAGTGCTGGG
AAGGTCCCTTCCAGGCTTAAGCAGCGATAATGGTTTTCAAGTTAAAAACAAAGGTAACCAAGGAA
AAAGTTTTCTCTGAATACCGAGATAAATTAGGGAAATCGCCAGAGACTGTGGTGCTGAGGAAACA
CTACTGAATTATACCACACAGACCGGAGCGATGCTGGTCCAAAGGG (SEQ ID NO: 370)

421. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GLG1. In some embodiments, the sequences from gene GLG1 comprise or consist of:
GTATGTATTAGATTATTTGCCCATCAGATATTACTGATTCAGAAAGAGAAACTGCTCCTCCTCCAC
CCTGGCTCTTTCTAAAGCAGAAGTATTAATATATTTAATTTTCTACAGGATATTCAAATAGAAGCCT
TGCTGATGAGAGCCTGTGAGCCCATAATTCAGAACTTCTGCCACGTAAGTGATGTCTGGAGGAG
CAAGGGTTAAAAACAGAAACAAATTGACAGGGACTCTCCCCTGAGTATCTCAGACTCACCTCTGT
CTGCAGCATGTATTACTCTTGAGTGTTAGCCAGCTTTGACAAGTTAAAATTAAAAATGTAAACAGG
CCGGGTGTGGTGACCAATACCTGTAATCCCAGCACTTTGAAGCCAAGGAGGAGCACTTGAGCCC
AGGATTTCAAGACCAGCCTGGGCAACATGGCAAAACTCTGTCTCTACAAAAAATAGAAAAAATTA
GCTGGGCGTGGTGGTACACACCTGTAGTTCCAGTTACCTAGG (SEQ ID NO: 371)

422. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GLG1. In some embodiments, the sequences from gene GLG1 comprise or consist of:
ATTTTGTGGGGCCAGAAATCAGAGAAGTGGGGAACTACCATTTTGTCTTAAACCTTTTAGTACTCT
ATTTGAATTGTCATAATGTAAAATTACGTTTCTCAACCAGTTCTTTTTTGCTTTCTAGTTTTCAGAAG
TTCATTGCCTTCTCTCATTTCGTCGTCATCTCTCACATTATCATTGTCATCATGGACTTATGAGAGC
AGTCTGGGTGTATAGCTCTTTAAAGGAAGGTGTTTTTTCAGGAGCTAGTGTTGCACGGGTTTCTC
TCTTTAAAGGCATTATTAGTATGTGTTCCCCAGTAACAGTGGTTTGGCATCTGCTTTGAGGGCAGT
GCTCTGGCTTATGAGCTTATAAACTGAAGATGGATATCAGTTACCCCTGTTTTCATTTTGAACTAC
TTAGCATTTTGGGAAAATCTGCAAAGGCTTTGCATACTCTAATGTTATTGCTACATGTGTTTTTACC
TCACTTTTCTTAATTCTGCCTTCTCATTTGTTCA (SEQ ID NO: 372)

423. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BCAR1. In some embodiments, the sequences from gene BCAR1 comprise or consist of:
GTAAGAGCACCTGGGGAGGGGAGGGCTGGCCCTGGACCCACTTCCCCCACTAGGCCTCATCCT
TTCAGGTCGCTGGGGATCTTACCTGCTGCAGGCAGCTCCCCCGGGGCAGGCGCGGCAGGGAG
GGGGCCTTGGTCCCAGCTGCTGCGCCCCCCAGCACACACCCAACCTGCCCCTCTGGCCCTGTC
CTCCAGAGTCTCCCCATGCTGTGCTGTGGGGCAGGGGGTGCTAGGCTCTATCTGGTCCTGGGC
CGGATGCAGTCCCCTGCTGGGCCAACCCTTCTGAGGAGGCTACAGCTAGGTGGTGTGGGCAGC
AGACTCCCAGGCCTCCGACGTGGCCTCTTGTCCTGTGGGGCTAGGCGCCCCAGTAACGGGGGG
TTCCTTGCCTGTGGGTAGTGCCCTCCAGAGCCAGGGCCTCAGCCCCTCACCCCACCGGTGTCAT
CAGCTCATACCCATGCTCCTCTGTGGAGCCTTCTGGGTCAGCAGGCTGTAGAGACGTT (SEQ ID NO: 373)

424. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene BCAR1. In some embodiments, the sequences from gene BCAR1 comprise or consist of:
CATTTTGCAGAAGGGGGAGACCAGCCACTGAGCTCCAGGGCGGGGGCCCACTTTGTCCCCTTC
CTCCGACCTGACACCTGCCTCTGGGGCCCTTACCGGGAGGCTGGGATGTATTCCTGAGTTCGCT
TGTCCCCCCGCTTGATGCCTGATAGTAGGGGAGGAGAGGGGCGGCACCCTGGCCCTGGGGCT
GCCTGGGTTCTGTGCGTGCACCTGGCAGTGGGCCTGTGCTGTGTTTTCTCTGCATTGTATGAGG
CATGTGTGTCAGAGACCGTGTGGGTCTTATGTCAGTGACTGTGCCTCTGTTCTCTCCTCCTGGGC
TCTGGCTGTGTTCCCCTAACCCCCGGGGGACCTCCACGGCCTGCTAGTGGGGTCTCAGGTGTG
CAGCAGGGTGGCCTGTGATTAGCAGTGGGGCTGAGTCATTCCCCTAAAGAGCTTTTCCCCCTGG
TGGCTGCGTTGCTCTGTTTTTCTAACAGAAACATTTGGTCACTGTGGCTGCCTA (SEQ ID NO: 374)

425. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ABR. In some embodiments, the sequences from gene ABR comprise or consist of:
GTAGGTACACCGGCTTTTCTTTCTGGGTTTGGGGAGGGGTGACGGGAAGGCCTGGGCATCGTG
GGCCAGGCCCTGCTTGGGTTGGTCTCGAGAGATTGGGACTGGAGACGTTTGGACCTGGCCGTT

CTTGGTGCCTCGTCATCTCGTCCTGGCCCTGGACCCCTCTCAGGCTCGGGCTTCCCTCCCCACC
TGCTTTGCCAACGCTGCCGCCCCTGTCTCTCCCCGTCTACTAGCCGTCTGCTCCCCAGGCCTCC
CAGACCCCTCCGTGCCTCTTTCAGCTTTCCCCTGTTAGCCTGTCTCCTCCAGAGGACCCAGGAG
AGGACCAGGCTCTCCTCCCCTCTGCACCCAGGCCAGGCAGTGGCTGCATGCGTGGCCCGTGGG
CTCCAGGTGTTCAGATGCTGCTCCCGCAAAGCCAGCCTGGGCCTGGTGCTCCCTGTGGGTGCA
ATGAGCTGCCCGCTCCAGCCCTCCTCTGTTCACTCTGGAAGGGAACAAACTCTGA (SEQ ID NO: 375)

426. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ABR. In some embodiments, the sequences from gene ABR comprise or consist of:
CTCCAGAACCTGCCCTGGACCCCTGGAGGGAGTGGGCTCAGTACAAATGGTACCCAAGGAGGA
GGGCCACAGGAAGTGACATCGACCGGCCCCCCCCACCTCCTTATTCCCTATAAAAAGCAAAATG
GTGACTCAGAGAGGAGAGTTGGAAGCGTCCTGCCTCTTGCTCCCACTGTTAATTTTTACACTTGG
AATTAGGCAGAAGGCAAAGAAAACAGCAGCTTGAAATACGCGGCTGACATGCTCTTCATCGGGT
AGCAACAGCAGAGCCGCTCCTCCCCGCCTCCCAGCAGCCCCGGAGCGGGCAGGGCCCGGTGC
CTGCTGGCTCTCCCCCGCCCCTCACCAGGCCCAGGCCCCCGCACAGCCCCCGCCCGGGCCAG
GCGTGGATGGTGCGGCCGGGGCCATGGCTGCCGGGGGCCGCCGCCGGCGCCCACTACGCTA
CCAGTCCCTGGCAGCTCTGGTGGAGGATTCTCAGTGGCCTTTCTTGTTCCTTGTCTCA (SEQ ID NO: 376)

427. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBB. In some embodiments, the sequences from gene UBB comprise or consist of:
CATTGCACTCCAGCCTGGGAAACAAGAGCGAAACTCCGTCTCAAGAAAAAAAAGGAAAGACCCC
CCCTCCTTCTCCCGCCGGAAATACCCTCTTTCAGGACGGCGCGCCTGTGCGGCGCACGCGCGC
TCAGTTACTTAGCAACCTCGGCGCTAAGCCACCCCAGGTGGAGCCCAGCAACAACAGAGCCACC
GCGTCCCCCACCAATCAGCGCCGACCTCGCCTTCGCAGGCCTAACCAATCAGTGCCGGCGCTG
CAAGGAAGTTTCCAGAGCTTTCGAGGAAGGTTTCTTCAACTCAAATTCATCCGCCTGATAATTTTC
TTATATTTTCCTAAAGAAGGAAGAGAAGCGCATAGAGGAGAAGGGAAATAATTTTTTAGGAGCCT
TTCTTACGGCTATGAGGAATTTGGGGCTCAGTTGAAAAGCCTAAACTGCCTCTCGGGAGGTTGG
GCGCGGCGAACTACTTTCAGCGGCGCACGGAGACGGCGTCTACGTGAGGG (SEQ ID NO: 377)

428. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBB. In some embodiments, the sequences from gene UBB comprise or consist of:
GGCGGTTGGCTTTGTTGGGTGAGCTTGTTTGTGTCCCTGTGGGTGGACGTGGTTGGTGATTGGC
AGGATCCTGGTATCCGCTAACAGGTACTGGCCCGCAGCCGTAACGACCTTGGGGGGGTGTGAG
AGGGGGGAATGGGTGAGGTCAAGGTGGAGGCTTCTTGGGGTTGGGTGGGCCGCTGAGGGGAG
GGCGTGGGGGAGGGGAGGGCGAGGTGACGCGGCGCTGGGCCTTTCCGGGACAGTGGGCCTT
GTTGACCTGAGGGGGGCGAGGGCGGTTGGCGCGCGCGCGCGTTGACGGAAACTAACGGACGC
CTAACCGATCGGCGATTCTGTCGAGTTTACTTCGCGGGGAAGGCGGAAAAGAGGTAGTTTGTGT
GGTTTCTGGAAGCCTTTACTTTGGAATCCCAGTGTGAGAAAGGTGCCCCTTCTTGTGTTTCAATG
GGATTTTTATTTCGCGAGTCTTGTGGGTTTGGTTTTGTTTTCAGTTTGCCTAACACCG (SEQ ID NO: 378)

429. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene LRRC75A-AS1. In some embodiments, the sequences from gene LRRC75A-AS1 comprise or consist of:
CTGGCGTAGCGATACAGAACGTCGTCTAGCGAGGTCGACTCCATGCCCAGGTCCTGCAAGAGC
AAAGGATGCCCAGAGGTCAGGGCTGGCTGCCCACCCAGCTCGCCCACCATCCCCAAGAGAAGT
AGGCACAGACCCCTAGAGGCGACTCTGCCTCCCAGAGCCCCGGTGGGGAGCATCTGCAGAACT
TCCCTCAGGGGCTGGGGCAGGCCTCTCCTGTTTGTCTTTGCCTCCAAGTTGAGGAAGAGCAGGG

ACTGGCCTCTGCAGGCTCTGCAGTTTGTGCAGGTCCTGGCTTGTGGCCCTCTCCTAGGACAGCC
CCTGACCTTTGTCTCTCTGGTTTTCCAGAGGAGGAAGCCAAGGGTGGCCTGCCTCGGTGCAAGC
AGCTGCTTCTCTATGGTGGCAAAATTTGGAATTAACTGCCTTGTGACAGGATGGTTTAATGATATT
TATTTGTGTTTTCTTCCTGCTTCTGACGTTGTTTTTACTGCTCCTTCTGTAG (SEQ ID NO: 379)

430. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene LRRC75A-AS1. In some embodiments, the sequences from gene LRRC75A-AS1 comprise or consist of:
TACTGAGTGGAATCTTCCCGATGGGAGGGGAGCAGCTTGGAGGCGAGTGCTACTAAGTGTGGT
GGGGCCGCGGCAGAAACCGCTGGAGCAGAGCTTCCCTGGGTCTGAGGAAGGAATTGGGTTTGG
GGGCTCAGGACACACCACCCCAGAATATGGTACCCTGGCATCTGAGGAGGCAGCTGACACAGG
AAGGTCTCTCTGACTGCTGTTCTCCCCCAAAGCAGGCCCTGAAGAATCCTGTGACCTTCATCTAA
AGTAGGTCATGAGACCCCTGAGCTTAAAACGGAGTGATCGGCTTTGGAGAAGTAAGGAGACATG
ACGTGCCTGCCCTGGGGTGGGGACTAAACTTCGTGCCACTCCACGTGAAAGGGGGAGGTACGC
CTGCTCCCTTTCCTCAAGCCCCCCCCTCCCAATTTCTGCCATCCTTGGGTATGAGCTACACGACA
GTCCCTGACCCTAGCTTGGTGCCCTGCACAGACCAGGCAATGCTGACATTCCC (SEQ ID NO: 380)

431. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ALDOC. In some embodiments, the sequences from gene ALDOC comprise or consist of:
GTAAGGCCAGGCAAGGCGGGAGCCACTCAACATCTCCGCTTCATTTCCTTGGCTCTTCCCCTGC
CATCCTCGTCCTGCTACCTGGGACTCCGGGATGTGCCCTTTCGACCCTTTCCTAACATCTTTGCT
CCTTTCCGCGTACTTGAAACCCCATGGCTCAACCTCTTCTGTTCTATCCCTCTTCAGCTCTCCCA
GCTGGACCTCAGCTTTTCCAATCCCAAATCCTCCTCTACTTGTTGGATTTTTCCTTGGAGTCTGTC
TCTCCTACCCAGAGCATTTCCTTCTCAGCCTGCTCCCTCTCCTCCTAGGCTAGGTCCTCTCTCCA
GTTCTCCCGCCTTCTCTGCCCCCCGGTCTAGGTCTCTCCCGCTGACTGGTTAGCCTGCATCACC
ACTAGCTCCCCTCAGTCTCATCTCTCTCTCAGGCTCTCTACTCCTTTCAGCCTTGGTCCTCTGCC
CTCCCGTCTGGGTGTCTGAGTTGTGGGGAATTGAAGTGCTTCCTA (SEQ ID NO: 381)

432. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ALDOC. In some embodiments, the sequences from gene ALDOC comprise or consist of:
CCTGCCCTTCCTCCCTTCCTCTGCTTTCACCAAAACTCTGGGCACTGGACTGCTTGTTCCCTGGC
TCACCGCCTGGAGGAAACAGAAAGGCTTCATTCTCTTACTTTCCCCAGCCCCCTCGGGGGTATA
CCCTGGCAAATATGGGGGTGAGGACAGAGAAGCTCAGTTCATTACTTCCTGCCCTGAACTTGGG
CACCTTGAAGATGCTTCTGCCCCACCTACTCAACCTGTTGTTACTGTTCTGGTGCCTCCTCTTCA
CCAGACTAAGCTTAATCCCCAGCATCCAGCAAGTGCCCGGCACGTGGTAAAGGGATTGTGGCAG
AAATGAACGCAAGGTCATGGCCAGGCTCCCCGAGGTGGGAGGGCAGTCCCTAACAGCCACGGA
TGCCTGGCGGGGCGCTCACTCCACCTCGCCGCCCCGCCTCTGAGGGCGTGGTCTTGCCCCGG
ACACCAGTCCTGGGGAGGGGGTGTGGTCAGGGCGGGGCATGCAGGCCACGCC (SEQ ID NO: 382)

433. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GIT1. In some embodiments, the sequences from gene GIT1 comprise or consist of:
GTATATGGTGCCTGCCGGGGCAGCAGGCCTGAAGGTGGGGTAGGGCGGGGAGGCATTTGGTG
TGCAGCATCTGGGGTGCCATCTCCCCGGGATCCCTGCATGTTGGGGAGGTTGCTGGCATGGGC
CTGGCCACCTCTCAGGTCTCTCCTCTCCTCCCAATTCCCATCTCCCTCTGCCCTCAGCCTTGACT
TATCCGAATTGGCCAAAGCTGCTAAGAAGAAGCTGCAGGCGGTAAGTCTGCTCCAACAGTGCCC
TGACACTTGAAGCTGGCCCCTCTCTGATCCCCCACCCTCTGCTCTTGCTTCCTCTGCCTCTGACT
CGATGACCTTTTCCAAGTCTTTGACCTGTCCCCTCACTGGCCTCAGCAGTCCCCTCTCCCTGACC
TCCCTACAAGGGGATGGACTGGTCCCTTCTCTCCCACCTTGGAGTTTGGAACATGATCCCTTTCC

ACTTTCCCATTCTGAGACTGTAGGGGCTGGGCAGCACAAGGAAGGCCACC (SEQ ID NO: 383)

434. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GIT1. In some embodiments, the sequences from gene GIT1 comprise or consist of:
CAGGTGTGAGCCACTGTGCCCGTCCCTAGGGTATTCTGATGAAGTATGTTTGGAGTGTGCCATAT
GCACCTGTTATCACTGCAGTGCCTTAAGGCAAGGGGTAGTGCAGCCAGGTGTATCCAAAAAATC
ACCCTGGCTGCTGGGTGGAACAGGATTGTAGGGACAAAACTAGAAGGAGGGAGATTAAGAAACT
TACAAAGCCCAGGCAACAGGTGATTGAGGAACCTGGGGAGCTTCACTAGGACTGGAGGGTGAG
GGAGGCTTCAGGTGACTGCCAGGTGGCTGACACTGGTGGTGGACAAACAGGTCACTGAGAGGA
AGAGCAAGCCAGAGGAGGAGGGGTGGGGGACGCGGTGAGATGAATTCAGCTTTGTCCCTTCTG
GGCCGGGTGTGCGTGGAGATGGGTCTGGGCCTGATGTGAAAAGGCGTGTGCTGCCCTGCTCCT
GGGTAACTGCCGCCTCTGTCCTGTTCTTCCCTCTGCTGCCTTCCTCTGGACTTA (SEQ ID NO: 384)

435. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATP6V0A1. In some embodiments, the sequences from gene ATP6V0A1 comprise or consist of:
TCTTGCTGCAGATATTTTGTTTGAGCTTTTTTGGTGTCATTTGCCTACTTTTTACAGGGAGAGAGA
GAATTAGGCCAAACTAGACTTTTCCTTAAGATACCACCTCCAAGCCCACTCTCCTTGCCTGACCC
CTTGTAGCACAAAGCCTCTGAACTGAACTATTAAATCTCATCTACTCATTATGTTCTTTTTAAAGCA
AATAAAATAGGAGTTGAGGACTCAAGTTGGACTTTTCAGTCTGTCTGACCACTTTCACTATATATG
ATTTTTTAAAAAAGAAATCACAAGGGTTGTGGATGCCTTTAAAAAATATGTATCTTAATGCTCTAAA
TTCCTGCTGATTTCGCTTTGTGTATATGCTGAGGAGGCCTGCCTCCAACGTGCTAGCCCATTTAA
CATGAACAGTCCTCCCCAAGAAGCATTCAGTAGCCTTGTGCTCCTAACTTGTGACCTTGTGTGTG
GCGTGGCTCCCCACTAAGTGTAAATTTGTGTTTTCAAG (SEQ ID NO: 385)

436. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATP6V0A1. In some embodiments, the sequences from gene ATP6V0A1 comprise or consist of:
TAAGATGAAAGCTGGCGTTGCCTTCGTGTTTATCCGGGCTTCTCTCTTCCCATCCTTGTGATCAC
TCTGCTGACCCTGCCACACCCTGGGGCCATACACATGACTCCTGTGCCTCTGCATCTCACTGGC
CATTTCAAACCAGTTCGTGAGCCTGTGTTCTAAAAAGCTCATCTCCATTAACTGCATCTCATGTCG
GTCACCTCTGTCTTTGTTTCATTGACTTTGCTGATTTAACACCTCTGAGAATGGCTTTGAAAGGAG
CTACAAGTAATGTCTTCACTGGCATTCTTGAAGTGACTCCTCTTGGGGGTTAAGTCCCATTGGCC
TCTGCCTTCCTCTCCTGTGATGTTGTGGTTGATCTACTCCCAGCCACCGGGAGTAGCCGTTTCCT
CCCTGCTCCTCCTAGTGCTTGTGAGCAAACCTTACCCTTCCTCCCTGTCTGAGCCAGCCTCTTCC
TGCTGCCCTCCTCAGCTTGATGATGCTTCAACTTAGAAGTGGT (SEQ ID NO: 386)

437. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSME3. In some embodiments, the sequences from gene PSME3 comprise or consist of:
CCTACCCGACACTTGACCCCGGCAGTGTGAACCCCGCTGGGAGCGTCCAAAGCCATGCCTCAT
CGCGGCTGCGCAGCGCACGTGCACAGCCTCGCAGGAGTCTCGGCGATTGGCTGTGACGCAGTT
TCCGGCGTGAGCGGCGAAAGCCGGGAGGGCGAGCGAGAGAGCAAGCAGGCAGCAGGCTGCC
GGCGGGCGGGCGGACGGCACAGAGGGAGGGAGCGAGCGAGCAGTGAGTAAGCCAGCAAGGG
CGGTCGGGTCCCGAGGTCAGCCGAGATTTCTCAGGTCCCTCCGGCCCCCTCCCTGGAGTCCAC
AGCGCCTCCGGTGTCCAGAGGATCGGACACGGCCCGGCCCGGCCATGGCCTCGTTGCTGAAG
GTGGATCAGGAAGTGAAGCTCAAGGTAGCGGCACCGGTCCGGCCTTTTTGCCCCTCGCTTTGAT
CCCCCAGCAGTCTGACCGGCTTCCTACTCCCCATGGCGTCTTTGTCTCCCTGGGGATACCAG (SEQ ID NO: 387)

438. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSME3. In some embodiments, the sequences from gene PSME3 comprise or consist of:

TAATCCCCCAGCCCAACAACGTCCCTGGACACTGCCCCTGCCCTTGGCGGCTGGCCTGCCTAGT
ATCATAGACTAGGTCTGGGTGGGGGTTGGCACGTTTGTGAGCTCACATCTTCCCTAACTACCTGT
CTTTTGTCTGCTTATCAAATTCAGACAGCTTCAGACACAGGAGGAAGGGAGGGAAGGGGGAGGA
CAGAGGAGACAGGCAGGTGCTGTCCTCAAAGCCCTGCGTTCTTCTGAGATGGAAAAATGGATCC
TCAAAAAAATAAAGTATTTGCAGTCTGGGGGCCTCTCAGCTTCTTATTACAGTTACAAGGTGAGG
GAAAGACAGTTGGATTGGGATTCTCCATCCTGCTCTTACCTCTGTCCCCAGGTACTGAATTGCTC
TCTTTGTTAATTTTAGGTTGATTCTTTCAGGGAGCGGATCACAAGTGAGGTGAGTGAAATAAATAG
AAAAATGGTTGTTGGTTGAGAATTTCCCAAAGAGGAGATACCTGGA (SEQ ID NO: 388)

439. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GFAP. In some embodiments, the sequences from gene GFAP comprise or consist of:
GTAGCCCTGCCTGTGGGCCAGCCTGCCTCCTCCAGGCAGCCCTTCTTGCTCTGTACAAGAGAAT
GGGGGAAGGAGGGTGGAGGAAGCTGGGAGAATATCCTCTCCAGGTGACTGACTTTCACCAGAG
AAGTGAGATGGCTTGCCCAGGGTCACACAGGCACTATTGCTTTCAAAAGTACCCATTATTATTAC
TGCTACTATTGCTATTATTAGTAGTAGCTGATACTGTTCTGTTCTAAGCCCTGTGCTTTTCATGGAT
TACCTTACTATGAAGTAGGTGCTGTTCTTTGACAGATGAGAGAGCCGAAGTCCAGAGAGGTTAAC
TAATTTGCTCAAAGTCACACAGCTCCTAAGTGGTAGAGTTGGATTTCCAACTCTAGCACATCTCAC
TTGGGAGCCTGCATTCCATGCCTCTGCCAGTCTGTTTTGGGTTACTGAGCCTCTACCATATGCCA
GGCACCCCCCAGGACACAGAGAGGTGTCTGACCTGGAAGGTGTG (SEQ ID NO: 389)

440. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene GFAP. In some embodiments, the sequences from gene GFAP comprise or consist of:
CTGCTCCCCACTGCCCCAGAAGGAGGGGTAAGGCAAGGCTGAGGAATGGGGAGAAGGAGCCT
GGGGCCCCAGTGGCCCTCTACTCCTCACCCCTCCTGCCACTCCAGGAAGCAGATGAAGCCACC
CTGGCCCGTCTGGATCTGGAGAGGAAGATTGAGTCGCTGGAGGAGGAGATCCGGTTCTTGAGG
AAGATCCACGAGGAGGTGAGGCCAGGGCAGAGGGAGGAAAGCTCAACACAGAGATTGCAACTG
AGAGAGGGAGAGACAGAGACAGAGAAGCTGAGACTGAGAGAGACACTCAGAGAGAGGAGAGAA
ACAGAGATTGGCAGGTAGAGACAGGAAATGAAAGACAAACAGAAAGACACTAAGGGAGACGGAA
AGAGACAAGAGAGCATTCGAACTCCTGGCCGAGGGGCAGGCAGAAGAGGACACAATGGCGTGG
GGAACCCCAGCTGTGGCCTGTACCCTGAGCCCTGGTACCGCTTCTCTCACCCTGGTCA (SEQ ID NO: 390)

441. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDK5RAP3. In some embodiments, the sequences from gene CDK5RAP3 comprise or consist of:
TCCTCATATCTTGTGTCCCAGCTCAGGCTATAATCCCTCGATAACAACCTCCTTCCAGCCTCCTTG
TCCCCAGTCTTATCTCCCATGCATCCATCATCCCAGCAGCCTATCTGTACAGGTTCCTCCCTGCC
TCAAACCCCTTCTGTGATTCCTCTGTCTGAAGGGATGAAGTCCAAGTTCCTTAATAAGTCTCCCTT
TGATATGGCCTTTCCACCCTTACAGCCTCTCCTCTAGCCACTCGCTGCCTCAAACCATCTACGGT
ATAGAGGTTGGCCTGCCCGCGGAGCCGACTTCATCTTGAAATTCTTCATCATTTTGTAACAAGCA
GCTGTGCATTTCCATTTTGCACTGGACCTCACAAATTACGTTGCCCGTCCTGCCTGCCTGTTGTT
GCTTGCACCCCTCTTGCAGTTTGTGGCCACCTAAGCTTTGTCTGTGTAGTCTCCTCCACCTAAAA
CTCCTCTTCCCACATCACCCAGCTATCTTCAGCTCTTCGTTT (SEQ ID NO: 391)

442. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CDK5RAP3. In some embodiments, the sequences from gene CDK5RAP3 comprise or consist of:
TATTTGCAACGGCCTCCCAGATCGGCGCTAGGACCCCGCCAGCAGACGTCTCAATCTGCGTGGA
GAAGACCCAGTGCCCGCCAGGGGAAGCGGCTGCCAGGCTGGGCTCTCGAGCGCCGCCTGTCG
CAATCCCACGGCCGCTGCAGCGCACCCCCTCCCGTCCCCTGCCCTGAGCCCGCCTCGCGTCTC
CAATTGGCTGTCTCCATTCTCCCGCCCCTCCCGAGCTCAGCCATTCGGAGCCTGGGGTGGGCG
GGGCTTGAGGCCTGAGTGGAGCGTAAACCCTGATTGGCTGTACGGAAGGCGGCGACGTGGCCG
AAGGATGCCCGTTTGTGTCTAAACGGAGGCTCGGCCACAACGCCACTGGATTGGTGGTAGGGC
GGGGCGGGCCACAGTCTCCAGCCTGAAGCGGAAGTGGAGGAAAGATGGAGGTGTGGGGACAG

GAGCTGGGTGTGCTGGGGACTGGCCGCGGACCCCTAACCTGTGTCTCCGGTCTCCCTCC (SEQ ID NO: 392)

443. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CBX1. In some embodiments, the sequences from gene CBX1 comprise or consist of: GTGTGCTGATTGGAGGAGGAGATGTGTGGAATAAATTGGGAAAGGGGACACGGAGGGGGAGGG GCAGGCGTTTGCTGGGCCTGACTCTGGAAGGGGAGGAGCTGTTAGGATAAGTAGGGCGGAGAT CCCGAGAATATTTCTATAAGGTATGTAAGAAAAAAGGGGAAAGCAGGCCGCCCTTGCATCCTGAT GGGTCCTTACAGTGGGGAGGCTGTAAGAATAATGTGCGAAGAAAGGATGGAATACGCTTTTTTCA GTTTTCCAGGTTTCCTACTACCTTCACTCCATGATTCCTTTGGGGAGTTAAAAAAGTCCAAGTGCA GTTCTTGCTTTGATTCAAAATTAGTTCCGTACGTTTTTGTGTGGGATCGTAACTGGTCTCACAAAG GTGATGAAATTGTAAAAATATGTAGATGAGTTAATAGTTGAGGAACGGCGTGAGGTAGTGAGAGA TTGTGAGATCGTGTGAGGTGCGAGAAATTGGGAGACATAGGAAAAT (SEQ ID NO: 393)

444. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CBX1. In some embodiments, the sequences from gene CBX1 comprise or consist of: GATGACAGGCGTGAGCGACTGCCCCTGGCCCATATGTTCTAATATTCTAGGTTACAACGCTCTAC GCTGCAATCTCTCCACCGTTACAGTTTAAAAACTATAAGTCCCTACCACCCTCGCCTACTGTGCG TGCGCGGCGCGCGGCGCTTCGGGCCTTGTAGTCTTGGACAGACCCCCGAGGCCCATGGTGCC GTGCGGCGGGTCGTTGCGCCTGCGCGGTGCGAGCGGCGGGCAGCGCAGACTGCGAGGCTCTT TTGTTCGGCTGAGGGGAGGGCCGTTGGCCGGGGCCTGCGGTACGCCGCTTCAGTGAGGGACG CCACTGCGGCCACCCGGCTTGCTGCCTTCCTGGGCGCCACTCCCCCAGGCGACCCGACGCGAC GCGCCAGCAGCGCAGCACCGATTCCTCTCGGGCTCTTGGGCGCTGCTCTGAGGTGAGGAGCCC GCTGGAGGCGGGAGAGCTGGGGGAGGGGGCGCGGCGGCGGCGGCGGCGGGAGCCCTG (SEQ ID NO: 394)

445. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PHB. In some embodiments, the sequences from gene PHB comprise or consist of: GTGAGTCCGACTTGTGAGGGAGGGGAGAAGGGGCTGAGCCCGGGACGAGCCAGGGGTTGCTC AGAGTAAGGGAGGTGTCCATGGAGGCAGGGTGAGGAATAATCCAGAAGCTATTACAAATGTAAA GGGCCGGGTGTCCCAGCCTCAGAGAAGGAAGATTTAAATGCACTGGACGAGATCAGGGTAGTCT CAGGAGTTGAGGTCTGGGAAGTAGGGAGGGAGGATTTGAGACTGGAGCGGGCAACGACGGTG GGGCGGAGCGTTAGAAAGTTACATGCTGGCGTGATTTCTAGTTAGGTCAACTGTGCTTATGCCCA CCCCGCCTCAGCCCCACCCTCCCAGTTATTCCAGAGCTCACTGTCCCTGTGCAGCTAGTTAGAG CCTTTCTCCCAAATGGGTTCTTCAGTTATCTTGGCCCCAGGATGTCATCCAGCTCCTGCTTCCAT AAGAAGCATGTCGTTCTTAATACACGATGTTGACAAGCAGTATGGTGAGGAGG (SEQ ID NO: 395)

446. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PHB. In some embodiments, the sequences from gene PHB comprise or consist of: AAGACGGCCCTTCGTTTCCCCCAAAGGGTCTCAGCCTGCCGGTGATTTCACCACGACTTCCTCC AGAGTTCCACCTGTCCTCTTCATCAGCCATGAACTTGCCCCTACTAATTTTTGCCACCAGCTGGA CGCCCACCTCCTCTTTCCCGGAGCCCTAAGGCTCTCCTTGCGGCAGTCTTAGCCTCTGTACAGG ATAGGCACGTGCATTTAGCCCCAGAAAACTACAGCCCCCAAAAGGCTTTGCGGCAACATCCTCG CGTTGATCACCAAAGAGAAAACGCTTTTCTCCGCGGGCCCGCCGCTGCATAGCCTTTTGGGAGT TGTAGTTCATCTGCTAAGAGCCGCAGAACCAGGGTGAGGTTCTAAGCCACCCTTCCCAGAACTC ACAGCGCTCTTCCACACCAATAGGAAGCGTGGATCTTGGAAAGCGGGCGGGGCAGAGGAGCTC ATGCGCAGTATGTGTGGTTGGGGAATTCATGTGGAGGTCAGAGTGGAAGCA (SEQ ID NO: 396)

447. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CLTC. In some

embodiments, the sequences from gene CLTC comprise or consist of:
ATTACCTCAAATCCCTTGAACCATGCATGCTACCTTGCAGATGTTGCTCTTTCCTTTAACTTCATCT
GTATTTGTTCTGCCTCTTATTTGAAACAGTTGAATGGCATGTTTGTTTGAAGAAGAGAAGGTCCAA
TACTTGGCTATTAATAGTCTCTCTTTAATTAACATAATGTAGATGTTATTGTGACCTTGAAGCATTA
ATGTTAAGTGAGGATTTGTGTTGATGAGCATATATGAATGTCAAGTCTTTGGAATCCACTTGGTAA
CATGGTTTCTTATTATTTTTTCTAGCTCCAGAACCTGGGTATCAACCCAGCAAACATTGGCTTCAG
TACCCTGACTATGGAGTCTGACAAATTCATCTGCATTAGAGAAAAAGTAGGAGAGCAGGCCCAG
GTGGTAATCATTGATATGAATGACCCAAGTAATCCAATTCGAAGACCAATTTCAGCAGACAGCGC
CATCATGAATCCAGCTAGCAAAGTAATTGCACTGAAAG (SEQ ID NO: 397)

448. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CLTC. In some embodiments, the sequences from gene CLTC comprise or consist of:
TGGGTTTTCCTTAAAACTCTTCCTATGTTTTTGTTTTTTTTTGTTTTTTTTTTGTTTGTTTGTTTGTTT
TTGAGACGGAGTTTTACTCTTGTCACCCAGGCTGGAGTGCAATGGCACGATCTTGGCTCACTGC
AATCTCCACCCCCCAGGTTCAAGCGATTCTCTTGCCTCAGCCTCCCGAGTTGCTGGAATTACAGG
TGCCTGCCACCACAACCAGCTAGTTTTTTTGTATTTTTAGTAGAGATGGGGTTTCACTATGTTGGC
CAGGCTGGTCTCGAACTCCTAACCTCATGATCCGCCTGCCTCGGCCTCCCAGAGTGCTGAGATT
ACAGGCGTGAGCCACCACGCCCAGCCAGCTCTTCCTATGTATTTATGCAAGTACAATAACTAGGG
TTTACCTTTTTAAGTATATTGATTAAGTTTGGTTAAAGAAAATAGATCTGCTAATACCGAACTTGAT
TTAAACCACTTTAATTACTTTTACTTGGAATGTATCTGT (SEQ ID NO: 398)

449. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AMZ2. In some embodiments, the sequences from gene AMZ2 comprise or consist of:
CCGCGGCCCCCAACAAATAAAGAAGGGAAAGTGCTGAGGGTGACGGCCCCGGGGAGCGCTGC
GGCTCTACGTCAACCTGCGGCGGCCGCCGACTCATTTGGGGCCACGCTGGTTGCATTCGTCAC
GCCGGCGATGCCTCTCAAACCCGCGGCCTGCCGAGGACGTTCCCACACGGGAGACCCCAGCG
ACGCGGGCGCATCTGTGGCTCTCGAGAACCGGGCCGCGGAGCCGCCGCGAGCGCAAGCGAGG
AATCGGCGACTGCGGGGGTGGACAGCTGGGGCTTGTAGTCCCCTCGCTACCCTCTATTCTGGAA
GAGGCGGGTCGCGGCCGCTGAACTCCAGCTCTGCGCCTGCCCAGGCGGCCGCACGCTCAGGG
GCGTGGCATGGGTGGGTCGTGAGTTGGGCGGGGCCCACAGGGCGTGCGCGACGCAGCGGCG
CGGCGCGTGGCGTAAGGGGCGTGGCGCCAGTGGGCGTGGCGTGGCGCAGTGCGAAGGGACG
CG (SEQ ID NO: 399)

450. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene AMZ2. In some embodiments, the sequences from gene AMZ2 comprise or consist of:
TGAGGGCTGCCGCGGGTGGGTGGTATCGAGGCCTGTCGGGTCAGGGCGGTTCGCGGGTGCTG
TCAGAGCTGGGCCGGGGCCCCTAGGCAGGGTAGCCGGGTCGTAGAGGCGGGGGCCGGTCGC
GGTCGGTGGAGCGGGATGAGGATGTAGGAGGGGCGGACGTGGCGGAAGCCGCGGGGTCCGC
GGGGTCGGTGCCTCTAGGGAGCCAGGGAGGCCTTTCCCGAGGCTCCTGGGGAAGAAGAGGCG
AAGCGAGAGTCCCTGGGGAACCCCCACTCCACTCCCAGCTGGAGACTGGGTTGTGTCTGCATG
GACCAGAGCCCACAGTGCGAGTTGCTATAGGCAACCAGCCAGGGTGGCCAGCTCCTTCCCGTTT
GCCCGTGATGTTCTGGTTTTGGGACCAAAGCATCCTAGGCCTCCAGCCCACTGCAGTGACCGAA
TTCTGCGCCCCCTGCCCATCTTCTCCCGCAGCTTCCCTAGATTAGGCTTGGGAGGCAAGAGG
(SEQ ID NO: 400)

451. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TTYH2. In some embodiments, the sequences from gene TTYH2 comprise or consist of:
GTGTGCGCGTGCGTGCATGTGGGGCTCTCGGGAAGCTCTGTATCTGGAGGGGTGTGTTATTCC
GCACCCTCGCTATACACACATTTTCTAGACCGTAAGTGCTGTGATGCACTAACCTCTAGGTGCTA
GAACCCTGCACGGCACTGAGTAAGTACTCCATAAATGTCTATCAACTTAGCAAGTTAGTGAGTGA
TGCTCTATTGTGGACCCCTGAGGCAGTGGCTCCTGAAGGAGGACGGGGCCACCGGCAGAGCAG
GGCACTCAGAGGGGTCCCCTGCCCGGGGAGCATGTGCCAGAGGAGGGGGACATCCCTAAGGA

ACAGGCCAGAGGACCTGAGCTCTCCCTGGCTGCTCTGGAAGGCGGAGGCCCCCCAGTTTATCC
AGTCCCTAGAGCACCCCAGGCCAGATCTGGGGTGCGCCTGGCTTGGAGGCCATGTCCTTGCTG
CCGCCTCTCCTGGGGCCTGCGTCTGCTCCCACCCTGCCGCATGGGCCTTAGCAAT (SEQ ID NO: 401)

452. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TTYH2. In some embodiments, the sequences from gene TTYH2 comprise or consist of:
CCACCAGTGACTTCTGTGTGGCTCCTGACACCTTCATCCTGAACGTCACGGAGGGCCAGATCAG
CACAGGTAACTACACACTCTCAGGCTGCTGCTGTGGATGCATAGGTGGCCGGACTCTGTGCCCC
TACTTACCTCTTTCAGCCCTGTAGCCATCCAACCCCTCCTCAACCCTGAACTTCAAGTCCAGCTC
ATGCTCTAGGCCATTTCCTAGAAAGTGCCTCCCTTGGGAGCTCAGGGACGGGGAGGGAGGTCT
GGCTTGGCCACCAAGGATGATAGAGATCTCATCTGGTCATTTGTGAGCTGCCTAACGTTATGCCG
TTGCCCTGCAGAGGTGACTCGCTACTACCTGTATTGCAGCCAGAGTGGAAGCAGCCCCTTCCAG
CAGGTATGGCCCCCCGAGGCCTGCCCTCACCCTGCCCACAGCCGCTCCCCCTTGACCCTAAGC
CTCACCACTGACCAAGATGGCGGAGGTGGCAGGGCCTTGCTTGCCTCACTG (SEQ ID NO: 402)

453. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HID1. In some embodiments, the sequences from gene HID1 comprise or consist of:
GTGCGCCACGGGGGCCCCGGCGTCCCCATCCACCTGCCGGGCTGGGGGCTGGGCAGGGCCG
GGGGTACGCGAACTTGGCTCGTCGGGAGATGGGGGGACGGGCGGGCCCCGAGCGTAACGCCA
AGGCCAGCGCCGGAACGGGACCCCGCGGCCTGTACCTGGAAGCTCCATCCCCTGGCCCTAGTC
CCCCACCCTCAGCCTCCTCTCCTGGGAACACCCCTCTCCCCGAAGCCGCTGCTGCCACCTTAGG
CTGACGTGTGCCTACTCCCCGAGCCGGCGACACAGCTGTCCGCCCCCTGTCCCGCCCCGCGGC
GTCCCCAGCTTCGCATCTCCAGCCTCCCGCCGCCCCCACCCACCCATCCACCGTCCGCTCCCCT
CCCTGCCCCTCATTGCCCGCGGGTCCCGGACGCACAGTCCCTGTTGACTCAATGCAAACAAAGC
CTGGCTGGCGTCCGCCCGGGTCGGAGAAACAGCTGGTGTGCGCGGCAGCGGCCTCGCT (SEQ ID NO: 403)

454. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene HID1. In some embodiments, the sequences from gene HID1 comprise or consist of:
AGGGGTCGGGACCGCGAGGGACTCTCGCGCTCAGCAAGGCGAGGAGCTGCTTTCCTGGAGTAT
GGAAACTGAGTCAGCGCCTCCCTCCCTCATAACCAAGGGCCTGCGGGACTGTCTGAACACGTG
GGTTTGACAGGTCAGAAAAAGGGAGAACCAAGAGAGTGGATGCTCAGAAAACATGAATGGGAAA
GACAGACTGAGAAGGAGGAAAGTGGGATGGAGAGGGCCAGCTGAGACGTGGGCCAGGAGCCG
GAGCGGAGATGAAGGGTGAGGACCGGGGCGGGGGACGAGCTGCGAGGAGGGTTTTGGGCCCT
GGGGACTGCGTGGTAGCAGCGGAGGCGGGTACAATGCTCCGACGCAGAAGGAAGAGCGTCGA
GGCTCCGGGTGGGACCTGAGAAGGCACCCGGCGTGCGGCGGCGCTGGGTTGGAACCGCCGAC
TCCGCGGGTCTTCGGCGGCGGGCGCTGCAGGTGCAGGAGGCGGAGCCACGCGGGGGCGGGG (SEQ ID NO: 404)

455. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SRP68. In some embodiments, the sequences from gene SRP68 comprise or consist of:
GTAAGACGAAGTTCGCTCTTTTCTTGAACGCCGGTTGCTCCAACCACTTAACCCCACTTGTCTGA
GAAGGGTGTTGGCATGTTTGTTGGATTGCATGGAATTAAAACGGGCGCCGTAGCTCTTCCTTTCT
GCTGAGAATGTGGCTGTGGTATATGTGTGTTTCTTTTTTTTTTTTTTTTTTTTGAGACAGGGTCTCA
CCCTGTCACCCAGGCCAAAGTGCAGTGGCACAATCTCAGCTCACTGCAACCTCCACCTCCTGGT
CTCAGTTGGTCCTCCCACCTTTGCCTCCTGGAATAGCTGGGACCACAGGCATGCACCACCACAC
CTGGCTAATTTTTTTTTGCATTTTTTGTAGACATGGGGTTTTGTCATGTTGCCCAGGCTGGTCTCAA
ACTCCTGGACTCAAGTGATCTGCCCACATCTGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGC
CACCGCGTCCGACGCCATGTGTGTTTCTTAAGTAGTGGTGCCAA (SEQ ID NO: 405)

456. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SRP68. In some embodiments, the sequences from gene SRP68 comprise or consist of:
AGACTGCAGAAAAGCCCATCCTGAAGGTTTCAAGTTTTGTAAAAGCTGACCTAGGATTGATTGAT
TCATTTGGACTAATCAGTAACATATTACTTCTGGGCTTAAGATTTCTCACTGTCATAGGCACACCT
GGGAAAAGGTCTAGTCAGACCACCAATTTTTGTGCAGGGAGTTTTGCCACTTATGTTTAAGAGCA
CGTTCTGGTTGGTCCAGTGGCTGGCGGAGAAGGTCGGTGTACAGGTGGCCAGGAATCCTGCCT
CTGCGTGTTGAGAGGAGTTTCTTATTCCACTGTCCTTTCAGGAATCATCTTAGCCTTGAATATAGA
TTTATAGAATAAAAGTGTAAATAGCAAAATATATTGAAGGCTTCCTGTTTGGAGACATTTTGCCCT
GCCCAGGGAGAATCATGAGAGCTTCTCCTTCAGAGATTAGTGGTCTGAGTCATTGCAGTGTGGG
CGTCGTAAGAAAAACACAACTGACTTAAGTCCCGCCCTTCAAAT (SEQ ID NO: 406)

457. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EXOC7. In some embodiments, the sequences from gene EXOC7 comprise or consist of:
GTAAGCAGTGCGGTTCTGCAGCCCCCTCCTGTCCCTCTGAAGCTTGGTGGGTGAGGTTCCCTGG
GGACTGACTCTCAGTACCTACTGGGGAGCCTGAGTCAGAGGGGACATGAGTTTTCTCGGGGTGC
TCTCAACTCTCTCTGCTCCCTTCAAGGCCACTCTGTCTCTGAGCTTATCCGCAGCACCTGCCCAG
GCTAGAGCCCTGGATACACCCCCTAGGCTCGCCCGGCCTCCCTGCCTTGCTGTCCCCACTCGG
CCTTCCCCACTGTGCAGGCCGCAGCTTCGTCTGTTCAGTAGGGTCTGGTAGAGGGGATGTTCGA
ATGTAGGGGAGAAGGTGGAGAGGCTGTGGGGAGCCCATTCTAAGACTCTGCTGTTGACAAAAG
GAAAAAGGGGGCCTTGTAGAAACCACCCAGGGTGGGTGGGGGCAGGAGGGGACAGGGCGCTG
GCATCTCACTCTTTTCCTGCCAGCTTTTCTGCTGACATGGGCCAGCTCCATCCC (SEQ ID NO: 407)

458. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EXOC7. In some embodiments, the sequences from gene EXOC7 comprise or consist of:
TGCTGGTTGGTTGGAAGGTGTCCTTTCTGCCCCTGCCCCCCTCCCAAATCCTTCTCTCGTGTCTG
CCTGCTCTCCTAATCAGGCTCGCTCAGCTGGCCTTCAGAGGGTAGCAAGTGTCTCAGGGCCCGC
TGGGCGTCTTCCTGCTGGCCCTGCCCTGGGACTGGAGCTCAGGGGGTTGGCCTGTAAGCAAGA
GCACCTTTCTGGGTCATTCCAAGCACTGAGGTCCCTGGGCCCTCTCCTCCCGTCCCATTTTGGG
GGCAAGGAGCCTGTGGGCAGCCTCCAGCCTGCAGTTCTCAGCTCTCTACTTTCCAGGGTGTTCC
CTGGTCCTCAGAGGGTCCCGCCTGCTGTGTCTTGCTATCTGTGTTTTGGCTGTCGTGGGGAGAG
GTCTGCTTAATTCGGGTTGACATGCCGTTTCTAACCTGTTTTTTGCACTTTGCATCTTTCTCCCTC
CTTTGTCTCTCCCTCTGTCCCCTCTGTGTGCACTGCCTTTCACTCCGTA (SEQ ID NO: 408)

459. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEPT9. In some embodiments, the sequences from gene SEPT9 comprise or consist of:
CAGTCTTCTCCCAGACACTCCCCCGGCTCTGGCCTGGCGCCCGGAGACCAGTAGCAGCAGCTC
CCCACGGCCGTTCACTGTGAGGGTGGGGAGGGCCGTGGGACCAGGAGGCCTTAGGGGGAAAG
TTGGCCATGAGGAGTGGGAAGCGACGGGTCAGATGCCAGTGACTGCTGGCTGGGGAGCCGCT
GGACGTGGCTGGCCTGTTTGGCCAGTGTGGCGGGTGCCCCGGGGCTTCAGTCACCCCCAGCCA
CGTGTGGGGGTGCGGGATGGGAAAGGTAAGAGTGTGTGGAGCCCAGTCAGCACTCAACATGAG
GTCCCGTGGGGGCTGCCTGAGGGCGTAGCTTCCAGAATTCAGCCCCTGGCCCTCAGAAGGTGT
CACCAAAGGCTTCTTTCCATTTGAGTGAATCCCTCCCAGCCCCCAGCAAGCCCTCGGAACGAGC
CCACTCCCAGGCGCTCTCTCCTAGTGTGGGAGTGGCCACGCCCCTGCTGGGAGTGACTC (SEQ ID NO: 409)

460. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SEPT9. In some embodiments, the sequences from gene SEPT9 comprise or consist of:
TGAGCTGCGCCCCCATCCCCTGCCCCTCCTCTCCTGCTCCTTCTCCCTTCCATGGTCCCAGCCA
GCAAGCACCTGGGGTAGAGGGGACAAACCCAGGTGGCTGTGTTCCAGCCCTGGCTGCAGGTCT

GAATGGCTTTCTGGGGTGGCTGGCCATGCTCCCTGAGAGCCCAGCTGTGGCGATGTCTGAGCA
GGTAGGTGGGGGAGCACCTAGGAAGCAGGGGTGTCAGGCAGAGCACAAGGAGAGAGGGTGTC
CAGGTCAGTTTCAGGACCTGGCTGAGAGGAGGGGGCTCCTCACGGGCACCGCCTCTGGCAAGC
ACAGGGACAAGGGCAAGGACGGCATGGCCAGAGGTCCCTGGGAGCCTCTTCCCCTCTCTTCTT
CCTAGCAGCTCCCCCTCACTCTTCCCAGGGACCCTGTCACTTTCCTTTAGCGTGTGGCAGCTCCT
TGGCGTCCCTCCCGTGCCTTCAGGTTGCTTCTGCGCCGGGCCTGCCGCTGGGCGCC (SEQ ID NO: 410)

461. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ANAPC11. In some embodiments, the sequences from gene ANAPC11 comprise or consist of:
GGCCTGCGCCCCACCGCCGCGGCCGCCCTGGGAGCCGGCCCGGCCGCGGCCCCGGCCCCCG
CCCCGGCCGCCTCGCTGGCTCCGGTTCAGTTTAATGATGTCGTCCAGAGACATGTCCATTTTGT
CGGCCATGGCGGGCGCGGAATCGGGCATCGGCTCGAGCCCGCGCGTCAGCACGCCGGCACGT
CACTTCCGGCGCCGCGTGAGGCCTTCCGGTGCCACGGCCTCGGAGCGGCTGCTGATTGGCCG
CTGGCGGACGGCTGCGCGCGCGGGACGGGGTGAGGCGGGGAGGCGCGTGCGCACTGGCGTG
CGAGACTCGGCGGGCGCTGTTGAGGGAGTCGGGCCGCGACTGTGGTCGTTTTTATACCTTCCC
GCGCGGACGCCGGCGCTGCCAACGGAAGGGCGGGTAGGGCGGTGCGTGATTAGGTTGGCGAA
GGTGCGAGGGCGCAGGGGGTGGGGCGGCGGCCGTTGGAGGCGGAGCCTACGCGCCCCTCCC
TCC (SEQ ID NO: 411)

462. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ANAPC11. In some embodiments, the sequences from gene ANAPC11 comprise or consist of:
TTGGTTTTTTGGTCTCCACCTGCAGCCCCCCCAAGTCTGCACTGTCACATTTTGCCAGTCATATC
CTTTACAAGTTTTCTTGCGGGCCGGGCGCGGGCCTCACGCCTGTAATCCCAGCACTTTGGGAGG
CCGAGGCAAGAGGTTCGCTTCAGCCCAGGAGTTTGAGACCAGCCGGGGCAACATCGTGAGACC
CCCATCTCTAAAAAAAAAAAATGAGCTGGGCATGGTGGTGCACTTCTGTACTACCAGCTACTTGGG
AGGCCGAGGTGGGAGGATTGCTTGAGCCCAGGAGGTCGAGGCTGCAGTGAGCCGTGGTGGCA
CCACTGCACTCCAGCCTGGGCGACAGAGCCAGACCCTGTCTCCAAAAAAAAAATTATTTTTGCAAC
TTATTAATGAAAACCAGTGTGCCATTTCATTGATTTTTTTTTTTTTTTTTTGAGGCAGTCTCATTCTG
TCGCCCAGGCTGGAGTGCAGTGGGGCGATCTCGGCTCACTGCAACCT (SEQ ID NO: 412)

463. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NARF. In some embodiments, the sequences from gene NARF comprise or consist of:
TGTCATATAAATGTAGCTGGGTACAATGGCTCAGACCTCTAATTCCAGCCACTCAGGAGGCTATG
GCTGGAGGATCACTTGAGCCCAGGAGTTTGAGACCTTGCTGGGCAACACAGTGAGACCTCGTCT
CTTTTTTTTTATTTTTTGAGACGGAGTCTCACTCTGTCACCCAGGCTCTGCAGTGGCTCCATCTTG
GCTCACTACAACCTCCGCGCCTCCTAGGATCAAGCGATTCTCCTCCCTCAGCCTCCCGAGTAGC
TGGGATTACAGGTGCGCCCCACCACACCAGGCTAATTTTTGTGTTTTTAGTAGAGAGGGGGTTTC
GCCATGTTGGCTAGACTGGCGACCTTGTTTCTTAAAAAAAAAAAGGGCTGGGTGCAGTGGCTGAC
ACGTGTAATCCCAGCACTTCAGGAGGCTGAGGCAGGCTGGTCACCTGAGGTCAGGAGTTCGAG
ACCAGTCTGGCCAACATGGTGAAACCCCCGTCTCTACTAAAAATACAA (SEQ ID NO: 413)

464. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NARF. In some embodiments, the sequences from gene NARF comprise or consist of:
TGAGACTCCATCTCAAAAAAAAAAAAAATGCAACCAGTGTATATTTCATCATCCTATCTCTGTGAGC
TTGTTATACACAAAAGTTTTCTGTTTGTTTCATGCAAAGTAGGCCAAAAAAGTTTACAGATTTTCCA
CATGGGAAAATCATGGAGAGATTGTTTACATAAATCCCACAGTTCAAGGGCAGAAAGAGGAATGG
AAAGAGGAGTTAGAATTGAATTCTGCTTACGTTTTATTAGTGTTTCATTTTATTGGCCTCACTTTGC
CCTTTAGATGGACTCCTGCTGTGTGTGATGGAGATTTCATAAGAGGGAGGTCACCCAGGGTCAC
TAATGTCAAATCTCCTGCAGGGGAAGAAAAGTTCCTGTGGCCACCTGTGTCTTTTCAGTGTCTTA
CTTCGTTTGTCTGCAGGTGAAATTGCTCAAATAATGGAGCAAGGTGACCTCTCAGTGAGAGATGC
TGCCGTCGACACTCTGTAAGTGGCTTCTCTGGGGAGAGTC (SEQ ID NO: 414)

465. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EPB41L3. In some embodiments, the sequences from gene EPB41L3 comprise or consist of:
GTGGCCATTTGTTTTCGTCCTTGGTGTTTCTGAATGTGCCCATGTGCCTTTCCTTACCCTTTTTTT
GGGCGTGAGTGTGTGGTTGCATCCAGCTGGCTTTGCCTTCAACATCTCAAAGGTGTCTTCACTTA
TTGTCCTTTGTGTCTGCTTGGCATATCTGTCACATGCCTTTAGTTGCATCTCAAGAATGTACTTCA
CTATTCGAAAGGCGATCATATTGAGAAATTTTAATAGAATTAAATATCTAAAAGCATTATGTCTCAC
CAGTTGAGTCTAAGAAAGCAGCCAAAACCAACGTGAATGCGCTGCAATGCTTTGGTTTTTGTTTT
GTTAATTGCACTTTATCCTGCCTTCCGTTTGTTTTGCGGATGTCCTGAAGCAGCAGCGCAGGTTC
AAGTGCATGCACCAGGGGCAGGGGCAGGCATCAGAGATTTCAGTGGGAGAAATGAAAGCTAATT
TATATTTTTCGTCAGTGTTTCTGGTTATAAGCACTTGCTGC (SEQ ID NO: 415)

466. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene EPB41L3. In some embodiments, the sequences from gene EPB41L3 comprise or consist of:
GTGTCACTCATTGGGGCCACAGTTTGCAATTCCAGCATGACAGTTTTTGAGGCAGTCCCCTTCCA
CCCCAAACCTTTCCGTTTCTCTTGCTGCTTGGCTTTATGTTGAGAGCAGCCAACCCAGCTTCTTAA
TTTTTTTTCATGGTTAAATCAATACCGCAGTGCAAAGTCAGCATTAAAACACTTTCCATTTTATTTC
CAGCTCCCTGTTCCCAAGATGTGATAGTGCTGCTGTGGCTTGCAATGAAGGGGAAAAAATATATA
TATCTGCTTAAATCGGCGCCACCCTGATCCTAATAACCGTCTCTGCTTTACCAAACAAGAGCACC
TGGTTTTCTATTTTATTTCCCATTCTTTTCGTTTCCAAACTCTGAGATTCCTTCGTTCTTCCTCCTC
CCTGTCTCCTCTGCCTACGATTTTGTCTAACAAGCTGTGAATGTTTATGTGCCTGAGTTTGTGTCT
CTCTTTTGTGCTTGACTCTGCCTCTCTTTGTTCACTCA (SEQ ID NO: 416)

467. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSMG2. In some embodiments, the sequences from gene PSMG2 comprise or consist of:
GAGATGGCCGCACGGTCTCTAGCCCGCAGGGCTCTCAGAGTCGCAGGCGGTGACGCCCGGTC
GGGGGGCCCGGTCGCAAGGGACACACAGCTGGGGGCGCAATGGTGAGGGCGGCGACGCACG
GTCCGGAGGGGATGCGCGGCCGGGTAGGGCGTGCAGGGTTGTGGGGCGTGGGGGACACGCG
GGGCCGGGCGCGCGGTCGGGGGGCGCAGGGGCAAGAGGGTGTCGCATTTATCAGGGAAGTCC
CCGGCCGACTCTGGCGGGGAACTGGGCGCGCCAACCCGGGTCACCGCCCTGCACAGCGGGAG
AAGTCACCCGCATTGACGTTCCCTAGGCGCTGGATCGCCGAAGGTCTGGTTGAAAACTTGAACC
CGCCTGGAGCGGATGCCTAAGAAAATGCAGGCCCGCTGAAGCCTCCCCGCCGGGCCCTGGGC
CCTGAAAGCCTCCGGCAGTTTCCCGTGACCCCGCGGCCGCTCTGCGCGTTTTCCGATTTCTTGC
T (SEQ ID NO: 417)

468. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PSMG2. In some embodiments, the sequences from gene PSMG2 comprise or consist of:
TAAGCACCGTAAAGACGGGGATCTTTACGGGTTTTCCTCACTGACTTCTCCCAAAAGCTAAACCA
GCGCCTGGAATATAAACATGTACATAATTTGCAGGTGTTAGTTTTAGCGTCCTTCCGGATTCATTT
GTAACATTGGTCCCTTCCCTCACTAAGGTAATGTCTCAAGTACCACACTCATCAGAGCATGTGGA
ATGAATATCACAGTGGTAAAATTGAACTGAGGGCAATTAGCCGTAGAAAGAAAGAATTCCGCCCC
CCCAACCTATTAAATATGCAATAAAACAGATAATTCTTAATCACCCATTGGTAGATTAATTTAATCG
ATAAAATTCCACTGAGGCTAGTCCTGTGTGAAAGCCCTACAGAGTGTTGAAAGCATCAACCAAAT
AGGCAATGTATATTAAGTTCCAGTAAACCTTTTACGGCAGTTTTATGTAAAATGTTAGAAATCACG
CTCTCAACAATTGCATCTTGCGGTAGAAACTACAACAGTC (SEQ ID NO: 418)

469. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DTNA. In some embodiments, the sequences from gene DTNA comprise or consist of:
TAATTCAAATTTCCTACCAAAGAAAGTTAACCGTCTCTTGAGGCATTTGAATTATTTAGAACTGTTT
TCAGATAATTTGCACATCTTTTTTAGGGCCCTATACACCTGCCTCAGGAAAGAAAAAAAAATCTGT
TTGTCAGATGTAGGCAACACCACTCGTTAAGTAAGCCATTAGTCACTCTATTTTTTAAAAAATAACT

TAATTATCTCATCCACACCAGTTTTCCATTCTCTGCCCATCTTCCTTTCTTTTTTCTTCCTCTCATTC
TCCGTGTCTCTGATATTCGCTCTCTTCCCACTGGACAATCAGCATTCACCCCTTGTGCTTCTGAGT
CTTCCAGTGAGCTGTGCTGGTCTCCTGGAGACAGAGAGCAGTTTGGGGTAAAGGCAAGTCTGTT
TGGCTAATTTAAATTCTTGTAATGTGAGAGATGGGAATAGAAAGAGCAAATGGCATTACAGAGATT
TTTGTTGTTAAAAGGACACCTCTTCTCCATCCCAT (SEQ ID NO: 419)

470. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DTNA. In some embodiments, the sequences from gene DTNA comprise or consist of:
CTTCCATCCGGTTGAGTGTTCCTACTGCCACAGTGAGAGTATGATGGGATTTCGCTACCGATGCC
AACAGTGTCACAATTACCAGCTCTGTCAGGACTGCTTCTGGAGGGGACATGCCGGTGGTTCTCA
TAGCAACCAGCACCAAATGAAAGAGTACACGTCATGGGTAAGGCAAGGTCCAGGCAATACTTGG
AGTTGGATGTGTGAGTGTTGCCCAGAGTTAAAGGGAATATCAAGGATGGTGGCAGAATTAAAGG
GCAAACTTACCTTCCATCCCAGGTCTAGTATTCAGTCCCCCTTCCTCCCACTCTCCACCCTACTG
CGTGCTCTTACTTATTCTGTTGGAACCCAGTGTAGCTTCCTGAGATTTAAAATATAGGAAGACTCA
AAACTATGTTACTTCTTGGAATATAGATAATTCAGTACTGATTTAAATAACAACTGAATAGCAAGGA
CCTTCTGGAACATAATCTTACATTCACAGTAAGTTAAAATCTTT (SEQ ID NO: 420)

471. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAPRE2. In some embodiments, the sequences from gene MAPRE2 comprise or consist of:
AGCCTGCACTCCATTTTCCAAATAGAACCCAAATATCAACAGCATCAACAAGCAGATTTGAAACCC
CCCAAAAACACGCTATTATTAAATTGTTAATTGTATTAGAATTGCCTAGTTTAATTAGTAATATTCAT
GACAAAACTAGTTTGCCCCTTATCATCAATCGTGCTCCAGGTAGGAGTACAAACACTGGGTGTAA
AAAGCAGATGCACCCCAGTTGGTGTGCAAGCCCCCGTTTGCAGGTAATTAATTCACAGTGTGGC
GGCGCCTTTTCAAGCCCCCTCTGCAAGCCGCGCCGGCCTCCTCCCTCTCGAGCGGGGTCAAAC
CACTTAGTTTATTTCACCCGCTGGCACTTTCTTCCCTGTCACGAATTCAGCCTGGCTTCCTTTGGC
CTGAGACAGCGTCTTCAGGCGGGTCGGCTCGGACCTGCCCAGTGGGGCGCCCACCTGCACCC
GCACCCGCACCCGCACCCGCGGGAAGGGGCGGCGCTGGCCGGACT (SEQ ID NO: 421)

472. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene MAPRE2. In some embodiments, the sequences from gene MAPRE2 comprise or consist of:
TGAGTCAAGTGCATTTAAAGCGGTACCGCCCTGGCGCACCCCGACACCCCCTGCACTGAAGCAG
TCCCTCCCAGGCCAGGGGCTGGCTGCGCCTCCTCCTGCCGCTGAGGTCTGCAGCCCGCGGGG
CTCGGAGCAACCGGAACCGGGGGTCCAGAGTCTAGCAAGAAGTTGTGCAAGGGTCGGCTAGGC
GGTCTCCGGGTGTGCACCCCGCCGCTCTCCCGCGGGCCACATCTCTGGTTCGGTGCCCCAGCT
CTGTGCACCCCAGGAAAGTGGAGGGAGGGAGTTGGGGCTGCCACGCTGGCAGAAGCGAAGTG
GACTGGTTCTGAGGGGTGAGGCTGGGGCTGTCCAGGGTAGGAACACGGCGTTGGTGAAGGAG
GGGGGCTCGCGACTGCGCGACCGCGGCGCACGACCCTCCAGGCTCTAGCTGGGGCGCCGGCA
CTGAGAGAGCTGGGGGCTCTGGCAGGGGCTGCGCGCTTGGGGGCAGATCAGGAAGTGCAGC
(SEQ ID NO: 422)

473. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CNDP1. In some embodiments, the sequences from gene CNDP1 comprise or consist of:
CCACTCCTTGTGGAACCTCAAGAGGGTGTCTCAGCTTCCCAACCCCATTAGGGATTGGTCCTTCC
TTCTGAAGGCTCCCATGTCACTTAAAACTAGGAGCAAATCAATCTGTTATGCCTCTTCTCCAATTC
AACTGCCCTTTGCAAGCTGATTTTGCAGCGAACCTTCAGAGAGCTGGGAAAACTCTACCCTCGG
CCCCTGCACAGCCCTAGGAAGCTAATCCTCGGCCGTAACATTCCATCACAAGGGCCCACAGCCA
CAGTGTGTGGGGGCCTGTCATGTGAGGGGGCTGTCACCTGAGGGGGCTGTGCCGCTGGCTCA
GCTCTGCCTGCTGGCCGGGGCCCTACTCCCTCTCAGAGATGACACACAAGTGCCCCCAAAGAA
GAACCCGAGGAGTCGCAGGCTGGGCCAGGCTGCTGGCTTCCAGTGACATCACATGACTTTGGG
GCCACTGCCTCATCCCGTATCTGCGCGTATGAGATGCATTGTCTCTTCCTCT (SEQ ID NO:
423)

474. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CNDP1. In some embodiments, the sequences from gene CNDP1 comprise or consist of:
TGAGTAGGACCTCCTCCATCAGAGTCCGTGCATTGGGTGCCAGAATTCCATTTGTCCCGGGAGC
ATGTGCGTTAAGCCCAGTTGGGCAGGGCAGGCACCCAGCGTGGCCCCAGATGCTGCTCCTCAT
GGTGTTCTTAGGTGCTGTCTTGGCCGAGGAATGTGGTATTTGGAATTATATTTTATCAGTAATGCT
TTTGGGTAGTTGTGTGTTCTTAACAATAATTAAATGGCATTATTGTCAAGTAGTTCATATTCAAATT
GTTCATGAACTCAGTCTTCTTAAATCAATTTTTTTCTGTACTTTTTCTCTTTAAAAAAAATGAGTTTG
CTTCCTGGAAGAATTTGCCTAAATAATGGTAACAGACAGTGTGCTGTTTGTCCTGGTCCCAGGTT
CCCGACTTAAGGGCTAGTTTGCAAGAGCTAATCACCGGGCTAAATCACCCCAGGCCTTTCTCGG
CGAGGTTTCCATGGTTCAGGTGCAAACCTGAGTGTGGGTGTG (SEQ ID NO: 424)

475. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene C19orf25. In some embodiments, the sequences from gene C19orf25 comprise or consist of:
GTGGGAAGAGGCCGGCGACTGGGGTGACCGCGGGGAAACTGAGGCAGAGGTTGAGCCAGACC
CTGAAGCCTTGGCCACCGTGTTTTTGGGCGGAGGGAGGGTCAGGGCCTGGGGCGAGCTCAGA
GGGGCGGGACAGGGCGGGCTTCCCCGGGAGCGGGACCGCGACGGGTGCGTACGAGTTCGCT
GGGCGGGAGGAGCAGCCCGGGCAAGGGCGGAGAGGTGGACGCCCCGGTCAGCGCCCCCTTC
CCCGCCTTCAGAGATGGGCTCCAAGGCAAAGAAGCGCGTGCTGCTGCCCACCCGCCCAGCGCC
CCCCACGGTGGAGCAGATCCTGGAGGATGTGCGGGGTGCGCCGGCAGAGGATCCAGTGTTCAC
CATCCTGGCCCCGGAAGGTAGGGGGAGCCCGGTCCCGGGGAAAAGCGGACCTGAGACCCCGG
CAGCAAGGGGACGGGAGAGAAGCACACCCCTAACTCCTGACCCCACGCCCTGGGAACCCCCGC
AA (SEQ ID NO: 425)

476. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene C19orf25. In some embodiments, the sequences from gene C19orf25 comprise or consist of:
ATGGTATGTAAACTGCATCTCAATAAAGCCCCTGAGAGAGGAAAAGGGCCCTCTGCTCTTTCTGC
CTTCCCAGGCATCAGCGGAGAGGAAAAGGTGACCTCCAGCACCGTCCCCGAGGTGGGAGGACC
CGCCTTGGCCGGAAGTGGAGGCGCCGCGACCGCCCCGCCCCCGCTGTGTTCCGGCCGCCGAG
TGCTCATGCACCACCAGGCTCCCTTAGGTGGACAGCAATTTTGTGCTCCCGTCAGCCACATGGG
TGGCGTGTCCCCTAGTGCCGTGTTCCCCTTTTCAGAAAGACGAGCCTCGGATGCTTTTCTACCCA
GCCAGTGGAGCCTGGACTCGAACTCGCTCTCATCGTAGCGCGTCCAGGTTCGGGTTCGCCTGA
GAGGCTGAGATCCGAGTCTCAAGGGCACTATCCCTTTAAGACGGGGCGGAGCCCCGCGATGAG
CGGCGGGCCGGCGGGAGAGGAGGCCGGAAGTGTGTGTCACGTGTTCGGGGACGG (SEQ ID NO: 426)

477. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SHD. In some embodiments, the sequences from gene SHD comprise or consist of:
TCCCTCCTGGAATCCTTCCTAGAGCTGTCTGGGATTTCCTGTTAGAAACCACATCTTTCAAATAAG
GAAAACCAAGACTCAGGGAGTGACAGACCCTGCCCTCAGCCCCGCCGGGCTGCCAGGAGGCCC
CAGTCATAGCAGTGTTGGTTCTGACTTCTGTCTTGTCCTCCAACTGTGCTCTCCAAGCTATGACC
TGTGCCTGACCAGGGGGCTGGCCACAAGAGGAGAGAATCTGGGGTCCCATCCTTCCTGACCAC
CCCTCTCTCACTCCCCTCATTAGGAGGAACTGGGCAAGCCCCCTTATGGGGAAAGAAAAAAAAC
GGTTCTGCACTGGAAAATTGGCCAGTGGCTCCCTTTTCCTCTCCCACCCCCCAAACCTCTCAGTG
CCCTCACCCTCAGACAACGACAGCTGACAACAGGCAGCCAGTTCAGGCCAGACCCCTCTCACTT
CTGCCCCTCTTCCCGCCACCGCTCCCCCCCACCCCGCCCCCAGAAGCCA (SEQ ID NO: 427)

478. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SHD. In some embodiments, the sequences from gene SHD comprise or consist of:
TGCGTGGCTGGGTGGCCTGGGGAGACTGGGTGGAGGGGAGGCTCAGGATGGGCTCTCTGGAT
CGTGGAGAGCTTATTTTATGTGTGATCACAGGAGGGGACTGGGGCACCAGACAGACCCTTCCCA

GTCCTCCAGACCTCCACCTGCTTGGGGAAGTCTGTTCTTTTTATGTATTTATTTATTTTGAGACAG
TCTCCCCCTGTCACCCAGGCTGGAGTGCAGTGGTGGGATCTCGGCTCATTGCAACCTCCACCTC
CTGGGGTTCAAGCGATTCTCCTGCCTCAGCCTCTCCAGTAGCTGAGATTACAGGTGTGTGCCAC
CACACCCGGCTAATTTTTGTATTTTCAGTAGAGACTGGTTTCACCATGTTAGCCAGGCTGGACTC
AAACTCCTGACCTCAGGTGATCCTCCCGCCTCTGCCTCCCGAAGTGCTGGGATTACAGGTGTGA
GTCACTGCGCCCGGTGGATATCTGTCCCTTTTCAATGCATAATGCTGGTT (SEQ ID NO: 428)

479. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBXN6. In some embodiments, the sequences from gene UBXN6 comprise or consist of:
GTAAGTTCATGGGAGGGGCCTGAGAGGAGACGGGTGAGACAGACGCGTCCGAGCAGGTTGGG
AGAAAGGGCTTCTCTGCGAGGCTTCTCTGCCAGGTCACTGTGCCACGTGGGTTACGGAACTCTC
CTTGGTGTAGGGCTCAACAGGGTGGAGCCACGAGTCCATGAGCTCTTCGTACTTGCACAGCCCT
AGGCCTGGCATGGAGTGGCCAGGGCGAGGCTGGTTCTGCTGTCCGCTCTCCCCAGGGTCCCGC
CACGAGGGTGGCGTGGCATGGGGCACATCGCCCGGACTTCCTGTCCCTCTTGGGTTTAGGAAT
GGGATGGTGAGGCCTCCCTGGCAGCTTGTTAGGAGGAGTAAACCAAGCGAGCCGACCAGCTCC
CAGCAGGGTCCTGGCACACAGTAGGTGCTCAGCAAACGAAGCTGTGACCTGAGGGTGGAGAGT
CTTATGGCAGGGAGGGAGGGAGGATGTGACACCCCTTGAGTCTCCTCAATTCCTGAG (SEQ ID NO: 429)

480. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBXN6. In some embodiments, the sequences from gene UBXN6 comprise or consist of:
TTCTCTCCCTGCGGCAGCTCTAGCCCTTTCCAGACCCCCATCCTCCTCCCACTCCCCCGGAGAA
CATTCTGGGCAGAAGGTGCAGACAGTGCAGGGGCCTGCAGTGGGGAGCAGCTGGGGTGTGGG
AAGAACTGCGGGGAGCCCAGGGGAGACAGGCCACGGGAGGGCAGTGGGCCAGGCTGGGAAG
GGCTCTCTGGCCAAGGGAAGCTTTAGGATTTTGCAGTGGGAGGGCGTTGTGCAGTGGAGTGAT
GCTGACGCTCCCTGGCTGAGGTTCCAGAAGGGTCCCTGTGGCTGCCCAGGGGGGCAGGGTCC
ATGGCTGGTTGGGGTGAGGTGCCCTGGGAAATGGCATTTTGTTGGAAAGACCCAGATATCGGAT
GAGGCCGGGGTGGGTCTTCATGAGTCATCTCCTCTTCCACCCAAGATGCTCAGCTGTGGGAGGA
CTAGATAGGCAGGGGTGGGACGAGGAGGGAGGGCTGCCCGGGTATGTAAGCAGAGCCAG
(SEQ ID NO: 430)

481. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TNPO2. In some embodiments, the sequences from gene TNPO2 comprise or consist of:
GTGTGTGTAGGGGCCTGTTTCGGTGGGGCTTGGTTGGGTCTGATTGGGGGAGGCCGCACTGAA
AAGTTGAGCGGGGTGGGGGGAGGGGAGCTCGTTGGGTCCTGACAGGGAGGGGCGTCAGACTT
CGGCCTAGAGGGTTTTCTTGGATCTGACTTCGAGGCGTTGCTGGGATCCGTTGAGGGGAATGCC
CCGGGGGGGTGTTTACCCAGGCCGAACTGGGGGAGGCTGCAAGGATCGGACCAGGGGGTTACT
GACACGAGGTGGTGGGGGGCTCGGCCGAACTTGACTGGGAGAGGCAACAGAGATCCGTCAGC
AGGGGTTACTGCTGACAGGGTCGGAGGGAATTTCAGGGAGAGGCTTGGCCAGACCTGATTGGG
GAAGGCGACTGGGATCGGTCCAGGGGGCTCCTATAGTGGGTTGGCCGGGCTTGGCTGGCTCTC
ATTCGAAGAGGCAGCAGAGACCTACCTGGGGACTGCTTTGGGCCTGATTAAGGGGAATCC
(SEQ ID NO: 431)

482. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TNPO2. In some embodiments, the sequences from gene TNPO2 comprise or consist of:
GAGGACCGGCTGGCTAGAGAGGCCAAAGAAACGGCAACTCTTTGGTCACGTGACCGGACCTTG
TCTCAGCCCGGGTTTCCCAAGTGCCAGGGCACGTGTGAAGGTTGAACCTTCCGATTGGCTCGGC
GGGACCAGTTTGAACGGAGTACGGGAGCCGCGGCGGCTCACCTACGGCCGCGTTTTTCTTTTTT
TTTTTTCTTTCTTTCTTTTTTTTTTTTTTTTTTTTTTTTTTAATTCTCTCTCTTTGGCTCCCTCCTTCCGC
GCGAGTCTCTGGAGAAGCCGCAGCGCGAGTTGCCGCCGCTGCTGCCCGGGGCCGGGTAAGTG
GGCCTCACTCAGAGCCCGACCCTCTTGGCCCCGGCTTGCGTCGACCCCCGCCGGGCACCGAG
CCTGCGCCGCGCGCGGCCCGGGCGTCGGGGCCGCGCCCGACCGGGAAAGGCCGGGAAGCCG

GTTGGGCCCGATCCTCCTGGCAGCTAGAACGGGCCGGGCGGGGGAGGGGGGAAC (SEQ ID NO: 432)

483. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NFIX. In some embodiments, the sequences from gene NFIX comprise or consist of:
TTATTATTTAAACTTCAAACAAGCAAACAACCAAAAAAAAAAAAAAAAAACCAAACAAAACCGAGAG
AGCCCATCCTTCTGTCACCTGACTGAGTGGGAAAAAGGGTGAAGGGGTTGTGGGAGGCTGGGG
AAGGGGTCGCAAGAAGACCCATGTAGCTTTTAACCCTAATGTGGCCGAGACAAGCACCTTATTTG
TGCTAACAAGAAGTGTTTTGTTCATTATTACTGTGATTAACATTAGTATTGGTGTCGATAACAAAGC
TGAAATCACATATTTAGGATTTAGGTCTGATTAAAAAATGTTGGGGTGGATGTTCCAACTGGATCA
GGAGAAAAGAAAATGAAAACAGCCTGGGGAGAGGGAAGCCTGATCTGTTTCCTCACTCGCTTGC
TCGTGGATGTCATTTTCTGTCTTCTTGGGGGCGGCCAAAAATCGACCGGTGTCGGGGACCAGAG
GCGGCCCCGCACGCCCCCGCGTGTGCGTCCACGGGCGTCTGTGC (SEQ ID NO: 433)

484. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NFIX. In some embodiments, the sequences from gene NFIX comprise or consist of:
TGTGTGGACGGCAACGTTGTCTGTGCGCGTGTGTGTGAGTGAGTGAGGGAGAGAGAGAGAGAA
TAGGTGTGTGTAGAGGCTCCCGGTGCCTCTGTCTGGCTGCTGAGGCTGAGATGGGAGCAAGTG
GCTGGCGAAGCTGGTGGTGGCTTCAAACCACACTTTCGTAGAACAATCGCAAGAGAAAATTGTT
GGGGGGAGGGAGGAGGAGGAGAAGGCGGTTTTCCTTGTGCCCCCCCTTCTAACGCTGCTTTTC
TCCTTCTCTCTTTCCCCCTCATCCCGTCTTCCCCTCCTCCCGTCCTCCCTCGCCCCGCATGCTCC
CGGCTTGCCGCCTGCAGGATGAGTTCCACCCGTTCATCGAGGCACTGCTGCCTCACGTCCGCG
CTTTCTCCTACACCTGGTTCAACCTGCAGGCGCGGAAGCGCAAGTACTTCAAGAAGCATGAAAA
GCGGATGTCGAAGGACGAGGAGCGGGCGGTGAAGGACGAGCTGCTGGGCGAGAA (SEQ ID NO: 434)

485. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RHPN2. In some embodiments, the sequences from gene RHPN2 comprise or consist of:
GTAAGTGGGAGCAGCACACCTTCCAAAAGCCTCTGAGCCAGAGATCCTTCGTACATCCAGGGTG
CTGCACAAAGAGGTCAGATAGCGTTCTAGACTGGGGTGTGGCAGCCCCCACTTTCGGAAGTGAG
AGAACCATCAGGTTTGGGGTTGAGTGAGGTGCTAGACTGGAAGGGATGAGCCCATTTGTTGGGA
AATACCTGCAGTGTTGGACAAAAAGGCATTTGTGAGGCCGGGCACGGTGGCTCACTCCCGTAAT
CCCAACACTTTGGGAGGCTGAGGCGGGTGGATCACCTGAGGTCAGTCTGGCCAACATGGTGAA
ACCCCGTCTCTGCTAAAAATAAAAAAAAAAATAGCCAGGCGTGGTGGTGCACACTTGTAATCCTG
GCTTCTCAGAGGCTGAGGCAGAATTGCTTGAACCCGGGAGTTGGACGTTTCAGTGAGCCGAGAT
CACACTACTGTACTCCAGCCCGGCTGACAGAGCAAGACTCTGTCTCAAAAC (SEQ ID NO: 435)

486. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RHPN2. In some embodiments, the sequences from gene RHPN2 comprise or consist of:
ATGCACCACCACACCCAGCTAGTTTTTGTATTTTTTAGTAGAGACAGAGTTTCACTATATGTTGGC
CAGGCTGGTCTCGAACTCCTGACCTCAGCTGATCCACCTGCCTCGGCCTCCCAGAGTGCTGGGA
TTACAGACGTAAGCCACCATGCCCGGCTGGAATCATTCATTTCTTTTCAAGTGGGTATCTTATGGT
ATTTTAGGGCATGGCTGGGAGCAGTTTTGTTTTCTCTTCTCAAGACTGAGTGTTTGCAGGATGTC
ATAGAGTTCATGTCTGCAGCTCACAGTGTCATTGCCTGTGTCCCCAGCTCCACGTACTGGCAGGT
GTGCTGCAAGCTGGGTAGGTGCCCTGTGTCCCTGGGATACCTTAACCGACACTCCTGGCCCTCC
TCTGCAAGCTGTGCCCTGATCCTCCCTGCAGGGACTGGGGATTGGGTCTGCTCACCTAGAAGCC
AGGATACCTGGCTGAGGGCACTTCTCTCCCTCTTCTCTTTGAACA (SEQ ID NO: 436)

487. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SCN1B. In some embodiments, the sequences from gene SCN1B comprise or consist of:

AGATGGGGCTTGGGAGGATGACTGAGGAACGTGTGTGTGCTCGTGTGCATCTTGGCTAGAGGC
AAAAGCGGGGTCTGGTTGACTCCAGGCGTGATCCTAGCCCCCCACCCCTGTGCCCTCCCTGCCT
GAGGTCAAGGTGTCTGAGCCCATCTGTGTGCCATCTGTGTTTGTGGGTGTCAGGGCAGGGGACA
GAATCAGGGTCAGGTAAGGGAAGAGAGGCCCAGGCAGTGACACCTTCCCCTCCCTGGCTACCC
CTAGATCCTGCGCTATGAGAATGAGGTGTTGCAGCTGGAGGAGGATGAGCGCTTCGAGGGCCG
CGTGGTGTGGAATGGCAGCCGGGGCACCAAAGACCTGCAGGATCTGTCTATCTTCATCACCAAT
GTCACCTACAACCACTCGGGCGACTACGAGTGCCACGTCTACCGCCTGCTCTTCTTCGAAAACT
ACGAGCACAACACCAGCGTCGTCAAGAAGATCCACATTGAGGTAGTGGACAAAG (SEQ ID NO: 437)

488. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SCN1B. In some embodiments, the sequences from gene SCN1B comprise or consist of:
CCGCACACCCCTCTGCACTCCTGCCCCGGGGGAGCCGCGCTGGCCTGCAGTCTCACTCAACAC
CTCTGGGGCGGGCCTAGGGGTCCTTTCTAAAGCTCTCAGGTGAGGCAGTGAAGGGCCACAGGT
GCGGGGCCCACCCTCTGAGCAGCAAGGGCCTACAGCGCTTTTGAACGTCTCATCATTTTGCCTC
AGCCACCCTGGACCCCTTTTCTGAGGGAGGTCCGCCCCTTCTCTGATCCATCTTCTGCTCAGCAT
CAATTGCAATTGTCCAGCGCCCTGTGGCCACTGGCTTAGAGTTGGGGAAACAGCCCAGGCCTTG
AAGCAGCTACAAGCCGTGGCAGAAAGGTCTCTCAGGGCCACGGCACACACATCCTCATGGGCA
ACACGCACTGCCCATCTTTTCTGTGAGATGGGTGCCGGCCTCAGTGCCTTACACGGAGTCCCTT
AGTGAATCCTCTCCCCACCCTCTGGGGTAGGGGCTCTTCCTATCCCCATTTTA (SEQ ID NO: 438)

489. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SAMD4B. In some embodiments, the sequences from gene SAMD4B comprise or consist of:
TGTATGGAGTATGCAAGTCTCAAATATCTCCAGCCTGCACTCATTCATTAATGCATGGAGGCACT
ATTCTAGGTACTGGAGACAGAGCAGTGAATAAAACATTCAAGGTCCTGAAATTCATGGAATTTATA
TTCTGATGGGGGGAGGAAACAAAAAAATCAGAGTGTGATTCATGCTGTGAAGGAAATAAAACAGT
GTGAAAGAGAGGGTGGGAGTGGCCACTGTAGTAGACAGGGGGATCAGAAGAGGCCTCTTTTGG
GAGGTGACAGTTGAGCCTGATAACCAGAAAGATGAGAAGGCACCAGTTGTGGGAAGATCTGGGA
GTGGAACATTCTAATCTAAGCATTGTTACATGCAGAAAAAGGACCTCTGCAAGGTGGGGAAATTT
ATCACAGATATTTATTGAGGGCCTGCTATGTACCAGGTGCTATGCTAGGAATTGGAGATGTAGCA
ATGAATAATATAGCTACAGTCTTCCCTTCTCTCATGGATCTTACAG (SEQ ID NO: 439)

490. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SAMD4B. In some embodiments, the sequences from gene SAMD4B comprise or consist of:
TGAGCCCAGATCTGATTGATGAGAAGGAACCAACCTTGTGACGGTCCGGGGAAGAGCATTTCAG
GCAGAGAGGTCAGCAGGTGCAAAAGCCCTGCCATATGTTCAGGGAATCGCAAGGACCAGTGTG
GCTAAAGCCTAAGTGAGGGAGAGGGGTGAGGGTTGGAAAGGCTGACAGAAGCCAGATTACTTG
CAGCCTAAGGGCCACAGTAAGGAGTTTCTATTTTCATTTAAGGGGATTGGGAAACTATTAGAAGG
GAGTTTTTAAAAGCAAGACAGCGACATGATCTGATTAATTTTTTTAGAAAGCTCACTTTGGTTTCT
GGGAGGAAAACAGAGGGTCAGGACAGAATCAGGAAGGAAAGTTAGGAGACAATCCATTTGTCCA
GATGAGAAATGGTGACATGAATGTGGTGGTGGTGGTGGTAGTGAAGATGTAGAGAAGCAGATAT
ATTTTGGGTGTACAGAAAACAGGACTTGATGATGGGATTAGAGAAAGAGA (SEQ ID NO: 440)

491. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PAF1. In some embodiments, the sequences from gene PAF1 comprise or consist of:
GTATGTAGTAGGCTATACTATGTACGTTTGTGTAAGAGTACTGTATGATGTTCACATGATGTATAT
CTCAGAATGTGTCCCTGTTAAATGGCCCATGCCCGTATTTATGTAAATACACCGTATAACACACAC
ACACAGTGTAGGGCAACCAAACTGGTGCCATGGGAGCCATCCTTCCTTTCCCCTGCCCTCAATA
CCTTGAGCTTAGCTGCCCTTATTCAATCTGTATTTATTCCCATTTACTCTAAGTATTGATGGGGAA
CCAAGTCAGACCAGACCCCTCACTGGGGGGCGGGGAAGTGGGAGGTGTGTCTTTAACTGCATC
TTCCACTTCTCTCTCCCAAATTCACCCCCTGCAGGGTCCGCCTTAGTAAGCGCCGGGCCAAGGC

TGGGGTTCAGTCAGGCACCAACGCCCTGCTTGTGGTCAAACATCGGGACATGAATGAGAAGGAA
CTGGAAGCTCAGGTAACAAGCACCACTGGCTCAGGGCACCCATGGC (SEQ ID NO: 441)

492. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PAF1. In some embodiments, the sequences from gene PAF1 comprise or consist of:
ATGAATGTTTTAAATGAAATGCTTAAACCCATGTTCAAAAATGTGACTCCAAAACTCTTCCCTTATG
GCTCAAAGTTTACTGCTATGCCAGCACCTCTGGTGTAGAGTTGGGAAGTCTTGAGTTTCTGTTTA
AAGCAGAGATTACAAGAACTGTGACCCCATAGGCCAGGCAGGAAATGTAAAAGAGCAGTGGCTG
GTAGCATCTGAGTGACCTGGAGTTCTGGGCAACCATGGAGGGCACTATTCACTTCCAGCCCACT
GTTGCTGTGCTGTGGGGCCAGAAATTCCTATCTTCCAAAAGCCCCAAATCCAAATGATTTGACAT
CTCCTGGTTTCTCAAAGTGTTGGTAACTAACTGACACATACAGTAATGCACTGCATGTTTCAGTCA
ACAATGGACTGCTTATGGTGGTCCCTTAAGATAGAATACCGTATCTTTACTATACCTTTTCTATGTT
TAGATACACAAATACTTACTATTGTATTACAATTGCCTGCA (SEQ ID NO: 442)

493. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CLPTM1. In some embodiments, the sequences from gene CLPTM1 comprise or consist of:
GGCTCAAACATAGATGTCACTTGTCACCAGCCTGGCCAACACGGTGAAACTCCGTCTCTACTTAC
AAAAAAAAAAAAAAAATGGGAGGCTGACGCAGGAGAATTGCTTGAATCCGGGAGGCAGAGGTTG
CAGTGAGCCGAGATCGCGCCACTGCACTCCAGCCTGGGTGACAGAGCGAGACTCCGTCTCAAA
AAAAAAAAAAAAATTAGCCAGGAGTGGTGGCGTGCTCCTGTAATCCCAGCTACTCGGGAGGCCG
AGGATGCAGTGAGCCGAGGTTGCAGTGAGCCGAGATCGCGCCATTGCACTCCAGCCTGGGGGA
GAGTGAGGCTCCGTCTAAAAAAGAAAAAAAAAGAGAGAGAGAGACGTCACTTGTCCAGGATATCT
TATCCAGTCAGTAGCACCACAAGGGTTAGAACCCTGGCCAGACATCCACCCAATTTCACGGGTG
AACAGTTAACAGCCTCTGAGAGTCTTGTCCTCTCTGGGCCTCCGTAACACC (SEQ ID NO: 443)

494. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CLPTM1. In some embodiments, the sequences from gene CLPTM1 comprise or consist of:
TTTGGACCACTGAGGGAACGCGCATGCGTGCTAGGCAGGGCAGTCCGAAGGCTTGGGGGTGTA
TCATAGGGTCTCATCGGAGGTTTGTTGGCCGTAAGACCCCTGGAATTGGAACTCTAAAAACACAG
AAAGGATATGAGCTCAGGAGACTTGAACGAAAGAGTTGTCTTAGGAAGAGGGGTCAGAAGACAA
GGGTGCTGGGCAAAAGGCTAGTTCTTCGAATCAGAATACGGTGGCCAGAAAGGTTCCTCTGACG
AAAGAGGGGCGTGGTTCGAAGCCGTACAGTGGCCGGTAAAGCTCAAGAAACATGGAACGAAAA
GGACGCGAAGAATCGGCAGGGAGAAGCGGACAGGATGTCCCGAAAGGCTCATATAACCGAAAA
GGCGGGTTAATGTGAAGGGACGGAAGGGACAGAACTTGCGGGAGGCACATGCTGGCCGAGAAA
GTCCTGGAGTTCGGAGCATACAGTGTTTTTATTAGGTGGAAACAAACGGGCTGG (SEQ ID NO: 444)

495. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLC1A5. In some embodiments, the sequences from gene SLC1A5 comprise or consist of:
GTATCTAATAACCCTCTGTGTGTCTGTCTCTGCAGAAATATCTTCCCTTCCAACCTGGTGTCAGCA
GCCTTTCGCTCAGTGAGTCCTCAGGGGTGTCCTGAGGGGATGGGGGTGGACAGGGAGGGATGC
CAGCCAGGGGGAGCCCTTGCTACCTGATTTTGGTTAGTTCCTGGAAAAATGCATGTCAATGAGAA
TACGGGCTCAGAGCCTCCTGTGAGTTTTAATTCTAGCTGTGTGACTCTGGGTAAATGTGTTTACC
TCTCTGAGCCTCGGTTTTCCACCTCTGGAAAATGGGGGTATTGATCATCCTGCCCCATGGGGTTG
CCAGCAGATGAAATGAGATCACATTGAAAGGATGTGGAAGGGCAGGCTTTGAGCATTGTTAGCTT
GGCATGGGGTTGGGAGGCCCTGGTAACGATGGACACTGACTCTTCCCAACCCCACCTACAGTAC
TCTACCACCTATGAAGAGAGGAATATCACCGGAACCAGGGTGAAGG (SEQ ID NO: 445)

496. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SLC1A5. In some embodiments, the sequences from gene SLC1A5 comprise or consist of:

GAGAGAGTCTCACTCGGTCCCAGGCTGGAATGCAGTGGCTTGATCTTGGTTCACTGCAGCCTCA
ACCTCCTCGGGCTTGAGTGATCCTCCCACCTCAGCCTCCAGAGTAGCTGGAACTACAGGCACAT
GCCACCATGCCTGGCTAATTTTTGTATTTTTTGTAGAGACACGGTTTCGTCATGTTGCCCAGGTTG
GTCTTCAACTCCTGGCTCAAGCGATCTGTCTGCCTTGGCCTCCCAAAGTGCTGGGATTCCAGGC
AAGAGCCATGGCGCCTTGGCCTTAGCTACTATTTTCATCTTAAGGCAGACACTGTCACACAAGAG
TAAGGGTAGCCTTGTAAACACAGATGCATATTCATGAGATATGAAGCCGTCCCTTTTCTCCCTCC
CCGCCACCGCCTCCCAACACACCCAGATCCTCCCCCATACTCTCAGAGCCGCTGGCAGGCCCT
CCAGGAGGAAGTGGCTGATGCAAGCTGTCCAGGGTATTAAGTTTGCTG (SEQ ID NO: 446)

497. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RPL13A. In some embodiments, the sequences from gene RPL13A comprise or consist of:
GAGAGGCTGAGGCAGGAGGATCCCTTGAGCCCAGGAAGTGGAGGCTGCGGTGAGCCATGATC
GCCCCACAGCACTCTGGTGTGGACAACACAGCGAGACCCTGTCTCACAAAATAAAGTAAGCCCG
GACTGAGTGCGGAAAGGCGGGCCTGGCGGGTCTGGTCTCCCCATGCGGGCCACCAGAGGCCC
TGCAGCCTTCAGTCGCTTGAAGGGGTAATGGCGCTTCCACTCACAAACATGGCGGACAGAGCGT
GTGAACGAGATGAACAGCCCCTCAAAAATATGGCCGCCGAGGCTGGACGGCCGTGCCCCAGCA
GCACCGCCTCCGCGCCCCACGTGATCTCTCGCCGGGCACAGCGCTGACCGCGGAGGTCCAAC
CGGAAGAATGTCCGGATTGGACATTCGGAAGAGGGCCCGCCTTCCCTGGGGAATCTCTGCGCA
CGCGCAGAACGCTTCGACCAATGAAAACACAGGAAGCCGTCCGCGCAACCGCGTTGCGT (SEQ ID NO: 447)

498. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RPL13A. In some embodiments, the sequences from gene RPL13A comprise or consist of:
TTTTCCAAGCGGCTGCCGAAGATGGCGGAGGTGCAGGTATGGGCTCCGCGCGGGCCGGGGCG
GCAAGGGGCCGGGTGGGATCCAGGCCGGAATGGGGTCGCACCCTCTCTGTCTTGCATGTTTTG
CGGAGCTTAACATCCATAATGAAGCAAAATGGAAGTCTTTTGGGATAAGGGGAATCTGTAGGAAA
TGCCGCGGCTCTCTTTAGGCCTAGGGTTGGCTACAATGTGGCATTTCCTTCTCGAGGCGAGGGT
GATAGAGCTTCCAGCACAGGACAGGTATTTTGCAACTAGATTTTGCTTACCTTGAACTCGGGTAG
TGGGTGGGGGCCCTGGGGTAGAGTCTTGGCCGAATTGGACCCTTGTGTGTCCTCAGCGATGAG
GAACACGCGGAAGTGTGGCCGGGCGGTCTCGGGGCAATGAGAAACTGAGTTTTGGCCAAAATG
GAAGGTATTTTTATCCCGCTCAGTGCGCGGGCTACTTTGATTTCACGTGGAGGT (SEQ ID NO: 448)

499. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NOSIP. In some embodiments, the sequences from gene NOSIP comprise or consist of:
GTATGCACCACCACGCCCAGCTAATTTTGTATTTTTAGTAGAGATGGGGTTTCTCCATGTTGGTCA
GGCTGGTCTCGAATTCCCAACCTCAGGTGATCCGCCCACCTCGGCCTCCCAAAGTGCTGGGATT
ACAGGTGTGAGCCACCTCACCTGGCATTTTTTTTTTTTTCCCCAGAGACAAGGTCTCACTCTGTCA
CTCAGTCTGGAGTGCAGTGGTGCAGTGGCACGATCATAACTCACTGCAGCCTCAACCTCCTGGG
ATCAAGTGATCCTCCTGCCTCAGCCTCCCAAGTAGCTGGGACCACAGGCGCATGCCACTATGCC
CGGCTAATTTTTTAAATTTTGTTTTGTGGAGATGGAGTCTTGCTATGTTGCCCATAGCAAGTTCAA
GTCTGGTCTCAAAAACCATGCTGCTGCTGCTTTTTTTTGGTAGAGACAGGGTTTTGGCATGTTGC
TCAGGCTGGTCTTGAACTCGTGAGTTCAAGTGATCCTCCTGCCT (SEQ ID NO: 449)

500. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NOSIP. In some embodiments, the sequences from gene NOSIP comprise or consist of:
GCCATGTTGGCCAGGATGGTCTCGATTTCTTGACCTCATGATCCGCCCGCTTTGGCCTCCCAAA
GTGCTGGGATTACAGGCATGAGCCACCGCGCCCCGCCTGCATGGATGTATGTTTTTATTTCTATT
GGCAGTGGAATTGCTGGGTCAAAAGGTGACTATTTAACCTTTTGAGAAACTGTGACTTTTCCAGA
ATGGCTGTACCATTTTACATTTCTACCACCAATGTATAAGGGTTCCAGTTTCTCCATATCCACACC
AGCACTTATTATTTATCTTTTTGATTATAGTCATTCTAGGGGGTGTGAACTGGTGTCTTTTAACATG
CTTATTGGCCATTTGTAGATCTTTGAAGAACTGTCTATTCCAATCCTTTACCCATTTTCAAATTGTG

TTAGGTGTCCTTTCATTATTGAGTTGTAAGTTTTTAATATATTCTCACTGCAATTCCCTTATCAGAT
ATCCTGATTTTTTTTTTTTTTTTTTTTTTTTTTGAGACA (SEQ ID NO: 450)

501. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NUP62. In some embodiments, the sequences from gene NUP62 comprise or consist of:
AAACCCACCTTGTCCCATCCACATCAGGACATCCCAGCTGGAGTTCAACCTTCATCCCTTCTGTG
GCAGTTAGGAGACTGAATCAAGGTCCAGAGAAGGTGGAGGAATCCTGATACTGAGCGGTACACA
CAAGCTTCTTTCTCCTTCCTTACCTGTTGCGGGCAGGAAGTCCTTCTTGGGATCTGACCACCTTC
CCTTAGAGCACTTACTGTCCACTCTGCCAGTTTTTGAGCACTTGCCCTATATTTTCTTGGGCCTAT
AGGGGCTGTGTTATCACTGAGGCAGTATACAGAGTAGCAGCTAAGAGCATAGACTGAGCTTGTC
CCACCCGTGGGCCTGCATGCGGCCTAGAACAGCTTTGAATGCAGCCTAACACAAATTTGTAAAC
CTTACCAAAACATGCGAATTTTTTGCGATTTTTTTTTAAGTTCATCAGCTATCAATAGTGTATGTTA
TGTGTGGCCTAAGACAATTCTTCAATGTGGCCCCAGGAAGCCAA (SEQ ID NO: 451)

502. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene NUP62. In some embodiments, the sequences from gene NUP62 comprise or consist of:
AGACGGGGTTTCACTGTGTTAGCCAGGATGGTCTCAATTTCCTGGCCTCGTGATCCGCCCGCCT
CGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCATCGCTCCCGGCCTCAGCATATTTTATT
AATAGGAACTCTGGGGCCCAGTCTCATTTCTTCCTTACCACTTGTAAGAGCCGCAGACGTTGGAC
TGTCCAACACCTGCTGTCATTCTTCTGTCTCCCTCATCCCTCTAAAGTGTCTGTTTCCAGCTATCC
TCATCTTCCATTCCAAATGATGGGTGCCCAGGCCCCATCCCCTGGCAGGGATTCAGACATCGAG
GCCCCAGCTGCGTCCTTTTCTCCATCCCTTGCCCTTGGCTTCCTTTCAAACCGTCCTTCAGCTTC
CACTGGATAGGAACTATCTCCCAACCCTGCCAAAAATGGAAGATCTCCGTTTTCGTTTAGTCACA
GGGTAGCCATCTTGCCCCTTCTCATGCACTGGGCCCTCCTCCACCA (SEQ ID NO: 452)

503. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATF5. In some embodiments, the sequences from gene ATF5 comprise or consist of:
GGCCCCAGAGTTCCTATTAATAAAATATGCTGAGGCCGGGAGCGATGGCTCACGCCTGTAATCC
CAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGCCAGGAAATTGAGACCATCCTGGCTA
ACACAGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGTGGTGGCGGGCGCCT
GTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCGTGAACCTGGGAGGCGGAGTTTG
CAGTGAGCCGAGATCGCGCCACTGCACTCCAGCCTGGGCGACAGAGACGGAGAGACTCCGTCT
CAAAAAAAAAAAAACAGTTGAACAGGAATGTATGAGTTGAGCTCTGTGCATAAGGCTTGCCAGACA
TCGTCTTATTTGAGTCTCATAAACCCACCAGGCGAGTTGATTTTTCTTATTTTACAGATAGGGAAA
TGAAGTAAGAGAACTTAAGTTATTTGCCCGAGGCCATCCTGGCAGGTCTGT (SEQ ID NO: 453)

504. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATF5. In some embodiments, the sequences from gene ATF5 comprise or consist of:
TCGGATCCCCAGCTGAGAGGGAGGAGGGTCCCGGACCCTAGGAGTGGGAAGGAAAGGCTCGG
ATCCCCTGATCCCCAGGAGGAGGGGACCCGGCTGCCTCCCGGTTGGGGCCGCGCGAGGGCGG
GGCGCGGAAGGATCCGGGAGGGCCGTGCTCCGCCACCCAGTATATATCTGTCCCCAGTCCCCG
GGGCCGCCTCATTCCCTGTCCTCGGATCACAGTCTCTTCTCACTACAGTGTCGCCGCCTCTGCC
TGCGTAGCCCCGGCCATGGCTCTGTAGCCTCGACCCCTTTGTGCCCCCGGCCCGTCTCCGCGC
TCACCACGCCTGCGCTCTCCGCTCCCACCTTCTTTCTTCAGCCGAGGCCGCCGCCGCCTCTCCT
TGCTGCAGCCATGGAGTGAGTAACCGCTTACCTCTTCTCCAACTGCCTTTCCCGCCCTTTCGCAG
CTCGTGGCCCTCTTTAGGGAGCCCTGGGGGGTGGGGAGTCGCGAGCGGGGAATCAC (SEQ ID NO: 454)

505. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTPRA. In some embodiments, the sequences from gene PTPRA comprise or consist of:

GTTTTCTTACTTTGTCAATTTCTAATTTTATTGCATTGGGACAAAAGAATATTGTACTCTTTCTACTG
TTGGGGTTTATAAGGGCTGTGGATATTTCACTCGCCTTTGAAAAGAAGGTTTTCTCTGTTAGTCTG
TAGAGTTTGGTATGTACCAATTAGATTTTATTACTTATCATTTTGGTCTTTTGTATCCTTACTTAATT
TTGTCCTCTTGAATTTTAATGGAGCAAAAGACATAAAGTCCTCTAATAACATGCGTTCTGTTTGCA
TTCTCATACTTTTTATGAATATTGATGCTGCACTATTTGTGTACCCAGGGAGAAGGCCAGACCACT
GTCCAAAGTTTAGTGAATCTGGGCAGCCTTGTTTCCCAGTTGTTGGAGGATGCCTCATGGAGGAA
AGCATTCCTAATCCTGGAGCTTGTTTTGTTGTACTCTAATTGAATTGTAATGTGTTTCTTTAACCTG
AATGAATGTTTCTATTTTTTACTTATTACACAG (SEQ ID NO: 455)

506. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PTPRA. In some embodiments, the sequences from gene PTPRA comprise or consist of:
TGAGCTGCTCACCTTATATCTGTTGTTCCTTTTACACAGTGTACAGTATTCATTTATTTCCTCTGCT
CACAGTCTGTGGTAACCGTGTGCATCTGTGGCTGTGTTGTTTGTTTACTTTCCCTTAAGTTATTTC
CATGTTAATCTCATGGAGAAGAGCAATAGAAACAAGTACTGTATTCAGTATGTTTTTTAATATAGA
CTATGGATTCTAACAGCTATGATGTATTTTAACAAGTAACAAAATATATCTTACTTTGACATGTCAC
TTTGTTAACATTACTTTTTGGTGATATTAGGTCATAATTTCTATACCATTAGTTACTTCTGATTTCTA
GGCCACAGTTCCCTTTAAATATTCTTTGTGTTGTTTTTCCCCTAGTGTATAAAATGTCAACCCTTTG
TGGCTTTATATGGATTTTATGGATTTTCAGCCCTTAAATGTAAAGTCTCTATGGCCTGAGATGTTG
TGTCTGTGGTTTAAGCTGGACTGCTGAGTCCC (SEQ ID NO: 456)

507. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPX2. In some embodiments, the sequences from gene TPX2 comprise or consist of:
AAAGAACAGACCTTCTTAATTCGAATCCCATCTTCTCCATTTATTATGTGATTTTGGACATGTTTGT
TCAACTTCTCCTAGACTTTGTTTTCTTTTTACGACATGGGGATCATAAAGCCGGGATGCAGTTGG
GAATAAAACCGGATAAAGCTCCCAACGAACCGCGGGTTTCATAAGATCAGGGCAGGGACTGGGT
AAAAGGTTTCAAAGACTCCTGCACTATTGGGAAGGACGCTACGGGCGAGTCTATGTTGCATGCA
GGCGACTCCATGTTAAGACGAAGTGAACTCCCTGAACCTTCAAGGGATAATGCACAACCATAACG
AGAATAATTTTTAAAAATAGAGTTTTCTTCCCTGAAAACTTGGAGAGGTCCAGGATGCGCGCCATT
CTGTGATCTAGGTTGACTCTCCACCTCTTCAGTTGGTACCACCTTTCCCAAATAGTTTGGAGCAG
AGCACTCCGGTCTTTGTAATAACGTACTCCTAAGAGCTGTTCC (SEQ ID NO: 457)

508. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPX2. In some embodiments, the sequences from gene TPX2 comprise or consist of:
TAACGATAATTATTGTTATTACCATGCTAACAGGTTATAAACATTGACTGAACTAAGCACCCTGCA
TGCCCGTTCTCATTTAATTTCCTCGCCAAGCCAATGTAGTTGGTGCTATTCTTGGTCCCTCTTGAC
AGAAACTGAGGAAGGAGGAAGGAGGAGGAAACTGAGGCCCAGAATCTAGATAAATTTCGAGAAA
TGGGTGATACAGTAGCCATGCCCTCAGGAAGTGTGGCGTTTGATGGAGGAAAACAGAGGTAGTC
ACAAATAAGTACATTTCAAAACTGTTGTCTAAAACAGGAAGATAATTAGATGGTGTGAGAACATAA
TTGAGGGAGAGTTTAAGTCCACTTGGAGTTGTCTTCTATTTGGGATTTAAAATTCATTATATGTTAT
CCATATTTGTCCAGCTCTCTTTTTGTATGGAATCACCAGATATTATTCCCTTTCTCATTTCCTTTCT
CAACATTTATAGATTGGAGGGGGGAAGGAAAACCAAACC (SEQ ID NO: 458)

509. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CBFA2T2. In some embodiments, the sequences from gene CBFA2T2 comprise or consist of:
CAAGTCTGGATCTGAGAGGCAGCTTGTGTGAATCATTTACATACATTTCTGTTTATATTCCCCAAA
TTAATTTGCAACTTTATATTTTTCATCCAATTATATGTTCAAAACATATTTTTAATAATTGATTTTAAG
AAGGAATTTGTTATATTAGGATTTAAAAACTGGCTCAAAAAACAGAAGCTATTAAACAATAGCAGA
AACCAGACAGTATATAGGACTTTAAATGGTAATTGCTAAACATTTGAATGTTCCCAAAAATGTGAG
TCTGTGTGTCTCTGTGTGTCTCTACGTGTTATTCCACTAGGGATTTGCACAGATAGGTTTTGCACA
ATATCCTTGCTGTTATTGTCAGCCATAAACAAATTACACGTATTTAACAAGTTAATGTCAGATTGGC
CAGGAGCCACTGGGAGGTGTGTACTTAGTGACATCAGCTGGCAAAGAGCCCTGGTAACAGGGA
GGGTTGGAAGGGTAGTGGAGAGAGAGGAAGCAGGAG (SEQ ID NO: 459)

510. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CBFA2T2. In some embodiments, the sequences from gene CBFA2T2 comprise or consist of:
TAAGTACATTTTAATATAGTTTTGGGGGTTAAAGTGCACAATTCTCTGCCTTTCAAAGCTTTTTACT
TCTTTCAAATTACGATGATATGAATGTTTCTTGGTATTTGATACAAGAGTTCAGCCTTTCTACTCAG
TTTTATTTTAATGCTTCATTTTATTTATGTTTCTATTTTTCTGTTGCCAACCTTATATTTGAATGTCAT
GCTTTTTTGAATGCAAGGTTTACTTAATAATTAGATGTAGTATATGAATTCTACAGCTAGAAAAGTA
GTCCCACAAATATTTCTGTAAGGTTTTCCACGTTGGATTGTTCTGTGATGTTTAGAGGGAATTTTT
TTCCCCTTTAGTATGCATAATACAAATAGGCCATATTAAAAAGATGGCTCATAAAACGCTCTTTTCT
ATTGTCAGATTTTATTTCAGTATATGCAGGCAAATTATAACTAAAAGAGGTTGAAGCAAAACTAAC
AGCATCTCTTCGTTTTAGATATATCTAACA (SEQ ID NO: 460)

511. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DYNLRB1. In some embodiments, the sequences from gene DYNLRB1 comprise or consist of:
AGCAGAGTTCTCGCAATTCCTACTTAAGCAGAATGAAAGCCATCAAGGGCAACAAAGTGGAGGT
GCTGTGTCCTTGGATAGAATGTTGATTTCCAGCCAGGCGTGGTGGCTCACGCCTGTAATCTCAG
CCCTTTGGGAGGCCGAGGCGGGCGTATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAA
CATGGTGAAACCTTGTCTCTACTAAAAATACAAAAATTAGCCTGGTGTGGTGGCGGGCACCTGTA
ATCCCAGCTATTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCAAGGAGGCAGAGGTTGCAA
TGAGCCGAGATCACACCACTGCACTCCAGCCTGGACGACAAGAATGAAACTCGGTCTCAAAAAA
AAAAAAAAAATGTTGATTTCCAAGTCAGCAGAGCCCTGGCAAGCACAGAGCTAGACAGAACGTG
CTCCCCAGCCCTGTCTAGTTCTGATTAAACCATGTGGTCATTTCATTTACAG (SEQ ID NO: 461)

512. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DYNLRB1. In some embodiments, the sequences from gene DYNLRB1 comprise or consist of:
TGAGTGCTGCTTTTTTGTATACTCATGGGGCTGATTGCACCATAGCTGAGAACGTGGAATGCAGA
ATGAGCCCACCTGGCTTTGAATCTGGGCCCTACTTAACTTATCAGCTATGTGGTTTTGGGCATAA
GCCACTTTCTCTGTTAAGTTTTCTCATTTGTAAAATGTGGGTCATAATTCTGCCTTCCTCTAGGGG
AAGCTTTTAGAATAGTGCCTGGCATGAAATGCCTATGAATGTCTCAGTTAGTGTGTGTGTGTCTTT
AACTTGCGTCCCATTCTCAGGGCCCCCACATCAGTGTCTCGTTTACATCTCACACAGTGACCCTG
CGAGGCAAGGGTTTGCCCAGTTTGCAGATGAGAAACCCAAAGCTGAGAGAGGTGTGGGGAACC
GCCCAAGGTCACCCAGCTGTGAATGAACGTGGTCAGAACACAGAATCTGAGTTGGTCACACTTC
CCACTGATCCATGGGGCCTTTAAGCCCTCTGGAAGCTTCCATTAA (SEQ ID NO: 462)

513. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ERGIC3. In some embodiments, the sequences from gene ERGIC3 comprise or consist of:
CGGGGGTGCTCTGTATTTGGAAGGATGTATAAATGCAAAGGTACAGTTGCCCAAGGCCAGAGAT
CTGGCTGAATTGAGGCCTGGGAGTGAGTTTCTAACATCCTTGTTGATTGGGGCTGGGGTGGGTA
ATAATCTCTTACAGTGTAAAGTTTACAAGTATTTTTCCATCTTAGATCCCACGTGATCCTTAGGACA
GCCCTTTGCAAAGGAGAACACTGAGGCCCAGAAAGGGCAACTGATTTGCCCAAGGCCACACAGT
CAGGAACTTGGCTCTTTGAGCTCTAGGCCTCTTGTCCTTCTAGGCCACTATTTTGCTCCTCTCTG
GCCAGATTAGTTCACTCTCGAGGAGGGGCCCAGAAGGAGGCTTGTTAGCTGGGGCCAGACTGT
GTTGCTGAGGCTGAATGTTCCAGTCTTCCCTCCTGCAACATATCTTGCTCTCATAGTTCTCATTGT
GAAGCTCTGAATCTTTCTTCTCTCTCCTCCCTCCCCCATGCTGCAG (SEQ ID NO: 463)

514. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ERGIC3. In some embodiments, the sequences from gene ERGIC3 comprise or consist of:
TAAGTGGCCCTGCCCCCATGGAGGCCAAACCCCTACTTCTGGGGCAGCCTGCCCTACTAGAATG
GCGGGGAGGTTGGATGGGGCTGTGATTGGGTCTCCTCTGACCTGGCTGCTGGGTGACTGTAAA
AGGTCTGGGATGTATCTTTGAAGTATGGTTCCTTGCAGCAGGAGGGATTGAGGCTAGAGGGCAG

GAATAAATTGTTCTGGAACAGTTGGTACAGGGTCCCCATGGGATTTCTTCTGGGGAGCTTTGAGG
GTGGAGGCAGGGAAAGTGTGGATGGCATTCTCAGATCCCACCTCACTTTGAGGTTCAGTGATTT
GCCATCAGCTCTAGTTAGTGAGAGCCCATAGTCGGTGGGTTTTGTTTCTGGAGATGCAGGCAGG
GCCATGGTGGTAGTCAAGGCATAGAGTTCCCTGTGGACGTCAGGGAGGAACCAGGGTCTGTTCT
AAAGACTCCTGAGGAGGGCGTGAACTCTCACACAGGCCCAAGGCTTGCCCT (SEQ ID NO: 464)

515. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DLGAP4. In some embodiments, the sequences from gene DLGAP4 comprise or consist of:
GGCACCCATTCCTAGAGGCAGGAGCCCCAAGTTCTCGGGGGTGGGGTGGTTCCTGACTGGCGC
GGTGTGACCCGGGCCAGTCTCGTTCTCTCTGGGCCTCAGTTTCCCTCCTCCACGGGGCGGCGA
TGGTCAACACAGGTTCCTGCCGGCCCGCCCCGTAGCCTGGGGTTCCAGGCTCCCGTGCCACCG
CGGCCCGCGCTGTGTGACCTTGTTCCAGTAGCCTGCCCTCTCTGGACTGGCGGCCCCGGATTT
CCAAGCGCTCTTCCGGATCGCGACAGAGCGGTCGCCCGCTGCGGAGACCCTCCCCCTTCCCCC
GGGTTGCGGGGGCGTGGGTGGGGGTGGGGCGCCAGGAACGGCGCGGGCCCCCCCAAGGCCC
CCCCAGCCCCGCGCCCGCGGCCCGATCCGCGCCTGGTTTTGGGCGCAGCCGCACGGCCCCCT
CCCCCGCGCTCCTCTCCCCTCTCCCCGCCCCCTCCCCGCCGCTCTCGGGGAGCCGGGGCCG
(SEQ ID NO: 465)

516. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DLGAP4. In some embodiments, the sequences from gene DLGAP4 comprise or consist of:
TGAGGGCGCGGGGGTGGCGCGCGGCGGCTCCTACCCCCTTCCCGGGCCGGCGCGCTCCGTC
CCTCGGCTAGACCCCCCGATCTGGTCTCCTCCCCGACAGACCTCCCTGAACCGGGGGACGGCG
CTGGCGCAGAAAAGCCCCCTCCCCTGCCAGTTCTGTCTTCCGATCCCGGGTCCGAGGGGCCGG
CTGTGCGGCTGGGAAGCGCCTTCTCCGGTTGGGATCGCCCCATCCATGTCTCCCCGGACCCTC
AAATCGGGGGCGGCGGCACCGGGGCCCGGAACCCCTGTCCGGGACCGGATCCCCATTCCGGC
TCTTTTTCCCGCGGACTCCCCCGTACCCCATATCAAGCGGCTGCCAAAGCCTGGAAGCCCCCTC
CTCAGGCCCGCCCCCTAATCCGCAGGGCGGCCTGGGGGTCAGGCGGACCCCTCCCGTGCCCG
GCCAACCTTGGCGCTTGGGAGAGCAGGGCTATGCCGGCCCGGGCATTCCTCCATTCAACCC
(SEQ ID NO: 466)

517. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SOGA1. In some embodiments, the sequences from gene SOGA1 comprise or consist of:
GTGAGGCCCACCCCTGCCAAGCCGCTTCCACCCGCAAGGGAGAGTTGCTACAGAAATGATTCAG
AAGCAGGAACTCCTTCAGGTATAGCTGGATCTAGGTGCTCATCCAGTGAGGTCTGGCACACCAT
CTCCTTCAGGTATAGCTGGATCCAGGCACTTAGAGAATGCAGTGGGAACTAGATTTTTCTTTCTG
CTTCAGCCTGTCAGGCCTGCTTTCCTCTGTGTTAGCTTTACTCTTAAACAAGCTATTCCCAAATAT
GGCCACTGTTAGTTTCATGCTCATATCTTACAGCTTAGCAAGTACAGTGGATTGGCCAGATATGA
GTCATGTGCCCACCCCTGGAGCCTACCCAAACCCAGGAACCAAGAGGGAGGAACTAAGAGTGG
TTCCCATGGGAAAATTGGGAGGCCTCCAATCAAAAGAAGGAGGAAAGGAAAAGCAATCATTGAC
CCTCACTCCCCATTATAGTTCACTTCATGCAGCCAGGCACCACCTACC (SEQ ID NO: 467)

518. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SOGA1. In some embodiments, the sequences from gene SOGA1 comprise or consist of:
CCTAACCCTCTTCCAGATCTCACAGCTCCCTCCATCTGCATATTCCACGGTGTCCCCTGCACCTG
CTGCCCCCAAAGACCTGGGCATTTCAGGTGCTCCTCCCACCAAGAACCTGACCAGCTCATGGGG
GTTAATGGGGGGCATTGAGTCTAAAGGTTGCACATTCCCTTTCCTGCCACTCTGAGGTTTGAGGC
CAAGAAAACCATCTTGCTGGAATGACCACTAGTAATCTTTCTGAGTTTTTATGAGGATACTGACAT
CATGCCTGAAAAGCCCACAGAAGAGCATGGCTTATAGAAAGAGCTCTTCAAACCCTTATTGTGTG
GAGGGGTTAGGGGTTAGTTCTGAGTGGGGAGGACTAAGCTGGGTTAGTCCCTAGTGAGGGGTC
TTCTGAGGGGACCTCTCCCCTTTTCCCCGCTGGCACCCAGGAGGGAAGGAGAGAGAAGGGCCA
AGAGGAGTGGCCTCCTGCTGCCAGCTGCTTAGTCTGCTTCTTTCCGCA (SEQ ID NO: 468)

519. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DBNDD2. In some embodiments, the sequences from gene DBNDD2 comprise or consist of:
CCTTAGGGGCAGAGCCTAGTCTGGAAGTCAGGCCTGTGACTTCAGAGCAAGGGTTTGGGGTAG
ATGGCACATGCGTGTGTACGTGTTTGTGTGGGTGGAGAGAAAAGGAGGGGCGCGGGAGGAGTT
GCTTTAGCCTTTGTCTGGGTTTTGAAGGATGGGAAGGGGTGGGCTGCAGCACTGGAGGAAGGG
AACCCTCCACCCTGAGATCTCTGTCTCTATCCTATCCTGTCCCTGGCCTTCTGAGGCAAGCGGG
GCCAATTAAGGGGAAAACGTACCTCCTCCATTTGTGCTGAACCAATCCCTCCAACCCCTCTCAGG
AGGGCATGATATGGAGAGTTGGGCATTGGCTGTGTTCCCTGAATACAGAGTATCTCTCTTGTGGT
GCCTGGAACTGGCATCCCCTTTGTGGAGCTTAGGGCAAGCCCCGCCTCTGCATGAGACTTGGTT
TGTGGGACACACTTGGTTTCAGGGAAGGGGAAAGAGGTCACCAAGGGCAGAG (SEQ ID NO: 469)

520. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene DBNDD2. In some embodiments, the sequences from gene DBNDD2 comprise or consist of:
AGCTGACATGGACCCAAATCCTCGGGCCGCCCTGGAGCGCCAGCAGCTCCGCCTTCGGGAGCG
GCAAAAATTCTTCGAGGACATTTTACAGCCAGAGACAGAGTTTGTCTTTCCTCTGTCCCATCTGCA
TCTCGAGTCGCAGAGACGTAAGTCCCAAGTCCTGAGAAGAGGGACTGGGGTAGGGTAGGGAGG
ATGTCCTGTGGGTCCTGAATCTTGTGGCACTCTCTCCCCTCTGGTTTTCTTGGCCCTCTATGCTT
CTAACTTGGGACCTGACATGTAACTCTCACTGTCCTGGTGTGCAGCTTGGGTCCTCCTGACTTGC
CCACTTCTTGATCCGCAGCCCCCATAGGTAGTATCTCATCCATGGAAGTGAATGTGGACACACTG
GAGCAAGTAGAACTTATTGACCTTGGGGACCCGGATGCAGCAGATGTGTTCTTGCCTTGCGAAG
ATCCTCCACCAACCCCCCAGTCGTCTGGTATGCCCCTCTGCTTTGGGG (SEQ ID NO: 470)

521. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPD52L2. In some embodiments, the sequences from gene TPD52L2 comprise or consist of:
AAGGGTGTCCCACATCCTCCCACGGTGCGTGTGCTCCCTCAGCTGACGTGATTTGGGGAACACG
GGCCGCTCTCGTTCTGTGGAGCTGGCCAAGCCCAGCTGTCATGCTGTGGCACATTTCACACCTT
TGCGCTGCTGGATGGGGCTGGTTGTGCTCCAGGTGCTGTGGCTTCTCCAAACAGGTGTGCCTTG
GGGCATAAGGCGTGGACAGGGCGTGGACCCAGGGGCCTCTTGGGCACAGCCGTGAGGCTGAG
CAGTTGCTAGTCATGATCTTGCGAGAGCCTCCTGTTGAGTCAGGACTTGAGGAGACTGGAGACA
GTGCTGCTGTCCCCGGTGGTGTGCGGACTGGAGGAGCCGTCCTGGAGGGTCTTCCCCTGCTGG
GCCTGACTGAGCACGAGCAGGGGGCCTCCCCTGGGGCTCCCCGAGGAGGGCTGTGAGTGGGT
GCTGGCCTCCCTTGCTTACACTTCGTTTCCTCTTCTCTCCTGCTGCCACCTTCCAG (SEQ ID NO: 471)

522. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TPD52L2. In some embodiments, the sequences from gene TPD52L2 comprise or consist of:
TAAGGCTGAGCCTGGACACACCTGTGGAAGACTTTTCTCTGAATTGGGGCAGGGTGGACTCCGG
CAGGGCCCTTGGGCGGCTGTGCTAGTAGAGGGCAGTGAAAGTGGGATCACCCCTTCCAGGACA
GCAGTGCCAGCCAGGTGGTTGCTGCATCTCAGGGAACAAAGCAGCAGCGTGGGATCGACGCAG
AGGCCCCCCGGAACCCCCCGGCCCTTCTGTGTCCCCTCCTCGTGCTTCCCTTCAGGCTCACAGA
CCGCCTGCTGCCGGGTCTGTGAATAACTGGCCTGGCGTCCAGGCCTGAGTTTACTCCTGAAAAG
GAGCTTTTTTTTTTTTTTTAGACGGAGTCTTGCTCTGTCGCCCAGGTTGGAGTGCCGTGGCGCGAT
CTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCTCCGAGT
AGCTGGGACTACAGGCGCCCGCCGCCACGCCCGGCTAATTTTTTGTATTTTT (SEQ ID NO: 472)

523. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CCT8. In some embodiments, the sequences from gene CCT8 comprise or consist of:
GTGCGTTTTGCCTCCATCCGTAAATGGGGCTAAGGCCCGTCACCCTTAAAGGAGGTTGTGAGGG

TGAAATTGAATAACGTAGATGAAATTGTCTTGAGAACTGCGACGTCGATTATCACATAGCTCGCG
AGTTGTAGGATGGGGAAGAACGAGAACTAGCCGATCCAGAGAAGAGAGTGGGAAAAAGGGCCG
GGTCTTGGTTGCTTGCTTCCCAGTGAGAAACATACGGCTTTCAGCTTAGTTGACAGAAGCCATGC
GTTGTAGCCAAATGAGTTCCGGTCCCAACTTATGTTAGCTGGCTTAATCTAAAATGTAACTTTCTT
GGGTTTTGTTTCCTTCGTCTTTAAATTATGGAGATTGGACCAAGAGGTGGTGTCTTTGAGTTCTGT
GTAATCTGCAGGATAAGTGATAGAGGGGTGCAGATAACACTTTTGTTTAATGGCCTTTTCTTGAAC
GTTAGTTCGGTAGCATAGTTTTAAAAAATATCTTACTGCACTAT (SEQ ID NO: 473)

524. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CCT8. In some embodiments, the sequences from gene CCT8 comprise or consist of:
TGACGTTGGTGGCTGGGTCTGGAAGATACGTGGAAATTAAGCTAAGGATGTGTGGCTTCCAGAT
CAAAAACCGCAAAAATCTAACGCCGTGACTACTGACTACGGTCAGAGAGCACAGACTGGAGCAA
CCTCTCACGGCCTGGGCTGTCTGCGCGTGCGTGAGCCAGAAACCCGAGGGGCTCCCTGGGCC
CGCCCTATCGATCGACCCGATCGGGGATCGTCAGCTTGGTTCTGGCCACAGAGGTTGCTCTTCT
CGCGATGCTTCAGACCTGGCGGCAGGGAAAGGGTGGGCTAATTGGAGAGCCAGGAAGAGCGTG
AGGCGGCCCCACGCTGCTTTCCCAGAAGGCTGTGCGTGCTCCTCGCTTCCTCCGCGGTCTTCC
GAGCGGTCGCGTGAACTGCTTCCTGCAGGCTGGCCATGGCGCTTCACGTTCCCAAGGCTCCGG
GCTTTGCCCAGATGCTCAAGGAGGGAGCGAAAGTAAGGGCTGAAGGAAAGGAATGA (SEQ ID NO: 474)

525. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TMPRSS3. In some embodiments, the sequences from gene TMPRSS3 comprise or consist of:
GTACATCTGGGTCTCTATGTGGTTCTGCAGCTCTTCCTTTGTTTCAAGAGGATTTGCAATTGCTCA
TTGAAGCATTCTTATGATGGCTGCTTTATAATCCTTGTCAGATATTAATAATTCCAACTCCTGATTC
ATGTTGGTGTTGGCATCAGTTGATTATCTTTTCTCATTAAAATTGTGATGCTCCTAGCTCTTGGTAT
GACAAGTGATTTTCAATTGTATCCTGGACAATGTGGCTCTCATGTTTGCAGACTTGAGTCCTACCT
ACATTTTCAATGTTACCCTGTTTAAATGTAGTTTGTAGATCCTGGCCTACAGAATGAATGCACTGA
TGACTCTGCCAGGTAGATTGGTGGGCTGTAGTTCCAACAATAATTTTAGAGCCTTCGTGGGCTGT
GTGCTTTGTCTGGTGCCACCTTCTCCCTGTTGGTGCCACCTTCTCCCTGTTGGTGCCACCTGGA
GGCAGAAAGAGCTTCTTGAGGCCAGACCAGCTGGGGCC (SEQ ID NO: 475)

526. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene TMPRSS3. In some embodiments, the sequences from gene TMPRSS3 comprise or consist of:
CATAGCTAATTCCAGTGGACCATGTTATGGCAGAGACAGGGTGAGACGGTGGTGCGGGAGGCT
AGAGGGAATATGTTGGGGGCCAGGTACTGGGTCTCTTCTTAAAATCTCAGGAGTTTAGAGTGCAA
GAAAACTACAGAAAAGACTTCCAAACACAATGGTTCTCCCTGATATTTTTACCCCCTATTTTGTTG
CTGTTTGATGAACAGTAGTGCCTGATAGACTCCTTGCAGTGACCAATGTTGAGTTCAGCCCTCAA
ATGCCAAGACGACCTCAGAGGTGCTGAGAGTGAGGTCTGGGAAACACATGGGGTGTGGGTCTG
TGTTTCTGTAGGGCGTGGCAGTGCAGTTGCATATACAGCATAAACAAGCAGGGTGATGGGACCA
CATCTTGCCTGATAACCTCTCCCACCATCTTCCTAGGTTTTCAGGATACCTGAGGTCAATGAGTTC
AGTGGTTGGACTTTTCCTGTGCTTCACCTCTTGCTCTTCTCATTTCA (SEQ ID NO: 476)

527. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PFKL. In some embodiments, the sequences from gene PFKL comprise or consist of:
CGGCTGTCTTTCTGGGGGAGCTTGTCTGTCTGTCTGGGGGGCTTGGCTTTCTGGGTGTGTGTGG
GATGCTTGCTGGGTTCCCGCCCCAGTTTCAGCTGTAGCAGCCGTGCTCCCATCTATGTGGGGAT
GTGAGGGAGGCACTGTTCCTTTAGAGACGGCGTTGCTTGCTCAAGTGGAGAAGCTGCCAGTGTG
GGCAGCTCCAGCTCCCTGCACGCTCTGTGCTCTGCCCATTCTAACGTCTGTGCCCCTTCTTCTG
GATGGCTGCCGGGCTTGGCTCTGGCCCCCCTGTTGGATCCCCTGGCTGCTGGGTGGGGAGAG
GGCCACCTACTGAACCTGAGGGTGGGTCTGGGTGAGTCCTGGCTCTGCTGCCACCTGCTGGGC
TCTGGAAGGTCCCTCACCCTCCCTCTGGGATCTCATTGGATTCCTGTAGTGTGGGGATGGTGGC

AGATACTCTGGCTGCTACGTGAGAACAGTGTGCCGATCCCTGGGGTTTCTCAAG (SEQ ID NO: 477)

528. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene PFKL. In some embodiments, the sequences from gene PFKL comprise or consist of: TCAGCACCTCCAGCCTCTGCAAGTACAGGGGGGTGGGAGGGCAGGGGCTTTTGAGGGGCACGA GGCTTGGGGACAGAGGACCCGCATGGCTTAGGGATGGATGGCATGGTATGGGTGCTGGGAGG GAGGCAGGAAGAGCAGGGCTGGTCCCAGGGGCAAGCACAAACTCAGGCCTGTTACACGGCCCC AGACCTCACTCAGAAGGGGACCCTGGCCGCTGGCGTGGGTTTCCTCCTCTCTGAAGATTAGGTG GTCTTGGCTGCCCCTTTTGTATGAAGTCATGGATATCTTTTGAGATGGGGGCTCTCGGGAAGAAG GTGTGGGGTACATTAGCACCAGCGTTTCCTGAGTGCCGCCTCCCCCGTTAATGTCCCTCTCCAG GAAACTGGCTTTGCCAAGGCCCCCGCTGGGACAGACTGTTTCTTTCACTGCAGTCCTGGGAGCC GAGGGCAAGGGGACAGGAAAGAGGAAGTGACCTCAGAGCCTGGTGGCACCAGCA (SEQ ID NO: 478)

529. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene S100B. In some embodiments, the sequences from gene S100B comprise or consist of: GTGAGAAAGAGCCAGGCCAAGAGGACGCTCAGGAAGAAATGGTTCTTTTCTTTTGGGTGGAACG GAATGGAGGGGTAGAAACTAAGTGGTAGCTTAAAAAGCCCCTTTAGGACAATTGGCAGCATTTCA GAAGTGTCAATAGGATGATGTGTTTTAATCTCCACATTACTGCTGCTTTGTGGACACCTGACTGCA TCAGCCCTAGACAGCTAGAGGTGTGTTTTGCCATAAATCAGAGAAACGTCAGGTTTCATGGCCCA GAAGTGATTGTTGACATTTTCCCAGCGGTACTACAAATACTGCCTCTTCTGTAACTATTTGAAGAG TAAAGATTTTGCTTCCCACTGGGGCTAAAAATGATGGAGAACCTAATGCTAGTTTAGTCCTATATC ATAAATAAATGCTTCCCTTTTCTCCTTATATTTCTTCCACCGCCCTGGGTAAGTAACTCTTCAGTTT TCCAGTTTCCCTCAGTTTGAAGTGCCAGGGTCCCCACAGC (SEQ ID NO: 479)

530. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene S100B. In some embodiments, the sequences from gene S100B comprise or consist of: AGGCAGCCCCGTTGAGCCCAGGGCTGACCACAGACAAGCACTACTGTCCACAGAACTTCACGC CCAGTGGGGCCAGACTTGGAGGATGGCAGAGGAGAGAAGCTCCAGGGGCCTCTCCATTAGAAA CCAACTTGCAGGCCACTTAATCTCCTATGCTCAGCCTGTACTTGGAAGCTGCTTGTTCTTGGCTG CACATTTGCTTTGTTTGAATCAATTAATCCAAGTCTCTCTCCTCTCCCCACCCCCAACCTTGCCTT TAGGGTGACATCAATATTCATGTAATAAAGAAATCGCACAAAAAGCTGACTCCCCACTTCCTGCC CTACAGGCCCTTTTTTCTTCCTCAGCCCATGTGCAATCCTGGCTCCCAGCAAGTCCCCGGGGCT GCTTGGTCAATGCAGCCCTGTGTGCAGGCCTGGCAGCCCTGCCACCCCCGCCTTCGGCTCCCA TTGGCTGCCACGGCCTGCAGTGGGCTGCACCAGGGTTCATCCATCCTCCC (SEQ ID NO: 480)

531. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RANBP1. In some embodiments, the sequences from gene RANBP1 comprise or consist of: TACTGGTTTTGAATCGCGGCGCGTTTCCCGCCGCTGGGGTCAGGGGTCGAGGTTCGGGTCGTG GGGCGGAGGGAAGAGCGGGCGGGCGGGAGGCGCCGGCGCCAGACGCGGAGGGAAGGAGCT ACGAGTAGCCGCCGAGAGGCCGCGGAGCCAGCGACGACCGACCCAGCCGAGCCGCCGCCGC CGCCGCGCCCCCATGGCGGCCGCCAAGGTGCCGCCGGGCCCAAGCGGGGACAGGGTGGGCG GGCGGGGCCGGGGCCGTTATCAGCGGCCACGTGGGCGGCCCGCGCCGCCGCCACCAACCTC CGCCGGCCTGCAGGCTCGGCCGTCTGCTGGGCCTCGGTGGCGCGGAGTCGGGGCGCGTGGG GTTTGGGGGCTCGAGGCCTGCGGAGTTGGGGCGTTTGGGGGTGCAGGCTCTGCAGAGGCCTG GGGGCTGCAGGGCCCCCGCGTGACCTTGGGGTGGGTTGGGGAGCGGCCGTCGCCACGCGGG ACGGCCCCA (SEQ ID NO: 481)

532. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene RANBP1. In some

embodiments, the sequences from gene RANBP1 comprise or consist of:
CATGTGTTCTGGAAGACTCGAACCTAAAATATGATTATTGGTGCTCTCTTATCCTCTAAATTGGGC
CAGGATTTCATGACTTTCACCGGTACAATTTATCTAGTTATTAACTTAGTTTTCTGAACTGTGAAAA
AATTGCTGGCAGAGCTGTGAATCCAGTGTAAATACTAGCAGTCCTGTAGCGACTTTTTTCGTTTTA
CTAAGCAAGAGCACAACTATTTCCTAATTAGTCAAAACTGAAAGAGTTACATTTTGCTTTAAAGTAA
TATTTCAAAATCTATTTCGACCCATCATTGTGTCCTTTGATCTTCACACAGCAGGTATCATCTGCAT
TTTATGGATGAGGAAGAAACTGATGCTCAAAGAGATGAGGCAGTTTCTGCCAGGCCACTCTCTGC
AAGTGTTGGCGGCTTGTAGGGTCCCCCATCAGTCTGTGCACAGATCTGATTGATGTCTGTGAATC
TGGGGGAGGGGCCCCAAGTTCTGGTGTCTCACTCTG (SEQ ID NO: 482)

533. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBE2L3. In some embodiments, the sequences from gene UBE2L3 comprise or consist of:
CCTGCCTCAGCCTCCTGAGTAGCAGAGATTACAGGCGCCCGCCACCACGCCTGGCTAATTTTTT
GTATTTTTAGTAGAGACCGAGTTTCACCACGTTGGCCAGGCTGGTCTCGAACTCGTGACCGCGT
GATCCACCCGCCTCGGTCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCCCCGCGCCTGGTCA
ACTATTTTATGCAATCAGTATTTATTATGCTCCTACTATGTGCCAGGCACTGGTTGTAACTGCCAT
CTGATTGGACGATCCGTAAACGCTGAGGCCCAGTCTGTGCGGTTCACTTGCGTTCCTCCACGCG
CCCCCCAGCACAGTGGGAAGCACACAGTAGGTGCTCCGCTCTGCTCCTGTGCCCCGCCCCGCG
GCCCCTCCCCCGCTCCAGGAAGTGCGGGGGCTCCAGCCGCCCGGCCGGCCGCGATGCATTCT
GGGGAAGGAGCAGCACCAAATCCAAGATGGCGGCCAGCAGGAGGCTGATGAAG (SEQ ID NO: 483)

534. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene UBE2L3. In some embodiments, the sequences from gene UBE2L3 comprise or consist of:
TAAGTTCCAACTCCAGGAAGGCCTGAGGTCGGCCCCGATCGCGGCGCGGTTCTGCTTCCCTCTC
CTCCACTCAGTCATCCCGATCTCCCCTCCCTGATAAAGTGCCATTTTTGGGGGGATAACGGTTGA
TTTCAGTCGTTCGAATCAAAACGGGCCAAAGTTTATAATAATAATTTGGTACTTTGGATCTTGAAT
GCAGCAGGGTGCTTTCTCGCTAATTGGCACCTTTTGGTGAGGAACACATGCTAAATTGGCTTAGT
ACTTTTGCCAGTGGATTTGCCAAGGTCCTCTGTAGCCCACCCCGCCAGCATCTGTGAGTCGGCG
GCTGGGTAGTGCTGCCGGCCTGCAACGGGCCGGAAATTAAAAAAAGGCCCAGGAGCCAGTTTC
CTGAGGGGAGATAAAGAGCTGGGGTTCGTTCTAGGCGGAGCAGTGCTTGGTAGAGCTAGACATT
GAACTTGGAGCCACAGTCTCTGAGCATTCCCTCCGTCCCTGGGAACGT (SEQ ID NO: 484)

535. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CSNK1E. In some embodiments, the sequences from gene CSNK1E comprise or consist of:
GTGATCTGAACCTGAAGTCCGAGGCCCCAAGAGTTCTAAGTAACCCAGGGGTGGAGGTGGGGT
GGGGGATCCCAGCTCTTTCCGATCTGGGAGATCAGAAAGATGCTCATCTGGGAGAGTGGGACCT
CCCCTTTCAGTCCGCCCACCCCCGAGGACCGCACTTGGAGGGCCGCACTTGGAGGACCGCGCC
TCCAAGGCGGGCGCGGCTGACGCCCGGGGCCCAGGCCATGTGGGGCGTGCGTGCCGGGAGA
AGTGTCCCAGCGCCTCACCCCGCAAGCATGAGAACCACGAAACCCCCGGGGCCGGGAAACCGG
GGCGGGGCGGGGCGGGGCGGGGCCGGGAAGCGGCGCGGGGCTGGGCCGGTGACGTCGCGG
CCCCGCCCCCGGCCGGCTCCCTCCTCCCGGAGCGCTCCCCAGCGGAGTCCTCACCTGCAGGC
ACAGGTGTGCGCACTTCGCATCTCGAAGGCCGGCCAGCAAGCTTCAGGTGAGCGCCAGCAGCA
(SEQ ID NO: 485)

536. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene CSNK1E. In some embodiments, the sequences from gene CSNK1E comprise or consist of:
GAGACCCCATCTCTACAAAAGATGGAAAAATTAGAAAGGTGTGGTGCTCGCCTGTAGTCCCAGCT
ACTCAGGAGACTGAGGTGGGCAGATGGCTTGAGCCCAGGAGTTCGAGGCTGCAGTGAGCCGTG
ATCACACCACTGCACTCCAGCCTGGGCAACAGAGCAACACCCTCCCTGCTTCAAAAAAAAAGTAA
ATAAAAAGATCTCCACAATGAACAGGTATTCTGCATGACTTCCTTGGAAGAGATTTCCAGAAATGG
AATTGCTGCCCTAAGGCAAACGCTAATTTACGACTCTTGGGCAGCTGGAACCTGTCCGACAGAG

CGGAGACCCTTATCTCTGCCACCACCAGCAGGCTGATATTTTCAAGAAAAAAATTTGCCAAATAC
AAGCAGTCTCAGATAATACAAAGAAGATGGAAAGTTTCCGGAGCGCAGGTGTCAGATCCAAAGAT
AACTTGACCCAAACACCCCGATCTCCATGTCCCTATCTCTCTCTTA (SEQ ID NO: 486)

537. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SUN2. In some embodiments, the sequences from gene SUN2 comprise or consist of:
GCTACTCGGATGTGGACCAGCAGAGTTCCAGCTCGCGGCTCCGAAGCGCCGTCTCACGGGCGG
GCTCCTTACTCTGGATGGTGGCCACTTCGCCAGGTGGGCTGCAACCCGTGCCCAGTTACTTCCA
TTCTTGGTGATAGTGCTTTCTTACCCATCTCTCTGCAGTTGGGCATCCTGCCCATGCAGAGAGAC
TGTAGGACCATTGGGGAAAGGTCATTCTAGAATAATCACTGGGAGCCCAGAGCTGTGGGGACCC
CCTTGCGTGGAAGGGAAGGAGTAGCTGCAGAGCAGGACAGAGGGTGTGGGCAGGTGGGATCC
AAGGACCTGGGTCCCGGTAGGGCAGGACAGAGGCATACTGGCAGGTGGGGGTGGGGTAGGGG
CAGGGAGGACGGCAGACGGGACAAAGGAGCGGTGCCCCCAAACACCATATGGAGCCTTCGGCT
TGATGGTCATTCTTCCAGGCCGGCTCTTCAGACTTCTCTACTGGTGGGCTGGCACC (SEQ ID NO: 487)

538. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene SUN2. In some embodiments, the sequences from gene SUN2 comprise or consist of:
CTCCCTCCTGAGCAGATCCGAGGCTGCTGGGAGGCCTCAGGAAGGCTGGGCAGGGAGCCCCG
GGGAGCTGGAGAGAGGGCAGCATGTGGCAGGCACAGCGCCCCTCCCATGCCCGGCCCTGGGT
GCGCCCCAGCCTGGCCTGCGGTGGCCCCTGGTGCCCTGGGCTGTGACTGCCCTTCACTTGTCT
GTCCTCCCCACCCCACGAGTCTATGGCAACCTAAGGCCAACATCCTTGCATTCAGGCCCATTCC
AGCACTTTCCTGTGGGGCTCACACATGGTGGGTGCTCAGTCATTCTGAGTGGTGTGCATGTCAG
ACCCCAGCACCTAGTTCTGAACAGCAGCTTGAGGGGTGGCTGGTGAGGAGAGGGATGCAAACA
GGAAGCTGTCAGAAGAAACAGAATGTCAAAGAGCTCCCATTTCATTCCTTACTGCACACCGGGCC
TGTGTGGGGCTGTGGGGATGTGAAGGAGGGTGGGTGACTTGTGGTCTTGGCTCACA (SEQ ID NO: 488)

539. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATF4. In some embodiments, the sequences from gene ATF4 comprise or consist of:
GGACCCCGGGATCCCTCTCCCAGCAGCCGCCCATCTAGGGCCCTGAGCCAATAAGAGCTCGAG
ATATATATGATTCACCGGGCCTGGGCCAATCACCTTGACGCGCGCTCTTCGCCAGCACCTCGCG
CGATAACCTGGCGTCCTCGGCCTTCACAATAAAAACTCTTCGCCGGAAAACGACCTTTCCCCGC
CCACTGCGCTGACACCGGAAGCGAGGCGTGTCTGGGAGATCACTCCGCGCTCCGGCGGCGAA
GGAAAGAACGGACTCTGATCATAGAAGCCTAGTAAAGTAGTACACCTCTCTCCTTTCGTGAGGCC
ATAAGAACAAACTCCTTTTCTCGTCACAGCTACGCCCTGGGCATAAACGGTTGGGGCGTCAAAG
GGAGGGAGGGAAGGGAGCGGGCGGGAGGAGACGGTCACGTGGTCGCGGCGGAAGGATGCGT
CTGTGCTGCGTCCCCATAGAGACGAAGTCTATAAAGGGCCGGCGGGCGGCCACGGC (SEQ ID NO: 489)

540. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene ATF4. In some embodiments, the sequences from gene ATF4 comprise or consist of:
TTCTACTTTGCCCGCCCACAGATGTAGTTTTCTCTGCGCGTGTGCGTTTTCCCTCCTCCCCGCCC
TCAGGGTCCACGGCCACCATGGCGTATTAGGGGCAGCAGTGCCTGCGGCAGCATTGGCCTTTG
CAGCGGCGGCAGCAGCACCAGGCTCTGCAGCGGCAACCCCCAGCGGCTTAAGCCATGGCGTG
AGTACCGGGGCGGGTCGTCCAGCTGTGCTCCTGGGGCCGGCGCGGGTTTTGGATTGGTGGGG
TGCGGCCTGGGGCCAGGGCGGTGCCGCCAAGGGGGAAGCGATTTAACGAGCGCCCGGGACGC
GTGGTCTTTGCTTGGGTGTCCCCGAGACGCTCGCGTGCCTGGGATCGGGAAAGCGTAGTCGGG
TGCCCGGACTGCTTCCCCAGGAGCCCTACAGCCCTCGGACCCCGAGCCCCGCAAGGGTCCCAG
GGGTCTTGGCTGTTGCCCCACGAAACGTGGCAGGAACCAAGATGGCGGCGGCAGGGCGG
(SEQ ID NO: 490)

541. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KIAA0930. In some embodiments, the sequences from gene KIAA0930 comprise or consist of:
GTGGGGGTCGGGAGTGGTGAGGGAAGGGTGGCGCATCTCAGAGCCCTCGCAAATTTCTGGCCA
GAAATGTGGGGGTATGGGCGCAGCTTGGCCAAGGCCATGCTGCAAGGGCCAGGGTGGCCGTC
CTTCCTCACTCCTGTCTGGCCTCCCTCTGCAGGGTGCTTCAAGGATGACCGCATCGTCTTCTGG
ACTTGGATGTTCTCCACCTACTTCATGGAGAAATGGGCTCCCCGGCAGGACGACATGCTTTTCTA
TGTGCGCCGGAAGCTGGCGTACTCCGGCAGCGAAAGCGGTGCAGACGGGAGGAAGGTGAGTG
ACCCCCGGCCCCTGCCCCTGCGTCTGTGCCCCAAGCATCCCTGTGGTGTCTGCTCTCGGTGTAC
ATGTGGGCTTTCCTACAGTGCTCATGCATATCAAAGAGGGTGAGTGATATTTATTGAGCACCTAC
TGTATTCCAGGAACTGTGTAGACAGTCTCATGTGCAAATCTGGATGTGCTGGGT (SEQ ID NO: 491)

542. In some embodiments, the intronic domain that promotes trans-splicing primarily in the brain comprises or consists of sequences from the gene KIAA0930. In some embodiments, the sequences from gene KIAA0930 comprise or consist of:
AGAGCTTGGCTGCATATTTTGAAGTGTTGAATCTGTCTAGAGAGGGGACAGACCCACCTATGTTG
ATCCTGCTGTGTGCCCGTGGTCTCGGTTTGTCTGCATGTGCCCCGAGGAACCTGTGGCTCAGAG
CCCCCGCCCATTGTCCCATCACCAGCGGCAGCGCTGGAATGGAAACCCAGATCTTCCCTACCAA
AGCCTGTGGGCTTTTTCTCTTTTGCAGGAAAATATTACAAATATTTATCATAAAGAAATACCATTTG
TAATAGAAGGAGAAGTCCCTGTGAGGATCAGATGAGCACGAAGCTGCGCAGACGTGGGGCAGG
GGTGGGGCGGGTGCTGTCTCCCTGCGGTTCCCGCTTGCAGCCTTGGCTGGCTGGAGGGCGGC
TGTCCCTTTAAGTCGGGTTCCCGCTGGGACTGCCGCAGCCAGGGGGAGTGGGTGGGGGTGAGA
GATGTTGGTGAGAGCCCTGCCTCTCCAAAGGCTCCCCCCCAGCCAAGCCTT (SEQ ID NO: 492)

Intronic domains that promote trans-splicing primarily in liver tissue

543. In some embodiments of the compositions of the disclosure, there may be an intronic domain that promotes trans-splicing primarily in liver tissue.

544. In some embodiments of the compositions of the disclosure, the intronic domain is derived or isolated from human genes that feature exons that are primarily included in liver tissue during the process of RNA splicing.

545. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MASP2. In some embodiments, the sequences from gene MASP2 comprise or consist of:
GTGAGTTAAAACAAAGTACACCACGATCAATGACGATTGCTTTGAAATGTAAACATATTTCTATCT
GCAGATATGTGAAAGGAAAGTGAGAAAATCGTGTGTCAGCATGATTTCTTTTGTCTATCTTTAAAT
GATAAAAAGCCAAGAAATAAGTTTTCAGAGGACAAAAAGGATGGCTATGGAAAATGTGATTCTGA
ATCCCGCCCTTTTTTCTTTCTTTCTTTATACTTAACTTTAAATTTACATAAGCGAGCCCTTTGTTTTA
AAGCTAGTTTGGAAAGCTGGTGATTAAAATGGGCAACTTGGCCAGGCGCGGTGGCTCACACCTG
TATTCCCAGCACTTTGGGAGGCAGAGGCAGGCAGATCACTTGAGGCCAGGAGTTCAAGACCAGC
CTGGCCAACGTGGTGAAACCCCGTCTCCACTAAAAATACAAAAATTAGATGAGGTAGTAGCCCCG
TCTCCACTAAAAATACAAAAATTATTAGGTGGCGGGCGCCT (SEQ ID NO: 493)

546. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MASP2. In some embodiments, the sequences from gene MASP2 comprise or consist of:
TTCACAACAGCCCTGGGGCAACTATTATCGTCAACCGCCCCCCATCTTGCAGATGAAGAAACTGA
GACTCAGAGAGGTTACACATAACCATGGGGAAATGGAGAGCTAGGATTTAAACACAGCTCCAGT

CCCATGCAAGTCCCAAAGCCTCCCCTGAGCTCTTTTCCTCGGAGTTACACTCTCTCTTGGTTTTG
AGCCATGGCTCTGAAGTTCCTGGCATGGAGCAGATGTTCTATTTGTGGGGACTGCACCATCTTCC
CACATAACCCAGCTTTCTCACATACCTTTTGCTCAGTCCCAGGGAAAACAAGAAACCTTAATTTGC
AAAAGCACCTGAGAGTTTAATCTTGCCTTTGGTTTTAAAGAACCCTACCCCACGTATGGTGAGCT
CTCTTTACATGTTAAGTATTCTTTATAAACTAAGAACTTCAGATGGCTCGATTCAGTCTTGGCTGCT
GTAGACCACATGAAAACCAACAAGCCTGGTTTCCTCTGCGCA (SEQ ID NO: 494)

547. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AGMAT. In some embodiments, the sequences from gene AGMAT comprise or consist of:
GTAAGGAGATTCCACCAGTGAAGATCCTGGGGGTGGAGACACTTAACACCCATTTTCCTGGGAC
TTGAAGCGAATCTTTAGGAATCAGGATAGGATTTTTGTTTGTTTGTTTGAGACGGAGTCTCACTCT
GTCGCCCAGGCTGGAGTGCAGTGGTGCGATCTCGGCTCACTGCAACCTCCGCCTCCCAGGTTC
AAGCGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGAGATTACAGGCACATGCCACTACGCCCGG
CTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGGTCAGGCTGGTCTTGAACTCCTG
ATCTCGTGATCCACTCACCTCGGCTTCCCAAAGTGCTGGGATTACGGGTGTCAGCCACCGCGCC
TGGCTGCCAAGGTAGGATTTTAAGAGCAGAGCACCTAGGCCTTTTCTGTTCTCTGGGCTGAGGA
TAAGTTTGAATACCCTCTTACTGAAGGGTGATTGATTTTGGCAAGGGC (SEQ ID NO: 495)

548. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AGMAT. In some embodiments, the sequences from gene AGMAT comprise or consist of:
TGAGATCGCGCCACTGCACTCTAGCCTAGGTGACAAAGTGAGACTCCATCTCAAAAGAAAAAAAA
AAGAGGGGAGGAAGTCCGGACCCAAGATGAGTTGCCACCTTCTTAGTTCTGGTCCTCGTACCCT
CTAGGCAGAATGGCTCTCAGATAGACGTGTATGACAAGACCCCAATGGAACAGACCCAAATCCC
TTGCTTTTAGAGCGTGCCAAGGCCAGTCTTCTGGACAGAGCAATTCAAAAGGTGCTAGCGTGAG
CTGCTGTTTCCCACTCTTGCTTTAGCAAAGCTTCTCTCTGATTCCAACTCCATCAGTCAGCTTTGA
CCCTGCTTCCTTACCACTCATTGTCCCTCCCTTCCTCACCTGTAAAATAGGATAGTTCCCTCTTCA
TGGAGATGGAGGGTCAAGTGTCATGTGCACACAGAGCTGAGCATGGGGCTGGCAAACAGGAAA
TGCCCTGTAAATGCTGCCAGACAGAAACCTCAGTCCCTGTCTCTGCA (SEQ ID NO: 496)

549. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MFSD2A. In some embodiments, the sequences from gene MFSD2A comprise or consist of:
GCTTCCGCAATGAATTCCAGAATCTACTCCTGGCCATCATGGTGAGTGGGACCTGAGCAGGGGC
GGGCAGCCTGGGCTGAGGTGACATAGGCTGTGGAATGGTTCTTGGAATAGGCAGAGGATGTTTC
TCAGGCTGGCCCAAGGTCATGAAAGGATGAGGGAGGCTTCTCAGGGTATTTGGTTGGACCTTGC
GAAGGTAGGACTGTGAAAGAAAGAGTTTGAGGTTAGATGTTTGAGTAGTGAGCACAGCAAAAGC
AAGGGCGAGGACACCAGGAACTTGGCTCAGAGGTTTGAGAGGGCAGCAGACAAGGTGGGCCTG
GACCAGCTCTGAGCTCCCCTGGGGAGCCGTCAAAGGTGCCTGTCATCTTCGTTGCTGCCCACAT
GATGTCATCTGGCTGCTCTTGGGCAGGGCTGGGAGCCACTTTGGGGTTCTGGGAAGGGCAGGA
GGGGCTCTGTGGCTCTAAAGCACCTCCCTTTAACCCCCTTTGTCCATCCACAG (SEQ ID NO: 497)

550. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MFSD2A. In some embodiments, the sequences from gene MFSD2A comprise or consist of:
TGAGTGGGGTTGAAGAGCAGAGCCTGGGTTGAGTTGGGATGTCTGGTGGGAACCTCCCAGCTG
ATTCATCTTCCTGCACCCCCTTCCCTAGTCAGCAGTGCCATTTCTCATCTTGGTGGCCCTCATGG
AGAGTAACCTCATCATTACATATGCGGTAGCTGTGGCAGCTGGCATCAGTGTGGCAGCTGCCTT
CTTACTACCCTGGTAGGTATATACAGGCCCCCCTCCTCGGGTATCTCCAGCCCCTAGTCCCCAG
TTTTGAAGCTCCTTAGGGAGAGTTCTATGCAGTGTTCTCCCACAGGCCATTCTGTGGGTCCAGGT
TAGGAGTGGGGGAGGTCTGTCCTGTACAGTTGTACAGGTAGTGAGCTTTGCAAGAACACCTAGT
CAGAGTGAAAAATGGGGGCTGTAATCTGGCCTGGGCTCCACTTGCCACGCTGAGCACCTCCAG
GCAGGGTTACTTCCTCTTAGAGCAAGAGGCCTTTTCTTATTCATGTGAAGG (SEQ ID NO: 498)

551. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene EBNA1BP2. In some embodiments, the sequences from gene EBNA1BP2 comprise or consist of:
GAAGCGGAAGTCCCAATCAAAAGTTGAGCAGTAGCTGTGAGTTGCTGGCGCTGGAGCGATTCGG
TGGCACGTGGAGCCACGGCGTGGGAGTAGGGGGCTGAAGGCAGGCAGCAGCGGCCAGGGCC
GCCCTCTGCTAGCCGCTTGGGTCTCGGGATACCCCGTTTCTTCCTGTAGGTGTGGGACGTGCGT
GCGGCGAGATGGACACTCCCCCGCTCTCGGATTCGGAGTCGGAATCCGATGAATCCCTTGTCAC
AGACAGAGAGGTAGGTGTCAGCCGAGCTCGTGGGGCTGGGCGTGGGAGAGGGGGCCTTACAC
CCCTGGGAGTGACCGTGATTGTGTCCTGCAGTTGCAGGATGCGTTTTCCCGAGGGCTTCTGAAG
CCAGGCCTCAATGTCGTGCTAGAGGGGCCGAAGAAGGCCGTGAACGACGTGGTGAGCGTGGG
CACAGGGTCGGGGGTACTCGGACATGGGATGCGCTTCAGGCGCTGTTGGGCTTGGGAG (SEQ ID NO: 499)

552. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene EBNA1BP2. In some embodiments, the sequences from gene EBNA1BP2 comprise or consist of:
AGTTTCATAATACAAGTCGCCATTTATTTCCTCTACATTTATAATACTGCATATATATTCAAATTGG
CCAAAATCTTTCTTTCCAATCATCATGCTGGGATTATGGGGTTATATGTGGCACATACCATTCCTG
TATATGTCAGGATGGAAAAAGTTTTACCTGGAATGAATTTTTGCCATTTCTGATCCACATTGTACTT
CACACAGTGATTTCCTGAAGGAAATATAATGATCTGTTCATCGAAGTAGAAGATATTGTTGGCCAC
GTGGGATCGAAGACCAAAAACATGCAGCGTCTGAGCTACCACGGCTGACATGATCTCCCGCCAA
ACAGTTCTGCTGAAGACCAAGGCAGCGCTTCAGAGTGGAGAGCACCGCCCCGCTCCGACCCCG
CCCCCGGCCCGGACTCGCCCTCCCCGCCCTTTGCTCCTCCCCTTGTCTCTCCCCTTTCTCCTCC
CCTTGTCCCTCCCCTTTCCCCTCCCCTTGTCCCTCCCCTTTC (SEQ ID NO: 500)

553. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PRDX1. In some embodiments, the sequences from gene PRDX1 comprise or consist of:
GTGAGTGAGACTCCGTCTCAAAAAAATGTGGAATAGAACAAACTTTAGTTTTAGGAACTAGACTTT
ATATTGTAGATCTAGTTGCAATTGACACGTCCTTGTTTTATGGGAGGCTACATACTTTAAAGGTTT
CCAGGGGAGCAAATAATTAATTATGATTTTGTGTATGTGTGTTTGTGGGGGGTAGTCATCAGGAA
ATGTCTGAGGCCTTTTGCCTTACCGTGTGGGTCTGGCTAATGTGTAATGTTTTGACTCAAGATTGT
AAAGTCAAATTATTCATCCGGGGAGAGGATGGTCGTGTAACTGAATCAGCCTCCCAAGATGAACT
TTCCCTCTGGCGTAAGTTTAGGAGTCCTGATATTTTATTTTCCTTTACAACAGAAAGCAGCAACCC
TGTAATTAAAGAGAACAATGAAGGAAGCTATCTAAGCCATGAGGGTTACTGAGGATCTGCGCTGG
GGTTAAGGCTGCGAACTTAAGAAATATTTGGATAGACAGT (SEQ ID NO: 501)

554. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PRDX1. In some embodiments, the sequences from gene PRDX1 comprise or consist of:
GCCTCCGGGTTCAAGCGATTCCCCTGCCTCAGCCTCCCAAGTAGCTAGGACTACAGGCGCGCC
ACCACACTCGGCTAAGTTTTTGTATTTTAGCAGAGACAGGGTTTCACCATGTTGGCCAGGATGGT
CTCGATCTCCTGACCTTATGATCCGCCCTCCTAGGTGGCCTAAATCTACATTTTTACATAAGATAA
GGTGAATGTTTGAAGAAAAAGGGAATGGAGGAAGAAAACAATTATGTGGTGGACTCAGGGTAAT
CTAGTAGTAAGGTACTACTAGAAAGGTAGAAAGTAGTCTAGTAGAAAGGTAATCTAGTAGTGAAC
ATTTATGGAATTTGTGGAATAGAGGCCAGGTGCGGTGGCTCGCGCTTACATTCCTAGCACTTTGG
GAGGCCAAGGCGGGCGGATCACCTGAGGTCAGGCGTTGGAGACCAGCCTAGCCAACATGATGA
AACCTCGTCTCTACTAAAAATACAAAAAATTAGCTGGGCGTGGTGGTG (SEQ ID NO: 502)

555. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene FGGY. In some embodiments, the sequences from gene FGGY comprise or consist of:
CTGCCCAAGACCATGGGAACCCACCTCTTGCATCAGTGTGACTTGGATATGAGACCTGGAGTCA
AAGGAGGTCATTTTGGAGCTTTAAAATTTGATTGCCTTGCTGGATTTTGGACTTGCCTGGGCCCT
GAAACTCCTTTGTTTTGGCCAATTTCTCCTGGAATGGCTGTATGTACCTAATACCTGTACCCGCAT

TGTATCTAGGAAGTAACTGACTTGTTTTTTATTTTACAGGCTCATGGGTGGAAGGGACTTGACTTG
TCTCAGATGAGACTTTGGACTGTGGACTTTTGGATTAATTCTGAAATGAGTAAAGACTTTGGGGGG
ACTTTTGGGAGGGCATGATTGGTTTTGAAATGTGAGGACCTGAGATTGGGAGGGGCCAGGGGC
GGAATGATAATGATTTGGCTGTGTCTCTATTCAAATCTCAACTAACTTATATCTCCCAGAATTCCC
ACATGTTGTGGGAGGGACTTAGGGGGAGGGAATTGAATCATAAG (SEQ ID NO: 503)

556. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene FGGY. In some embodiments, the sequences from gene FGGY comprise or consist of:
TAAGTCAAATTAAACATCCTATTCTTCCCAGTCTCAGGTTTGTCTTTATCAGCAGCATAAAAATGG
ACTAATGCAGTAAGTTAGTAACTTTCCCCCATATTTTTGTTAGTGGAAAGATAGAATAGTTTTTTTT
TGTTTTAATGGAAAGATAGAATAAGAATCTTGGATTCTTTAAGGCCTGAACTTAGATGCCAGCAGT
GGCTGGGAAGGGCACAGGAAGGTGATAGTCCATGATGACGGGTTGATACAGACTTACTTAATAT
ATGTTGACTATGTTTTATCCTTATTATGCCTTCTTATGCCTTCTTATGCCTCTTTCTTTACCCTTCAC
CTTACAGCCAATCCAAGAGTTGGATATCTCAAAAAAATTAGGAGGCCTGGGTGCAAATGTTTCCT
TTCATTTCTACCTTTCCTATACCCCTATTAGGATGTGGAGGTGAACAGATGCCTGAAAATCTTGAA
AAGGTTGTCCATGGGTCCAACTCTATATTAACTAAAT (SEQ ID NO: 504)

557. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LEPR. In some embodiments, the sequences from gene LEPR comprise or consist of:
TCTTTCTCCTTCCCCTTCTCTTCCCTCCCCTCCCATTATATAATCTATGCTGTTATGTTACCTATTT
TATCCACTACCCCATCTTTACTGGAGGTGTTGTTCTAGTGGACTCTCCAGGAACTCCTCTATCCTC
CTACTTCAATCAGGACTAGGCTTTCTCTAAAATTACTATAAGCCATCACTCTAAACTTTCCCTTAAC
TGGTTTCTGGTTAGTACTGTTTCCTGGATTCCTTTCCTTCATCTTTCTTAACTACACCCTTAAGTAA
CCTCCTAAGAAGTATGCGATAAGTCTCCATCTCTCCATGCCTGAACTGCCTTTTATTCTGCCCTCC
TCGATTGTTAGTTTGGTGGAGTATCAATTCTTAGAAATAGCCTTTCCAAGAGAACATTGAGATAAT
TCCTGCCTTAACATATAGTATCCAGTGTTGCTTCTGAGCAGTCAGATACTATTGTGATTTTTACTC
CTCACTGTTTACTTATAATTTCCTTTTTAAACAG (SEQ ID NO: 505)

558. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LEPR. In some embodiments, the sequences from gene LEPR comprise or consist of:
AAAAAAAAAGAAAGAAAAAAAAATTCTCCTCATTTTTGTTGTTTTGAATTTTCAGTGATGAATCTGG
AGTGGTTCTTTTTTTATTTAATGTGGTTATTTTTTGAAGAGACTTTCAATTCCATGTCTCCTGTCAAT
TCTAAGAAATTATATTATTTCTTTGATAATTTCCTCTCCTCTTGTTTCTTTGTTTCTCTTTCTAGAAT
CTGTATGTTGGATGATGGACCCTCTGCGTAGATCTTCCACATCTCTTACCTTTTATCTCATATTTTC
GGTTTCTTTGTTTTGTGTGTGTGTGTGTGTGTTATATTCTGAGACCTTGCCATACCCTCTTCTT
CCAGTGCTTCTGTTGGATTTTTATATACTATTATTTTTGTAAATTTCCAAGTATTCTTTCTCAGAGTA
TTCTGTTCTGGTTTTATGCATATTTTCTTAAATGTTGCTAGAAATACCAATTCGAGGATTTTTGTTC
TTTTATTTTAAAAATTCTTTTTTCTTCT (SEQ ID NO: 506)

559. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GBP7. In some embodiments, the sequences from gene GBP7 comprise or consist of:
AAAGAAAAACTATGAGGTTCTTGCTTCAATTTATCATGGGCTTGAAAGAACAGTTTGACAGGGCA
CTGAGCTGGCAAGGGTTTGAGGATATTGTCAGTGTCTCATATTTGCTAGTGAGAGTGTGAACTGT
TGGAATCATATATGAAATATTTAAGTGCACATACCTTTGATCTAGCATTTCCACATTTAGAAATCTA
TCATATAGATTGATTTACTCAAATTGAAAATGGTATATATAAAATAGTACTTATGTTGCAGCATTGT
TGTAATGCCAAAAGACTGAAAAAAACATTAAAGCCCCTCTTTCAGGTACTGATAAGGGAAATCTTG
GGAAACACTCATAAAGGAATACTCTACAGCCACTAAAATGAAGGGAGAAGCTCTATTTGAACTAA
CAATGACAAGTCTCCAAGATGTATCATAAGTAAAAAAAAAAAAATGATGCACGAAGCATGTATAATT
ACTACCACTGAATTTAGAAAATAATAAATGTATGCATA (SEQ ID NO: 507)

560. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GBP7. In some

embodiments, the sequences from gene GBP7 comprise or consist of:
GAAAGTATCAGATTTGGCTTGATATGAAATGATACTGAATGATCTCAAATTGCTCCATTTGTTTCT
GTATCTGCCTGACTCATCCTATACAACTAGAGTAAAACATATTCCTTGTCCCAAACTGGAGCTTGA
CAACCAGTGTTTTATACAGGGTCAGCAGTCCCCATTATTTGCTAGATGAGCATGGCCTTGCTATA
TCGGTGGAAAGGGGAATCAATTAGAATTAAATCTGCATTCCCTCTCAAAGGGCATTCATTGTGCT
GGAACAAAATTCCTCCCCACCTCCAGTGAGATGGTGCTGAGGAAATGTCACAAAGGTGTATATCA
TGGATACTCCCCTTATTTAGGTCCAGTCATCTGGAAATGTCAGACCAACTCATCAAAGATTTTCTA
AGATGTTAGAGAAATGGACACATGTTTAACTAATGAAATTGTTAAATACAAACCTCGGTCTCTTAA
AAATTGGGGATTTTCAAAAGTAGGCTCTTTTACTTTTATA (SEQ ID NO: 508)

561. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ENSA. In some embodiments, the sequences from gene ENSA comprise or consist of:
GTGGGTGAAACATCCCTGTGGAGGATCCCAGTTATTGAGTCTTAGTCACAGATGATAATGTGATG
CTGATTTGCATTTACCTTGCTGGAGGCAAGGCAGGCGTGGGCAGGCTGTCACAGTCATGGAACA
TGTGTGGGAGCTGTGAGAGTCAGAAGGAAAATACATTATCCTCATGAACAGGCCCAGTTTCTATT
CCTGGTCTGGGAGAATAATCATTTTGAGGTTGTTGGCTTGTGGTTGATCTCCTGGTGGCTAGGAT
AGCCCCATATTTATCCTTCTCTATATCTTATTCATTTCTGTTTCTCCAGTTCCAGGCTATTGCCCTG
TACCCAGTAAGGTCCTCAGTTACCCTTTATGAATAAGTGATTTTGGTGGAACGATCCTCTACTGAG
TGGAGTACAAAGGATGGCAGGGGCTATCCCTTGACTCCAAAACTATATACTCTAGCTGGGAAATT
GCTTATGTACCTGAAAAAGTCAGAACACACTGGGGAGAAGAC (SEQ ID NO: 509)

562. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ENSA. In some embodiments, the sequences from gene ENSA comprise or consist of:
GAAGTGAGCACCAGCCATTAATTATACTCCTGCAGCAAATGTATTTTTCTTGTTCAGAGTGGTCCT
CCTTACCAAGAGAGAGTCTACTTTCATAGCCATGTAGCTCCTGATCAGATTTTTAGTTCCCAAAGG
TACCTAAAGCTGACTGAGGGATTATATTATCGTTTTTTAAAAAAAAAATTTGGCCAGGCGCAGTGG
CTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGAGCACGAGGTCAGGAGATC
GAGACCATAGTGAAACCCCGTCTCTATTAATAATACAAACACTTAGCCGGGTGTGGTGGCGGGC
GCCTGTAGTCCCAGCTACTCGGGAGGCTGAAGCAGGAGAATGGCGTGAACCCGGGAGGCGGA
GCTTGCAGTGAGCCGAGATCGTGCCACTGCACTCCAGCCTGGGCAACATAGCGAGGCTCCATCT
CAAAAAAAAATTTTTTTATTTTCCTTACTCTCCTCTGCAATGACTGTA (SEQ ID NO: 510)

563. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC39A1. In some embodiments, the sequences from gene SLC39A1 comprise or consist of:
GTGGCCCACGAAGCTACCCAAGACATCTCTGCACAGCCCTAGCCTTTTTGGCTTCACCCACTCC
GTTCGGGAGTTGGGGACCCGGCCTCTACATTCCTTAGGGGAACTCCAGCTCCAGGTCCTATTTG
GAGGCGGCTCCTAGTTTCCTAGTTTTCTGGGGGCACCAGGTGAAAGGGTGATGAGATATCCATA
CAGCCTTTCTCATGCCTCGGTTTCCCCCGTGCAGTCTCCCTGAATAAGTCACTTGGGAAAGAAAG
TGTGAGAAGAGAGGAATGTTCCTGGTACAGGAGTAGATGAGTCACCCTGGGTAGGGGAAGGTCA
CAAAGTGGCTGGGGCCAGGGAGCTGCACTCTGCTGACCAAGCTTCCCCATTCCTTGCCCCATCT
TCCTTTGCATGATTTTTCCCAACCACTCTGGTCTGTCTTCCTAGGTCTGAGAGTCACTGGAGCTA
CCAGAAGCATCATGGGGCCCTGGGGAGAGCCAGAGCTCCTGGTGTGGCG (SEQ ID NO: 511)

564. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC39A1. In some embodiments, the sequences from gene SLC39A1 comprise or consist of:
AGACTTGACAATGCGGGGTCTCCCTCTTTTAAAAATATCCATATAATCAAAGCCTTTGTTGACTGG
CCCGCTCCGGCCCCTCAGTCCTCCACAGATGCGCCCCAGGGCCCCAGCCCCGAGGTCCTTTTC
CTAATATCCGCTCTTGCTCTCGCTCACTCTCCTCAGGTCGCCTGCTCCGCCCGCTCCCGCTCCC
GATCTCTGATTGCTCCTAACTGACGTCACTCCCGGTCTGTCCCCGCCCACTCGGTGCTGCCATT
GGCAGTCGGTCGTGGGTACGCGGCTCCTGTGGGGGAGGGGGGAGCTATGGGAGGGGGCGGG
AATTCCCGACTCTAGGCCGGAAGCGCGCGGAGACCATGTAGTGAGACCCTCGCGAGGTGAGTG

CGGGCTGTCTGGCAGCGGGGTCCATGTCGGCTGCCCAGGCCTCCCCGGGCCCGGGAACAGGA
GTCCCAGCTCACGCATTCTTCATCTGCTTCCCGCGACGCTTGGCGGCCTCGCACCC (SEQ ID NO: 512)

565. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RAB13. In some embodiments, the sequences from gene RAB13 comprise or consist of:
GTAAGGCTCCTAAATTCTAGTCCCTCAACCCCTGGCTCTGACCCTTCCCCCGTGCATGTCTCTGT
ATAGTAACCAAACCTCTCACCTCTCTGAGGCCTTCAGGTAACTCTTCAACTGCTGCCAGCTCCTC
ATTTTCTTGGTACCATCGCCTTAGTCTCCCCAAATCCACAAGAACTCTTCTCTATTTTTCTCTGTTC
CCCTCTTCCCCTACCCCCACCACCTAGAACTCTCTCGATCCTATCTCCATGTTTCCTGTATCCCTG
TCCGCCACATCTTTTTCTCCCGATCCGATGCTAGCCTCTTTCTGTCTTGCTGAGCTTCAAACTCTC
CCACTGTGTCCCCACCTCACCATCTACTTCCCAGGTTCCCTGCCCCAGTCTCCCTGCACCTCAG
CTGAACAAGGGTTTGGGAAGGGTGGAACAAGGTGGCTGGGTGTGCTGGAGGGTGGCCCAAGGA
CTGTGATCATGAATATGCAGCCAGCTTGGTGAGGAACGTGGAA (SEQ ID NO: 513)

566. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RAB13. In some embodiments, the sequences from gene RAB13 comprise or consist of:
TCGTCGTGGTTAAACCTCTACTTCCCTTCACCCCAGCCTCTCTGGCCTCAGAATGGAAGAGTAAG
GTCCTAAGAGGGGAGCTACAATTACCGAAAGGCTGTGGAAAATAGCGAGAGAGACAGGCCGGC
CTAAGCTAGGAAGGGAAAACCGAGAGAACAGAGGCCGGGCTGGCAGCCTTGGCCTGCTCAAAA
GGGTGGGCGGGCAGGGGGTGGAGCCCGGAGGGGTGCCGCCTCTCCTCTTTCCCGGAGCCTGG
GCGGAGAGGGAGGAAAACTTCTTCCTGGCCTGGGCTCCGTGCCGCTCTGTTTGCCAACCGTCC
AGTCCCGCCTACCAGTGCCGGGCGCTCCCCACCCCTCCCCCGGCTCCCCCGGTGTCCGCCATG
GCCAAAGCCTACGACCACCTCTTCAAGTTGCTGCTGATCGGGGACTCGGGGGTGGGCAAGACTT
GTCTGATCATTCGCTTTGCAGAGGACAACTTCAACAACACTTACATCTCCACCATC (SEQ ID NO: 514)

567. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene FMO4. In some embodiments, the sequences from gene FMO4 comprise or consist of:
CTCCCAACGTGCTGGGGTTATAGGCATGAGCCACTATGACCAGCCTAAAATGGGGTCATTTTAAG
TGTTTACATCTAACCAACTAATAGCTTTAACACAAACATGCACACACACACACACACACACACACG
TACAATGTGGAGGGTATACATACAATATAATATAAATTATATTATTTATACAGCAAAAGCAGATGAA
GAGAGACAGGGCAGGCCAACTGGCACAGGTGCAGGTGTCTGGTGAGTGTGGCGCAGGCTGAC
AGCTGGGCCATAGAGGCATCTCTCCTCACAATTCTGGCAGTAGAGTACCCTGGTTAAGTGAACT
GGGCGGGGAATTTTACCTCCAGAAAATTATTTTCTGTGCTGCATTTCCATTCTGAGCTTTGACTAT
CATGTGCTCTGAAGTTAGAGCAGTGGGAGGCTAGAAATGAGTGGGTGGAGAATTTAAATAAAGG
AAAAGCCACATGTGACTTTAGTGTTGTTTGTGATTTTTCCCACAG (SEQ ID NO: 515)

568. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene FMO4. In some embodiments, the sequences from gene FMO4 comprise or consist of:
TATGAAATGTAGCTTGCTCTAGGGCAAACTTACAGTATATTCTGTTACAAAAAAAGGATTCAGAGT
ATAAAAGCCATTCCTAGAGAAGCAGTATGGCAGGTTGGAAATAACTCTGCATTAGGAATCAGAAG
GATACATTTTTAGTCCTAACTCTGCCACCAATCAGACGTGGCCTTAGACAAGTCATCTGGGGACA
CCAGGTCTTTTCAGTGGAACACACAGCCTGGCCCCCTACCAGTGGCAATCCTGTCTTCACTTAGT
CCAGGAAATCTATTCTGACTTCACTCTCTTCCTACCTCTCAGGCTGCTCTTTCTCTGTATTTGCTG
GTATCGCCTCTTCCTCACTCCCAAAATTTAGTGAGCTCCAAACTTAGTCCTCAGGCCTCTTCTCAT
TCCTATTTACACCCACTCCCAGGTGGCCTCATCCAGGCCTGTGGCTTTAAATATCATCATATACTC
AGGGCTCCCAAACTGTGTCTCTGACTCAAATCTTTCTCCA (SEQ ID NO: 516)

569. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CFHR3. In some embodiments, the sequences from gene CFHR3 comprise or consist of:

CAGATGACTATTAGAAAGATTATACCTTTCTACAGTTCTGTTTCTACATTGTGGGCATAAGAGAAA
AATATAAACATAGAATTAAATTAGCAAAATGTGAGTACATTTGGAGTGCTTGTAGTCACGGCTTGT
CGAATGGGGGAAAGGAGGATAAGTAACCATGACTCCAATGGAACATGTTAGCATAATCCTTTTTG
ATATGAAGTCACTAGGGTGGACACAACATATTTTAGGAAAGAAGAGTTCAGGCTCTAGAGAAAGA
CTGCCAGGGTTCACGTTTATCACCTCACCTGATGATCTCTGCTGTGATGTTGGGGAAGTGCAACT
GAACTTATTATATTTTTGAAATGCTAACGTCAGTATGTAGCACAAGTTAATAACTATTAACTATTTG
GATTATTTTATAATTTTATTTTATCCTAAACTACTCATTAGGATGCATTTTATTTGCTCATGAAAGAG
AAAATTATGATTGTTAATTGTTTTTTTCTGCTTTCAG (SEQ ID NO: 517)

570. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CFHR3. In some embodiments, the sequences from gene CFHR3 comprise or consist of:
AAAAAAGAAAAGAGGTTTTGCTAACCCTTTCAGAGCATTGGGAACACAGCCAGAAGTGCATTAAA
TGTATATATTAACTTGGGCAATGTTGACACTTTAGGATGCTGAAGCCAGGTGCAGTGGCACACGC
CTGTAATCCTAGCACTTTGAGAGGCCAAGCTGGCAATCATCAGAGGTCAAAAGTTCAAGACCAGC
CTGTTCAACACGGTGAAACCCTGTCTCTACTAAAAATAGAAAAACTAGCTCGGCATGATGGCGTG
CACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGTGGGAGAATCACTTTAACCAGTGGGGCAGAG
GTTGAACTGAGCCAAGATAGTGCCACTGCACTCCAGCCTGGGCAATAGAGTGAGACTCTGTCTT
AAAAATAAATAAATAGGATGCTGAAAATTCCTATTTAAGGAAATAATTCTTTTTCTGATTTATTTAAG
GCTACATTTGTATTTTCTTAATACAAATATTTTGAAAGTTTCT (SEQ ID NO: 518)

571. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene C4BPB. In some embodiments, the sequences from gene C4BPB comprise or consist of:
TGACCTGACAGGAGGTGGAGCTCAGGCAGCAATGTGAGCAAAGCAGAGTGGCTATAAATACAGC
TGAAGCTTTGCTTGCCTGCCCGCTGCTCACTTTCTGCTGTGTGGCCCAGTTCCTAATAGTCCGTG
GACCGGTACCGGTCTGTGGCCCTGGGGTTGGGGATCCCTGTTATAGAGCAAAGCACATAAGCAC
AATGCGTGAGAATTGGAAAAGTCTCTAAAATTCTTCTAGGCTCCAAAACTAAACAAACAACACTGA
ACAGATCCATTTTCATTGAGATTCTTCTTTTAGTTCATATTTATTACTGGGATAATATTAATAAGTAT
ATTTAAGCCAGAAAATATAAATGATTTGCCATGTTGAAAACCCAAATCTTTACTTAAGCTAGCCTG
GTTCTGAGCCCCCATTCAGAGAGCTAACTGCTGCTCACTGGCTTCAGAGTATATAGCTGGGTCTC
AGTCCTTATGTTGTAACTTGTGAAAAATTTTCTTTCTTCAG (SEQ ID NO: 519)

572. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene C4BPB. In some embodiments, the sequences from gene C4BPB comprise or consist of:
TTGGTTTCAGATTTACCTCTTATTGGGCTGAAATTGCCAACAGCAGTTGTATAATGCACCATGTGT
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATGTGTGTGTGTGTGTGTGTGTTGTTC
TCAGAATGTGAAAAGGCCAAATGTAGTGGTTGTCTAAGGCCAGAATTAGCAACATATTATTGGAG
AATAGAGGGCTTAATTTCCAGTCTGTAAGGAGAATGGAAAACTCTGATCTCAGCCGAGAGAGTAA
CTCGTATTTTAACATGAGACCATGAATTATGAAACCAAAACTAACCGCAACTTATGAGGCAAAAAT
TAACCTTCCATTTTGGAAAAGATGCTTAGAATAGTTACATCCTTAAAAATGACCCACTGGGACAGA
AGGAGAGCTAGGACCCAAATTCTCCTCCCAGTCTTGCCCACATCTGGCTTACGGAAACAGGTTTC
CAAAGCTGCAGGAAAATTGCTTACTGCCTCTTGAATGAAAC (SEQ ID NO: 520)

573. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene EPHX1. In some embodiments, the sequences from gene EPHX1 comprise or consist of:
AAGGCGGCAGCGGGGTTGGAAACCCACCCCCACACAGTCAACACCTGCTGTCACACCAGGCTA
ATCAAGAACACTTTTCTTTGGTGCATTAACCACCTGCTATTAAATAAAGGGCTGTTACTAGGTGGC
AAAGTAACACACTGCAGTAGAGCCTATTTGTAATCTGAGATCAGTGGCTGTAAGGCACCATCCTT
GAGCCAAGCAAGTACTAATATTCTTGTTATCTTAATTAGAATGCAAGAGATCGTGTTTTTAAAATTC
TCTTTGAATCTGTCACTTTGCCCTCCTCTTCCTGGGTGATACACCTGGTAGTGCTGGTGGGGGCC
ATCATAATGCCCCTTGTCCCAGATTCCCTTCTTTTAGATGGGACTCGAGCACTGATCATTTCAGCC
CTGTATCTCTCAGGTCAGCGTGGTTCAGTTTGCTGTGCAGAGTCCAGGGGAGATAACCACGCTG
TGCACACATGAGATTGGCTGACTTGGCAGGACTGTGCAATTGT (SEQ ID NO: 521)

574. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene EPHX1. In some embodiments, the sequences from gene EPHX1 comprise or consist of:
TAAGGAGGGTGGTTTGTAAAGTTCACTGGGGAGGGTGATCCCTCTTTATTGTTCTAATATTATGCT
CGCAGCCTCCTTGACAACATCATGCAAAATGTGTCTTACTAGCTTCTAGTGCATAAAATATTGGTG
GAGCTCTTCGCTGTGCTGGGCCAGTCACCAGTGCTGGGCACTGTGGGTCAAGGCAGTGCCCAG
GACGGGCACAGCCCTGCCTTCCCAAGCTATGGTTTATTGTGGTAGGATCTGCCTGCCCAGTGAA
GTGTGTTCAGCTGCTCCTGTTGCTGGGGGAAGCTCTGCTCTCTGCCTTCGGCTGCCTCCCACAC
GCTCCCATGTGTCTCCCAGTCCCTAACCCCTAGTCCTGCTTTCAATACCGCAGGGGCTTTTAGCT
GACTTTTCTCCATCTTCTTAAAGGGCAGGATTTCCTGGCAGAGACATAACGTCTTTCTGGAAATGA
AAGAAGCTGATGCATGTTTTTTCTTTTCTGAATTACTTAAATAAG (SEQ ID NO: 522)

575. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RBM34. In some embodiments, the sequences from gene RBM34 comprise or consist of:
ATGAAAGCCTGCAATGTACTTTGGAGGGTGGATGGGTGACTTATTTACTGTGTCAGCAGAATAGA
CTGAAAAGTTAATACTGATTATCATTGCTGGAATCCTAGGCATTCTCTTCCTATGTCCCATCATAC
ACATTAGTATGGGAGGTGGGTATGATTGCTGCAAACAGTCTTTGTTCTCTGAGCACAGACAGATA
AAGAATTTATGTCAATTTAATATTAAAACTTTATAGAAGTGAGTTGGATTTTACCAGCTCAGCACTC
TGAACCAGTTATAGCCACATTCTTTGGAGCAGGAAATAAGTATCATTTATATTTGGTTTTCCCATA
CATGATTTTTTTTTTTAACTGCATAGGCATAGTTAGTTGACGTACCATAGTGTACATTTTTGGGCAC
TATTACATAATTAATGTATATTAGAATATAGGAAATGTTTATTCTATTTTTTTTTTTGAGACAGAGTC
TCGCTGTGTCTCACCCAGGCTGGAGTGCAGTGGTG (SEQ ID NO: 523)

576. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RBM34. In some embodiments, the sequences from gene RBM34 comprise or consist of:
CCTACTTTCCTGAAATGTTCTTAAAAACTGGCAGTAGGCCGGGTGCGGTGGCTCATGCCTGTAAT
CCCAGCACTTGAAGAGGCTGATGTGGTTGCATCACCTGAGGTCAGGAGTTTGAGACCAGACTGG
CCAACATGGCGAAACCCCGTCTCTACTAAAAATACGAAAATTAGCTGAGCATGGTGGCGGGCGC
CTGTAATCCCAGCTACTTGGGAGGCTGAGGTATGAGAATCACTTGAAGCCGTGGGGGCGGAGG
TTGCAGTGAGCTGAGATCACACCACTGCACTCCAGCCTGGGCGAAAGTGCAAGACTCTGTCTCA
AAAAAAAAAAAAAAAAGCCTGGCAGTAGAGGATTATCAGACAATTTTTCTTAATTCCTTTTTGTAGCA
CTTATTTGATGTTCTGAAGGTCAGCTAATGTGTATTTTTTTTTTTAATTTTAGAAGCTGAAGTCGTT
TTTTAAAGAGTATGGACAAATAGAATCTGTACGATTTCGTTCTCT (SEQ ID NO: 524)

577. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KMO. In some embodiments, the sequences from gene KMO comprise or consist of:
TCATGAAATTTAAATGTAAGACCTTTTTGTCCAGTATAGATAAGTTCTGAAATAAGGCAAAAGATAA
AGTAAAAAATATATATATAAATATATAATGTATGTGCATACATTATATATGTGTGCATATACACACAT
GTACACATCTAGATATGTGCATGTGTGTGTACATATATACCAGGTATAATTATACCAGCTATGATT
CAAGATTTGAGAACATAAGATGTTCTCTCTGTCTTTTTCCTTACATATACACACACACGCACGTATT
CTGAAATCTTGAAATATACCTGGTATCAAAAACCTACCTAAGGTTGAGTTTATAAAGACAGAACAC
AAAGTGTTTTCTAAGACAACTTCTATTTTATGTAGCAATAGATGTGCGTATCATCGTGTAGATGCT
ACTGGTTTTAATTACTGTGGAAACTATTATAAAGCTGAGTCCGTTTTATAGGTTTGCTATATGAATG
CACTAATCAATCATATATTCTTTTTTCTGCAG (SEQ ID NO: 525)

578. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KMO. In some embodiments, the sequences from gene KMO comprise or consist of:
TAGTATAGAATTTTTTATCAACTGTAATTTTGCATTTGTAATTAATGTTGTTTATTACTTACATTTGTA
CTTAGAATGTATCTACCTAATTGATCTCTTCATTGTTTAATCCATTTAGTGATTATAGCTTTGAAACT
TTGGGATTACTGAGGAAAAATCTGAAGGATTTCCAATTATTTACTTTGGAAAGGAGATTTAACTTA
CATGAATGGATAACAAGAGTTTATGTGTGGTGGTGCCTGTCATCTCCACTAAAGACAATTTAGGA

GGAAACAGCCCTTCCAGTAAAGCCAAAGAGATTTAGGTTATCTATCAGGAAGTGATTCAGCCTTT
AAGGTCTGTAGTACATTGGAATACGCATTATCAAAAGAGAGCATGGGGATGGGCGCAGCGGCTC
ACACCTGTAATACCAGCACTTTGGGAGGCCAAAGCGGGAGGATTGCTTGAGCTCAGGAGTTCAA
GACTGATGTGGCCAACATAGCAAGACCTTGCCTCTACT (SEQ ID NO: 526)

579. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RMDN2. In some embodiments, the sequences from gene RMDN2 comprise or consist of:
ACTTGTCCTAGGAATATCACCAGTTGTTTTTGTTCTTGAAAAGAAAAGGATAGAGAAAGAAGACTG
AGGAAAATGATTATGTAAAGAAATCTGAAAACCATAAAGTATCTCATTGCTTTGTAAGCTTTATGAC
CATGGTAATCAATTTTATTTTAATGGCTAAATGCAAAGGCTATGTTTCCACCCAAAAGATACTTAAA
CTGATCAAGTGATTCAAATGTGAAACAACCAACCTAAATTCTTAGGGCAGTTTGGTTCATAATATT
TGATTTATTTAAATATATTCTCTTCACTTGTGGTTACTGTTATTTTAATATTGCCCTGTTATTCTCTC
ATGTTTTTCTCTCAAATCAGGCTGAAGAACTATGCCCTGGTTATTCTAATCCCAATTACATGTACTT
AGCAAAGGTAATGAAGACCACTGTTCTGCTTTAAGATCACTTTGAACCTATCGCATAAAAACGGAT
TATGTTTAATATTGGTTATTTCTCATTTCCAG (SEQ ID NO: 527)

580. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RMDN2. In some embodiments, the sequences from gene RMDN2 comprise or consist of:
TAAGTCCAGAAAGTGACAGTGAGTGCTGTTGTCTTGTTAGTACTATTCGAGCTCAAAACAGGAAT
AACTCGCTTAGATACATTTGTAGTTTTCTCTATTCAATTTTATGTATTTATTTTTATTCTACCTTTATT
GAAGTATAATTGACAAAAACTATATGTATACAGCATGATGTTTTGATAGACATATACATTATGAAAT
GACTACCACAATCAAGCTAATTAACACATTCATCGCCTCACATAGTTACTTTTTTTATTGTTGAGAA
CATTTGAGATCCACTCTCTTAGCAAATTTCAAATATACAATACAGTATTATTAACTACAGTCACATT
GCTGTCCTTTAAATCTCCAGAACCTATTCATCCTGCATAACTGAAACTGTGTACCCTAGACCAATA
TCTCCCCATTTCTCCCACTCTTCCAGCCCCTGACAGCCACCCTTCTACTCTCTCCTTCTATGATGG
AGTTTTCTTTCTTTTTTTTTTTTATTATACTTT (SEQ ID NO: 528)

581. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SPTBN1. In some embodiments, the sequences from gene SPTBN1 comprise or consist of:
GCTCGCCGGGCCGCCGCCGCGTGGTTGGCGCCAGCGCACTGGGGCAGTCGCGCGCGCCCAG
GTGCGGGCCGCGTTACCTCAGCAGACGCTAGAGAGTGAATGAGCCGCGCGGGCCCGGGACCC
TTGGGGCTCTTCACTCTCCAGGCCGTCCCGTGGGCGCGCTAGCCTTTTCAAGTGATAGTAATCG
GAGACTTTTCCGTTACATGAGGCTCAACAAAAGATTGTAATTCCAGCAGCTCTGTTTGGGAAGGC
ACTACCGCGGCGAGTCCAGGGCCCGGCCGGGGGTCGGCGGCTGCCGGGCGGCTGGGGCGAC
CGCGGACCGTGCGGGACCGGTAGGGGGTCGCGGGCCGGCTAGGCTCCCCCGCGCCCCTCCTC
GTGGTATAGCCTGCATTTCTAATACAATGCTGTTATGCTAATCAGGTGACATCACCGCCCAGCAC
ACGGCGAGTGGCTCCTGATAAAATTACAAACCGGCGGCCGCCGCGGGCAGCTGGGAGGA
(SEQ ID NO: 529)

582. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SPTBN1. In some embodiments, the sequences from gene SPTBN1 comprise or consist of:
TAAGCCCCCTCCCAAAGGCCGGGCCTGTCCTGGGTGCCAACGGGGGTTCTTGGAGGCTTTATTT
GTGACCCTAATGAAGACGGGCGGCTTCACAGCTCGGCCCCAGACCCTGTGGTTGGCTGCGGGC
ACCCCATTCACGACTTAGGGAAGGCAGTTGCTCATACTCCACTCCAGAAGAGCTACCATTTGGAG
TCCCTGTCTCTCCAGCACCTTTTTGGCTTTCTAGGTTGTCAGATAACTGCTGCACACACATTTTCT
TTACTTTTAGCTAACTTTACCTCCTAGTAGATCAGTGCTCATAGACTTATTAGTATGCAGGTATTTG
ATTCCGGGTCGCCTCTGGCTCCCAGCCCCCAGCCTCTTACCTCTGGGAAGCTTTAAAGGTGTAA
AGTGCCGTGCTCAGACCCAGTCCTGTAGAACAATAGCAAAGGGGAGGAGGGAGGGGTCTTTTTG
TTCCTAAGCCTTTGGTAAATTACAGTTTTTTATTCAGAAGCTTAAT (SEQ ID NO: 530)

583. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NFU1. In some

embodiments, the sequences from gene NFU1 comprise or consist of:
GTGGGTAGTGCATCTGATGGAGCCGGCGGGTCCGCCCTGTCGCCGTAGTTGGGGGTGAGCCCT
GAGGCTGTCTGTGCGGGAGCTCGGCGCTTCTGTGGCCTAATCCGGGCGGACTCTCTGGAGCTT
CCTCTCAGGCTCAGAGACCCAGTTCTTGAGTCTCTGCGGTACGGAAGCTTGTAGAGACTGGCTG
TAGAGCCAGAACGGAGGAGCTGTTTTAAAATCGTGTGCCTCTCCCGCCCCCAGGCCCTCTACCG
GGTGCATTCCCTCCTCTTCTAAACGCAGAATCAGAATGTCACACAGAAGGGAAGAAAATACCTTG
TCTCGTTTCCTCATTTTCCCAGTAAGGCCCTGAAAGAGGAGGTGACATGTCCAAGGTTACACAGT
TTCTAAGTGATGGAATTCCGACGAGAACCAGGACCCCTAGATTCCCTGCACCCACCACCATTAAG
CCCACTCTGTTCCCTTGTTTTTTCCGCCTCCCTGAGCCCTACCTTTGAGT (SEQ ID NO: 531)

584. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NFU1. In some embodiments, the sequences from gene NFU1 comprise or consist of:
CGAGAACCTTTTAGAAGGAATGCTCCAGGGAGTCTTTGGGGGCAGTCACTGAGCTGGGCCTGGA
GGCTGAGTAGGGTCCTAGAGGAGGGAATGGGTCAGGTTTAGGGGCTGGAAACAGCATTCGCAA
GGCAGCACCAGCACCAGCTAAAAACCTAGCCAACAGGGAAAACAAAGTACGGAAACACGCATGC
GTTCACAGTGCTGCGTGAATTAACCAAGCGTTGGCGCAAACGGGAAAGGTTCCCCGGCCTCTCT
TGGTCAGGGTGACGCAGTAGCCTGCAAACCTCGGCGCGTAGGCCACCGCACTTATCCGCAGCA
GGACCGCCCGCAGCCGGTAGGGTGGGCTCTTCCCAGTGCCCGCCCAGCTACCGGCCAGCCTG
CGGCTGCGCAGATCTTTCGTGGTTCTGTCAGGGAGACCCTTAGGCACTCCGGACTAAGATGGCG
GCGACGGCCAGGCGGGGCTGGGGAGCTGCGGCTGTTGCCGCCGGGCTGCGCAGGC (SEQ ID NO: 532)

585. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PCBP1-AS1. In some embodiments, the sequences from gene PCBP1-AS1 comprise or consist of:
GTTGGTTGAGGGGTTTAACAAGGCTAAGAAGGTGAGTCAGGTTTAGACTTTGGAAGTTGAACCAC
AGGATTTATGCTACATACAGAGGAATGATTGTTGCTTCCTCTTATGTTAAGTTGGTATGTCACGTA
AAACCTTTCAGAGTGCTTTCACGTTACTTGTTTAATCATCACAGACAACTTTGCCAGTAGGGTCTT
ATGCCCATTTTACAGAAGAGCCATTTTTGGATTAGAGGAGTGAAGTGACTTGCCCAACGTTACAC
AGCCTGTTAGAATTTGAGCTGAACCTCTTGACTCTTAGTTATGGATTACACCTTTCCATGGCTTCT
GATGCTTTTGATATGGACTTTGATGTGTGGGATAGCTTTACCTTAAACTCAAAAGGCTTTCTAGCC
AGTTACTATTTTTCTGTCCCCAAACAGCCAATGCATTTACCTTAAGTTCCTAACTCTTGTTTTAGAA
AATCTCTTCCCTCTTTTCCCTGATGTTTACATTTATGG (SEQ ID NO: 533)

586. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PCBP1-AS1. In some embodiments, the sequences from gene PCBP1-AS1 comprise or consist of:
CTACCTACTGAAATATTTCCATAATTTCCTGTTATGTACTCCTGGGACTTAGTGCACCTCCTCAGT
GAAGCCTTCCCTTTCCCAGCTTCCCCAGCTCTTAGCCTCCCTCCTTCCCCGAGAGTCTTAACAGT
TTCTCCCTTCGGTAGCCCACGTTTGGACGTTGGTTAAATTGTAATGTGTCTTGGGGTTGGTAACA
TGTCATACAGACACCTTGGGTGATGCTGTGGTCTGGCAAAGAGGTCATTGGACCTTGGAATCTG
AGGCTCTGGGCCCTAGTCCTAGCTCTGCCCCTGTCTAGCTCTGAGACTTCTACAACTCATCTGTC
AGGGTTTCAGTTCTCCCTTTTATAAAGCAAGAGATTAAATGATCTCTAAGGGTCCTTCTACTTATG
TCCAGGGACTGATGATATTTGATGACTTTGGTTATTTTTCTTTGGCGGGGTGGGAGGTTTATGTAA
ATGTTTTCTGCACTTTTGGTAAAATCTCCACTCCCTTCCTCA (SEQ ID NO: 534)

587. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IL1R1. In some embodiments, the sequences from gene IL1R1 comprise or consist of:
TCCTTAAGTGAAAAATCTGTGAGGAGTTTTCTATCTTTCTAAGTCTTTGTGGCACACTTATCACAT
GCATAGTACTATTTCTCAAGTTACCCAGGCACACACAGATGTATGGCTTTCAGGAAGCCATACAT
CTGTGTAGCTCTGAGGCCCAGCCTTGTTCAACACTTCACTCAGAAGAATTGCTGGCCTGATGACC
AACAATAATTGTCAACAACTTAAAACTTCATTGACGGCTCCTAAAAAAAATCAGTGTGCATGTGTG
TGTGTATGTGTGTGTGCGTGTGTGTGTGTGTGTGTGTATGAGTGTGTGTATAACATTCATTACTG
CAAACTGGAATGGAGTGGGGCTGGAAGGCAGCCCAGAAGCAAGGCTCAGAGCCTGGAGCTGCT

GACCTCTTGGGGACACTGCAGCCCTGGCCTGGCCTACTTTTCTCTTCTCCCATATCTGGAAAATG
AAAGTAGCCTGACGTATCCGGGGACCCGGCCCAAGACTCCACCC (SEQ ID NO: 535)

588. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IL1R1. In some embodiments, the sequences from gene IL1R1 comprise or consist of:
TAAGGTTTTAAAGGGCCCGCCCTGGCTTCCTTGGGCCTGTAGTTTGTGACTGTGTCGTTTTCAGA
GTGGGAAGGCCCAGAGTTGGCCCCATGGAATTCTTTCTGCTTCTAGGGTGTTTGAAGAGATAGA
AAGCCAGGGTAAGGTTCACCGAACCTCCAAGCAAAAATAAATTTCCAGAAGGGGCCCCTTTACTC
TGAGGACATTGAATAGCAACAAAAACTACCACTGAAGAGTCATTTTGTCCCAGGCCCTGTGCTGG
AAACTTTGAACACCTGTGTTCACCCCTCCCTCATGACACTCATGAAGATATACCATGGCTGTCTTT
ATTTTCTAGGTGGGAATCTCAGGCTTGAGGGTTGGGGTGGCTTGGGGAAGGTGTGTATCTAAGA
GGTAGCTCTTATTTATTTTTACTTCTAGAGATTAAGACACATTCTTTTTCAAGATAGACATGGAACT
GTCAAAAAGGATTAAAAGTTAAATAAGGATAAGGTTATGTAAA (SEQ ID NO: 536)

589. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DBI. In some embodiments, the sequences from gene DBI comprise or consist of:
AGCGCGTGCACAGCCAGGCTGCGAAGGTGCAGCGGGCGGGAGGCCCGTTGGGGGCTCAGCC
GGCTGCCAGAAGCTCTCGGGCTCTTTCCTTCCGTGCCCCTCACTTGCTCATGGGCCCATGCCTA
GCCCTGATTCGTTGGACAGAGCCTTGTGAGCGGGATTTTCCGTTTGGGGATTTCTAAATCTGCTG
CCCACCCCGCAACTGCCGGAAAGTTGCCCATGGGGTGGACTTCGCTGTGTAGCGGGAGAGGGG
TGGGAGTCGAGGGTGCTTGATGGAGAGATGGGGGAAGGGGTTGCACGGATTGGAGGAGCGAG
GAGACTCAGTCCCCATCCCGAAGCACAGGGCAGGACGTCGCGGCGGAGTGGGGAAGCGAGGA
GTCCGTGGCCGAGAGCTTGGAGGTCAGGGGAAGTACGGGGCCGGCTGCTCAGAGTGCGGGAC
GAGGAGAATCGCGGCCCGGGGAGAGGTGACCCAGGGGCCCCTCCCTTCTCTCCAGTGTAG
(SEQ ID NO: 537)

590. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DBI. In some embodiments, the sequences from gene DBI comprise or consist of:
TCGGTGTTGAACGCGCGGGCCCCAGGGGGAGGGAGGGGACCAACGGGCTCCGGCGCTGACAC
CGCGGCACTCATGCCCTGTCCCCTTTCAGCTGTTTCCAGCATACTGTGCCCCGTCTGTCCTCAG
GCCAGGGCTTCGCTGCAGCCCCGGCCACTCCCTAGTGCCTGGCCCGGTGGTGGCCAGGCAGTT
GGCCGCGCTGCTTCTCCCGCAGAGGGGACCCCCACTGGGGGCGAAGGCTTGGCCTGCCCTCTT
CACTGCTGTATTTCCAGACCTGATGCCTGCGTTTGTGAGAGCTCTGGATATATGGTTTTCGATTG
AATGAGTGAACTGGAGGGGCTTCCCCTTCTTGTGTTGCTGAATCTTTCTAGCTGCCCTGTTGGGG
CAGGGAGGGGCAGACACACTTCAGGGGCTGCATTGCCCGAAGGGTGCCACCTTTCCCACCTCT
CCATCCCCGTAACTGGGCTGTCATCAGGCCACAGTAGGATTCTTACCCTCTCCC (SEQ ID NO:
538)

591. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HNMT. In some embodiments, the sequences from gene HNMT comprise or consist of:
TCCCTAGAGTTGACTATTGCCTTGATTTTGGTTTCTTTTCTTAGTTCTCCATGTACCTATTACTATT
TTGATCCCCAAGCAGATATATTAATCTCCTCTCAATATATGCAAACATATCAAGGAATCTGTTTATT
TTACCCCAAGGGAACAACTTTTCTGAAGCCCTCTGTTCTTTTTTTCAGTTTAGGAAGATCTGCTTT
GGCCTGCTATACAACTATTAAGGAGGGAATTTATTTCACTTTCTGAGAATCATTTTCTTTCTCCATT
ATTTGATTCCCTGATTCTATATCTCATGCCTTTCTTTTCTTTGTTTCCTCGGTCCTTTGTTTCCTGA
ACAATTCTTTAAGAACTTTAAGAGTGAACGAGAGGTAAACTTTTTGAGACTTTGTATGTTTAAAAAT
CCCTTGGTTCTATGTTAATCGTTTGACTGGATATAGAACTCTATACTGAAAATGGTTTTGTATAATA
GATCTAAAGGTACTTTTCCACTGTCTTTTAG (SEQ ID NO: 539)

592. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HNMT. In some embodiments, the sequences from gene HNMT comprise or consist of:

CCTTGGCATGTGGAATAACTTTTACATTGCTATGTGTTTTGTTTTCCCTATTTTGAACTTTTTAGAA
TCTTCTTACGTCTAGTATTCTGAAATTTTAAAATACTGAGCTGTGAAATGGTTCCTTTTTACCCATT
TTATGGGTACTCCCTGGGCTATTTCAATTGAGATTCAGATCCTTCAGTTATGCGGAACTTTGGTAA
TCATTCTTCACCACTGTTTTCTTTTTCTGGAACTTTTATTCATCAAATACTTCCTGGATTGATTACCT
AATTTTCTTATATTTCCAGTTTGCTACAACTTTCCTCTTTCAGCCCATGTATTAACTTTTTACTATTA
TATTTTTAATTTCCAAGAATGTTTTCTATAGCATTCTTTTCATCATTCCCAGATGTAATACCTTCTTA
TTCATTACAAAATGTTCCTCTGCTCTCTCTGCCTCTTTCCATCTCTGTTTCTTATGTTAGACAGCTC
CCCAACCACCTAAAGAGCCTTGGTTTTC (SEQ ID NO: 540)

593. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KYNU. In some embodiments, the sequences from gene KYNU comprise or consist of:
GATCTGCCCACCTTGGCATCCCAAAGTGCCAGGATTACAGGCGTGAGCCACACACCCGGCATGT
TTTCTTTTTTTGGAAACAATAACAGGATATCAGATTGATAAATGCAATACCAATTTCTGATAATTTAT
CTTGCTATATAATACTTCATGGACTTCTTGCACTTTGTGGTGTTTTATTAGTCAGGAATAAGGAGA
AAACAACTTATAGCTGTGGAAAGAGTACAAATTAATTTTTAAAAACTGGAGAATAAATCAAGCAATT
CGGCTTTTGAAGACTTTCACTTGAAAAAACACTTTTTACTTTTTAATTATCATTTCTTAATAATAAAA
ATTATGCTCAAATGCTGCTCTTATGCCAGATTTTTAAAGAACCTTAATCTGAAAAAAAAAACTATTT
TATAATGCAAAAGGGCTCACGGTGAAATTTAGATCGGCAATATGAAATTACAAATTTATTATTATC
GATATGACCTAACTTGTGCCTAACTTGATTTAG (SEQ ID NO: 541)

594. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KYNU. In some embodiments, the sequences from gene KYNU comprise or consist of:
TATGCACGCCATTTACTTCTTCCCACCTTACTCCAAACATCACTCTACTTAAGAGTGTTCTAATTG
CATGACTTGTGAAGTACTTTAGCTTGTGTCTGAGTAAAACTATTTCAAAAGTTAAAAAAAAAAAGA
GTAAACCTTGGGCCAGGCACGGTGGCTCACGCCTGTAATCCCAGCACTTGGGAGGCTGGAGCA
GGGGGATCACGAGGTCAGGAGTTTGAGACCAGCCTGACAAAAATGGCGAAACCCCATCTCTACT
GAAAATACAAAAATTAGCTGGGCATGGTGGTGGGCACCTGTAATCCCAGCTATTCGGGAGGCTG
AGGCAGAAGAGTCACTTGAACTCGGGCGGTGGAGATTGCAGTGAGCCAAGATCGTGCCCCTGC
ACTCCAGCCTGGGCAACAGAGCAAGACTCCATCTCAAAAAAAAAAAAGCGAGTAAATCTTACATT
TTTAAAAGAAAATCTGTAATCTTTTTTGCTTCAGGCATCTCTATTTAA (SEQ ID NO: 542)

595. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GRB14. In some embodiments, the sequences from gene GRB14 comprise or consist of:
GTAAGTTTGGTATTTTTAATTTTGAGTACTTGTGAATTGGATTTCTCCTATAAGCAGAAATTATTTAT
TCCATAGCCACAAAGAGTTCTTGATTTGGGCTTATCATAAAACAGAAGTGACATTGTTCTATAAAT
GAGGTCATCACTGTATTCTAACAGTATCTATATTATACCTGGTACATAGTGTGTGTCTGGTATTTG
TATATAAATGGACAAATAACGGAATAGAGTATCTTGTTCTTAACCAGTGATCACTAATATTACCCAT
TATGTCCTGATTCTAGCATCTCAGATATCAATTGATGGGGGAAAATGAACTTCTTTTTAAGTGTCA
ATATTTTGATTTGAACATATGATTTCGAAGTATGGTTTATATTATGACATTATGTCAAATGTATTTTT
TTAGGTATGATGCAACATGTATTAAGTAAAAAGCTGTTTCTTAAGTGTTTTGAACACTTATTTTTTT
GTGTGTTTACATCCCTATTGTCCTTTCTCTA (SEQ ID NO: 543)

596. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GRB14. In some embodiments, the sequences from gene GRB14 comprise or consist of:
AAAAACACTGAGAGAAAAACACTGAAATTGAAAAACACTTTCAATTTATTTGAAAGATAACTTTCAA
AGAAATTTTCATAACTCAAATGTGTTTCTTTTTTCCAGAGAAGTATATCAGAGAATTCCCTGGTAGC
AATGGACTTCTCAGGCCAGAAAAGCAGAGTTATAGAAAATCCCACTGAAGCCCTTTCAGTTGCGG
TTGAAGAAGGACTCGCTTGGAGGGTACAAGTAGCTTCACATGCTTCAAAATATTTATGATTTCAGT
TTGTTTCACCTAAAAACTTGAGATTTGTTTTCTCCTTCCTTGCTCAGAAAAAAGGATGTTTACGCCT
GGGCACTCACGGTAGCCCCACTGCCTCTTCACAGAGCTCTGCCACAAACATGGGTATGTCTGTT
CATAGTCATTGCCACTGAGTAGACGGATAGACATGGAAAGGACATGTAATGAAATTGCAGTCATC
TCAAACAAAGCTTTGCATTCATCCATCCTATTTCTTTA (SEQ ID NO: 544)

597. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SPATS2L. In some embodiments, the sequences from gene SPATS2L comprise or consist of:
TCAGAAACAGTTATTGGTATTGCCAAAAAAAAAAAAAAAAAAGGAAGCTAAGAAGTCACCCTTCTA
AATAAATAAATAAATAAATAAATAAATAAAAACCTGAATTGGAGAGCTGCCTGCATTTCACTCTACT
GCCTCTGGAAGAAGAGTGTTATCTAAAGTGCTTCCATCATGAATAATGATTGAGAAACTGCTTTTA
CTCTCCCGACTACTGTACTCCCAGGCAGAAACCCACGGCTGAAGCCCACGATGCCCATGTGTAA
CTTGGTTATTACACACACGTTTGGAGCCCAGTGTGCAGACCCGCAGCGCAGAGGAGGCGGCGG
AACACCCCGGGTTGGTCGGGTTTCCAAGGGCTGACCCGAGCTCCAGCACTTTTTCCGCGCCTGA
TTTTTCAGGTCATTTTCGAATGGGCTATCTTTGCTTACATTTTGAGCTTGGATCCTCTCCAGAAAG
CATTACTACCTTCTAAAAGGAAAAACATCTCGTATTTGCAGAC (SEQ ID NO: 545)

598. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SPATS2L. In some embodiments, the sequences from gene SPATS2L comprise or consist of:
TAGGAGAAGATGATTCTCTTGCAACACGTGCGGATTGTGACAAAATCTTTCATTAACAAGGGGAG
TTTCGGTGAAGTGGAGGTTTGGGGAAAGGCGAGGAAGTCGGTCTGGAGCAAGCAAGCAAAGTG
CGGAAGCTGTACTGGGATTCTTCTAGAAAGTGGGGTGGGAAAGGAGCTAGGGAGGGCGTGTGG
AGGGACGAGATCTGTGTCAGAACGTGCGTGTGAGCGGATACAAAACCCGAGAGAGGCGTGAGC
AGCGCTGTGTTTGCGAGCGGGAGCGAGGGGCGCCGGCTGGGGTGTGTGCTCCTGGTGAGTGA
CACCGAGGGGAAGGCGGGCGGGTCGGCGGGCGGGGGCAGCCTGCGAGGGGCGGGAGTGTCC
CTGCGTGGGGCGGCCGAGCCGGAGTTGTGTCAGTGAAGGAATCCAGTCCGGGGGCCGAGCTG
GCTGCGCCCTCCGCTGCAAGCGCCGGCAGCGCGGGGCGAGCTCCGGACGGCGCGCGGCCC
(SEQ ID NO: 546)

599. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CPS1. In some embodiments, the sequences from gene CPS1 comprise or consist of:
AGGGCTGAGGATCGCTCCATCTTCTCAGCTGTCTTGGATGAGCTGAAGGTGGCTCAGGCACCTT
GGAAAGCTGTTAATACTTTGGTAAGGAGAGAAACAAGTATCTGTTTCTAATGTTCTATTTTGAAGA
GCTGCAACCTGAATGTTGACTGAATGTTGACTATTGGATATGTTAACTACAGGGCAGATAGAATG
CATACACTTAGTGAATTTAAAGTTGTTGTATATCCATGATTGCAGTTAATGCTGATTATGAGTTGAT
AGCAGTATTCTCATTAAGATTCAGACAATGAAAATAATTTCAAACCAGTTTTGAACAAGATTTGATA
TTTAGAATCAGAAGCTAGGAATTTTATGTATTTCAGTGTCCAATTTACATTTAATGGTGCCTTTAGA
GAATAAAGAAGCTGGGCTACCACTCGAGCTAATGATACATTCTGTAATTTTATTGCATATTTTAAA
CTACTCATACATTTTTATTGTTGTTTCTATTAATTAG (SEQ ID NO: 547)

600. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CPS1. In some embodiments, the sequences from gene CPS1 comprise or consist of:
TAACACTGTATATTGTTTTCCAAAACAATGATTCAAAAATTGGGAGATACAGAAATGCATGCTGTA
TGCTAATAGCACTAGGGTTCTATATGTAGTAATTTATAAATCCATTAACAATTTCCAAACCATCACA
GCCAGTTTAAGGACCAATGTGTGGTCTTCTAGTTTAATGCTTTCCCTTCAGGGAGTGGCCATAGG
AAGACTACAGTTCTTCATCTAGAAGTGTAGTGTAAGGCATCTCCTTACCAAACAGAGAGGGTAGC
TTTATATTAAAGAACAGGACAATTTAAAAAAGACACACAAATTGAGGTATCTCTCGCCAGCGTGTT
TTCTGATACCCAGAAATGACAGCTTATCTTTGACTATTGTCAGCACCTTCTGATAGTGCCTTTGTT
TTAAAATTTTCAGTTTTTGAGATCCGATTGTTTAATAGATAAATTATAAGGGTGAGGAACAGGAAC
AGTGAGGATCTTTTATATTAAACTTTAAAACAAAGTTT (SEQ ID NO: 548)

601. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PECR. In some embodiments, the sequences from gene PECR comprise or consist of:
GTAGGTAAACGATCTATATTGAAATTTATTGACAAATTATGCTTTCTGATTCCATTTGTGATGTTGA
TAGAGGTATTTGGTAATAAGCAAGTATAGCATAAAAGATTGACTTTAAAACATAGATAAAATGGAA
AGCCTAATTTTCTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTCTCTGTCGCCCAGGCCGGAGTGC

AGTGGCATGATCGTGGCTCACTATAACTTCCACCTCCAAGGCTCAAGTGATTCTTGTGCCTCAGC
CTCCTAAGTAGCTGGGACTACAGGCACAAGCCACCATGCCCAGCTAATTTTTTGGATTTTAGTAG
AGATGGGTTTTCACCATATTGCCCTGGGTGGTCTCGAACTCCTGAGCTCAGGAGATCTGTTCGC
CATGGCCTCTCAAAGTGCTGGGATTACAGATGTGAGCCACCGCACCCGGCCCAGAAGGTCTAAT
TATCATTATGGAAGTACTCTTTGATTTACAGCCAGATTGTC (SEQ ID NO: 549)

602. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PECR. In some embodiments, the sequences from gene PECR comprise or consist of:
CCCGGTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAAC
TCTTGACCTCAGGTGATCCGCCCGCCTTGGCCTCCCAAAGTGCTAGGATTATAGGTGTGAGCCA
CTGCACCTGGCCTCCTTTGTTATTTAAAATCGATGTTAAAAATAACCACAGGCTTGAAATCCTTAA
AATTACCAATGTGTTTTCCTTTGTAATCAAAGTTCTTTAAAGTATTCCTCTTACGTAGTGATTTGGG
GAGCCTTATCTGGGTCTATGCCATGTGAGATTTGCTTGATCATCAGCTGTGGCTTGGATTTAATAT
TGAAGGACATAGTTTTTTCTTCGTTGTTTAGACAGAAGCTCAACAAGACAGACTCCATAGCAAGAA
GTCTCTTGTGGAATTCTGTCAGGTAGTTGGCACACTTGTGAGCTTGATGAACAAGAGAAATATTC
AACAGAAGCTGATTGTCATGTTTATGTTTTGTCTTTCAAA (SEQ ID NO: 550)

603. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SP100. In some embodiments, the sequences from gene SP100 comprise or consist of:
GTAGTTATTTTCAAATCTTTTCGAAAGGAAAGAAGGAAGGAAGGAAAGAAAGACGCAGGAATATG
TATAAAGGTATAGCAAACATCACACTTAATGGTGCTGCTAAGTGCTTCTTCCTTGAAATTGGAAAT
AAGGCAAGGAAGTCCACTCTCATCACTTCTCTTCAACATTGTATTCAAACTCCTAACCAGTGAAAT
GAGACCAAAAAATAGAAATAATTGTTTGGAAAGAAACAGTAAGTCAGTCTATTTGTTCATGATATA
ATTATTTTCTTTAAAATACAAAGGAAATCTATAAATAATTTACTAGAAATACTACATGAATTTAGCAA
TGCCATAAATTCATGGTTAATATGTTTCAAACCAATTATATTTTCATATAATAGTAATAAGGAATTTG
AAAAGCATTATCATTTAAAGTAACACCAAAACAATAAAATAACTAGGAATAAATTTATTATTTTTTAA
ATTTAATTAAATTAAATTTTTTATTTCAATAG (SEQ ID NO: 551)

604. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SP100. In some embodiments, the sequences from gene SP100 comprise or consist of:
TAAGTAAATGGAGAGATATACAATGTTAACAGATTGGAAGCTCAATGTTGTTGTCATCTCCCCCAA
ATTTATCTGTAGCTTCAATTCAAATCCAAAAAAAAAGTCCTAAAGTTTTTTCTTGAAGAAATTGACAA
ACTGATTTGAAAAGATAATGTATAAAAGCAAAGAATCTAGAAAATCCAAGCCAATCTTTTCTAATTG
ACTTCAAGACTTTTGTTAAGCCATGATATTTAAGGCAAAATCTTACCAGCATAAGGGTAGACAAAT
AGATCAATGGTATAGCATAGAAAGTACATATATAAACCCATGCTAATATTGTAAATTGTTTTTTGAA
TATTTTCATGACCTTGGAGTAGGCAAATATTTCTTAGATAGTACACTAAAGTCATTAATTATAAAAG
AAAAAAAAATAAATTGGATTTCATCAAAATTACAGATTTCTTCCCATCAAAAGACATGATTAAGAAA
ATGAAAGAGAAGCTACAGACTGGGTGAAAATA (SEQ ID NO: 552)

605. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TRPM8. In some embodiments, the sequences from gene TRPM8 comprise or consist of:
CTTACTTTAAGGAAGGTCCCTGGAAGTTGTTCATTTCCTGCATAATAGTCCGTTGATTCTTGCATT
TGCTGCACTTACGTTCTAGTTCATTAAAAGAATCTAGGCTGTTCCTTGGGGGACTCATCAAAAACC
CACATTTTTATGTTATTTCAGTTTTAATTCAGTTTTTAAAAATTTATGCAGAAACCACTGAGCAAATA
AAATGCTCAGAAACATTCTGGGTTTTAACCTAGATTGAATGAGTTTGAATGAGTTGAGCCTTGATC
ATTCAACCTTAGTCACGCAGCTCACACCGATAAACTGGTCAGAATACACATCTTTAAGAGAAAAAA
ACATTCTCAGAGCTGCTTCTATAAAAAAAAAAATCTCTCAACTTTGGTGGTATATTTGGATCTATTC
CCAGTATATTCCCAGTATATTTTGAAGCAAACCATATCCTGCCTGAGAATGGAAGTGGGAAATCTA
TTCTTAACACAGTGTTCTTTCTTTGTTTTTACAG (SEQ ID NO: 553)

606. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TRPM8. In some

embodiments, the sequences from gene TRPM8 comprise or consist of:
GTGTTGCTTTTGTCATTTTATTGAGAGTGACAAAATAAAATTCCTTAATTCGGTCAGATTCACTTCT
ATAGGGATTTGGTTCCCAGAGTTACATGAACTGACTTCTCTAAGCAGATGACTAGAGCATTCTGA
TTAAATGCAAGCAAATGAATTCCCCCCTCTGGTTCTGGTTCTTGTCAACATGGCCAGATCTGAATT
CTGTGGCCCACTTTTTGGTTTCCCCCAAGTCAGGCATCCATCTGTAGCCCCGGGGACTCCAGAT
TCATTGACTCAGAGCCACCCCAATGTGTCATGGGGCTTTTTTGAGGCCTCATGTGGGCTCACAAA
CAGGTGCTCCTGCTCTATGTTGGGGTCAACACGAATGTTGATTGTCCACAAACCACTTGACAATG
GAGCTTCGGGCCCAGCAAAGGACATGATTCCCTTGTTGTAGGCATTGTCTCCAGAGTGTTCCTG
GGCCCTCCTGCTCCAAACACACATTCATTCCAGGAAGAATCTG (SEQ ID NO: 554)

607. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SEPT2. In some embodiments, the sequences from gene SEPT2 comprise or consist of:
AGTACATTCCTCACATTTGTGAACAGTTATGTTTCTAATTATATGATGTTCAAGTTCTGTAGTCTCA
TAGACCTGGATTCAAATCTTGGCCCTGCTCTGGATAGTACTCTGACCTTGGGCAAATTAGAGTTT
CTTTGAGTACCCTCAAAGATCATACTGCAAACATAGTAGTACTGTAGGTACTAAACACAGAATGAT
GTTTGTGAGGTACTTAGCCCAGTACCAGGCCTTATGTAAACACTTAACCGATTGAATGGTGTCAT
ATGAATAAGGTCATGACAAGGTTTTTCTTTTTATTTAAAGGTGAATCAGGTCTAGGAAAATCGACT
CTCATAAACAGCCTATTCCTAACTGATCTGTACCCAGAAAGAGTCATACCTGGAGCAGCAGGTAA
AAACATTCTTATGTTACTGTAAGTGTAATTCTACATGAAAGATGCTGAAGACTGCCTAATTAATATT
TTATGTCTTAGCTGTGTGTTTTGTTTGTTCTTGTTCAG (SEQ ID NO: 555)

608. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SEPT2. In some embodiments, the sequences from gene SEPT2 comprise or consist of:
TAGGTGTGCTGCACCGAGGTCCTTGGATTTGGGTTGTAGACTTTCTTTGACACGTATCCATGGAT
CCATCCTCTCTTGAGTTTGTCTGTAAAATGTAATAAGTAGTTTCTGCCTATATTAAATATTTGATGG
AAGGATTAAGTGAGAATGTTTTACATCAAAAATGCTGTGTAACTAGAAGATTACTAGGATAGATGT
TCGAATTCATCTACTGTCAGAAAGTTCCAGCACAGGACACCAGCATCCACAAATGACTGTTGAAT
GAAATAGGCACACATAGTGAGAGCCTAAGACTTGGGCTGCTGCAAGAATATGTAGCCCTTTCAGA
ATATTTTTGAATTCAGTTTTTAAATGAATTCGTAAATTGCTTTCTTTTTCCCAGGAACAGAAATTATA
ATTTTTAACATTTGTGTTTTTAACCTTCCCCAGTAGCACAATAATCTTAGCTTTAACCTTCCCCTTT
CTGACTTCTCTGGGATCTTTTTTTCTTAATCCCCAT (SEQ ID NO: 556)

609. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RPL15. In some embodiments, the sequences from gene RPL15 comprise or consist of:
CAGAGACTCCGCAGGGGGAGAGCCCGCGGTGCGTGAAACAAACCTGTTCTCTCCTCAGACCTC
AAAGACAGCGGCTCCACCGCGGTACGCGGCCACCGGCTTTGGAGCCTGGACCCCAACTTGCCT
CCTCTCGCGGAGAGACAGTCGCCGACGCTCGCTTAGCCGCCGAGACCTCGCCGCCAACTCTCT
CACCTCTCGAGACGCCCAGGCCGCTCAGGCTCGAATCTTGCGGAGCAGGGGGCGGGACAATAG
CGGCCGCGGCGCCCCACTCGGCAGAACTCCGCCACCAGGCGCGATGCCGGAACTACATGTCC
CATGACGCTCTGGGAGGCCGCAGCTTTCCACCGGAAAGAGGGTGGCTGAGGTGGGGGAGGAG
CCCAAAAGGCATTGTGGGAGTACAGCTCTTTCCTTTCCGTCTGGCGGCAGCCATCAGGTAGGCT
GCGTTGAGGATCTTTGCTCTTCCATCCGCCTTTGATCGTCTTCCTCTTCAGCCATCCAG (SEQ ID NO: 557)

610. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RPL15. In some embodiments, the sequences from gene RPL15 comprise or consist of:
TCAGGATGCGGGACAGCAAAGGGGTGGAGAGGCGGCCCCCGGGGCGGGTTGAGCGAAGATGT
GATGGCGGCGCGAATTCGAGCTGGGCCCGGATCCTGGAGGAGGCGTGGGGCTGACGAATGGG
GCGCCCGGGACAAGGCAGCCTAAAGTGAGGCTGCTGGTTGGGTGGGGTAGATGCATTTTCCTC
GAGAGTTAATCCTCGGTGGCCGCAGCAGTACCTTGTCCTGTGATGTCAGCGGCATCTCCTTTCA
GGTCCTCCTTGGGGACGCCGCCTGCCGCAGCCACCCGCCCCCTTGGTGCTCAGTTCTGGTTCT
GTTAATTCGCCCCACCAAAACGTGCCGAGCACCGCTCTGTGCTGGGGTTGCGGAAGTGACTGAA

CGCGGCTCCGTGGGCGCAGTGGTGGGGGTTGGGCTAGCTGTCCCCGGCAGTTGGTGCAGAGC
CATTTTCATTCCCGGCGGTTTCCTTGTTTTTGTTGGGGAACTAAGATGGACGGATACAG (SEQ ID NO: 558)

611. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AZI2. In some embodiments, the sequences from gene AZI2 comprise or consist of:
GTAACGAGCTCTTCTCTTAGGTTTTGGAGTCAGAGTTTGATTTGAATCCTACTCTACCCACTCTTC
ATTCAGTAATCAATATTTATTGAGCAACTTCTACACAGTGATGAGTTGGGGACACAAATGATGGGC
AAAACAGACAAAGCTTCTGCCCTCACAGAGCTTAACATTCTTCTAGATTTAACAGGGCTAATTCAA
CTTTCTAAGACCTACCTATAAAATATAGATGATACATATTTCATAGAATTGTTCAGATAATTAAAAG
AGATAATATTAAAAGAATGTAGTGCATTATAGTGGGACATATTGGACACTCAAATGTTAATTAATTT
GTCTTCTATTCTAAATATACAACAAACATAGCCAATTACTGGTATGGAAAGATAGAGTATGCATTA
AGACTTCTATAATATAATATTAATATGTTGTTGTAATGAATTATACTCAAAGAACTTTTGAAAATTTA
TAAATTGAGAAGCTATGAAACTTGCTACTAATA (SEQ ID NO: 559)

612. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AZI2. In some embodiments, the sequences from gene AZI2 comprise or consist of:
TATTCATGTGATCTGAAATAAGGCAAAAGAAATGTTAAAGGGATTAGTTGACACAGGAGGGAGAT
TAGACATTTTGGAAGAAAGCAGGCATAGTGAAACACGGGTTGGAAACGTGGCTGTAGTTAAATTG
CCTATGTTTACATCTCAACTCTCCACTTACTATGTTACTTTGGAAAAAATACTTAAATTCCTCCTAC
CTCAGTTTCTTCATCTATAATGTTCTTGAACAGTGACTGATATTAGTAAGTAACCAAATTTTATTTC
AAGCAAGGGATAGTTAAAAACTCACTTTCTAGTAATAATTACTGATCTAAGATACATGAAATTCAAT
TGATAATCTTTATTTAGAGTGCTATATTTAGTTTTTTATTTTAAACTAAAAAATATTTAAAAGGACTTT
TTAGGTTCTCTTGCATGGTCTAAAGTCCCTCTTATTCTGTTTTTCCCAGGAGGTCTTAAAAGGTTT
TAGCCACAGTTTCTCCTTCCATCATGTTTTTCA (SEQ ID NO: 560)

613. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IP6K2. In some embodiments, the sequences from gene IP6K2 comprise or consist of:
GTAAGAATCCATTAAAGAAATTAATTTTAAATGTGCATTACCTGGTTACATAAAGGACTCTAGAACA
ACTTAGGTTCTTTTGGGACTGTTGAAACATTGTCTTTAAGGACAGAATGTACTGGGTGCCTTTCTC
TGTACTCTGAATATGCATGTGTATTGCGGTGGGGATGGGGGAGTTGGGGGCCCTCACTTGGTCC
TTCTCTGTTGTTTTTTTCCAGGACAAAGCCAAAGGCCCCTTGTTAGCTGGCCATCCCTGCCCCAT
TTTTTCCCCTGGTCCTTTCCCCTGTGGCCACAGGGAAGTGTGGCCTGAATACCCCACCCCGGCT
CCTCTGCACCCAGAGCTGGGGGCCACCTCAGAAGTGTCATCTCTCTCTGAGCACGCATTCCCCT
GCAGCAGTCGAGGACTGAGCAGATTGAGTGATGCTGGGGCAGAGAGGCCTGGGAGGAAAGGT
GTTCAGCCAGTCGTTTGTAAGGCGCTCGTCGGCACCTGCTGAAACGC (SEQ ID NO: 561)

614. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IP6K2. In some embodiments, the sequences from gene IP6K2 comprise or consist of:
AAGGCCCTGGCAGCCATCCCTGGAGCCCTCACTCCCTCCCACTCTGTGCTTTCCCTCCCTCTCC
TCCTTCTCCTCCTCCTGGCCCTCAGCCCAGCATCTCACACCCTCAGTTTTCAATCCCTGGTAAGA
TTGCTCAATTCTGTTTTGTTGTGTGGATTTGAGTTTGATTTTGGTAGAAGTGTAGTTGTGTTTTATG
TTCAGGTGTCTCTTGATCACAGTAACCCATAGTCCCCCACTGGGGGGACGGTGGGGGAAGACTT
TGGGAGGATTTTACCCAGAATACTTGCCGCCTGCTTTTTGTCCTCCAGGAAACCAGAAGCCCGG
GTAATTAGGTAGGCCGGGGAGCAGCGTTGAGTCAGATGGAATGCAGGAGTGGGAGGCCTGTGC
TGATTAGCCCAAGCCCTTTGCTGTTACAGAATGTCCCCAAAATTGCTATATGAAAGCAACCCTTC
GATTCACATATGATAATTTTTTATTTCTTTTTATAATGTATTTTATA (SEQ ID NO: 562)

615. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MST1. In some embodiments, the sequences from gene MST1 comprise or consist of:
GTGAGCACTAGTGACGCTTCCCCCATGACCCTGCCTCAGCCCCCACCCAAAGGCTGGCTCCCTT

AACCCCAGTGAACTTTGTCTTTCAGCTGATGACCAGCCGCCATCAATCCTGGACCCCCCAGGTTA
GGAGTTGGGCCAGTTATGGGTCAGGCCCTTTAGCCCACGACATCCACACAGTCTGGGTTTCATC
CAGCCCACCCCATCCTACAGACCAGGTGCAGTTTGAGAAGTGTGGCAAGAGGGTGGATCGGCT
GGATCAGCGGCGTTCCAAGCTGCGCGTGGTTGGGGGCCATCCGGGCAACTCACCCTGGACAGT
CAGCTTGCGGAATCGGTGAGGCACAACTGCCTGTCTCCCACAGAGAGGAGCTGAGGTTGTGTC
CTCTGTGGTTATCCCACTGGGGGCTGGGAATCTATCCCTGCCCCCAGAGGTCCTAGCCAGAAGA
TGGCAGGTCTAGCATCTGTCCCAGGAGTCTGTTACCTGTCCTAATTCCCCACT (SEQ ID NO: 563)

616. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MST1. In some embodiments, the sequences from gene MST1 comprise or consist of:
GGAGGCTGGCGGGCTAGGGCTGAGTGGAGCGCCTGCTTAGAGACCTTCGGGAGAACTTCTGCC
GGAACCCCGACGGCTCAGAGGCGCCCTGGTGCTTCACACTGCGGCCCGGCATGCGCGCGGCC
TTTTGCTACCAGATCCGGCGTTGTACAGACGACGTGCGGCCCCAGGGTGAGGCCCAAGCTTGG
GGGCTACAGAGCCGGGCTGGAAGCCTGGAACCGGAGGGCCGGGGCGAGGTCTCGGCCTGATG
GCTGCCCGCACCCGCCACAGACTGCTACCACGGCGCAGGGGAGCAGTACCGCGGCACGGTCA
GCAAGACCCGCAAGGGTGTCCAGTGCCAGCGCTGGTCCGCTGAGACGCCGCACAAGCCGCAGT
GAGTCCCTGGTGCTCCCGGCCCCGCCAGGGCCCTAACCCTGGGGCGGCATGCTTTGGTGTCTG
GGACCAGAGCCTGGAAATGGTTGAGACTACCCTGCCACGATTTTGCTCCCGCTTCCGCCTA
(SEQ ID NO: 564)

617. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ITIH3. In some embodiments, the sequences from gene ITIH3 comprise or consist of:
ACATCCCATTGCCACCAGCCCCATAAAGGGCTTCCCTGGACGTGCCCGATTTCCAAAGCCTAAT
CTTTGTAGTCACATCTCCACCTCTATCTGCCAGTGTTGGGGCCCCTCTGGGGCCCAGCAGCGCT
AAGACAGGAGGAAGGCACGGGGCTGGGGGAGAAGGAACCCCTAGACCCTGCTCACCACTGCC
CTTCGGCTTTTCAGCCACACCGGTGAGCCCCGCCATGTCCTACCTGAGTGAGTACATGCTGGCA
GCTGCCACTCCTCCCACTGCTTAGAGCCTGCCCCTGCCACATGTCCCTCCACCGTGGCTACTCA
CTCAGCTCTCCGGGATGGGCAGATGGACAATGTGCCCTGAGGAGATTGCGGGGTGGGAGGGCA
ATGGCATTAGCGAGCGGGAAGGGGAGGGGAGGGGCATAAGCTGAACTCCTATGGGGGTCGTC
GGGCGCCTCCCAGGGCCACTTGCTTAGCTCAGCCCTCTCTCCCTTTGTATCTGCAG (SEQ ID NO: 565)

618. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ITIH3. In some embodiments, the sequences from gene ITIH3 comprise or consist of:
TGAGTCCCTGGCTGCTCCTCGGGAAGGCTCAGGGGCCTGGGCACGTGCTCCTGCCTGTCTCGG
AGTCGAGCCCATGGAGGCCAGAAGGCTGGGGGAGGCCCCAGGTATGATGAGAGGCCCCGGGA
GTCAGCTCCTTCTCTAATGTGTCACCAGTGGACGGGGATCCCCACTTCATCATCCAAATTCCGGA
GAAAGACGATGCCCTCTGCTTCAACATCGATGAAGCCCCAGGCACAGTGCTGCGCCTTATTCAG
GATGCAGTCACAGGTGAGGCTTGTGGGCTAGGGCCGGGGCCAGGGGGCTCTTCCTGGGAGGG
CTTGGGTCCCCCGAGGTAGGCACAGGGAACAGGTTCTCACTCTGCCCAGTAAGGCATCATCTTC
ACATGCAAAGAAACCCCTGGGGGTGGGGAGTGCCCAGGGCCACAGGCTTGCTCAGCCCCACAT
GCCAGTGCTATTGGGAGATGATTAGCGTGAATGGACCACCTGGGCCTAGGGTAGGA (SEQ ID NO: 566)

619. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ITIH4. In some embodiments, the sequences from gene ITIH4 comprise or consist of:
GTGACAAAGTAGGAGGTGGGGGGAGGGGAGATTGACAGATTGGGCTCAGTCCTGGCTGTGGAG
GGTAGTGCCTTGCCCAGCTCCTCTGGCTGGTGACAGCCCTCGGGCCTCAGTTCAGTTGTATCTG
ATCAGGACTTGACCACACAGAGGCTTCCTTTTCTCCAAGAAGAGGATGGAATAGACAAGGTAGTT
TGAGGGTTTCTGCCAGGGGGAGGCATGACATCCCTGGGGGGGAGCTTGAGGGAGGTCCATTAT

TGTTCATCTCCCAGCTGTTGGGGGAGAGGCTCCCCAAGTTGGCCGGGTGTGGGGAGAGGGGAC
ATAGCTGCCCTCTCCGCACCCACTCCTGGGTGGATCTCAAGCCCTGGCTGTGAAGACCCACACC
CCACCTGAGAGAAGACTGCATCTGTCGATTTCTCCAAAGCTGGAGCTGCTGGCTCCCGGATGAA
TTTCAGACCTGGGGTTCTCAGCTCCAGGCAACTTGGACTCCCAGGACCTCCTG (SEQ ID NO: 567)

620. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ITIH4. In some embodiments, the sequences from gene ITIH4 comprise or consist of:
TGAGGAAAGTGAAGCCGGGTCTCCTGTCTCCCCAAATTCATTGCACCTACGATATAGTCCAGGAT
TGGGTAGCAAGATTAAACACAAGCGCTTCAAATTGATGAAAACCACCCTGACGGTGTCTGTCTGT
GTCTCTGTCTGTCTGTCTCTCTCTCTCTCTTTGTTTTATCCAGAAAGTAGAAACAGGAATGTCCAC
TCAGGTAAGCAGCGAACATCCTCAAAGGCTGTGCTGGGTGGTGGTCTGCTAACACAGGGTCCAG
GGCACCAGCCCTGTGAGGTTGCTGGCCAGGGCCCAGGTCCACCCAGGCCTCTCCAGCCCATCC
CTGCTGCCAGGAGGCAGTGTAATCTGACCCAGCATGCTGGTGCATTTAGTCGCCTGTGCATTCA
AATATTGGCTGTGCCTCAGGCCCTGTCCCCAGCACTAAGAATACAGTCCCCATCCAAGTGGGGC
CACAGGAAGGTGGGTGCAAGATGCAAACCCAGGTCCCACTGATTTCCA (SEQ ID NO: 568)

621. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IL17RB. In some embodiments, the sequences from gene IL17RB comprise or consist of:
TTTGTGTTAGAAGGGGAACATTTTAAAGAACCTGAGGAAAGTACCATGGACTGCATTCAGAGCTT
TCTTTTGTTTATCTCCTTAGCATAGCTACTCCTTAACCTGGGGTAGCCCAGTAAATACTCTAGGCC
GTCCTAAAAACCTAGAGTTAAACATTAGAGTGTGAAGGGGCCTCACATCGGTCCCAAGTCATCCC
CTGCTTGCAGCAGGGAAGGATGACATCCAGAGACAGATGGAGACCCACCTGTGGTCTTCAAGTG
AGGTTATGCACTGGCTTGAGGATCAGGTATACTGATGGCTAATCCATGGTCCGTCATAGCCTACA
GTGGGACAGCTTAGTTCCCCCCTAAGCTGTGAAGCAGAACCAGTTCATCTTTTCTTTGAAAGTTT
GTCACTTGTATATGCATTTAAGGGGAAAATGGTGTTCTGCCTAATTTGGCAAAGGAAAGCTTGTG
GTTTGCCGGCTTCAACGTGACGCTTGGTTTTTTCTCTCCCACAG (SEQ ID NO: 569)

622. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IL17RB. In some embodiments, the sequences from gene IL17RB comprise or consist of:
TAGGTGCATTAGAGAATGGGTATTTGGGGCTTTACATTGAAAGCACAGTTGGACTTTTAGGAAGC
CTAATATAGGCAATAGGTCATCGAAGACCAGACACAGGGTGACCCATTGCTTTATTGGCTGATGC
AGATGAAGTCTCTGTCTGCTCGAAGCAGAACTCTGGGGCTCTGTGGGAATGAGGCCGTGTTTCA
GACAGGCTAGCCTCTTGGCCAGTCAAGATGGGACTTGCCATACAAGGTGGAAAGTGATGCCTGC
CACTCTGCAGAGGGAGATCAAGGCCGTGGAAGGAAGGTCACTTAGAGTTGGGACCGAGAAGCA
AATGTTTCATAGGAGAGCGGGTGTTTGAGATGGTGGCATTTGAAGAATGGGTAGGCTTCTGCCC
AAAAAATGTGGGTAGGAAGAGTGAGCTGGAGGAGAGATGGCACCAGCAAAGGTTAGGAGGTGG
GAAAGTGGGGGCTGTGTGGGCCAGCTGGCTGGAATCCAGGGCCAAAGCCTG (SEQ ID NO: 570)

623. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DNASE1L3. In some embodiments, the sequences from gene DNASE1L3 comprise or consist of:
GTGAGGACTGCTGTGTCAGACGAATTCCCATCTAGCAGGGGCAGGCTCTGGTCCCTGAGTGGG
ATGAGTACCTCTCCAGGGAGGGGGAGGAGGAAGGGCATGTGCAGGCTACCACCACTTACAGCA
TTCTTTAAGGCCTTTCTTCAGCCCTAAGTATCCCTTTTGCTAAATCTGCCTGGGTACCCTGCATGT
GGGCCTTGGGAATTGCCACACTTTCCCATTAATAACAGATGCCAACATTTACTGAGTGAATAGCT
AGTGCCAGGCACTGTGCTGAGACTTGACATGGACAAGTTTATTTAATCCTCCCAATAATCCCTTG
AGGTAGCTACAGTACCTTTCTCATTCCCACTTTGCAATTGAGAAGTGTAAGGCATAGAGCAGTCA
GGATTGTTTCAGTTGCAAGGGACAGAATCTTAACATGGCTCATGAAAAAAAGGAGCAATTGATTG
GTTTGTGTAACTGAAATGTCCAGGAGTACTTCAGGCATAGCTGGATC (SEQ ID NO: 571)

624. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DNASE1L3. In some embodiments, the sequences from gene DNASE1L3 comprise or consist of:
CTGGAATGTGCCTGCGAGCTGGAATGTCCAGCACAAATATCTTGGTTAAGGTACAAGGACATAGA
ATGTACTATGTGCCTGTGAGCATGTCTAACAGCTACATAGGATAGAGCTTAACAAAGAGTTATTAG
CACAAAGCAAGGAGACTTGAAGGAAGTTAGTCTTTAAAGGAAACTATTATTTCTAACACTTATGAT
TTATTCTTTAATAAGAAGGGAAACTTTGAAGAGGAAACTTTTTTACTTTCTACAACAGTCTACCAGC
TTTCTCTTAGCCATGAAGGGCAACTGGGAGAAATGAGTCTTTCGTGTACTAAAAATAGGCAGCCT
AATGACCCCAAGATCATTAAAATCTCGGCCACTGGCTGGACCCTCTGGGAACTGGGGACCCAGA
TAATGCAGCCTGTGCCTTCTGGAGGGGACAGCTGGTTTCCCTCCAGCAGTGTTTATGAGACCTT
GACAGGGGAAGTGTGTGACCCCCGCCTCTTTCCTGTTTCTCA (SEQ ID NO: 572)

625. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MYLK. In some embodiments, the sequences from gene MYLK comprise or consist of:
GTGAGTGCCCCCAGGAGCTGCCCCTCCAGGCCATGCCCCCATCCCCACCTTCCTCCTGGCCCC
GGCAGCTCCAGCCCAGCAGCCCTAGATTGTTTGTGTCCTGCAGCTGAGGCTGCCAAAGCCAGAA
GGGAGAGCCTGGAAGGGGAATGAGGGAGGGAGAGCAGGGGAAGGAGGGGGTGATTTTTTTTTT
TTTTTTTTTTGCACACACCCTTATAAGGCTACTGAAGTCATTACCGATGTAATAAACCAACTAAGCA
AGCGAGCGCCTCTCACCAATGTTCCCATCTATAAACACAGCCTGGCCGGCCTCCCCCATCCCCT
CCCGCTCCCCTCTACCCTCCCACCCTCAGGGATTTGCTCTCCCCTGAAGTTTCTTTCTTACCCAG
CCCCTTTTCCTCCTGCTACTTTCCTTTTTCCCTACACTGGTTGCAGGGGGAGGGAGCCTGCCAGC
TGCGAGGACCTCTGTGGTGGAGGAGTTGGTGCTGATGGTGGTGGTAGT (SEQ ID NO: 573)

626. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MYLK. In some embodiments, the sequences from gene MYLK comprise or consist of:
TGAGTGGGGGTTAAGGGTGCTTCCATTCCCGAGCAAGAGAGGGAAAGGAACTACTTCTGTGTTA
AGGGATCATGGAGTCAGAGTCAAGGTCACTGGGCAGGCCCACCACCAGGGCCTATCTGTCTAG
ACCAACCTGCTACATCACAGTTCCCAGCAGGGTTAGCCTTTCTCCTTCCCCTTTTATTGGTTGAGT
GAGTGAGTGATTGATTGAATGATTATATTATATACTTACAGAAAAGTGTTCCTATTTCTGGATGCCT
GCCTTAGCTGTTGTCCAGACATTCTTTTTTTCTTCTTCTTTTTAAATAAGAGCTGAGAAAATAAAGG
GTGACCACACAGTGAGAGGGTCCTGCCCTAAATCTAAGGCTGGGGTGAATGTCTCAGTCAAGCC
GGCGACTTCCATCTTCCCCGCTGGCCAGCAGCCTGTGATCAAGTCCACACTGAACAGGCCCTTT
GCCCAGAGGGCCTCTTGATCTTTATTGATCTTTGGAATTCTTCA (SEQ ID NO: 574)

627. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CDV3. In some embodiments, the sequences from gene CDV3 comprise or consist of:
TCGCCGCGCCCGGCAGCGTGAGCGCAGAGCCGGCCTCGACCCCGAGCTCGGAGCCCCGCGG
GCCGCGCCCGCCGCCGGCCCCACCCATCCGGGTCGAGGAGGCCGAGGCCATGGCTGAGACG
GAGGAGCGGAGCCTGGACAACTTCTTTGCCAAGAGGGACAAGAAGAAGAAGAAGGAGCGGAGC
AACCGGGCGGCGAGTGCCGCGGGCGCAGCGGGCAGCGCCGGCGGAAGCAGTGGAGCCGCGG
GTGCGGCGGGCGGCGGGGCGGGCGCGGGGACCCGGCCGGGTGACGGCGGGACCGCCAGCG
CGGGGGCTGCGGGCCCAGGGGCCGCCACCAAGGCTGTGACGAAGGTGAGGGGCCGGGAGGC
CGGCACTCGGGGCCCGGGCCGCGCGCCGGCGCCCCATGTGCCCGCCCCCGCCTGCCGGGGA
AGCGTCCGGGAGGGGCCGCGGAGGCCGGGCGGACGGGCGCGGGCCGCCACGTGACGCAGG
CTCTCCACCTC (SEQ ID NO: 575)

628. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CDV3. In some embodiments, the sequences from gene CDV3 comprise or consist of:
TCTGGGGCCGCAGTGCCCAGCACAGAGCAGCGTTTATCGGGTGACGTCTAGGCTGAGTAATTCC
GTGTGCTGACCTCAGCCCAGTAGTTTGAGCTGAATTTTCGCTTTCAGCAGCCGCATTTGTAGCAG
CTCTTTTGTGATGACTTAGTCTCTAAGCCCGTGAAAGAAAAAGAAAACTCTCGGTGGCAAGGTTG

AAGTAGAAATGTAGTTGTGAAATTCCTATTGACTTCTTCCTTCGGCTTTTCTTAGTTGCTTAAAGTA
ACAGCTCCCATGCAGGAACCCAGCGGAAGTATAGTGTTAGCCTACGAGCATGTTTGTCCTCCATT
TAGCCTAGTTTGCCCCAGAACGAAGCAAGGGCTTTGACCAGAAGACAAGTACATACTTAGTTTAG
GTTCCAGCCACTTGATCCACTTTTCGTAGTGTGTTATTTGCTTAGTTATATGTCTACAAATAGCTTT
AATTGATCAAATGGCGTTTGTTTTACAGGACGAAGATGAAT (SEQ ID NO: 576)

629. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PLSCR4. In some embodiments, the sequences from gene PLSCR4 comprise or consist of:
GTATGTATAATTTTTGTAGTGCTCAGCAGTATTTTAATCAGATGGAAATTTGCATTATCCAATATCT
AGTTCCTTCTTTATATTGATCATGTTTTAGTGGCTCAAAGAAAAAAAAACTGCTCTATTACCCTATC
TTCAAGAAAGTAATAAAGTGAATTATTTTGTATAATTTTATCCTTCTATACATCATATAATCATAAGC
TCTTAGATTTGAAAAGGGCTTACATTTTATCTGGTCAATAGCCCTACACTTTACCCATTGTTCCTAC
TCCACATTTACCTTTCAAAGATGAGTAAAAAAAGGAGCCAAGAGACTAAATGAGTTAGCCAGGGA
CACCACAGTCAGCTAATCACCTCCAGATCAGGAAATAGCATTTAAACCACAGTCAGCTAATCAGT
GGCAGAGCTGGAAATAGAATCCAAATCTGCCAAATCGTAGTGCAGTGCCCTCGCTTTGGAAGTA
AGAAGAAAAGATCTCAGTCAAAATGATGCCTGTTCT (SEQ ID NO: 577)

630. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PLSCR4. In some embodiments, the sequences from gene PLSCR4 comprise or consist of:
TAAAATAATATAAAATGGGGACACTCCATGTGAGGTTCACCCTGGCTTGTTTGTTCTCCTTAAGCC
ACTGAGAGACTTCCCTTTTCTATGGCTGGTCCGTGTTAATCGTTCTGAACTTAACTAAACAACTAC
AGGCTATGGATGACATGTAGAGAGACCAGTGAGTAGGGACTTATCTAGGAACAATCTATAAGCAC
AGCTTCTTCTGATGTGATTACTACAGCAAGTAGATGTTTTGTTTTTCTGATATAGCAGACAACTTTT
TTAAAGTGGTACTGAAAGAAAGTGTTTTTCTAATATGGACAACTCTGCTAATATCCATCCGATCAG
ATGCAGATAAGCTAATTTCAGTTGGTAAAATTTTTTTGATTCTATTGACTTTCAAAAATATATTTTGG
TATCAATTGATGCATTTTAATATCTATTTCATCAGTTTATTTTACAGTGGTATTTTAGTTCTGTTATT
TCTGTCTTCTGATTGCTTTGTTTTATCCCAACA (SEQ ID NO: 578)

631. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene BCHE. In some embodiments, the sequences from gene BCHE comprise or consist of:
GTGTGTCTGTTTTTAGTGTTTGGTTATTTAATAGATGATGGGTTATGTAAAAAAGGGATGAAGTAT
ACTCTCCAAGGCACGGTGATGGAGTTACTATATGTATCTCTGACTTTAAAATAACTTGGTTTAATG
AACACATTATTTTTAAGACTTTCTTCTATCAAGTTTAGATATGTTTTGAACTCTTACTATATGACCAG
TACTTTAGTAGTTAAATAAAGAAAACTAAAATATAGATTTCACCCTGTGGAAATATAAAATAGAAAA
AGGAAACTAAAATAGAGCCCTACTTGTTATTCAGATAATCTTTGTGGAATTAATTAATGGACAAAG
AAATAAATATATCAAATAATCATAATGTATGGAACTAAAAAATAAGATGCATAAATTGGTAAAAACA
GATTTATTGATAAATAATAGAACCTTGATTTAAATGGAGAAAAAAACTCCGAAGTTTACATATTTAA
AAACACAATAAAAAATTTCTAAATATTCTGAA (SEQ ID NO: 579)

632. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene BCHE. In some embodiments, the sequences from gene BCHE comprise or consist of:
TTTCCTGGAGTAATGAGATTATTACATAATAAGATTTGTAATTAAACTTGGTCTTAAACTCAAGCAG
TATTAATAAGAGTATATAGAATGAAATAGATGCAAAAGATGAGTAAGTGATATGATTCCTTATTGTG
AAATTTTTGGGCCTAGGATAAGGGAAGATAATGAAACAAAAGTAACACCACCCTTTGAGCACGTT
TAAGTGTGAATGAAGATATATTTTATTGAAATAAAAAATTTCTTCTTCCAATATGTTAAGCAGAAAT
GCATATAAAAAATTCAACTTTAAATTTCAATTCTTACAATTTTAAATAACATAGTGGTTCTCAGTGCT
CAAACCACTAAGCCCAGTTCACATACGTTTCATATCATCAATATATATCCACATTTTTTCTGTCTTA
AATTCTTTAAAGCTCTTGTGAACAGTGTTAGAAAACAATATTCTTTTTAATCTAACAATGATTTCAAT
TTTACTATAATGTCTCTATTTTATTATTTA (SEQ ID NO: 580)

633. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MASP1. In some

embodiments, the sequences from gene MASP1 comprise or consist of:
GTGAAGTTCACTTTATAACCTACAGACAGTGACACCTCAGCTCTGCACTGGGCCTTCCTGCTCCG
TATTGTTCCCTTAGGGATTTTGAGGCTTGGGTGGGGGTTGGTGAGTGGGAAACTAGGAGCCCAG
ACCCACCTCCAAAGTTCAATGGGACTTTGAACCCCAGAAAGCTTGATTTGTTTGTTCTACATGTCA
TGGACTCTAGCCTCTAAACACGGTTAAGTTTTTCTGGTAGCTTATTAAAGGCTTAGCTTATGAAAA
TTCTCCCAGAAAACAGCAAGTTTAGACACCCCCATGGTGACAATCCAGCTGTGCACCATGAGAAC
TGTACACCAAATTGGCCAGAATGAGCCAGGCTCTTGAGAACCACAGTCCTTGCAGTAATGAACTT
GGCAGTTACACTTAGAAGTTCATATTCCTATCAGTTCAAGGAAAAAAAAAAAAAAACACTTAACTAA
AAGTAAGGAGCCATAGTTTCAAGTCTTGGCTCCCACTAACTT (SEQ ID NO: 581)

634. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MASP1. In some embodiments, the sequences from gene MASP1 comprise or consist of:
AAGGGGTTTTAGAGAATACCAAGTCCAGCCTCCTCATTTTATGGATAGGAAAACAGAGGCTTAGA
AGGGGAGCAGAGAGGAGGGCTGGCTAAAGGCACCATAGCACATAGTGGACTAGGCTGGGCTTT
TTATTTATTCGCTGTTCTTGATTGAGCACCTACTATGTGACAGCATTGCTATAGGCACTGTGATAT
AGCAGTGACCAAGAATGAGATTCTGCTCTCATGGACCCTAGGTTTCAGACTAGTTGAGGGTGGG
ACAGAATAGAAAACTAAACAAGTAAGCCAGTAACACATCATAGAAACCAGTGCCCCTAGCTCTGC
TGCAGGTAATCTGTAGCCCAGCTGCCTTTCACGTCTTCCTCCCCACCACACCACCTTTCTCTGAG
AAGAACAATCCAGTCTTTCCTCCACAGAAGAGGATGATGGAGCTGCAAGCTGCACCCCTCCAAA
CACCCCACAGATAGCTTCTCTGTTCTCACAGTATCTTCTCTCCTCCA (SEQ ID NO: 582)

635. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IL1RAP. In some embodiments, the sequences from gene IL1RAP comprise or consist of:
AACCCAAAAGGACCTGGCCCCAGAAGCTTCTCTCTAAACTGATACAGCATCCTGGCTCAGAAGTT
TAAGCAAAAGAGACATTTTGTTTTGAAGAGAGATCTATAAAAAGAAGCCAGTATTGGGATTTGGTC
TAGACAATGGGATAGTGTGTAGCGTAGATGGTATAGTATAGTGTTAGAATCTTACCATTAATACTT
TGTAATCACTGCATTATAGGTGGCTCAGCTTATCAACCTTCCTCGCCCTCACCTGTAGTGGGGGT
CTGTGGTTGCTTACTTGTCTGATTCCTACACAGTCCATAGCTCTTGAGTCACTCTCAAATGCTTTG
ATTTTCTTCTCTCTATTTCTAGTATAAGTCATAGTAGAACAGAAGATGAAACAAGAACTCAGATTTT
GAGCATCAAGAAAGTTACCTCTGAGGATCTCAAGCGCAGCTATGTCTGTCATGCTAGAAGTGCCA
AAGGCGAAGTTGCCAAAGCAGCCAAGGTGAAGCAGAAAG (SEQ ID NO: 583)

636. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IL1RAP. In some embodiments, the sequences from gene IL1RAP comprise or consist of:
TCAGACTGTGTCTAAAACTTTCTTTGTGTCTCTCACCTAACACAGAATCCCAGAAAATCCCTTCAA
GGATGTTTTCAATGGTCTTGAGAAAAGTAATGATGAGTTATCACACATGAAATCATGAAATCAGGT
CATTCAGAATCCTCCTGGCTCCTAGTCTATAGAGTGTGTAATATTTCTTCAAAAGTGAATAACATA
GCACATAATTGTTACATTTTACAGAGACTTAATGCTTTTTTAAAGCTGATGAAAAACAGGATTCACC
TCAAACTTTCATTACAACTTTAAAACTAAATAGCAAAGGCCTGAAATGTATATGCTGCGTATGAAG
TACTAGTGAATCAGTTCAGGGTAATTCATTGCTTCTGCTCCTCAGAAGCCAGTGTGAAAAGGAAA
GACTGAAGTACATGATGTAAGGCAGTTTCCCAAATTGAGTTCTCGGGAACACTACTAAGAATCAG
TATTGTCCTGCAATGCATTATTGTACTCTAGAATCAGA (SEQ ID NO: 584)

637. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PI4K2B. In some embodiments, the sequences from gene PI4K2B comprise or consist of:
ATTTAGAATTCAAAGAAAGAGTCTTAACAACTAAAAAAAAAAAAATGAAAAAAAATTATTTATTGTATT
TTATGTCATAAAAAGAATCTGGAAAAGTTCAGATAAAATTGCACTGTTACTGAATAAGCAGGATAG
GTTTAAAATTTGGCCTCCATAATTAAATTCACCTTAATGAATATTTTTAGAAAAACGGCATTCTTTTT
CAGAGTGTCACCTTGAAGACATGTGTTTATTCTTTTTTTAAATTTTCCCAAAATAGCTGCTATGCTC
CTTGAAAGTCTAGGGGTAAGCATTTTTTATTTGCTATGTATTCTTTATGTGATTATTTAAAATTAGT
GTATAAAAATGGTTTTCTTGATAAATGTGGCTTATCTAAATTAGTGTTAAGTTTTCTTATTGTGTTTA

CATGACATATTTTTTGACAGTACTGCTGAGAAATATAAATATTAATCCCCTTGTTCTTGTACTTTCT
TTTCTAACTATAGTTCTTAAAATTATAG (SEQ ID NO: 585)

638. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PI4K2B. In some embodiments, the sequences from gene PI4K2B comprise or consist of:
TATTGAAGTTCTCTCATTTGTTCACGTAAATCTTGTTCATTTTCAAACTATATTCTTGTTATCCAAAT
CAAAGCGGTAAACTTTTGTTGCAGAAGTCTTGAAGCCACTTTCTCTGTCTGTCTTGGCAAACAGAT
GTAGTATTGACTCTCCTGGGCAGAATTCATCCTGTGTGGGATAGATTCTGACTCATAGCAGGCTC
CTAGATCAGTTCCTGTCCCCTAGGGAGGAATTTCCTAGGGGCAGGGCAAAGTCAGATATTGGAA
ATGTTATCTGCATAATGTGAGTAATTAAGGCTTCATTGTATAAATTATGTTAGGTGCTTATTTTGAC
ATTATGTAACTCTTAGTGTAGTCTATAAATACACTAAACTCTTAATTTTTCCTGTGCTATAAAGGAG
CAATGACGTAGACCAGGGATGTCCAGTCTTTTGGCTTCCCTGGGCCACACTGGAAGAAGAATTG
TCTTGGGCCACACATAAAAACAGTAACACTAATGACAG (SEQ ID NO: 586)

639. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SULT1B1. In some embodiments, the sequences from gene SULT1B1 comprise or consist of:
GTATACTCCAGACTCCATGTCAGTTTTTTAGTATGGCCCTATCCCTTTACCCACTCACATAGTTTA
TTTTTTAAAATATTTTTTGTTTCTTTAACCATATACTTGCAACAATCTATACTATACCCACTCACGTT
GTACGTAAATCTTCAAAAGCCATTAAGTTTTAGTCTGAGTTTATATACTCAAGTTTTCCAAACTTGA
GCAGCAACAGAATCCAAACCTCAGCACAATATTACTACTTTTTTTTCCAACTCTCCCTAGATCTTC
AGGCCTTCTGTAAAAACTGAACTTAAGGACGTTAGTCCTTATTTGAAGATTTGGTATAATTCTTTGT
TGTAACATTTGTTCCTGCTTATCTGCTTTTGGGGAAATTTTATACTTCAAATTCTATTTATTTAATAG
CTACAGTGCTATGTAGATTATGTGTTTTTTTCTTATCTGACTTTTGACAATTTGTGATGTGTGAGAA
ACTTTTCTAAGTTGTTGACTTTATGAATGA (SEQ ID NO: 587)

640. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SULT1B1. In some embodiments, the sequences from gene SULT1B1 comprise or consist of:
TAATGAAAATATAGATAAAACAGCTGATATTATATACAAAGTTAACATCATCTATGCTACAGTACCT
AATACAACACGATAGCCAGTTTTAGACTTACTAGTTATTGATACCTCTTTGGCATGAAGAAAACAT
TTAAATAGTCATTTATAGCAATGCACAGGTATAATAAAACTCCAAATTATTAAAGAGGGTATTATTA
TCTCTCCTTTTGGAGATGGAGAAAGTGAAGTACAGAGATTCTGAGATACTTTCAAAGTGTCTCACA
ATGCTTAAGTGATAGAGTTAGCATTTGAACTCAGGGTGGCTAACCTCAGAATGTGTATCCTTGAAT
GTTACACAATACTGACTCTAGTAATGTGGTGAAATGCCTGTGATTGTTTCAGAATTTATCTGCATT
ACATAATGCTCAAAAATGTCTTGAAAAACTGGTTGGCAAAATAAGGAAACGTAGCCTTTCTGGAG
ACTCTAATATTTCCCTATACTTAACTAAATTTCTCA (SEQ ID NO: 588)

641. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CXCL2. In some embodiments, the sequences from gene CXCL2 comprise or consist of:
GTAAGTCTCGCCCATCGCTGCCGCTGCCACTGCTGGGGTCCCCGACTCTCCCGCTGCCCCAAA
CCCTGTCCTCAGCCCGACCTCCTGTCTCACGAGATTCCCTTCTCTCTGCAGAGCCACACTCAAGA
ATGGGCAGAAAGCTTGTCTCAACCCCGCATCGCCCATGGTTAAGAAAATCATCGAAAAGATGCTG
AAAAAGTAAGTTATAATTTCCATGTACACAGGCGACTGGAGCTGTTGGTCAGAAATACTGGCGTC
TGCCCCCTAAAAAGTAAATCAGGAAAACCCAGGGTTAGCTGCAGGACTGAAAAAATTATTATTTTC
ACAAAGTTGCCATTAAGGTTATTAATCTGTTCTGGTGCCAGAGGATATTCCCAGTGCCCAGGGTC
ACCACCCAGGTTCTTCCCTCCTGCCAGTGAATGTAGGTAAAACTGCTTTCATGTAAGGTCTCATT
GGAGTTTGCCAGTTGTGCTGAAGTGTTTTCCACCTGTTAAAAAAC (SEQ ID NO: 589)

642. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CXCL2. In some embodiments, the sequences from gene CXCL2 comprise or consist of:
ATTCGGGGCAGAAAGAGAACATCCCACAGTTGGCGGGAGTTACGCAAGACAGTCAGACCCGGA
CGTCACTCGTGAGTGCCCCGACCCCCCTCCACCCCAGAGGCGGGGCCATCGCCTTCCTTCCGA

ACTCGGGATCGATCTGGAGCTCCGGGAATTTCCCTGGCCCGGGACTCCGGGCTTTCCAGCCCC
AACCATGCATAAAAGGGGTTCGCCGTTCTCGGAGAGCCACAGAGCCCGGGCCACAGGCAGCTC
CTTGCCAGCTCTCCTCCTCGCACAGCCGCTCGAACCGCCTGCTGAGCCCCATGGCCCGCGCCA
CGCTCTCCGCCGCCCCCAGCAATCCCCGGCTCCTGCGGGTGGCGCTGCTGCTCCTGCTCCTGG
TGGCCGCCAGCCGGCGCGCAGCAGGTGGGTCCCGGCGCCCTGGGGTCCCCGGGCCGGACGC
GGCTGGGGTGGGCGCCCCGCGCCGACAGCCCCGCTCAATCAGCGAGTCTCTTCTTCCCTA
(SEQ ID NO: 590)

643. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HSD17B13. In some embodiments, the sequences from gene HSD17B13 comprise or consist of:
GTAAGTACAGCACAGAACACCCAAATACTAAAACACCAATAGAGCTTTTTTTTTTGCTTTTTTTTTT
TTTAGACAGAGTCTCACTCTGTCACCCTGGCTGGATTGCGGTGGTTGCAGTGGCATGATCTTGG
CTCACTGCAACCTCCGCCTCCTGGGTTCAAGCAATTCTCATGCCTCAGACCCCCAAGTAACTGG
GATTATAGGTGTGTGCTGCCACACTACACCCAGCTAATTTTTGTATTTTTTGATAGAGACAGGTTT
CCCCATGTTGGCCAGGCTGGACTCGAACTCCTGACCTCAAGTTATCCTCCTGTCTCGGCCTCCC
AAAGTGCTGGGATTACAGTCATGAGCCACCATGCCTGGCCCAATAGAGCTATTATTATGGAGCAT
CTTTCAGTTGTGAAAATTGGCATGGAAACTCTCCATCCCTGGGGAGAACAGTTATTTCCTCTGTTA
TTTTCCTACCCAGTCTATAAAAAGAGAGTGATTCATTTTCTCT (SEQ ID NO: 591)

644. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HSD17B13. In some embodiments, the sequences from gene HSD17B13 comprise or consist of:
TTTACCCAGACCCTATTCAAGATGGAGTTGCTCTGATTTAAACGCCTCTGACAAAATGACGACCT
CAAAACAATCCAGCTTTATGGAATACCTCCACAAGAAAGAAAGTATACTTAGCTATAGAATTTTCT
CCTTGCATCCAACAGGCTTTGAGATGTCAGATGTTTCCTTCCTGTCCCATGATTAATCCTAGCCAT
TCCTCTTTCTTGTCTGGCTCCACTACTCCTTACCATCTAATGCCTCGCCACCATTTTGATATTTTGA
CTAAGTGAGCTATGAAACACACCTACTGGATATGAAAGTATAAGTTTCTGATAACAAAACATCAAC
ATGGGATGTGGAGGAAGTGGGTAGGGTGGCATTAATGCAGCAAATCCTGGAATATTTTAAATCTT
CATTCTAAATTTAGTAAAAATATAGGATAATTTTCCTGCCATCATTTACTTATAAAATTAAAATTTTA
GAAAATAAAAATAATATTTTCCTCTTTTTAATCACA (SEQ ID NO: 592)

645. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ADH4. In some embodiments, the sequences from gene ADH4 comprise or consist of:
GTCAGTTTTTTTTTTCTTCATAGCTTTAAATTCTTTTCCTAGTAGTTCTGAAATTCTTAGAGTGAAG
GTTATTGAAAAGAAATAAAAATAATTTATTCAACCATTGAATCCCTAGAGCATATCCAAATACTACA
TAAAAACTATTAATGACTTATAAATAATTTATATAAAAAGGTAATTATAATTTGCAAATTGAAATTTA
ATTTGCATTTGAATGAACCAACATGGAGGAACAAAAAATAAACATTGACCTTATTGAGATAATTTCT
TATATAGAGTGGAAAATAATCTTAAATTTTTCTTATAAAGAAAAATTTTAAAATAGATATAAGTACAG
AAAATTAAAGATGGAAGGAGTTTAATCTATTTGAAGCAAACCAAATCTGACCTAATAATTTCATTCA
TTCAGCAAATGCTGATTAAACTACTTCGTGTCAAGTGCCATGTCTTTATTTTGCATTTTGTCCACAT
TACAGGTTGGAAAAGTGTAGATTCTATC (SEQ ID NO: 593)

646. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ADH4. In some embodiments, the sequences from gene ADH4 comprise or consist of:
TTTTTTTTTTTTTGAGACAGAGTCTCACTCTGTGACCCAGGCTGCAGTGCAGTGGTGTGGTCTCG
GCTCACTGCAACCTCCTCCTCCTCCCGGGTTCAGGCAGTTCTCCAGTCTCAGCTTCCCGAGTAG
CTGGGACTACAGGCAGGCACAACCACACCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTT
TGCCATGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGTGATCCACCCACCTTGGCCACCC
AAAGTTCTAGGATTACAGGAATGAGTCACCTGCACCCGGACTGTGCTGAACATTCTATTTGTAAT
GGAACACTGGGCCCTCAAGGCTCAATCTACAATGATACTATGATGTCATTAGCTTGAATCCCATT
ATCTTACATGCAGAGTTGGATTAATTTTTTTCTAAAGCATTGTACATTGCCACACTGGAGTTCATAT
TCTACTTTTCCACTGACTCAAGTATTCTTTTATGCTCCATCACA (SEQ ID NO: 594)

647. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ADH6. In some embodiments, the sequences from gene ADH6 comprise or consist of:
TTTGAATGTCTTGTTATGGTGTAGCTCGTTGCAAAATTCACCTAATTTTATCACAAATGCAGGAAC
TTTTTTTCCTTCCTGTTAATATACAGTCAAACATATTACCAAGTACTGGAGACTATCTATATCACTG
TATAACCATTCACTGTTGTTGCCAGCTTCAAGACCACATTTGAATCCTATCAGGCCCAGTAAACTC
TGTGAATAGACTCTGTGAACTGTCTCTAAGTCTCACTGTTTTGTCCACATTAAGTGTCTTGTTTGA
AGCACAAAGTAAAATCTTTCTTTCCAATCCCTGTCACTGCACCTCCCTAGACAGTCACTACATGG
GGCAGTTTATGGACTTCAGCAATGTTTACCTAACTCCAGATCCACACTATAGGAGTCCAGCCTTC
AGGGAGAACTAGTTTTTTACATTTTTTGCCTGCATAATGAGAAGCTTTAAGTTTTTCATATTTTTAC
CTGAGAACAAGAATAATTACATTCTAGGCTATCACCC (SEQ ID NO: 595)

648. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ADH6. In some embodiments, the sequences from gene ADH6 comprise or consist of:
AAAATACATAATCCTGAAAGTATTTAAGTGTTCACCTACCGTTACTTTTGCCATTAGCATTGTATTT
CCAATATGGATTTTTTTTTTACATGACATATTAATGGAAGTCAGCTTATAAAATTGTAGCTCAAGTT
TAAAAACATAAGAAGGTAGTTCACAAATAGGCCATTGTTGTATTTGTTGTTCTACTTTGGGGGAGA
AGAGGAATTATTCATAGGATTCCTAATTCTGAATCCTATCTTTGACCCAAAAAACAGAAACCAGCC
ATAACCCAGAAACTGGCATTCCCCACACGAGTATAAGCTTGCTTACCTACTTTTTACCCTTGGAGT
TTCATGTCATTTTAAAAAATCTTCCCATGGCTTATTTAATCTTCTCATTTTTCACCTAAAGAGAAAAA
AAATCTAGTTTACTGCTCTACAAAGTGAGAATTTGAAATCCAAAACACAAATGTTGCTCTAAAAAT
GTTCCAACCTTTTTTCTCTTCTTCTTTTTTTCA (SEQ ID NO: 596)

649. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ADH1A. In some embodiments, the sequences from gene ADH1A comprise or consist of:
TACTTGTGTCATCTTTGCCATTGAGAAAAGCTATTTCCTATGACTTCCTGCATTTTTGGTATCTTCA
TAATCTTTAGTCATGGAATCCCAGTGGAGGGGACCCTTCACTTGCCCTGAATATACACATGCTGG
GCTATTGTGCTTGTAGTCTCCTGCATCTATCTCAATTTTCACTGTCGGCATTTTCGCCTTTTTTTTT
TTTTAATAAAATATACCGAATTCCTAGGGTAAAAGCTGTAGTAGGGTAAAGGATATACTCATATTTA
CAAGTGGTGAAAGTCCAAGAGTTGTAAATCCAGGAAATTTCTTAGGAACTCAAATAAAATGTCACA
TGTTTTCTTACAGTGAAGGAGAATGTTTTTCTGACATTTATACTATGTCTTTATGGTCAATATACAA
TTGATTTTTAAAAATAATAGCTGATTTCATGCTTCATATGACTAAGGTACAATTACTAATTGCAAAA
ACTGAACTATTCCTGGAATTATGTTCAAAAAAT (SEQ ID NO: 597)

650. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ADH1A. In some embodiments, the sequences from gene ADH1A comprise or consist of:
ACTCTATACTAGATATGCGACCAGACCAAGTTACAAATCTTTCTAAGTCTCAGTGTTTATAATCTCT
AAAATCAAAATAATATGAAAATCTACCTCCTAGTGTTGATGTTTAGGTTGAAGTTTAAGACAGAAAA
TGCATGAAGAATGTGACAAATAGCAAAAACTTATCACAAGTTATTATCCATTGTTGTTTTATATTCC
TTATTATAACAGGAACGTGGGCACACAACAATGATTTTTTGAAGATGCTAACGTAGTATTGAAGTC
TAAATGACAGGCATACTCAGAATGTTGTGAGTGAGCTTAAAGTTGAAGAAAACACAAGAGAAAAC
CAAAAAAGATGAGCTTTCCTTTGACTTCACTTGACCCGAATGCATGGGGGTGGGATTAGAGTGGC
TGAGAACAGACAGATTTTCACTAAGTCATTTCAAATGCTCCTTGGACTCTCACATGGAAGCATGTC
TAAATGCTAATACAATGTCTCTTCTTTCCTATTGCA (SEQ ID NO: 598)

651. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NDUFC1. In some embodiments, the sequences from gene NDUFC1 comprise or consist of:
GTAAGTGTTAAGAGATCTTTTCAACTGTAAAATATAATATGTCACCTTGGATGAGTAGCTGTCTTC
TTTAAGCTTCATCTGTAAATTGAGGCTTATAACCACGGCATGATATGTGCTCGTTTTGAAGATGAA
ATAAGACAATGAATGTAAACCATATGATACATTAATGCACCGTGCCTGGACCACAGAATTCAATCC
AAATGCTAGTTATTATTCAGCACGACACTTTTCTTTCTTCTGGCTCATGTAGGAAAATTTTAATAAA

CCTCTTGATGAATAGCCGTAGAGATGGGGTGAAAAACCCCCAGAGGACAGAGAATAGGTAAACT
CTTTTTTCTTTTAATTATTTTCTTCCTAATTCCACTGTATAGACAGAAGGCTGAGGCCGGGGTGCT
AGAGAACCTTGCCGTGCTGGAATTCACGTTGACGCCCCCACGGAGCTCTGCTGCAGAGCCCTC
GAGTCCCGCACTTCCGGCCGCCAGGTGGCGCTGGTTCTGTT (SEQ ID NO: 599)

652. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NDUFC1. In some embodiments, the sequences from gene NDUFC1 comprise or consist of:
TTTTGGTTTTAAAATTAATGACATAAAGTTTAAAGGATTAGTTTTAAAGGGTCAAAATGTATTGTCT
GTTACCTATAAATATTTTTACTGGTCTTTAGACATCAGATTGAACTGAATTGAATGTACAAAGATCT
GGCTCAACTGTGCAAGATAAAACCTATTCCTCAGAACGATGTCTTTAATAGGCAAAACCAAATAAA
TTGTTTACTACTACCAGACACTTGTTTAAGCTTCTCAGCAACCCTATAGGTTTTATGTTACAGATGT
AAAACTTAGGTATAGAGAGGTTAAGTAATTTGCCTAGAAATCATAGAGCTAAAAAGTGGTGAGCA
GAATGGCTTTGAACGCTGATTCTACAGCTTATGGTCTAGGGTGGTCCAAGTCTGTTAGGTGGGCT
AATGAGGATCACTAGATCTGGAGTCAGAAGACCTCAAACTGTATCCCACCTCTGCCATCTGTGTG
ATCTTAAGCCTACCTAAGGCACTAATTCTACTTCACA (SEQ ID NO: 600)

653. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SORBS2. In some embodiments, the sequences from gene SORBS2 comprise or consist of:
GTATAATATCACTAACTCACACAATGTCGCACTTGAATGGCTTCTAGCTCTTCTGACTGTTTTTGTT
CTAAACGTAAAAAGCAAAGGAAAATGAGATCTTGTAGGAAACATTTTAAATGTGTAATTAAAAACA
GCAGTCACTTGCCAAAAATAGGTTGAGTAACTGCGAGTGTTAATAACTATTCACGTTTTTGTTATC
TCATGAACTTAAGTAGCATAATATTTCATTAAGATAACTCAGAGGTTTTGGGGTTTTTTTTTTTAAC
CTAAAAACTTTTGGGGTAGGGGTACAGGGGTACAGGATGAAAAAAGGGATTTGTAGGAAACTGA
ATCTTCATTAACTGGATTCTTTGTCAAAGGTTGTGAACAGAATGATAGAACATTAGTTTTGAAAGA
GACCTTTGCTTTCCTTTAATCCAATCAGCAAATACCCTTCTACTATATATATTTAAACATACCAAAA
TCTTGACCAATTAAGATTCACATGTACCCACAGATA (SEQ ID NO: 601)

654. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SORBS2. In some embodiments, the sequences from gene SORBS2 comprise or consist of:
TTTACTGCAAGAATTATTCAAGCTCTCTTTGGGAATTATAACAGCTAGAAGATGGTAAAACTTAAAT
GATATTAACTTAAAAGTATGTTGTACCATAGCCTTTAATCCTGACATGGAGCTAATCCTTGACTCT
AAAAGCCAGATCCAGTGCTTATAGATTTAGTATAAATTGAATTTAAATGGTATAAACAAAGTTGAGT
TCTGTGCCTGAGTTTTCACAAAGAAAACCATAAAATGTTAAGTATTAAGTCTTCCATGCTTTCACTA
AAACAGTGATACCTATTTCTAAGACAGATCCCTGGTCTTCTTTTGTTTTGTTTCGTTTTGTTTGTTT
TAGTTTGAGGGTGGTGTGAAATTGGCAGGTGCATTCCATGATTACTAATTCTAACTGTTCATCTTT
CTCATGGATGTCTGGCACATTTCTCTTAAAACGCATGATATTGCACGTGCTTTTCCCGTTGCCTTG
GCCTCTGCTATATCATTTTTTTGCTTCCAGATA (SEQ ID NO: 602)

655. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KLKB1. In some embodiments, the sequences from gene KLKB1 comprise or consist of:
GATATGTACACAACTAAAACAAAACTAAGATATAAGATCATATTAATGTAATGATAATAAAAGTGGA
TTGTCTCCTGTTCTAATTTTAATAGGCACAAGGCATTTTTGTTAATCACTTCTTATTAAAGAATTTTT
TATAATATTCAGGAAAATACAACAAAAAAACCCTTACATTCCTAAGGCCTCAGAGTCAGAGTAATA
TAAAGGAAATGTAAACACATGCTGAGTAATGCAAGCATTTGGCAATGGTGGTGACTGGAGCTGG
GAGCACAGCTTTTATTTCTCTGAAATAGGAATTTGCCCCTTAGAGTTAGACCAATTTTGCCTTCCT
CTAAATGGCAAACAGTTTGGAGATACTTTAAAGGACATTTTTTCACTTAGGATGTTTAGTACTATG
AATAATAAATAGTCACAATTTCCTTAACTATGGTGACAAAATACAAGCAAATTTAGCCTCATGTCAT
TTCCTAAGGAACATCTTCTCTCTGTGAGTTCACAG (SEQ ID NO: 603)

656. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KLKB1. In some embodiments, the sequences from gene KLKB1 comprise or consist of:

CGAGTATGCATGGAAAATCGCATCACAAAGGCGAGTATGCATGGGGAGCACTTGCTGCTGTACT
TTCATCACTTTTATAGTCTGAGTTCTTAAAAGTTTCGTTCATTTCCCTCAAAACACTTGAACCTGCA
GTTTCAGTAGGTACTGTTCTGCCAGGTGCAGATTAGTTAAGAGATTAGCAGACTTCTCTGCCTAT
CTTCTCTTACTTTAAAACAAATGTTACCATTGAATCAAGGAAGCAATAGCCATGAGAAAAAAGAAG
GATCTGACGCCTTTGAATGAAGATTCAAAACATGATCTTCATGTTTTGTATTAGCTTGGAGTAAAA
TCCACTTGCTGGCAATATAGCCCTTAAGCTTGTTGCCTCTTCTCTTTGTTTCAGAAACTAGAGCCC
TGTTTATTCTGATCAAGGCTCTGGCCCACTGTCTTTATCTCAGATAACCCACCCTCTTCTGCACAC
AGCATGGAGCTAAGAGAAGGGTGTCTAGTTATGTAATAT (SEQ ID NO: 604)

657. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene C6. In some embodiments, the sequences from gene C6 comprise or consist of:
GTAAGAGATACCCTACAGACTGTGTCTGGAAATTGGGAAAACCAGTCTAGTGTAACCAATTTGAT
GGAAGAGCTGAGCTTTTTGAAGCACAGACATGAAATAAATGAATTTTCCACATAACTGATATTCCT
GTGCTCTGCTGAATTCCTCCTTCCCCATTGGGTAGCAAGTTTCTTAATTATCTCTCAGCCCAGTTC
CCTGTTTAAAATGAGATTGTTCATTATAACAGTCTCATTTTGGTTTTAAAGACTTAACTTCTGCACA
TGTAAAAACTTTAAACTCAGTTATATCAACACTTTCCTGTTCCTCTCACTCAAGCCCAGGGCTTGG
AGTGGGGTGGGGAAAACAGGCAAAAGAAAACTGGTTGGTGAGTGAACACACTACATTGGCTACG
TGCCCCCTGTTTTTTTCTGATCTTCATATAGAAATGCTTGCTTTCCTCTCTTGGGCAGCCATCATT
CAGAAGATCTCTGTGTGTTTGACACAGACTCCAACGATT (SEQ ID NO: 605)

658. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene C6. In some embodiments, the sequences from gene C6 comprise or consist of:
AATCTTTCTAGCTACATCAATTTTTTATTATATGCTTCTCTTTGATAGCCCTAAGAAAGGCAACAAT
TCTATATTTATATTAGTGTGCTCATTTGATTAATGTCTGTCTGCACCCACAAGACTATAAGCTTGGT
GAGCACAGGATCTGGGTCAGTTTATGCTCAATCTACTCTCTCCAGAACCTTACAGAGTGATGAGA
ATATCATGTATACTCAATAAATATTTGAAAAACAAATGAACAAAAATTTCAACAGTTCCATTTTCTTT
AGTTATCTGAACATAATCGCAATTTTAGGTTGGAAAATGACACCTCATGTGCACTGGAAAGGACC
TTTCAGGTGGAATATTTAATGACAATGTATTTAGAGAAGCCAAAATGAATGATCTAACTCCAAGAG
ATAAATATGAATCCTTTACCACTGCCTCTTCTCTGAATTCAAGCTTATCACTTAGAATCCATGCTGT
GCACTGTTCTTTTCTCCTTTTTTCTTTTGTTTCA (SEQ ID NO: 606)

659. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MRPS27. In some embodiments, the sequences from gene MRPS27 comprise or consist of:
GCAAGTGCCCATTCCAGAGACTCACTCACCTGACATATTACTACTGGAAGTTGAAAAGTCCCCAC
ATTTATTTGTCTGAACTGCTTAAAAAGTCACCAACAGGAATTCTTCTCAAACTTGCCATCCAAAATT
GAACCCCGCTGGCCCAGTGTTTTGACTTGTTTATATTCCAGATAGCCACTCACGTAAGTTTATCTT
TTTAATGCTGATGGGGGCCAAGAAAGGAGTTCATTTGCTTCCTGGCTGGGAAATTCAGGAATTGC
ATTTTGGGCAGCATATTTTATAGTATGTGTGTAAGTATTTCACTGCTTTTCCTCAGTTTATTTTTTGT
GAGAGTTCATTGAAAATGTCCAAGGCTGGGCACAGTGGCTCATGCCTATAATCCCAGCTCTTTAG
GAAGCCGAGGTGGGAGGATCACTTGAGGCCAGGAGTTTGAGACCAGCCTGAACAACATAGCAA
GACCCTGTCTCTACAGAAATAAAGAAGGAGGCAAAGGCAG (SEQ ID NO: 607)

660. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MRPS27. In some embodiments, the sequences from gene MRPS27 comprise or consist of:
CTAGGCAAGCTCTGTCTTCACCTGAAAATCCTACTCAACACTGGGGACAGAGATCTCTTTAGCCA
TGGGATACCAACTTTTAGAACTAGAGCTAGAACTTGAGAGTACACTTTGTCACTCTTTCTTATGCT
CCTCCAAGAAATACACATTTCCTCAGAATTGTAAGTGTAATCACATTTTATAAGCTGAAATCTCAG
AGTACCTTTAGCCTTCATGAGCACAACCTTGTTGGGGATATTTGGGTTGTATTTGTTTCTCTTTTC
TACACTCACATGTTTGCCTATCTTGACAGCCTGTTGGCCTAGGCAATAATAAAGCTTCTGTCGAG
GTGAGCAAACAGCTGATGGCATAGGCGCACAGAGGGGACTCCTACAGTGGCTGGCTGTAATCT
GCCAGGCTGGTGGTCAGAGCAGGCGAGAACAAAAGCCAGTCTGTTTGCAGGCAAATTGGAAAAT
CAATGTGTTAGTTGTATTCTTTTCTCTTTGCCTTTCTTCTGACA (SEQ ID NO: 608)

661. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DMGDH. In some embodiments, the sequences from gene DMGDH comprise or consist of:
GTAAGCATATCATTTTTTTGAAATTAGTGTTTTTTAAGTGCCAAAGAAAGAAGATATTTAGCCGTAA
TGTTTCGTACGATGGACATTGTCATGAAGCACTGTGATGCTCCCAAGTTAAACATTTTGTCTGTTT
CTAAGTGACAAAGCCCTCCCTCTATCACTTTGCTCTTGGTGGATGCGCTATCACTCTGTCCTTGG
TTATCCAAAAAAAGTTGCTTATTTTCTCCATTCTGCATTTTATTTTGCTCCAGATTGTGTTTTTCCAA
ATTATGTTTATTTTTCCTTCCTGTATTCACTGTTTCTCTATATGAATAACCAGATTCTAGTGTTGAAG
TTCATAAGCATCCTCTTTGTGTCCAATTTGCTTTTTAGGGCAGATTTGATCATTTGGGTTCTCTCTC
ATCCATTTCTGATGACTTTTGACTCTAGTTGAAAAAGTTTTTAAATGCTTTTCCTTCTAGAACATTAT
TAAACATATTTCATAATCTTCTCTTTTTGT (SEQ ID NO: 609)

662. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DMGDH. In some embodiments, the sequences from gene DMGDH comprise or consist of:
AATAGATGAGACCCATATATAATATTTCACTGATCATTCTATCAACGTATCCCATCTGAGTTTCATT
CTTCTTTGTTTTCCCCACAGTACCTTGCCTGAAGGCCTAAAACAAAGTAGATATGCAAGAATTAAT
TGTTGAATGATTGAATCAAACATAAATTTCCTGACACCAGATATATTATTTAATGTGAATTTATTAA
CAGTATTAAAAATTAAATATAAATTATAATTGATATATCAGTTGGAATTAGATTTGTCTTCAAATGTC
AGAAACCAAAATAAGAAGGTGTAAACAAGATAGAGGTTTATTTCTCTTTCTTTTCAGCAGTCCAGG
ACTTGAATGGTGGCTTTTTCATGAAGTCTTCAGGGACCCAGTCACTTTCCAGATCAAGAAACACTT
TTGAAGTCCAGTTTTACTAAACGTTTACTAGCAGGATATATTTTTACTGAGTAATAAGTATATATAT
ATTTGAGTATTGACTCTGGTATGATTGATTTA (SEQ ID NO: 610)

663. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ZCCHC9. In some embodiments, the sequences from gene ZCCHC9 comprise or consist of:
GAATGCTCAACGAGCACTGAAGGGGGGACATGAGGCACTGCCTCTCACCCAAGAGAGCCCCCA
AATGTCCTTTTCAGACTTTTATCACAGTGACCCACTCCCACCGCGCCTTTACCTTGCCTCTGCCT
GGAATGTCCTTAACTCCCTCTTGCCGGCAATTTCACCAGATTTTTGATTTCTTATCCAGTCTCACG
GGAAGCCTTTCCGGCATCTCCCACCCTACCGATCTTCCCGTCTATCTCGCCTGCTACACTGTGAG
TTCAGACAGCACGGATTGAACTCTTCATCTTTTCGTGTCGGCGTCCTGCACAGGGCCATCCCATC
ACTAAGCGCGCCACAAACTCAGCCCAGTATTGACGCCCACGAGTCGCTTGTAAAGACCGTCTGT
GACGCCGGAAGTGACGCGCTCTCGGGCACTATGTGCTTCCGGTCTCCAATACCGCAGGAGGGC
GGTCTTCCCCGGCTCGCCAACTCGGCTGCTCTGGGGGATTCGTGCGCG (SEQ ID NO: 611)

664. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ZCCHC9. In some embodiments, the sequences from gene ZCCHC9 comprise or consist of:
TGAGGTTCTCAGCCACCAAAGCTGCAGGGTCTCGTCGTTCGTTCCCTCTGGCCTGGCGGAACTT
GCGTGGGAAGCTGGGAGGACAGAAGGCTTAGCCGCTGGGTCCCTGAGCTGGCTGGAGCGCGG
GCTGTCTAGGGGCGGCGACCTCAGCTGTTGGGCTCCGGCTGCTGGGGGCTGTGCGTCCAGCC
GCCCTGGAATCCGCCTGTGGGTGGGCCGCTTGGCTCTCCCACTTCACCCTCTTGATAACCCAGA
GCCTCCCCCTTCCCACGTACGTAGGGGAAGGATAATCTACTTCCTTTTGAACAGCTTCGGTCCCC
ACTATGACAGTCGCATAAACTTCAGCGAAGAGTGCGCTGGTAAAGTGGCATGGAGTTTCTCACAC
CAATTCATTGGGTCCACCCTTCAGCTTCTGTGGAAGGGGTCTTTCTGTTACTAGGAGCTGAGACT
TGGGGGGTTGCCAGGGATGCTGGTCTTAAAAGGTGATAATTTAGGCCGGGCG (SEQ ID NO: 612)

665. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LEAP2. In some embodiments, the sequences from gene LEAP2 comprise or consist of:
GACGATCTGGGGAACTGTAGGCCTTGCTGAAGCATCCTCCCACAGAAAGGAGATAAGGGCCTTA
TCCAATTGGCTGTACACAATAGATCAGTGCTTCTTTCCTAGACAAGGCTGAAAGGGGCCAACATT
ATTTCTGAAGACTTCATTATTGGAATTCTATGGGAGTGATCTCACTGAGCTATTTTGGAATAGAAA

TGTGGCTAGTTGCCTGACCTCCCTCAATGGTTTCACGTGGCTTTCAAAGGGAAGGAAGGGCAGT
GCTGACTTTTGGTAAAATGGGCGAAAGGGTCCATGCCAGCAACACAATCACTCAAAGTCCAGAT
GAGGGATCAGTAAATACAACGTGCCTGAAAGGTGGCCCTTGAGCACATTCCTCCGGTAGACATT
AACTTATTAAATTGATTCTGATTACAAATATAAACTTTGCCCCCATCTCACCCAGTAACAATGCAAG
AGTTGATGTCAGTCTATAAAAGGAAGTAGGAACTGTCCCTGGCTT (SEQ ID NO: 613)

666. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LEAP2. In some embodiments, the sequences from gene LEAP2 comprise or consist of:
TAAGGAGGGAAGGATACTTATGTGTGTGTGTGGAGTGTGGAGATGATAGTGGTGGTGGAACTTG
AAAGCTAGATTCAGTCCTGAGGAATGGTTCCTCTGTTCTGAGTCTACAGCATCTGCGGAATGGAA
TGATCACTCTTCCAAGGTGTGCAGCAGGGTGTCAACACTTTCATATCTGAATGTCTTTGCCCTTAC
AGATAGATGGCTCCCCAATACCAGAAGTGAGTTCGGCAAAGAGAAGGCCACGGAGAATGACCCC
ATTTTGGAGAGGGGTTTCCCTCAGGCCTATTGGAGCCTCCTGCCGGGATGATTCTGAGTGTATC
ACAAGGCTATGCAGGTACTCCCTGAACCTGGGAGCAGGGTTGGGCCAGAGAGCCCTGGGAAGC
TGGGCAGAGGAGTGACAAGGGGACACATGAACCTAAGAATAAAGCTGGGATGGAGGAGTTCTA
GACTGAGACTGGGAGCTCCATGGAAAATCCCTTAGGAGTTAGGAGCCAAG (SEQ ID NO: 614)

667. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ETF1. In some embodiments, the sequences from gene ETF1 comprise or consist of:
GTAAGGGGCCCGCGCTCCCCGGTTTAGATCACTCGGCCCCCCTCGTGGTAGGCCACCGCTACT
TTTGCACCTCTCCCGGGCCCTTAAGTCCAGGTCCTCCCTCTTCGGGCTCCAGGTGCTGCCACCC
GACTCGGGTGCTATTGTGGCAAAGTGTTCGGCCTTCCTTTCCCAGGGCCCTTCCCTGATTTCCTC
TTCTCCCTTCATTTCTCAGCCAGGCCTCATTAAAATGGCCTCTCCCTTCTGGGCTTCTGAGACCC
GGGTGGGTGAAGTTTGGATGGGACGGGAAGCAGAGGTGGCCAGGGACAGCTTCTTTCTGATTC
CTGATTTCTCTGGGTCTTCCACCTGTCCCAAGATGACTTCTCCCAAGTCCTCTAATTACCCCGGA
GCTTCCTGGTTTTAGCTGTTCCAGGACCCACCTATAAACTGAAAATGCCAACGTACGCGCGATGT
GAGGGGTGCTGGGTAGGTTTTGGTTAATGAATCTGCATGTGTATGTCCA (SEQ ID NO: 615)

668. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ETF1. In some embodiments, the sequences from gene ETF1 comprise or consist of:
GAGAAGTCGCGGCGGACGCCCAGCTTCTCCTCACTCGCACCGGCCCCCTCCCTTCCGCCTGCC
GCCTTCCACTCCGCCCCTGGCGGAGGAAGTGATGTCACAGGCCCCATGTGAGCGGATTGCAAC
ACATGCAGCTGCCTGGAGAGAGGGAGCCGGTGTCCTACGTCAGAGCCGCCGCCGCCGCGGAG
CCGCCGCCGGGGAGGAGCAGCCGCTGCCGCCCAGGACTGGGCCCTTAGGTAAGGCACAGGGA
GGGAAAGGCCGGTGACCTTTGTGGCGAGCTGCACCGGACGGGAGGAGAGGGCCTCTGGGGGA
TGGCGAGGAAGGGGGCCGCTCTGCCCCAGCGGCGGCGCTAACTCTGTGGTCTTGGTGTCTCCG
GGCCCCGCCGGGCCGCTCTAGGGAGGAGGAGGCGAGAAGATGGCGGACGACCCCAGTGCTGC
CGACAGGAACGTGGAGATCTGGAAGATCAAGAAGCTCATTAAGAGCTTGGAGGCGGCCCGCG
(SEQ ID NO: 616)

669. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RNF14. In some embodiments, the sequences from gene RNF14 comprise or consist of:
CATTGCTGTCTTTTATTACATCTTTTTATATTAAAAATAAATAAAAATGTCATAAATAGTAATTGTGT
AAATATAAAAGGCCTTATTAAAAAAACAAATCTTAGTGCCTCAGTTTTCTCTTCTGTCAAGTGGGC
ACATAAAATTACCTAAGTCATAGGGTCCTGGGCATTTAAATGAGAGAATGTACGTGAAATATTTAG
CACAGTGGAGGGCTAGGCACACGGGGAGACTGCAGTTTAAAAGACTAACCAGGCACATGAGAC
CAAAGACACAAAAGTCTGTTATTTTCCTAGAGTCAAAAACAAAACTTATTAGAAGGCTGTCTTTAC
CCAATCTTGTCCTCAAAATTGACTCTAAATCTTTAGTTCACTTTAAACATTCAGTAAATTATTAACA
CTGCTTTGAAATTCTCTTTCTATTCTCTCTATCCTGTGACCTCTGACATGATGTCACAATTCACCTT
CTGCTCTGACTTTGTGAGGATTTCCCAAGCTGGTTG (SEQ ID NO: 617)

670. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RNF14. In some embodiments, the sequences from gene RNF14 comprise or consist of:
TAGGGTTGCTGTGTGTTTTGCTCTTGGTCTAATTCCTTTGGCTAAACATGAATAATTATATTAATGA
ATGGCTTTGGAGATTCTTCTTCCGTCCTTTGCATTTTTCCGAGATATGTTTCTGGTTTTGGTATCTA
TTAGAAGGGTATTTTGGTTTCTGTTTTGTGACAATCAAGATTTATAGTACAGAAAATTAGAAGTGAT
TATTTCTATTTCAAGGTTCTTTCTGTGGCAGCCAGGTAATCCCTTGGGTGCCCTGATTTACTCACT
TGGTTTTTTTCTCTCTCCTGGGTATAAGACCAACTACATAATTTACAAAGCCCAGGGCAAAATAAA
AATGCAGCCTCTCATTCAGAAATTATTAAGAACTTCAAGAGGGTGAGAGCACAGCATCAAATCAA
GAGCAGGGCACTTCTTTTTTATTTTAATTTTTCCATAAGTTATTGGGGTACAGGTGGTATTTGATTA
CATGAGTAAGTTCTTTAATGGTGATTTGTGAGAT (SEQ ID NO: 618)

671. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NR3C1. In some embodiments, the sequences from gene NR3C1 comprise or consist of:
GTAGGTTATATTTTTATTCCCATTCTATAGCTGGGTAAAGTGAGTTCTAACAAAGTTACTTGTTAAA
GGTCACTCAGAGGTCAGAGCATCAGAAAAAAAGACAATCACAAGGCTGATGTTGTGTGCTGGAT
AGTTTAAACTGAACAGGAAGAAAACATTTTTGTGGGCTTTATCTAAAAAGAAATAGTTTGCTCTGA
GTTTCTCAGTTTCATTTATTCAGCAAGTATGTGCCAAGTGCTATTGTAGGCAATGAAGATACAGCA
GGGAACAAAACAAAACTGACATGGAGCTTCCAACTAGAAAGGAGAACGAGACAACGCGTTTTAAA
ATATATATAATGTGTTAGGTAAAAAGTGCTATAAGGAGAGCTAAAACACAATGAGAGGCTAGAAG
AGTGATAGTGGCGGAGGGGCTTCTCTGAGGAGATGACATTTGATCAGGGGTCTGAATAAAGTAA
AGAGGCCAGTTATGTGAATATCTGGAAGACTCAAGGGGCAGG (SEQ ID NO: 619)

672. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NR3C1. In some embodiments, the sequences from gene NR3C1 comprise or consist of:
TAACTATAAATTGTGCATTCTTGCATAGATCCTCCTTGGGAATGAGAAATTAGGAAAATCCAGTTG
TTAAAATGAATGCCTAAAATCAAAATAAAATTTGTTTTTCTGGCACCTGCTTGATGACACAGACTAA
TAACCAATGACAAAATTGCCCTTGAACCCAAGTTTTCATTTCCTCCTATTGTGTGGTCAGGTTATG
TAAGGGTTTGCTTTCACCCCATTCAAAAGGTACCTCTTCCTCTTCTCTTGCTCCCTCTCGCCCTCA
TTCTTGTGCCTATGCAGACATTTGAGTAGAGGCGAATCACTTTCACTTCTGCTGGGGAAATTGCA
ACACGCTTCTTTAAATGGCAGAGAGAAGGAGAAAACTTAGATCTTCTGATACCAAATCACTGGAC
CTTAGAAGGTCAGAAATCTTTCAAGCCCTGCAGGACCGTAAAATGCGCATGTGTCCAACGGAAG
CACTGGGGCATGAGTGGGGAAGGAATAGAAACAGAAAGAG (SEQ ID NO: 620)

673. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ECI2. In some embodiments, the sequences from gene ECI2 comprise or consist of:
GTAGTGCTAAAAAGTGACGACCTCACGCGCGCCCTCCTGCACCGCTGGGCCCGGAGTGGTCAG
GATGGGCGCGTCGGGAGGTCAGGGCTATGGTTCCCTGTCAGCAGTCCCCAAGGTCTCCGCCTG
CCTCCGCGCACGCTCCCATCCTCCTGGGGCCGGACTCCGGGCGGGTGAGCCGCCCCAGCTGA
GCACCCGGGCCTGCACTTCCCAGCCGGGCTGCTTCTGGGGTGCAAAGCGTCGCTTGCTAAAAG
CGAGGTAAACGCAAGCCGTTATCACTCGTGTGGACTTAACACTCTGCTTCTTGGAGAACACGTAT
GCTATAAAGTGAAATGGCCGGGTACAGAGTAACGGCTAAGAAGCACGCTGCACCTCCCTGGGGT
CCCGGGAACCCGCACGAATCTGTGCATAGGGAACAAAACCGAAACACGGTGGTGGCCTTGAAG
TGGTAGAATTATGAGTGATTTTCCCGACTTTATGTATTTTCTTAAATGGTCGTGTT (SEQ ID NO: 621)

674. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ECI2. In some embodiments, the sequences from gene ECI2 comprise or consist of:
GGCCCCGCCCCCGCATCTGAGCCCCGACTCCTAACCGCCTAGAGCTCCCGCCCCGCCCACGCA
CCGACCCCCCCCGGCCCCACCCCCGAGCCCCCGCAGCCCCAGAGGAGGCCACGGGCTAGCGAT
GGCGAATGCGGCGTGGCTACGCTCTCAGCCTGGCCCCGCCCCAACCCTGGCCCCGCCCATGC

CCCAGGCTCCTGCCTGGGCTCTGCTCTCGGCCCCGCCCCGCACCCAAGCCCCGGCCCCACCC
CCGAGCCCCCGCAGCCCGGGAGCCTAGGCCCCGCCCCCGAGTCCCGGCTCCACCCCCGAGAC
CCGGCCCCACCCCCGAGCCCCCGCAGACCGAGCTAGGCCCCGCCCCCGAGACCCGGCCCCAC
CCCCGAGCCCCCGCAGCCCTAGAGCCGCCCAAGGGATGGCGATGGCGTACTTGGCTTGGAGAC
TGGCGCGGCGTTCGTGTCCGAGGTAAGCTTGGAGTCCCGGCCGTTCGGCCCATGGTCGCCCGC
(SEQ ID NO: 622)

675. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ALDH5A1. In some embodiments, the sequences from gene ALDH5A1 comprise or consist of:
TGTTCTTTGTGCTTCTTGTATTTGGATGTCTAGGTCTCTAGCAAGGCTGGAGAAGTTTTCCTCGAT
TATTCCCCCAAATATGTTTTCCAAACTTTTAGAATTCTCTTCTTCCTCAGGAACACGTATTATTCTT
AGGTTTGGTTGTTTAACATAATCCCAGACTTCTTGGAAGCTTTGTTCATATTTTCTTATGCTTTTTT
CTTTGTCTTTGTTGATTGGGTTAATTTGAAAACCTTGTCTTTGAGCTTTGACGTTCTTTCTTCTGCT
TGTTCAATTCTATTGCTGAGGCTTTCCAGAACATTTTGCATTTCTATAAGTGCACCCATTGTTTCCT
GGAGTTTTGATTGTTTTTTATTTATGCTATCTATTTCATTGAAAACTTCTCCCCTTATTTCTTGTATC
TTTTTTTTTTTTTTTGTGACTTCCTTAAATTGGGCTTCGCCTTTCTTTGTTGCCTCCCTGATTAGCTT
AATAAATAACTATCTGAATTCTTTTTCAG (SEQ ID NO: 623)

676. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ALDH5A1. In some embodiments, the sequences from gene ALDH5A1 comprise or consist of:
TGAGCTCATGTGATTTTTGGGGGGTGTTAAAGAATCTTGTTTTTTCATATTATCAGAGTTGGCTTT
CTGGTTTCTTCTTATTGGGGTAGGCTCTGTCAGAGGGAAGGTCTAGGGCTGAAGGCTGTTGTTC
AGATTCTTTTGTCCCACGGGATGTTCCCTTGATGTAGTAGCTCCCCCTTTTCCTAGGGATGTGGC
TTCCTGAGAGCCGAGCTGTAGTGATTGTTATCTGTCTTCTGGATCTAGCCACCCAGCAAGTCTAC
CAGGCTCCAGGCTGCTACTGAGGGTTGTCCGCACAGAGTCCTGTGATGTGAACCATCTGTGGGT
CTCTCAGCCGTAGATACCAGCACAGTATTTGGGGTGTCTCCCAGGTCCTGCAGGAGCAATCTGC
TTCCTTCACAGGATCTGTATGCTCTCCCAGTTTTCCTGATTTATTCCTGCAGTCGTTCTGGAGCAA
AAGTTCACAATGCAAGCCTCCACATGCTGTTTTGTCCATCCGAGT (SEQ ID NO: 624)

677. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene APOM. In some embodiments, the sequences from gene APOM comprise or consist of:
CAATCCACCGTGCCCCAGCACCTGCATCATACCTGTTCTAAAGCATTTACCAAGTTGTATTGCAAT
GGTTTGTCTACACAGCTAGTTTTCCCTCTAACGACTTCTTCAAGATCAGGGGCTATGTCTTATTCG
TTTTTTTATGTCCCCGGGGATTAGCTAGTTCTTGGGAAACAACTGGGACTTGGGATTCAAAACAG
TTTGCTAAGTGAATGAATGAGAGGCCCAGTCAAGCTACTTCCCTTCAGTGCTGCACAGTGCAACA
AATAACCAGCTCAGATACAGGTTCAAAGACCACAGGCTTCTCCCTGGACAGCTCAGCTCTCCTCA
TAACTCCTGAGAAACCCTGGACATGCCAGGGTGTACTATGGAGTGGTTGCATCCGGAAGAGGGG
GAGGAAGTCCCAAACACTAAGTAATCCAGGTTTGGGTTGGAAAACAAGGTTGAAGTTACTCATTA
GCAGGTGAAAGGGTCAAGGGTCGAACGCAAGGGAGCTGAAAGC (SEQ ID NO: 625)

678. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene APOM. In some embodiments, the sequences from gene APOM comprise or consist of:
TATGGACTGAGATTGGGGGAAGCCTATGGTGGAGGCTCTGAGGGACTTGGGTGGATGGCCTAG
GATGACTGGAGACCATCTTGGGAAAGGAAGAGAGGAAGGGGGTGTGAGTGTTGTGATAATGAAA
GCAAGAAGAAAAATATCAGTACTGTGGCCATCAATGCAGAGGCATGGCAGAATTGGGGGGTGGG
GTGGTTACCCAGGTTGACTGGGGAGGGGCAAAGAGGAAAAGTCATTTAATGACTCTTTGTCATG
GATCCAATCCCCAGTTGGAAAGAGGAAGGCAGCCAACACCTCTACCCCTAAATCTTGCTGTTTTG
ACTGATGAAGAGGTTGAACCCATCCTGTGCTGGAACCCACCCTCTTTTGCTCCCTTCATTGTCTC
TCCAGTTCCCAGAGGTCCACTTGGGCCAGTGGTACTTTATCGCAGGGGCAGCTCCCACCAAGGA
GGAGTTGGCAACTTTTGACCCTGTGGACAACATTGTCTTCAATATGGCTG (SEQ ID NO: 626)

679. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene FKBP5. In some embodiments, the sequences from gene FKBP5 comprise or consist of:
GTAGGGACCCCATGGAGTACGTGACGCCTGGCCCTCCAGCTGCATGCTCCAGTTATCAGGACA
GAGACCCCTCCCCACCCATTCCCAGGCTTCCCTGGCTCCCTGCTCTGCTGCTGGGAGGCCCTGT
CACCACACATGCGCGTGCACGCACTAACATACACACACCCCTCTCAGGCACCCCCGGAAGACCA
GCTGCAGCTGGGGGGTGGGGGTGCACGGAGCACAGCCAGGGTTCTCAGATCCCTAGCCTGCTCT
CCCACCCCGCCCTAGCCCCCAACTGCCGAGCTGCTTCTAGTTTTAAAGCAAAACATGACTCTGTC
CTTCCTGCTGCTCAGTGGCAGCAACACTGCCTGGGGTTATTTTTAGCAGGGATGCAGGGAAGGC
ACAGTTCTCCTTGACTTTAACTAGGGACAACCCCCACCCCTCAGCCAAGACTCACTGGAGGAGG
CCGGGTACGGAAACCCCCCTCCCAGAAAGGGGAAATGGTGTGTTTTCTGTTC (SEQ ID NO: 627)

680. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene FKBP5. In some embodiments, the sequences from gene FKBP5 comprise or consist of:
GGACAGTCATCTTGGACATGCTCTGTGTTCCATATCATGACTTCAAGCCTTGCCTTTTTCATGTAC
TACCAGTGGGATCCTAGACTAGCACTTTACCACTTTAAGCCTCAGTTTCCTAATTTGTAAATAAGG
AGTAATTGTAATCATTCCAATATCACAGGCTTGCTGGGAGGATTAAATGAGATCATCCACATCAG
GGTCAGCACAGTGCCCGGAATGGGGTACCTGTGAAATTAATGGTGATTCTTCTTTATTGTTACCT
TGGAAAATGGAGGCCAACTGCAGGATGATCGTGGCTCCAAGGAGCTGGGGACCCAAGACATGC
ACAGAGAAAGAGAGACCAACAATGTGAGGCCTCTGATGCATGAGACAGGCAGGGGAGTAGTGG
GAGGAGAGAGCAAGAGTGAGCAGCCAGGAGGGCCTCTTCCCTTCCCTTTACTCAGCCTGTCACT
CCTCTGCTAGGATCCTGCATTGACACATCTTGTACTTCCTGTTTCCA (SEQ ID NO: 628)

681. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC22A7. In some embodiments, the sequences from gene SLC22A7 comprise or consist of:
AGGTGTGTCTTAGGCCAGGGCATCAGCTCCCAGCAGGGGAGAGGGATGCGAGGAGGCCTCATG
GCTCAGCAGAAAGAAACCTGGTTAGGATCCAGCTTTCAGTCCTGAATCCTGGGCTGTCGGCCAG
GCCATGGCTGTAGCTGCAAATAGGCAAGGCTGACCTAAGGTCTCACAGGACAAAGGGCACCCTG
GGAGAGCTGGCCCCAGGCCCCAGGGGCCTCCTCTTCTTAGGGATCCTGGGAGCTCTGCTGACC
AAGGGGCTAGGGGCTCACCTCCTATGCCATCACCCAGCTACCTCATCATGGTAGCCTTGGTCCC
TGAACACTAATGGGTAAGCCCCAGAGCCACGAGCCAGTGACCTCTGAATGGATGGCTTCCCCTT
CCCCCAGGCACCAGGCAAGACAGGTAGAGGTCCCTGGAGACCTGATGGCTGGGGAGGGCCCA
GTCCTGGGCCAGCCCCTGAGGGCTGGATTCTGGCTGCAGGCTCTCCAGTCCATCC (SEQ ID NO: 629)

682. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC22A7. In some embodiments, the sequences from gene SLC22A7 comprise or consist of:
TACTTAAGCCCAGAAGTTGAGAGACATGTGAGAGGGATGGGCCTGCCATTGCCTTGGGTGGTTA
CTGTGTAGGCATTAGATGTATTACTTTACCTCTTAAAGTCTCAGTTTACCAATCTGTAGATGGGGG
CTATGAATATAAGGCACTTTTAGTTCATGGCTTGTAGTAACAGGATCCTACACAAGAACTGTTATC
ATCATCATTAATTGGGAGGTGATTAAGGCAGGGAAGGGCTAAAGTGGCTTCAGGGAGTTGAGAC
AAAGAGCTGAGAAGGCAATTTCTGCAGCAAGAGGTGGAGAAACAATAGAGGCCTTCTTTTCTCCC
TTCCTCTTTTCCAGTCCCAGGTCGGTATTTACATAATCCATCTGGAGGTGGAATGTCGGTGGAGG
CAGTCTCCCTGGGAGGCAGCAGGTCGAGGCCTTCCTTGGGAAGAAGCTGAGGCTGCAGGACTG
GGGAGGGACAAAGTTTCCTATTCCCCAAGCTGGCGTGAATCGTTGG (SEQ ID NO: 630)

683. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MLIP. In some embodiments, the sequences from gene MLIP comprise or consist of:
TCACTACAGATGCTCCTGTATTGTTGCTTACAATTTATATACTAAGGATAAAGTTACTGATATTTTG
AAATAACTGTGTGTTTTCTAGTTCTTTATTTGGACACAGTGTTTGCATGTATTTATACCTCTAAATG

TTCTCTATGAGCATGACCAACTGATTATTGAGATTGGCAGGTGCTAGCGCCCTTCAATCAGCTTC
TCATTGCTGCACAATCTGGCTTTTCTCTTCTTTTCACAGAATATATAATTGGAATACATGCATGAAA
AGAAAAGAGGGAAAACACATATCAGTGGCTTTTTTTCTTTTTCTTTTTCTTTTTTTCACTTCTACTG
ATTCCATTTCAGCAGTTAGTATGACCTCTCATAATGTTCCAAATCTAAAAATTGTCAAAACAGAAAT
CTACTCTTCGGAGCTGACACAATTCCTCAATTTTGGAATGACTCTGCTTTACCTCTTTTTAGAATTT
CTTCTTTCTGCGTGAGTGTGTGTGTTGTTT (SEQ ID NO: 631)

684. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MLIP. In some embodiments, the sequences from gene MLIP comprise or consist of:
TAAAAGGAAGTCTTTGCTTAATGCTTTCAGTAACTTTTAAAAGCAGTGTACGGTGCTGGTGGTATT
TGCTGCAAGGATGTGAGGGAGAGCTGCCCAGTGAAGATAAATTTGTATGTATATTGAAATGAAAT
GCTATCTTCACTTAGAGAAAAGGGTGAGCTGATAAAGACAAAACTGCTCATTGGGCAAAGAAAAT
GCTCAGGATTGCCCTTGGCACAGTGATAATGTAAGATACCCTGTAATGCCTTAACAGGAGGCTAG
AGGCCATCTGCGAGTGTGGGTGTCAACATCTGAAGGAAGAGAACTTTTAGGGAAATATAAGAAA
GGAAGGCATTACAGCCCAAAACTGAGCAAAGGAGCTGTTAGCCTGCGTGGCATGCGGGAAAACA
GTTTCTCAAATTATTAGGCTATCCGGTGAGAAGATGACGTTCTTAGAGATTTTGAGCATTTCAAAG
TGTATTTAGAAAAAGATTTTAATCCTTTTATCTCATATTTCTAT (SEQ ID NO: 632)

685. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ENPP1. In some embodiments, the sequences from gene ENPP1 comprise or consist of:
TAGGAGCAGCGTGCCTATGGAAAATAGAAAATAGGTTCTTTTTGTTTTTGTTCTTGTTTTTTGCTTC
AGAAATAATTATAGAAATCTGTGTTTAGAAGCAGTCCTAAGAAGTTACATGCAAAGAAGTACCAGT
CTTGGAATGAGAGTGAATCATACACATACACTCCCAGTTAATATCCTAGGTGGTTTGGGGCAAAT
AACTGGGCTTTCACATTCGGTCTAAAAATGTGATAAGACATTCTTCTTTGCTCACATAATGATATT
GTAATATATAAATAAGAAGAAACATTAACCAAAATTTGGGTGACGGAAAAGATTTTGAAAAAAGTG
AAGTGATAGGTACAGCTGAAATTCTGTCTTACCTATCAGATCTTCAACTAATATGAGTGCTACACC
CATGTTTAACGAATTTAACCTTGGAAGTGAAAGAAGTTCTGCTCTGCATATTAAATTTTTTGTTAAA
GTTACAGCATGTTTTGGGATTTTTTTTTTCTCCTAG (SEQ ID NO: 633)

686. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ENPP1. In some embodiments, the sequences from gene ENPP1 comprise or consist of:
TAAGTATATCTCTGTGATAACTTTGAATATGGTCATATTAAGAATACCTTCCTTTAGGCCGGGCAC
AGTGGCTCATGCCTGTAATCGCAGCACTTTGGGAGGCCAAAGTGGGTGGATCACCTGAGGTCAG
GAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTAAAAATACATATACGATACTATACTATA
TCTATACTAAAAATACAAAAATTAGCCTGGCTTGGTGGCAGCTGCCTGTAATCCCAGCTGCTCTG
GAGGCTGAGGTACAAGAATCGCTTGAACCCAGGAGGCGGAGGTTACAGTGAGCTAAGATCATGC
CACTGTACTCCAGCCTGGGCAACTGAGTGAGACTTGGTCTAAAAAAAAAAAAAAAAAAAAAGAA
TACCTTCCTTTAAATCATTATATCGCTAAACTAAAGGGAATCACAGTTAATTTTTTTATGATTAAATC
TCCAATGCAGAGCTTTTGTACACAAATGGATTTTATGGGACT (SEQ ID NO: 634)

687. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene VNN1. In some embodiments, the sequences from gene VNN1 comprise or consist of:
GTAAAGAAACAACTTGTGAAAAATTCACTAGTAAACATCAACTTGATTTACCTGGGAAAACTTTGT
TGATGATCATTGCATAGATCCATGATCAATTCTTAAGTTTCAGTATAGCTTATTTTTCATCTACTAT
GGGTATATTTACTGGGAGAGCAAATATGAATTATGAAGTCACAGAAGTCAGAGCTAGAAAGTAGC
TTAGAAATCATCACATTCAGTGTGAACATCTCTGGTCTCTGACTCCTCACCAGTGAACAGAAAAAT
ATTTCCCTGTGTAGGTCTGTGATTTGAAAACTATATGAGTAAATGGCAAAAGAGAGTCACATCAGT
TTAAGATTAATAGTTTTCCTTTCTCATTGCTAAGATAGCTGATGAGGTTAATGTAGTAAAGTCCTTA
AAGTGTAAGCTGATTGTAATCTAAGAGGTGATATGGCAGGATTTTAAGTGGTTTAAGTCAGGTCT
CGGCTACAGAGATATTAAGTGTGGTGAAAGCAGCACT (SEQ ID NO: 635)

688. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene VNN1. In some embodiments, the sequences from gene VNN1 comprise or consist of:
CATCTCTACTAAAAATACAAAAATTAGCCAGGCGTGGTGGCAGATGCCTGTGATCCTAGCTACTT
ATGAGGCTGAGGCGGGAGAATCGCTTGAACCCGGGAGGTGGAGATTGTGGTAAGCCGAGATCT
AGCCATTGCACTCCAGCCTGGGCAGCAGAGCGAAACTCCATCTGAAAAAAAAAAAAAAGAGAGA
AAAAAAAATGCTTGACTAGAAGCCCAAACCTCACCATTATGTAACATATCCATGCAACAAACCTGC
ATTTGTACCCTTTGAATCTAAAATTAGAAATAAAGAAAAGAAAAGAAAAAGAAAAAGAAGTGACAG
TGCACTGAAAAAAAAGGAAATTAAAATGCTTTGGAAAAGAAAATAAATTATAAAAATATAGAAAACA
AAATAAGATTTAAGGGGTGTGGGGGAAGCCCAAATAGTTGTTACTCAGCCACTCAGCTCCTCAGC
TCCTCTTGCAGGCCCCCCTTTGGATTAAGTTGCATTTTTAACA (SEQ ID NO: 636)

689. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SGK1. In some embodiments, the sequences from gene SGK1 comprise or consist of:
GTTCGTACTTACCGTACTATATTTTGCAGATGCCTCAAAGGATTTGGGGTTACTTGGCATGGGGA
AGGCACATAAGGTGGGGTGTAGGAGAGGGTCTCTGGTTGTAGGTTTCTTAATTTAATGTTTGAAA
ACAAACATGCAAAAGTCTGTGTGCAGGTTGATGTTTCTGGGCAGCCTGAGCAAAATTTGCTCTCT
CAAGAGGGAAAGGAACCAGGTGGGAGCAGAGCTAGGCTGGGCTAGGCTAGTTGAATGGTGGGA
CATGACATACGGGTGGCACTGGCAATAACAAAGTCACATTCTATGAAGATTCCCTGCAAGAGGAA
GCAGACATGGGCCAGTTACTGTGATTTGAAATTGCCTAAACATTGCTTTAGGTTGGCATGTCAATT
TCAGGTACTAGTGTTTTTTTTGTTTTTGTTTTTGTTTTGTTTTTGTTTGTTTGTTTGTTTTGAGACGG
AGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGCGTGATCT (SEQ ID NO: 637)

690. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SGK1. In some embodiments, the sequences from gene SGK1 comprise or consist of:
AGTAGGTTGCTGGGACAGAACAGGGGGCGCCTGCTCCACCCATCACGTATCCGGTTGGAAGAA
AAGCCAGTCTCAACAACTTGATTCTCTCGGTTAAATGATAAGTTTAGCCGACCATCCGTCTCCAA
GTGCTGAACATTAGGGTAGGGGAGGAAGGAGCACATCAGACGTTCCCTTTCTTTTCCAACCACA
AATCATACGGTTGCATCTATTCTCTATTCCGCGTAGAACCCTCCGACCTGAATGCCACGTTCCTC
CCGGAATGCATGCCACAGAGCCTCTGAGAAAATAAATCCTGTGCATGTGTTTTGAATTTTTTCCG
GACTGATTTGTGAGGATAATCAGTTAAGTTACATTTCTTGTGTGCGTGCTGGGGGTGTAATAAAG
CTAGGACACTGATGACTGTAATTTTCTGAGTGATGTCGCAATGGGGAGAATAAATGGCCCAGTGT
TGAACTTTGCAGCTTGCTCCCTTCCTGTACTTAAATTGCCTTGATAT (SEQ ID NO: 638)

691. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PLG. In some embodiments, the sequences from gene PLG comprise or consist of:
ATATCCCCAGAGTGGGTGTTGACTGCTGCCCACTGCTTGGAGAAGTATGTTTAGGGGACAATTG
ACATGAAGTCTTGTCTTAAATACTTTTTCTGTCCTTCTTTTCCTCCTTTCCTCCTTTCCTTTCTCACT
CTTCCTCCCTTCCTTCTCTGGCTGTGACACTAGGGACCAGGCCAGGGCAATTGGATAAGAGAGA
AGGGAAGGGTTTCTAGAAAGAAACTGCAGAGGAAAGACACAGTACAGATGATTTTGTGGGCCTG
AATAAACTGCAGAACAGAGCTGTTCACTACCATAGGCTGTATCAGTCTCTGCCCAAACAGCCCAA
GAACATTCCTTAACTGCCTGTTTCAAGCAAATCATGAATTTTGCTTCTTGCCACTCAGAAGTCACT
AATTCTGAGTGGCCAAGGGTGTCAGGGAGACAGCACCAATTTCATGGCACAGAGGTTACCTGAA
GGGGCTGGACCATATTTTCCTCTTGACGTCCTCATCTTTTCTAG (SEQ ID NO: 639)

692. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PLG. In some embodiments, the sequences from gene PLG comprise or consist of:
TACTCGTTCACCTGTGGTCTTCACCCCACGCTGGTGAAGATATTTGCTTTATGTCTGGGTTTTATG
GGCCATGGCCACTGCATGGCAGTGGGGAGGAACTGTCTATCACATGAAAGGCTCAAGGGCTTTG
GGGACAGCATCAATCTTCAACCCTAGCCCTGCCACATGCTAGCTGTGCTCTTGAGAAAGGCAGC
AGGACTCCGTTTTCTCATGTGGAAAAAGAGTTGAAATGAGGTACTCTGTTACTCCTAGAACTCACT

TAATGTTCACCAGTTCATACACATTCATGATCAGAGAACGATTCAGTTATTCCAGGCTGACAATTC
CCCCTTCATCATAATATGTTTAAGAGAATCATATAAGACTATATTTGTTTCAAAGCACTTTAAAAAC
CACAAGATCGAGTTGGGTGTCTGGTGTGGGTGCCTGTAATCCCAGCTACTTGGGAGGCTGAGGC
AGGAGGGTCACTTGAGTCCCGGAGTTTGAGGCTGCAGTGAGT (SEQ ID NO: 640)

693. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ABCB4. In some embodiments, the sequences from gene ABCB4 comprise or consist of:
GGTCTCGAATCCTGACCTTGTGATCCGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCG
TGAGCCACCTTGCCCGGCTGATAGTGGTTATTTTGAAGTAATGGAATATTTTATTCTAAATTTTCTA
AAATGATTATATATTTTATAAAGTAAAGCATTCAAAAGAAAAAAGCTGCACAAATTACATTTTTAGC
ACATTAGGAATGAAAAACTGGAAAATACTCAAAAGGGAACTAGTTAAACAGAAGATTAGAAAATTT
AAATACTTATGAATTTTTTTACAGCATGGGAACCCATTTGTGTTATATTTAAAAAGCAGAACATAAC
TATGTAGATTAAATGTTGATTATACAAAATACACATGCATAAAGTTCAAAGATTCTAAGATACTAGA
AATTAAAAGTTGATTAGAAAGGTAACATTTTCAAATTTACTTGAATGTTAAAACTAATTTATACAATT
TTTGGGATAAGGTGTCTGTCTGATTTATCAATA (SEQ ID NO: 641)

694. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GSAP. In some embodiments, the sequences from gene GSAP comprise or consist of:
GTACGCAAGTATTTCTCACTTTTATCATGGTGTACAAAGAGTGGAAACAACTCTGTTGTAGCAAAA
CCCTTTTGAAATGCACTAGTTCAAATCAGTTCTCACCAGCTTCAACACCATCTAGCTTAATTCTATA
CTCAGCATTTAAAGTTATGCCCCCCTGCATATGTACCCTTTAATGTATAATAAAAGCTAAAATTAAA
ACAAAGTTATGCCCGTTACTTTACCCATCCTCTTTCCCTGGCACATGGTTGGTGACAGGGGAGGG
ACAAATGAGCCCAGTACTGCCAAGAAGGGGAATTTCACTTAATACAATGTGTAACATATGTTCCTA
CTCTGATTAAATTCTAGGCATTAGGCCGATGGTCACATTCATATTTATGGGGCTTTCTACAAGGCA
TAGCATTTCATGATTAGCATGAACCCTTGTGTAGTACTCAAAGCCACTGCTTAGGACAAATGGAG
CATCACAGATGAGCTCCTTGGCTGACATGCTGCTTTG (SEQ ID NO: 642)

695. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GSAP. In some embodiments, the sequences from gene GSAP comprise or consist of:
TGAGGACACTGCAATTTGGAGAGGGTGGGTAACTTGTGTAGGGTAACACAACTAGTAATGTATAG
AATCTGGACTTGATACCAGTCTTACTTCACAGCTCATGATCATGACCTCCATTCTGTGTCTCTTTT
CTTCTGACTGTCCACTGTTGGCTCTTGCGTTGTGACAGGCCTGGAGCAAACCCTGTAGCACTTTA
CCTTCACTGATGGATGGGGGTCTGTAAGTGTGAGTGGTGGGGCCAGTTAGCTGGGCTGGGGAG
GCTGAGCTGGGGCACTGCCCACACAAACAGAGGATGCTTTGTTAGTTTCTGGTGCACATTTTCAG
TCTTTCTATTTTGGGTTCAGTGCTTCAGAATTGACCTCAGAAAGGCTAGTTGTGTGTCTGGATGCA
GCCTGAATGCCAGCTGCCCTGAAATGCTTATCTGAGTTGTGGAGGCCTAGCTGTGGGGCCCTTG
AGGGAAGGAATGGAGCAATGGTTAATGGACTGTCTTCACCCTCCA (SEQ ID NO: 643)

696. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ABCB4. In some embodiments, the sequences from gene ABCB4 comprise or consist of:
ATCTGACTTGTAAAATAAGTTTCTGGTTTGTCATCATAAAACATAGGTATGTCTGTCTCATTCTAGA
TCAATTTAGAAGACCCAATTTGGGGTTTATTACGGCATTTGAAATTTGAGAGTTAGAAGTGACACC
TGTCTTGATGAAGTATTGAAACAACAGGCTAGCTCTCCCTAAGTTATTAGAAACATCCAGAAAAAG
AACAAAATTCAAGGTAAGTACAGGTGTAGAAATATAGAAGCCACAGACATAGGGAAATGGTCTTA
TGGTCCTGAATGGGTTGGGTAGACAGGAAAGTTTGGGAATAATTTTCCCAAGTACAAAAGAAAAA
TAAATTGTTCAATAGCCTCATCTCTCTTGGTAATTTTCTAAATCATTCTATTGTGGAATCAAAGTTTT
TTAAATGAATGAATTTCCAGCTTTATCATCCAACATCAAGAGAAAATGAAATTGCCCTACCGAGCT
AACTCTGAAAGCACATATCGGTTCCATAAAGCAAGA (SEQ ID NO: 644)

697. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene STEAP1. In some embodiments, the sequences from gene STEAP1 comprise or consist of:

AAACTCTGTGTTGAAAAAGTCATCTATTTTAAAATTTTTATTATAATTACACTAGGGCTTGGTTGTC
AGTCGGTTTTATATTGAGAAATGTTTTTTAGGCTGAAAATAAGGTACAACTTTAGCAACATAAGAA
ACATTTTGTTCATGGACGAGGCCATATTTCAAACTTCTACCACCCTCACAAGATTACTTTTTAATAT
TGTTGTTCTTCTCCTTGTTTACCAATATGCATGCACATTACAGTTCTATCCAAGTAAACCATCAAAT
AATTATTAGAAAATTAATAGATTATGGAAGTGTTGCATTCAAGAAAAAAAGTGATAGCTCCTATGTC
ATTTGTCTTAGAGGAATGCAAAAAAAAAAAAAGAAAAAGTCATAAATTTGTGGAGACCTGTTATCA
GGGCTTCATAGTAGGCACAGGGAAGAGTGTAGAAGGAGATTCACATTCAGGAAATAACTGTTGTT
TGCATTTCTTCTTTCTTTATTTACCTTCTGGTAG (SEQ ID NO: 645)

698. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene STEAP1. In some embodiments, the sequences from gene STEAP1 comprise or consist of:
TAAATAATATATAAAATAACCCTAAGAGGTAAATCTTCTTTTTGTGTTTATGATATAGAATATGTTGA
CTTTACCCCATAAAAAATAACAAATGTTTTTCAACAGCAAAGATCTTATACTTGTTCCAATTAATAA
TGTGCTCTCCTGTTGTTTTCCCTATTGCTTCTAATTAGGACAAGTGTTTCCTAGACATAAATAAAAG
GCATTAAAATATTCTTTGTTTTTTTTTTTTGTTTGTTTGTTTTTTGTTTGTTTGTTTGTTTTTTTGAGA
TGAAGTCTCGCTCTGTTGCCCATGCTGGAGTACAGTGGCACGATCTCGGCTCACTGCAACCTGC
GCCTCCTGGGTTCAGGCGATTCTCTTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGCACCCA
TCACCATGTCCAGCTAATTTTTGTATTTTTAGTAGAGACAGGGTTTTCCCATGTTGGCCAGGCTGG
TCTCGATCTCCTGACCTCAAATGATCCGCCCACC (SEQ ID NO: 646)

699. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PON1. In some embodiments, the sequences from gene PON1 comprise or consist of:
GTAACAATATTTACTATTTATTAAAACCAAAACCAAACTTAAAACAAAAACAGAAAAACATGCCAAT
AAATGAATTATTTTTTCTCATTCAAACAAAGCATAGTCATGAATAATGTTCTTACTCTGGGTTTTAA
ACTTACCCTCTATGTTAATTGAACTTTATAGTAAAACCACTTAAATACTTGAGAATGCTAAAATATT
TAAGATTTGTAAAGCATCTAATTTTGTAAAATACTAACATTCACATTATCCCTATAATTACCATAATA
ATAATATCCAGCCCTGATCATTATAGCTTTTCCATTTTAAACGATTTTCAAGACTCGGGCATTTACA
GGAACAGATTTTTCTAACCCAAGGCATCTGTAAGCTATAGGTCCAGTGACAGAAAGTCACCATGG
TCAGCTTTCTGCCGGTCCCATTATCTTCAATGCCTCCTGTCCGCTGGTTCCTCTGTTCTGTGTTCA
AAATGCTCCTCTGCATGTTGGTCCCTTTCAAC (SEQ ID NO: 647)

700. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PON1. In some embodiments, the sequences from gene PON1 comprise or consist of:
TCTTATATGGGAACACAATATATAAAACAACAGCTTTATTGTTTTGATTGAAGGCTAAGAAAGGAG
TAGTTCCTCTGGCCCACCAAAACTCTGTCTTTGAGATGCTTCCAAGGACCTACCAGGGAACAGTT
TAAAAGCCATAAGCAATATTCTCTCTGTATTCCTTGCTTATATCATTGAAGACTATTATTAATTGCC
TTTTTGGTCTGCTCTTCCATTTTTGATCTTTCTCATGGGCTGGAAGCTGTAGTGTCGTGCACATAT
GACTTTGCTGCAGGGGATGAAAGGGTTTGTGTGGGGTGGCCTAGTGGAGCATGTGGCTTCCAG
AAGACTTCTCCTGGGGACCCATTACAGAAGCTAACTAAGAGGCTTCCTATGTGGCCATCTGGCTA
GCCCTGTGGTTTGGAGCAGTCAACATGAACCCATGGGCCATGCAGCGCCTCTATTAGCATTTGA
AGTACTGGTATTGTGCTTGATTTTTCTCCTCCATGGTTTATAA (SEQ ID NO: 648)

701. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TFR2. In some embodiments, the sequences from gene TFR2 comprise or consist of:
GTGAGTGCGCGCGCGGGCGGGGGGCGCGCGGGGAGGGGGACGCGGCTCGGGGCGCTCACC
AGCCCCGCTCCCCAGGGCTCACCCCAACACCCTGCACTGGGTCGATGAGGCCGGGAAGGTCG
GAGAGCAGCTGCCGCTGGAGGACCCTGACGTCTACTGCCCCTACAGCGCCATCGGCAACGTCA
CGGTGAGCACCCCCTGCCCGCTCCTAGGATGGGGCGCGGCACGAGCCCTTTCCTGGGTCTCGA
AGGAGGGACGCGGGGAGCGCGCCTCACCGTCCTCGTGTCCCCAGGGAGAGCTGGTGTACGCC
CACTACGGGCGGCCCGAAGACCTGCAGGACCTGCGGGCCAGGGGCGTGGATCCAGTGGGCCG
CCTGCTGCTGGTGCGCGTGGGGGTGATCAGCTTCGCCCAGAAGGTAAGTGTCCCTGGACAGAG

GGAGGGCTTGAGCCCGGGAACCGGAGGGTCGGACTGCCAGTGAGAATCGTTCAGGGTGCTGT
GA (SEQ ID NO: 649)

702. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TFR2. In some embodiments, the sequences from gene TFR2 comprise or consist of:
AGTCTCCGGCGCCGCCCTGGTGGTGATGGGAGAAAATGGGTCCGCGGAGGGCCCTGCACTGC
GGCTCGCGCCTGTAATGCCAGCACTTTGGGAGGCCGAGGCGGGCAGATCACCTGAGATCAGGA
GTTTGAGACCAACCTGGTCAACATGGTGAAACCCGTCTCTACTAAAAATACAAAAATTAGCCGGG
CGTGATGGCACGTGCCTGTAATCCCTGATACGAGGGAGGCCGAGGCAGGAAAATGGCTTGAAC
CAGGAAGGCGGAAGTTGCAGAGAGCCGAGATTGGTCCACTGCACTCCAGCCTGGGCGACAGAG
CGACACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGTCCGCGGGGAGCGCTCTTTT
CCTAAACTCAGGAACCCCTCGCCGCCCCTGCCCCTGGCGACCCCACGTCTCTGGCATCCTTCCC
TCTTCCCTCCCTCTCCTCCGGGCGCCCAGAAAAGTCCCCACCTCTCCCCGCTTA (SEQ ID NO: 650)

703. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC39A14. In some embodiments, the sequences from gene SLC39A14 comprise or consist of:
ATCTCGGCTCACTGCAACCTCCGCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAG
TAGCTGGGATTTCAGGCACGCGCCACCACGCCCAGCTAATTTTTTGTATTTAGTAGAGATGGGGT
TTCACCATGTTAGTCAGGCCGGTCTCGAACTCCTGACCTCAGGTGATCCACCTTCCTCAGCCTCC
CAAAGTGCTGGGATTATAGGCTTGCGCCACCGCACCTGGCCTACTTGTATGGTTTTTAGGCTTCC
ATTGCTGTTTGCATCCGTCTCTCCATGGAAAAGGTGTTTCTCTTGGATAGCAATTTTGATAGTTTC
CCTAGGCTTCTCCGCAGCATCTGGTGAGAGATGGACTCAGCAAATGTTTACTGATGGGTTGGTG
GATCTCAGTCTGCCCCATCACACCTGAATTCAGAACAGGGCCGCCCCAGGCAGCAGGAGTGTCC
CCACCCTCAGTAATAGAGGCCCTCGTCTGTTCTTGTTCCTCCACAG (SEQ ID NO: 651)

704. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC39A14. In some embodiments, the sequences from gene SLC39A14 comprise or consist of:
TGCAGTAGAACAGAAACTTGCGCGTCCTCTTTCCCTGGGGCGGCACAGCTGAGCCAATCCCCTC
CTCCCCTACCCTGGGCTCCAAGGCACCCAATGACTGCCACCTGAGAAATGAACCTGTCCCTCGT
ATCAAAGCCACAAACGACTTCTAACTCTGGATCTCAGGGCCCACCTCTCACTCCTCTGGCCTCTG
CAGGTGCTGTCAGATGCAAGGTTCTTCCAATTTCCCTCCTCCTGGGGACTTGACAGTCTCCCCTC
CCTTGTTAAGCCCCATACATAAGGCATCAAGGGAAAGCAGCAGCTATCGACTGCCGTCCATGCC
TTTGGTGCTAAGTACTTGCTCTATTCTAAGGAGAAATCCTGGCAGTACTCAGGTCTGGGCACCAA
GAGCTTATCCATCTGGAATGAGATGGAAGGAAAAGAGGTTACCAAGTGATATGTAGAATTGGCCT
AAAAAGCGAGTGTTCTTTAATTTTGAGCAGGCCATCGTTTCTAGCAT (SEQ ID NO: 652)

705. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RBPMS. In some embodiments, the sequences from gene RBPMS comprise or consist of:
CCTTAGGAGTCGCCCAGCAGCGAGACAGCTGTGGATCCCCTCCAGGCGCATGGGAGGCTCACA
AGGCAAGGACTCTGATGGTTTTGGCTTCCACCTCCTGTACGGTGGCCAGTGCTGTGAGGGTGGT
TGGTCCCACAGGGAAACCTGTGAACAGAGTCATGTCTGGGGCCCCAGGGACATGGCTTCAACC
CCTCACCTGGCAGTCCTGCCTCCCAAAAGTAAGGCAGGAGTCCGGAGATTCCCATTGCTTGCTT
CTGTGAATCTCAGGTCACTTTAGCACTTGACCCCTGACCCCAGACTGCCTTGTCCTTGAGGCCTG
GGATTCCTAAGGTATATACTGTCTGCTCCAGAGCTGTGGCTGTGGCTATCCGGAAAACGACAGC
TTTGAAGGACTGCAGAGCTTGCCTTTGGGGCTGTTCTGCCCAAGGCCTTCCATTGTTTTCAGACA
TAAATGAAATTGTTAATCCTCTGACATTTACCTTTTCCTCTCAACCTGCAG (SEQ ID NO: 653)

706. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RBPMS. In some embodiments, the sequences from gene RBPMS comprise or consist of:
TGAGGCTTTCTAGGAGCACCTGGCTTAGCTCTCACAGGAGGAGGGGCGGACGGGGAGGCCAG

GCCTCATGCTCACAGCGCCAGCCTCCTGTGAGAGTGGGCTGGGTCTCCTTTCCTTTCCCAGGCC
CTTCCTGGAGGCGATTTCTTTCTTTCTTTCTTTCTTTCCTTTTCTTTTCTTTTCTTTTCTTCTCTCTC
TCTCTCTCTCTCTCTCCCCTCTCTCCTCTCTCTCTCTCTCTCTCTCTTTTCTTTCTTTTCTTTCTTTT
CTTTCTTCTTTTTTTTTTCTGAGGCAGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGTGT
GATCTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCATGCCATTCTCCTGCCTCAGCCTCCCAA
GTAGCTGGGACTACAGGCGCCTGTCACCACGCCTGGCTCATTTTTTGTATTTTTAGTAGAGACGG
GGTTTCACTGTGTTAGCCAGGATGGTCTCGATCTCATGACCTT (SEQ ID NO: 654)

707. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DPYS. In some embodiments, the sequences from gene DPYS comprise or consist of:
GTAAGTCTAAGTTCTTGTATTCCTTGGCTTCATTGTGGAGAAAATGCACTAACTTGCACAGAAATA
ATGCTTTGGCATTAATCAGCCGCTTCTCCTTAGATGACTTCTTTAGCTGTGCTCAGGTATTTTGAT
CCTGTACACAAGATAAAGGTTTTGATGTGCAAATATTCCTTTGTTTTTCTTGGCATAGAGGATGTA
GAAGTTGTGTTGCATTCTCTGACAATGGATCTGTATATAAAACCAATATGAATTTACCACTTCAGT
GCCTGGCAAATGCCCGAGTTCACATGGAAGAAAGGTAAAGCGTGATGAAGGAAATAAAAGGCTT
AGTTTGAAAAGGGTTGAATTGAAAACTCAAAATAATTACAGCCTTTTTAAAGCTTTCAGATAGAAAA
ATTCCAGCACAAAGGATGTCACTTTCAGTTAGCCAAATTTTCCAGTTGAGTTCATCTTCAGCCTAT
CATTCCTAGTAGATTCCAGCTTTTTGTTTCCAATTTCC (SEQ ID NO: 655)

708. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DPYS. In some embodiments, the sequences from gene DPYS comprise or consist of:
GCACCACTGCACTCCAGCCTGGGCAACGAGAGTGAAATTCCATCTCAAAAAAAAAAAAAAAAAGT
GTTGTCACCTATTCTCACTCTATAATATTCTATCTAATGTCTACATGATTATCTCATAAATCTTAGGT
CTGTAATAAATAAGTCAGATCATAAATGTGGTATTGTCAAACTTTAAAGGAGAATCGAAAATACCA
TTACCAAAATTTAGCTGTCACCTATAACAATTTTTGTGATTCTAGGATGAATGGGAAGAATTAGTG
TGGATGCTAAGTAGTGGGGTTTCTGAAAAGTCATCTTCAGGCTTCCATATGTTACCCCATCATCTC
CATCATTGGCATTATGACTGTTTAATACTTACCAGCATCCTCAGATGCTCTACAATATAAGAAATTA
GGTGCAGTTCTGTTTGTTTAAGAGATGCAAGTCTTGTCATTTTATCGATAGGATACTTTTTAGTATT
TGATCATTAGAATGATTCTTTGAATTGCTTTACA (SEQ ID NO: 656)

709. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RCL1. In some embodiments, the sequences from gene RCL1 comprise or consist of:
TATTGGGATGGGTGAGAGGAGGAAGATGCTTTTTGGGAGTCAGATCTGTTTAATTTTGAGCAAGT
GTCTTAGTTTTTTTGTCTTAGTTGTCTTTAATGTAAGTCCTAGAACTCGGAGCCATGGCCCTCAAC
ACAGGGTTACTGTGAGCATAAAGTAAGGTGATAATAGATGTGAAAGAACTTTGGGAGCCGTGAG
CTCTGTGGGATTATGTGCTAGGATGGTGACATCTCTTGTGCTTTCCTGGGGACAGTGGGCAGCC
TCAGACCTCAGAAGGACAGCACCTGCTTGGTCCAAAGGGTATGAGATTCAGGACTGTTTGTCTAA
GCTGTCTGTGGTCAAAAGTACATTCTGGACTGAAGAGATGGTGATGTAACTGGGCTGTGTGTGTA
TTGAAAAATCCCTCTTTGCTCTTTCCTCATTTCAGGTTTGTCCTTTGAGTCAAGTTAAATATTTATT
GAGCATTTCTGAGTACAAAAGTGGTGTATTGGAGAGTTGGGAG (SEQ ID NO: 657)

710. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RCL1. In some embodiments, the sequences from gene RCL1 comprise or consist of:
TAAGTTCAAGTGGAGCTAACACTTGGGTGCCGGCTGGAGGGTTTCAGGAGAGAGATTGGGACCT
CGGGCTGGGAGAATGGGGCAAAGCAGCTCAGGTTGAGGAATTTGGTCAGTTTGGATGGGTGGA
AGGAGTTGATGGTGCAGAGCTGAAGATGGACACAACTGAGCAGGCTGGGGGCTCTAACAACAA
GATATGGGAGGACCAGGAGCCACCGAGAGACTGTCACCAGCATGAGGAAGATTGGTCTTTTAGT
ATGAAGTTCAGGATGGGTCAAAAAAGGGAGCTAGATACCAGATCAGGTCATGTATCGTCTCTGAG
CACTTTGTTTCTGCAGTTCAGATGAAAATTAAATATGTTATTGTCAGCAGTTCTTGAACATTGGGC
TGGATTGGGCAGATTATATACCTCGTTCTACCTGTTGGACTTGTCACGTGGGGTTTGTATCAGGG
TAGTGGGAAGGTCACATGTTATTTCTCCATTTTTTTAGTTCCAAATATA (SEQ ID NO: 658)

711. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TOMM5. In some embodiments, the sequences from gene TOMM5 comprise or consist of:
GTAGCGGGGAGCAAGGAGGGTGCGCGTTGAAGGCGACGGGCATATGCGCGGTTTGAGGTCTG
CGGGTCAGGGTCCGGGCACTGAAGTGCACGTGGTGGCCGGCGCGCGTGTTTAATCATCCTGGT
TCTCCCAGCTTGAAGAATGTTTGAGCTGCCGGGCGCGTTGGCTCACACCTGTAATCCCACCCAG
CACTTTGTGAAGCCGAGGCGGGCGGATCATTTGGGGTCAGGAGTTCGTGGTGGCGGGCGCCTG
TAATCCCAGCTCCTCGGGAGGCTAAGGTGGGAGGATTGCTTGAATCCAGGAGGCGGAGGTTGC
AGTGAGCCGAGATCGCGACACTGCACTCCAGCTTGAGTGACAGAGCAAGACTCCATCTCAAAAA
AAAGAATGTTTGAGCTGAAAGAGCTCAAGTAATTATCCCTAGAGGAACTCCCTCGTTTTTGCAGA
CAGAGAAACAGAGAAACAGAACCATAGTTCTAGAAGGAAGAAACAGCCTTCTTGG (SEQ ID NO: 659)

712. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TOMM5. In some embodiments, the sequences from gene TOMM5 comprise or consist of:
AGGCTGGAGCGCAGTGGCGCGATCTCGGCTAACTGCAACATCCCCCTCCTGGGTTCAAGCGATT
TTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTGTAAGCACGCGCCACCGAGCCGGGCTGATTTT
TGTATGACAGATGTTATTAAAGACAGCGTGGAGAAACCAGAGCCTGCGTTGCTGAGCTTGCGGC
CGCCCGCTTCACACCGCACTTCAGATCAGCTGGGTCAGGACGTGGATTGTCCCGTGCAGGCATC
CATCGTCGAGTGTGGCAACGAGAGGGCGGGAACAGGAAGTGAGGATAGGCCGAGTTCCGGGC
GCGAGGCGGCCACCGTGGAGAGCAGAGCGCGGCGGCTGGAAGCTGCTAAGTCAGAGCCGCGA
TGTTCCGGATTGAGGGCCTCGCGCCGAAGCTGGACCCGGAGGAGATGAAACGGAAGATGCGCG
AGGATGTGATCTCCTCCATACGGAACTTTCTCATCTACGTGGCCCTCCTGCGAGTC (SEQ ID NO: 660)

713. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CBWD5. In some embodiments, the sequences from gene CBWD5 comprise or consist of:
GTAACTAACCATCCCAGTCACAAAATGCCGTGAACTCTGGTGTCATGGGATTTTGCGGGCTGCC
GGTGCCTCTTCTCCTGAGGCATTGGGGCCTCATGATCAAGAGCAAATGTCTTTGAGGTAGGGGC
TGGGTCACTTGCTTCTCGTATGGGTTACCTCTCATCTTGGGAGTTAATGATGCCCGGTCCCCTCT
GCGTTAGATTCCCATTTCTCAAGTGAGATGGAAAGTTAGCCTTTGAAACAAGGCTTTGAAGCTAA
GACACGCCCCCCTAATTGTCTCTGTGACCTCTTACCAAGTTATCTTACCTTCCTGACGCTCATCTA
CCTCACCTGAAAATGGAAAAATACCTGTCACCTGTGAAATAGGGCCGGAACAACCTACCTATTGC
CATTAAAGGATGTCCCGTCTGTAAAATGTCCGACACGTGGGGCTTTCGTCAGCAGATTCCCCTTC
CCCAGGAGCCAAAGTCCTCCAGCCAGTTGGCAGGAAGTGCTCCTA (SEQ ID NO: 661)

714. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CBWD5. In some embodiments, the sequences from gene CBWD5 comprise or consist of:
CTGAGGTCCAAATAAATAATGAGGAAAAAGTAAATAAAAGTGATGCATGAATACTAAAAATTTGGA
ATTACATATATAATATGTAATAATAAAAAAAGAAAAAATTGTCACTGGTTATCCTTCAGGTATAAAA
ATTACAATTAAAATTGTAATGTTATAACCTTCCATTCTTTCCCCTATGAATTAAAACTTTTTTTTTTAA
CGAGACTAAAAAATCAAGTTGATAAAATCTATGCCCTGTGGGAACTGGTTAGGTCAGGTTACCCA
CTCCAGATTTCCAGCAGGCTAGCCTCAGCTCTACCTACAGCCAGTAGCTTATTAAGGCTCTAGGC
GCCAGTGACACCTTCAGACAGGTGGTTAGTGCGCCCTAAGGGCTCTCCGCAGCGTCGCTCAGG
TTCACAGAACACGCCCAGGGGCGTGTCCAGCTGTCGTCGGGGAGAGCCCACCTCCCCGGGGG
GTGTGGCTAAGGGACGAGGCAGTTCTCGTCCAGAGCCCAGGT (SEQ ID NO: 662)

715. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TJP2. In some embodiments, the sequences from gene TJP2 comprise or consist of:
AGAAAAGCAAGACAGACTGAGAAAGTGTGGCTTAGCCGCGGTATGGAGGATGGATGGTAGCACA
GATAGGCTGCAGGGCCCCTAATTTGAGTTCCTGCACAAAAACGACCATAATATCAACATTGTACC

AAAGCCAAGTGATCTCAGGGAGAAAAATAAAAGATGCCTTCCCTGGCGAGCACATCAAGGTTTCA
GTCGCTTGGCTGTGTCCTTGGGAATTTTCTTGAGTCCCCACTCCCAGGAGCCACATCAGACCCC
ACTGACCGTCCAACACAAATTCCTCTAGATGGAAGGGATGGATGATGACCCCGAAGACCGCATG
TCCTACTTAACCGCCATGGGCGCGGACTATCTGAGTTGCGACAGCCGCCTCATCAGTGACTTTG
AAGACACGGACGGTGAAGGAGGCGCCTACACTGACAATGAGCTGGATGAGCCAGCCGAGGAGC
CGCTGGTGTCGTCCATCACCCGCTCCTCGGAGCCGGTGCAGCACGAGGAG (SEQ ID NO: 663)

716. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TJP2. In some embodiments, the sequences from gene TJP2 comprise or consist of:
GCATAAGGAAACCCAGCCCAGAGCCACGAGCTCAGATGAGGAGGGCTGCTAGCAGCGATCAAC
TTAGGGACAATAGCCCGCCCCCAGCATTCAAGCCAGAGCCGCCCAAGGTACGTGGCTGGGAAG
CCCAGGATGGGAAGGAAGAGGAAGCAGATGCCTCTGAAGCCTCCTGGACGGCCAGGGAGGAG
CATGCACACTGAGATGGTGTTTAATTACGGTTCTGACTCACTGTGTTCTCTATTAGAGCCTATCTT
TTGGCCTGTTGGGTGAACTCCCAAATTAGGGAAGGGCAAAAAGGAAGGAAAGGCAATATTAGGA
GAGCATATGATTTTAGGACTGTTAGTGTTTATTTAATTTACTCTTCTTGTTAAAAAAAGATTGTAAA
GAAAAAGATTGAAAAATACTGTACTGTATACCCAGAATCACCAATCGCAGAACGTGTTTTTCTTTT
GCTGTCCAGCTAAAGTTTTCTGCCCAGTCTGATTTAGATGCACCAGAT (SEQ ID NO: 664)

717. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ALDOB. In some embodiments, the sequences from gene ALDOB comprise or consist of:
GTAAGGATATTGCCCACTGAGATGAATCATGCCAGTGTAAGCTAGAAATGAAGGCAAGTAAAGAA
GGAAGCAAGGAAAAACAAAACACAACTATTACACTGGTCTTAGAGCCACACGTACCTGGTTTTCA
ATACCAGCTCCTCCATTTAACAACTGTGACCTTGGGCCAGTCACTGAAATATTGTGAGCCTCAGT
TCTCCTATCTCAAAATGGGGATTTCTCAAAATGTTGTGGGGATTAACTTAGACAATGTACATAAGG
TGCTTACCACAGTACCTTGGACAAAGAAGATTAAACTCTGCACCCGGAAGTATTATTTTTAGAAAA
AAATTAGCAGCAGTAGAGTGGAAAGTCCCCACACTTTGAGGTCAGACACACCTGGGTTTGAATCC
TGGTTCTATCACATGCTACCTAGATAATTTTGCAAGGTACTTCTGCCCAAGTAGACAAGCATTAAC
TCACAACATTGGGTTAGCTAAGCAGAATTTGAATCCCAGCT (SEQ ID NO: 665)

718. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ALDOB. In some embodiments, the sequences from gene ALDOB comprise or consist of:
ACTTCTCAAAAGTGAAAACTAGTATCCATTGAATAAGAGTTTTTACCATTCCAAGCATTCATTTAAT
TCTCATAACCTCTGGTAGTAGACTCAATTATTACCCTTATTTAGAGATGAAGTGAGAAAACTGAAC
TACGAAGAGTAACATAACTTGCCCACACAACAAGGCAAGGTCAGAGCCAGTTTAGGCTAATTCTC
AAGCTCATGACTTTTGCCTTTGCTATGTAGAGAGTAGAGGTTGTATCCTTAATTCTCTTTACCTCC
TGTACTAACACAACACCTGGTGCATGCAGGTGCTCAATAAATGTTAGGGTAGACACTCTCACAGT
GTACCTTCTAGGTAACTTCCCTTCTGCTATGGACTGAACTGGGTCCCTCGCACTAATACACTTTAC
TAATTCAACTCCTTGATCTGTAAAAGATGCAAACTGTTAGTTAGTTCAAGAGTTCTGCTTGTGTTTT
CCTGACATCTGACACCTGTTAATTATTTGTATCCACA (SEQ ID NO: 666)

719. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PTGR1. In some embodiments, the sequences from gene PTGR1 comprise or consist of:
GTAAGTAGACCTCCTGCTTTCTTTCCTTCCCTTTTCTCCCTCCTCTAACCCCCTTGCTTTCTTCCT
GCCAAGTTTCTAGACGCCCCAGTGGAGGAGGTTTGCTCTTAGACCTCCTCCCCTTACGTCGAAAT
GACCGCTGGGTCTTGCACTCGGAGGATCTTGGGAGCCGACGTCCCGACGCCTCCCGCCCCCGC
AGTTCCTTGGAGAGCTTGGAGCCGCGCGCCGGAGGGAATAGGAAAGCTTGGTTACAACCCGGG
ACACCCGGTAGCTTCCTGCACCCGGGAGGGGGCTGGCCAGGGAACTTGCTGGACTGCACAACT
GGGGGAGGGTAGAAGAAGAAAGATCGGGGTGGGGATTCGGGAATGGGCAAGCGGGCGGCGG
GCGGCGGGAGGCGAGGGTGGGAGCAAAGGGCGAGCGGGCAAAGGCCGGGCGCCGCGCCAG

GCCCCCTCCTCGGGCGGGCGAGACTTTCCCGGGACCTGGCCCCTCTGCGGCCAGACCC (SEQ ID NO: 667)

720. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PTGR1. In some embodiments, the sequences from gene PTGR1 comprise or consist of:
GAAGCCAGGTCAAGGCCTGATGTTTGCTAGGGTGTGATGGGTGGGGTGCCTCAGTGGCAAGAG
TGCTCACTCCTGCCTGGGGGAGTCTGGCAAGGGTTCACAGAGGTGACCTTGAATTGGCTGGTG
GAAGGCGAGTAGGTGTTCAGCAGGCGGACTGGGGACAGACAGGCAGGGTGTCTGCACCGCAG
CCCTGGGCGAAAGCTTGCACTGCGGGCAAGCGGCAGGGCTGACGGGGAGCCCAGGGATCGGA
GCCAGCACCGGGGGCTTATTAGGGCTGCGGCCGCCCCAGGCCCTGCCTTTGGACCCTTCCGGC
CTGCTTGGCAGATGCCACGGTTGGTTCCCCCACGGGGCATATTTCCGCCGGGCTCCAACTTAGG
ACCCCAGGCGGAGGTCCAGTGTCAGCTGGACAAAGCTCTGTTAGGAATTTTCCTATCAGGAGTC
CCTAACCCCCTACACGCACACACACGGGCGCGCGGGCGCGCACGCACACACACGCACA (SEQ ID NO: 668)

721. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ORM1. In some embodiments, the sequences from gene ORM1 comprise or consist of:
AGCCTCCTACCTCTGCTGGAAGCCCAGATCCCATTGTGTGCCAACCTAGTACCGGTGCCCATCA
CCAACGCCACCCTGGACCGGGTGAGTGCCTGGGCTAGCCCTGTCCTGAGCACATGGGCAGCTG
CCTCCCTTCTCTGGGCTTCCCTTTCCCTGCTGGCTGTGGTCGGACCCCCACTCCCGGCTCTGCC
TTTTTCTCTTCTGGGTCCCCAGGGTGAAATTCTCACCAGCCCAGGGGACTCTGGAGGCACCCCC
TGCCTCCAAACACAGAAGCCTCACTGCAGAGTCCTTCACGGAGGACGGTTCTGTGCTGGGCCTG
GAGGGGCTGCCTGGGGGGCAATGACTGATCCTCAGGGTGAGCTCCTGCATGCGCACTGCCCAC
CAGGGGCCTCATCTCCCCATCTGCAAAATCAGGGAGAGATCTGCCTGAGTCTCCTCCCAGCTGA
CAGTCAAAGATTCAGCATCAAGCCCCCATCACCAGCTCCCACCTTCTCCCCAG (SEQ ID NO: 669)

722. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ORM1. In some embodiments, the sequences from gene ORM1 comprise or consist of:
TGAGAGCCCCCATTCCAATGCACCCCCATCTCAGCTTCTGGCCAGAAGACCTGAGCAAGTCCCT
CCTTCTTCCTGGCCTTGGCCTTCCCATGGGTGGAACCGGGAGGGCTGGCTTTAATCTCCACCAG
ACTCTTGCCCCAGGACTGTGATGGGCGATTGGCCACTTCTCAATAATCTTCCTGTTTTCCTTCCG
CCTTCTGTTTGGCTTTAGACAGGACCAGTGCATCTATAACACCACCTACCTGAATGTCCAGCGGG
AAAATGGGACCATCTCCAGATACGGTGAGGGCCAGCCCTCAGGCAGGAGGGTTCACTGTGGGA
ACAGGGCAGGCCAGCATAAGGTGGGGGCTGGATGTAGAGCCCTGGAGGCTTTGGGCACAGAGA
AATAACCACTAACATTTTTGAGCTCTAACGATGTGCTCAGAAACAACTCTAAGAGGACACTGAGA
GAATTAGAGGAGGAAAAAGAAGAACAGAGACCTCAAATAGTTTCCCCAAG (SEQ ID NO: 670)

723. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ORM2. In some embodiments, the sequences from gene ORM2 comprise or consist of:
TAGTTTCCCCAAGGTCACACAGCTTATAATTAGAACTAGAATTGGAACTCCAGGCTGGCTTCAGA
TCTGCCTCTCTCTCACGCCCTCTTTAAGATCCTTTGCAAACCAATGGTAGAAGCCTGTATGTTGG
AGAGGTGGTACCTTCAACTATGTCCCCCATCACCGCAGAGGTGGCACATGGCAGGGATCTGATG
GAGCTGAACTGACATCATTTAGCATCCCGAGCCTCCTCTCTGGGCCTCATTTTCCTCCTCTGTAA
AACGGGGAGAAAGGCCCTGACAGCCACAGTCTGTGTGAGGCTCCTGAGATCTCATGTACAGAAA
GTGCTTGGCGTGGAGCTGGGCACGCAGCAGGGGCTGGGCACACGGTGGCCCAAAGGAGACCC
GGGCCTTCACTGATGGGCTTTGTGGCCCCGGACACACCTAGGACTCCTCACCTGTAAGACAGGC
ACCATTGTGCCATCCCATGTTCTCACCCAGAGGCTCTTTTTCTCTTCCAG (SEQ ID NO: 671)

724. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ORM2. In some embodiments, the sequences from gene ORM2 comprise or consist of:

TAGGCATGCTTAGCAGCCCCAAACTCATGCCCCTCTCAGGCCTCACCCCCCATTCACCCACCCC
TGGGCTGGCCCCTAGAACCCCAGCCCTCCCTGGCCTCCCGCCGGGCCCCACCATGTCCCCAGT
CAGTCTCCTTGCTCCCCCTGCAGCTGACAAGCCAGAGACGACCAAGGAGCAACTGGGAGAGTTC
TACGAAGCTCTCGACTGCTTGTGCATTCCCAGGTCAGATGTCATGTACACCGACTGGAAAAAGGT
AAACGCAAGGGATTGGACAGTGCCCACCTTGTCCATGGCCCAACTTGGGCAGCCCCAGAGGCC
CAGAGCAGGAAAGCTGCCAGGCAAGGCTGCACAGCTAGGCAGATCTTCTGCTTTTAGGCACCTG
CCTCACTGTAGGGACAGCTGAGCTCTACAGAGGCCCAGGGGTGGTGGATGAGAGCCCAGGAGG
GAGAAGTCCCTGTGAAACCAGGGAGGACCTGAAAGCTAACAGGAGGGAACAGC (SEQ ID NO: 672)

725. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene C5. In some embodiments, the sequences from gene C5 comprise or consist of:
GTAAGTAAAACAAGCTATCTTCATTTTTCAATGCATCTTAGTTATGACGAATGAAGAGTTAAATTTA
ACAGATTCTGTTAACTTGAAAATAACTTGCTACTTCTGAGAACAGCAAGTGAATAGTATCATCTCT
GAATGAGAAAGTCATGGAAGCATTTTGATTTGATGAGTAGCTAACAACATGACAGCTTTTATGGAA
TTGTTATTTATTAAAATTTACGTTAAGTGATTATTCAAATTCCTCTTCAAAAAAGCACAAAAGAAACT
CCAGATAATAAACTTTCTTGACATTTTTTGCTTATTTTAACTTGGTGTTTAGTTTTCTTTGTGTTTTT
CATAGACTATACACAGTTAAACCAGGGTTATTTAGGAGTCAATCTAATACTGTGATCTGAAAATCT
GTTGTTGTAGTGACTTCTACCATACATTTATGAGCTGACTTTTCACAATTTTTAGTGTCATTATTGA
GATAATATGCATTTTAAGTAATGTTTTAAAA (SEQ ID NO: 673)

726. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene C5. In some embodiments, the sequences from gene C5 comprise or consist of:
CTAGGTTATGCTCAGACCATTTGCAGCACCAAGGACACTGCCATTCAGGTCACCAAAAAAAGATC
ATCTTGTGAGCCCTGTCTAAACCAGGCCCCTTCTAAAATCATTTCAGTGTGAAACTGAGTCCAGG
TGGGTCTTCATCAGTATTAGAGTGGACCTGCCAGATGTATGCTTGCAGATGATGCAACATCAAAG
CAAATGCCCTGGGCAAGAGAAGAAAGGCCAAAGCAATGGGCTTACTGGTTTCTAGCTTTGAGCC
ACTCTTCATAGTGCCAAATTCCCATTTTAGGGTCCCTTTATTTGTATTAATAAAAATAAATTCCCTG
GGTGTAAGTTCCTGTAAAGTACTCCCTATCTGTATTCCTGGGCATGAAAGGGTGTTTTAGTTCCAA
TTCTAGTTTTCCCACTTAGAGGTTCACCTTTCTGACATTAATAATTAACCAGATTATCTGAATTCTT
CAAGTTCAGTTTATTTAAAAGGAGACTATCCTCAAAAGTG (SEQ ID NO: 674)

727. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DMD. In some embodiments, the sequences from gene DMD comprise or consist of:
CGTCTTCACCTCTTTTCAACCTGCTCCTCTTTTTTGCCTTAACTCTGATGGCAGTCACACAACTGT
GTGTTTTTCTTTTAATTCACTTTACACCTTGGTTTGGCTATTGCTTTCCATGGTTCATACTTAATTG
GCTGGATTTTATTTATTTTGACCTTTCAGTAAATTTTTTTGCGGCTGAGTTTGCGTGTGTCTCCTTC
ACCACCTCATTTTTTGTTTTGCAGTCCCGTTACTCTGATCAACTTCTGGCCAGTAGATTCTGCGTG
AGTACTTTTTTTGCTGAAGGGTGCTGCTACCACCAACACATTCGCTCGCTTGGTTCTCTTTTGTTC
TGTTTATTTGTTTGTTTTCTTTTGTTTTGTTTTGTTTTATGGACATATTAATTCCCCTTCCTTCATTTC
AGTTTTTTTTTTTCTTTTCTTGATGAGACTTTGAAAGTACCATCTACACAGATCAGGAGAATCAGAG
TGGGTTTTTTGGTTCCTCCACCAGGTGAAAT (SEQ ID NO: 675)

728. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DMD. In some embodiments, the sequences from gene DMD comprise or consist of:
AAAATACCATAAAGTGTGGTAAAATTTAATGTCACCTTTTTGACCTTAAGACCTATAAACTACCATT
TATTGAGTAGCCTAGTAAGCTTGTATGTTTCTTTTATTTATCATAACAACGTGTTGAGGTGTTGTTG
CTCCCATTTTACTGATGATCAGAGCCTCTGAGAAGTAAATAACTCAGCCAAATTAGTACATGCCAG
GCCTGGTTTCAGAGCCCCATTTGTCTGATTCCAAAGCCTTTGCTCACAACCACAACACTCTCCTT
AATTACAAAACAAGTGTCATGGGGCAGAAGACTGGAGTGGTCATTAGTTTTGAAATCATCCTGTC
CTAAATCTGATCTCACCATGATCTCCCTTTTAGACTACATCAGGAGAAGATGTTCGAGACTTTGCC

AAGGTACTAAAAAACAAATTTCGAACCAAAAGGTATTTTGCGAAGCATCCCCGAATGGGCTACCT
GCCAGTGCAGACTGTCTTAGAGGGGGACAACATGGAAA (SEQ ID NO: 676)

729. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GJB1. In some embodiments, the sequences from gene GJB1 comprise or consist of:
TTGCCCAGGCTGGTCTCAAACTCCTGGCTTCAAGTGATCCTCCCGCCTTGGCCAAAGTGCTGGG
ATTACAGGCATGAGCCACCATGCCCGGCCCTGTCATACAGTTTTAGAGGCTGGGAGCTAGAAGG
GTTGACCAGGATGGCAGCCTGTACAGGATCCCTCTCTGCAGCTTGCCCGCACTGTGGATCTGCC
TAAGGCCAGGGCATGGGGGAAGCCTGAGGGATGCTGAGGAGCACAGGTCCAGCTCAGTCTCCC
AGAGAGACTAAACATGGGTGGGTGACAATGATGCCTCTCTTCCTCTGGGACAAGGCAGTGACTC
CAGGCTATGTGATCTGTCTCTCCAAACCCATAGGGAGCTCAGAGGATCAATCTTGTTTAATGATT
GTATGTGGGAGGAGGTGGGGCTGGTTAATGTTTGTCTGGTTCCTCTTGGGCTGTGGGCCATTTC
TGGCTCTGGCCCTGGGTTCGTTGTCCCTCCCCTGGGCTGGGCTGACAGTAC (SEQ ID NO: 677)

730. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GJB1. In some embodiments, the sequences from gene GJB1 comprise or consist of:
TGAGGAGACTGGGGGCTGAGGGAGGTGGGCCAGGGAGGGCTGATGTGGCACAGTGGGCCGGA
AATAGGGGCCGGGTCTTGCCTTCTACTGACCTCCGCCTTCAGCCACTTAGGTCCCTTCCATGCTT
CCCTCTGAAGCTGGGGTGAGGCCCCTCCTGCCAGGTGCCAGACTTGCTTAGCCTCTCTCTGCAG
CCTCTTTCCAGGTTCAACATTGCTTTTCCTCTCACTTTTTTTCCTCTGGCCAAAGATTCCCCTTATT
CCCATAGGGCCAGATTCTCAGGAAGACTTGAGGGACCCCCTAGGTGCAAGGTGGCCAAGTTTGT
CTCTCTGAGACATTTCCTGCCACACAGGGTTAGGGTTTAGTGGGAATGTTGGGCACTGCCAGGT
GCTGTTTTCCTTCCTTGATTACAAGGCAAGCCAGGCATGCACCCAACACGGGGCTGCGAGTGGA
TGAATAAAGCGTGCTCAGCGGGCTGCAGAGGGCTAGCCAACAGGGCCAA (SEQ ID NO: 678)

731. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TXLNGY. In some embodiments, the sequences from gene TXLNGY comprise or consist of:
AGAAGAAATTGTCCTGGATCATACAATAAGCTAGGATTTGCTCCAGACCATTTTTTTCATTTTATCA
GGCTACCTACAATTAAGGAATTTCAGAAGATTTTGTGAACAAAAAATGTCCAGGAATTATGTGTGT
AATAAATGAATTTGATATTTTGATCTCCTTATCCATCTTTTTCTTGATAAAATATCAGCTTTTTTTTTT
CCAATGTAGGGCAGAAGCAAGAAGTACAGATATTTTGATGGGGACAGCCCACGTCTGATAGGGT
GGGACATGGGGCAGCAGTTAGAGGGTTGTGCTCTTTCTAGTGTGGGATAGTTTGCAAGATGATA
TGTTGTAGCCACTTCTGCAGTGACGGGGACAGAAGGAGTCAGTGTTCTTAACTACAGTGGTAGC
AGCAGAAAAGAAGGGTAAGCAGGGTTCTAGAAATTTGTGTTATGTTTTCTCCCCACTGTATTTATT
TCTTTGGTTAGTGGTGCAAGAAATTCTGTTTTCCTGTAG (SEQ ID NO: 679)

732. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TXLNGY. In some embodiments, the sequences from gene TXLNGY comprise or consist of:
TAAGTTCTACTTCTTGGAAAAAAAAAAAAGATCGCCAAAATTGTAACCAAAGCCATTTAAAACAAA
CTCCTCACTTAACATAGTGCCAGGGCATGCAATTTTGTTTCTTACTCTCTGGATGTGGGATATGC
GAGTGTGTGTGTGTGTGTGTGTGTGTGTGTATTAAGCTTTCTGTTTCTGATGAAATTTTCATATGA
AATTTACTGGAGATAAGATTAAATTAGTGGAAAAACAAGATAATTTTGCTTTCTATGTAGTGGTCAC
CAAGTTAAAGAATTGTGCCAGTTATTAGGCAAGATAGGCTTTGAGATTTAGGGACAGTTAAATTTT
ACACCAACTTAGTGAACATGAGACTTCTACCTAGTGTTACATTTCATTTTTAAATAAGCAATTTAAA
AATTGGTAAATGATTTGTTTACTTTGATTATATTCTGGTATAATTTTCTGACAAAATTATCTGTGTCT
TGGTCAGCATTGTTGCTAGAATATGTATTCAGAT (SEQ ID NO: 680)

733. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MICU1. In some embodiments, the sequences from gene MICU1 comprise or consist of:
GTACTTTTTAAATTGATCTTTGAAGGCTTGGGCTCTTTAATGGTAGTTTATAAATTATTAAAATTTAT

TCATTAAAATATTACTCTCACATTTCTGGTGGCTGGCAGTCTTAAAAATATAAATTAAACTGAGTTG
TAGTAATTAAATATAAATTAAGCTGAATTATAAACATCTTTTGGTTTAAAATAACTAATATAACTAAC
GAAGACCACAGGGTGCTCTTTATTTTTACAGTACATTTTTTCTATACTTCCTTTGTTTGAAAAATGG
GGTGTAATTTTTGGTAGTCCCTCTTACCAAACCCTCAAATTAGGTATCTTATTATTAGTACAATGGA
TTATCTTCCTAAATACCTTTGTCTTTAACTGCATTCTGAACCAAACCAACAAATACATTAAAAATTAT
GTCAGAATAACGTATAGACGATTCCATTATCAATGTTTCTAATCCTGGGAATTCTATTTTAGAACA
GCCATGGCACAAACATCATACAGAGTAC (SEQ ID NO: 681)

734. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MICU1. In some embodiments, the sequences from gene MICU1 comprise or consist of:
AGGTTAAGAAATTTTGTTGTAATCACTCTTGTTAAGCATAAGAGATACTTAATTAATTGAGTCACTT
AAATAGTCTTACTTGGAGGCCGGGTCTGGTGGCTCATGCTTGTAATCCCAGCACTTTGAGAGGC
AGAGGCAGGAGGATCACTTGAGCAACCGGGAGTTCAAGACCAGCCTGAGCAACATAGCAAGAC
CTCATCTCTATGAAAACATTTAAAAGCAGTAGTAGTCCTAGCTACTCAGGAGACTGACGTGGGAA
GATCGCTTGATCCCAGGAGTTGGAGGTTGTAGTGAGCTAAGATTGTGACACTACTCCAGCCTGG
GTGACAGAGTGAGACCCTGTCTCTAAAACAAAAACAAAAAAGTCTTATTTGGGATATTATGTTCCT
ACTTGAACTGTAACAGGACTGATGAGACAACAGTAACTTCAAGTTAAAAATTAATCTTTTTTTCTTT
TGAAATTTCTTACATAATAAATACAAATAAGCAGTTGCTTGGT (SEQ ID NO: 682)

735. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene VDAC2. In some embodiments, the sequences from gene VDAC2 comprise or consist of:
GGCGGCCAAGCCGGAGGCCCGCGCCGGACTCGGAGTCGGCCCTGGCTTCCTAAGATGGCCGC
GCTGCCCCGCGGCCCCTCGCCCCTCTCTGCCCGGGATCTCCCTTTGGCCCTTTGACCCCAGCTT
ACCGCACTTCTTGTCCCTCCCGCAGATTCCCCTCTTCCCGCGGCCTCGCCATGGCGACCCACGG
ACAGACTTGCGCGCGTCGTAAGTAAAGCTGGGATCTCTGCGGGATGGGGCGGCGGAGAGTCGA
AGCCTGTCGACCAGAAACCCAGTTTGTTTCCCCCTATCTTTCCAAGAACTTGGAAATTCGGCTGC
TTTTGGTGGTCGCCCCACCGTCTGACCACCTCCTCTGCGGAGGAGGGGCTGGGCTGCTGGATT
TCAAATGGGGAACAAGGCCCGGGGAGTTGGTCTGTGGCCGCATGGACTTTTCAGCCTTTGTACA
TGTCTTTGACGTATAGAAGTAAAAAGTTGTTAATTGGGGATTCTGCCTTTGGAG (SEQ ID NO: 683)

736. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene VDAC2. In some embodiments, the sequences from gene VDAC2 comprise or consist of:
TAAGTTTGAAGCGCTATTTGATATTTAGTTGATGTAGACATTTGAGTGAAACACACATGGCAGTAT
TTTTTCCAAGTTTCAATATTTAAATTCCCAGTATTAAATTCTCTTCCCACTCCAGGGTGTTGGTTTT
CCCCTCAGCGAAGATATTAAAGGACGTATCAGGGTAAAGGGCCTAGTCTTAGGTTTCGGTTTTAT
CTAATTTAGTTAAATCAGCTCATCTCAGTGAATTTTGGCAGATACATAAATATCCATACACACAAAT
ACTTGTTTGATTCTTTGTACTTGTCCAGTCCTAGGAAGTGAGGCTGTAGGTAATAGACTGTTTTTC
CGTTTTGAAACGAATTCCCCAAGTTTGTATAATCATGGTTATCTGTTTTAGAAATAATTCGTTGGTG
GTATCTCCTTTATGGGTCGTTATAGTTCTATTGTAGCTCCTGACCGCATAAAAAACATTCCAACAA
ATGGGATTGCTTGAATTTTAATATCAGCAGTGGGT (SEQ ID NO: 684)

737. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CYP2C8. In some embodiments, the sequences from gene CYP2C8 comprise or consist of:
GTAAGTCTGCCTTATGTTCCTCCAGCCAATTGCAAAGGGTAAGTTATTTGACTGCTATTTTTAGAC
AAAATATATTCCTGGAAGCACACTATTATAATAGATCATTGTAAAGCAAAATACTCCCTCTGAACTT
CTTTGATGTTTCTTTTGTCTTCCTATTTTTTTTTTTTTTGAGACGGAGTCTCGCTCTATTGCCCAGG
CTGGAGTGCAGTGGCACTATCTCCACTCACTGCAAGCTCTGCCTCCCAGGTTCACACCATTCTCC
TGCCTCAGCCTCCCCCGAGTAACTGGGACTACAGGTGCCCTCCACCATGCCCGGCTAATTTTTT
GTATGTTTTAGTAGAGACAGGGTTTCACCGTGTTAGCCAGAATGGTCTCAGTCTCCTGACCTCAT
GATCTGCCTGCCTTGGCCTCCCAAAGTGCTGGGATTACATGTGTGAGCCACCGTACCTGGCCTC
TTTTGTCTTTCTAAGTCTGTCATTGTCAGAAATAGCGGAGT (SEQ ID NO: 685)

738. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CYP2C8. In some embodiments, the sequences from gene CYP2C8 comprise or consist of:
TATACATTTATTAGCTAATAATTTGATATATGTATGGTAATTCAACATGTATGAGTTATATTCACTAT
TTCATGTTTAGGCAGCTGTATTTTAAGTGAACTATACTAAATATTTGAAAGGCTTTTGTTATCAAGG
GCTAAGTCTCCTATTTTTTGATATAGCATTACAATGTACATTTTTTATACACAAAATATAGAATACAC
TGATTTCCCTCAAGGTCATAAATTCCCAACTGGTCATTAATCTGAGAATATTGAATTTTGAGTATAT
TCTAACATAGAATCATTTACTTCAGTGTTTCTCCATCATCACAGCACATTGGAACAACCAGGGACT
TTTAATTAAAAATACCTGGGCTCCAATCCAATACAATTAAACCAGAATCTCCTAGATTGGCACTGG
AAAGAAGGAGTAGGACAAAAGAACATTTTATTTCTATCCATGGGCCAAAGTCCACTCAGAAAAAA
AGTATAAATTGGATCTAGGTGATTGTTTACTT (SEQ ID NO: 686)

739. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GPAM. In some embodiments, the sequences from gene GPAM comprise or consist of:
GTGAGTGAAGACCCTTCAGTGTTGCCTGGTCTCTTTTCTTGAGCGTTTTCATGAAAACGTAACCC
CCCGTGTTTTTCTGTTAGATAATGTTTGACCCATTGTTGATACTTTATATTCCACTCCTGGATTTCA
GTGACCACCAAACCAATATGTCATTTACTATCTTGGTTTGCTCTCTGGGTCACTGCTCCACTGAAT
CTATCCTGCAGCTATGAGCCATGATAGGACAGATTGCTCAATGTTCTCAGGCAGTCACATCCAAA
GCTAGTGAGCACGTATTGTGTGTGAGGCACTGGGTCAGTGGTTTGTAAATAATTAACACACCCAC
CTGTAGATGATGGAACCACAGATGGTAAGAGTCAGAAGCAGCCTTAAAAATCATCTGCTCGGCCA
GGTGCGGTGGCTCACGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACGAGG
TCAGGAGATCGAGACCATCCTGGCTAACGTGGAGAAACCCCGT (SEQ ID NO: 687)

740. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene GPAM. In some embodiments, the sequences from gene GPAM comprise or consist of:
GCCTAAAACACATAGTGGTATCTGCTTTAATTTGGGTGATAGCCCCTTGCTTGAGGGAATGTGGC
TATAATTTTAGTTTTCAAACGAAAATGTAATCTCCTGTTATATCACTGTTTACAATGAGTAGTTACT
GAATTACCGTTTGTATAGCATTACCCTTATTTTTCAGGAGAGGTAGAGTGTCTTGCTATCCAGGAG
CTGAAAATCTAACTGAGATGAGACATACACAGAGCAGCAAAGTGAGTGGAGGGCCTCATTTGTG
ATTAAGAGAAAAGAGAGGAAGGAGAGAAGAGGGGGCTTATGTCTTTGGAGAAGGTTTTTGATGC
AGTTGGGATCATATGGAATCATAAGAATTTAGTCTTATGGGATTTACTTAAATTTCTCCAAATACAG
GCCATTATTTTTGATGTATTAATAATCTCTTAAGGTTATTCAAGCCAGTTGAAGTTTTTCTTGGAGA
CTTTGAGCTGGCAACTTCATTGTTGCTTTTCTTTTCTTA (SEQ ID NO: 688)

741. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSL5. In some embodiments, the sequences from gene ACSL5 comprise or consist of:
GCTACCTATTAGCTACATAAAGTATCTTTCTCTCCACCTCTTATTTCCTACAGGTGACCCCAAAGG
AGCCATGATAACCCATCAAAATATTGTTTCAAATGCTGCTGCCTTTCTCAAATGTGTGGAGGTCAG
TGGTCAGTTGAAAAAGAGGCTCTCATTAAAATGTGAATCTGTCATAAGATTTTTATTTTTGAGGTTA
GAGCAGGCAGACACACACACACACATACACACACACACACACACACGTTAAAGGCTGGAGTGTG
GACAAACACCAGCGTGTTCTTTGTTTAGAGGACTGTACATTTTCAAGCGTTGGTCTTTTAGGATCA
CTGCAAATTTCTACACTATATGCAGTTCAAGGCATCTCAGATCTACACAGTGTACCGCCTATACAG
CTGTCTGTGGTAGTCCTGGGAGGAGGTAGTTTTAAAATCTCCATTGGAATTGAAAGTTGGCATTA
ATCTCATGTTGCCTCCTCTTACTTCCCTGGCCTACATAG (SEQ ID NO: 689)

742. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSL5. In some embodiments, the sequences from gene ACSL5 comprise or consist of:
TGAGTGTTCTGTGTTCCTAGCAGTATGTGGCAAGGGGGTCCTGACTTGCTATCACATGTTTATTC
CAAAGGCAGCTACACAGTATTTACTGTTCTTTCTCCGGTGTGAGAGGTGCAGGCAAGGAGTTGG
CTCATGGGAGCCCTAATCATGGCATGGCCCCTCATTTCCTGCAGAGTCTTCCTCTGCTAAGTCTG
CATGTGTCCAGGGAGGATAGTACTTGCTCCTGCCTTCATGGGGGTGTGTGAGTCTAGTGACATC

ACAGCTAGGAGCTTACTATCTATCTGCCCTTAATTCTGAGCTGACACAAGACATTGTCTTCTTTTT
AAATTTTATTTTGGTTAGAATTTTTGAAAAGATCTAGGATTAGAGAAAAGGAAGTTCCCTACAGAG
GATCAGGGAAGGAGCATTTGATCTACATAAGGTGTGAGATGTCCCCCGCGCCGGTTTTTGCACA
CCTGAGTGTGTAAGGTGGTGCTGTCAGCATGGTGCATACCGGAGG (SEQ ID NO: 690)

743. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HABP2. In some embodiments, the sequences from gene HABP2 comprise or consist of:
TGAGGTTTAAAACAAAACTTTTGAAGCCAACAAGCAACTGTGGGCAACACTTCAAAGGGCCCAGA
ATCAATGTTTGTCAATAGCAGTTTTGCATCCTTTAATTTATGTCTCATGAATATAAAGTGTGATGTT
ATTAGGAGCCCATCCATGCCTTAATTCTGTTTGAGATTTGATGAACCAGAAGTCTATTAACATTCT
GTACAAATCAGCACTGGCAGAGGCCTGTGGCACAGGCTTCACCTGATCTTTTATCCTGAGGCTG
GGATGCTAGTCACGCTGTCAGGCTTCCTGCTCGGAACACCCAGCAGCTGTCATGTGCACCGTGG
AGCCAGGGGGCTATGTCAGCTACTTTCTTTGGAGAGTTTCTCCCCAGAAGAGAAACCACTTCATG
ACTCAGCCCAGCCCCAAAGTTGCCATTTGTTTAATCAAGATAGTTAGTTTGCAAAACATTAAACAT
TAAACAGTATTTGATGCCTAGTTAATAATTTGCATCCTCTTC (SEQ ID NO: 691)

744. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HABP2. In some embodiments, the sequences from gene HABP2 comprise or consist of:
TAAGTGTTCTTTTCTAATATTTGTAGTTGAGAGACTCCGAAGTTTACTAGGAGGACCAAGCTAGGC
TGGGAGTGATGAGAAACTTTAGAGTGAAAGGCTGGAGTTGCCAAGTTGGAGATGTTCTAACTACA
AGAACCAATGCAGGCCTGTGGCTTGGTTTCTTTTGAGCAGCCACTCCCATGGGAACAGGTGTCT
GACTTGAGCCATCTTGGAGCGGAGCCTCCATGAATGCATTCCAGCAAAGGAGACTGGGGCAAGA
AAATGTGCCCCAGGGCATGGATTGTAATCTGTCATGGATCTCATAGACCCCTTTGAGAAGCCATG
GAAAGCTATAAACTCTCTCCCCAGGAAAATATACCTATCTATTGGTGCTGACACACACAGTTTTCC
AGCGATTTGTGGCTGACACTAGGGTAAGAAGCAATGTGCTATGGCCTTAGAGGGGAAGCCTGCT
GACTGCAAAAGATCCTGGCAGTGGGTCTGCATAAATAGTTTGGAT (SEQ ID NO: 692)

745. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IGF2. In some embodiments, the sequences from gene IGF2 comprise or consist of:
GTAGGATTTGAGCTGTGTTTCCCGCCCTGATCCTCTCTCCTCTGGCGGCCGGAGCCTCCGTAGG
CTCCAAGCCTGGCCCAGATTCGGCCCGGCGCAGCCGGCCTTCCGCGCGTCCCGCACCTGGCG
GGGGCTCCGGGGCTCCGGCGCGGCACCGGGGGGCGCTCGGGATCTGGCTGAGGCTCCAAGC
GCCGCGTGGCCGGCTCCTCCTGCTGGGGCAGGTGGCGGCTGCGCGCCCCGCCCGAGCCCAG
GGGCCCCCTCAGCCGCAACAACCAGCAAGGACCCCCCGACTCAGCCCCAAGCCACCTGCATCT
GCACTCAGACGGGGCGCACCCGCAGTGCAGCCTCCTGGTGGGGCGCTGGGAGCCCGCCTGCC
CCTGCCTGCCCGGAGACCCCAGCTCACGAGCACAGGCCGCCCGGGCACCCCAGAAACCCGGG
ATGGGGCCCCTGAATTCTCTAGAACGGGCATTCAGCATGGCCTTGGCGCTCTGCGGCTCCCTGC
(SEQ ID NO: 693)

746. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IGF2. In some embodiments, the sequences from gene IGF2 comprise or consist of:
CCGCATCTGCTGCTGTCCCGCCGGTGCTGGCGCTCGTCTCCGGCTGCCGCCGGGGAGGCCGG
CGTGGGGCGCGGGACACGGCTGCGGACTTGCGGCTGGCGGCTGCGCTCGCTCCTGCTGGGCG
CCCCGAAATCCGCGCCACTTTCGTTTGCTCATTGCAAAGATCTCATTTGTGGGGAAAGCGGCTG
GAGGGTCCCAAAGTGGGGCGGGCAGGGGGCTGGGGCGAGGGACGCGGAGGAGAGGCGCTCC
CGCCGGGCGGTAAAGTGCCTCTAGCCCGCGGGCCTAGGACTCCGCCGGGAGGCGCGCGCGGA
GCGCGGGCGAAGTGATTGATGGCGGAGCGAGGGGGGCGAGGGGGGCCAGGGGGGCGCGAGA
TTCCGCCGGCGGCCCCTTCCCCTTGGCTAGGCTTAGGCGGCGGGGGGCTGGCGGGGTGCGGG
ATTTTGTGCGTGGTTTTTGACTTGGTAAAAATCACAGTGCTTTCTTACATCGTTCAAACTCTCCA
(SEQ ID NO: 694)

747. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PSMA1. In some embodiments, the sequences from gene PSMA1 comprise or consist of:
GTGAGAATATCTTTGCTTTTTGATAAAACACAGAATGCATAGATTTCACATCTCACTATGTGAGCC
CCCACAAAACAAAACCTAGAGGAGCATGTGAGAAAAACGCATCTCTAGGCTAGAAAACAAAAAGA
GAAAAAAAGAAAAATGTCTGTGTAAGAAAGCAAAGGAAAGAAGATGCTCAAATCCAGCAAATCAT
ACCAGCCTTGTCATAGGCACAAAAAGAAAGGGATTAACCTAAGTTACAAGGTGAATTATCATAAAA
TCAGATGAACCTTTCTGAAAAATAGTCATGGGACAAAGGAGGGATATATAACACTAGAGGCTTAA
CCCTTTCCTGCAGAGAAAAAAAATGTAACTGAAAGAAATGCCACTCAAGGCTTGTGACATTCAAA
GTGAAGACAAGATAAGGTCTTATGTAGTACATGACATAGGTGTAGACACTCACTAGACTGAAAGG
AGTACATGTTTCCAAAGCAGCTTTAATTCACGTCTCTGCTGA (SEQ ID NO: 695)

748. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PSMA1. In some embodiments, the sequences from gene PSMA1 comprise or consist of:
TGACCTAATTGTATTCATTTGTCAAGAGGCCGGTTCCATATCGGAGACAGGCTGTATTCATAGAT
GATTTTAAGGACAGTTTAAGGCATAGAGTTTTACTCTAAAAACTGAGAAACAAAAAATCCTTCATT
GTAGAATTTGTTTTGTTGCCCTAGCTCTACTATTTATACTTTTCCACTTTAGCTATGCACAGAACAT
AGCTAATTTTCATCTCAATTTTTCAATTCTTTTGCTATATAATTGTTAACATTTATTGACCACTAACC
TCATTTTAAGGACTGTGCTAAGTATTTTATATACTTTCCTGGGGAGGCACTTATTCCTCACTTTTGA
TATTTCCCTCCACGTGGGGAACATCCATTAGAGTAACTCTCCTGGCCTGTATCTACTTACCCCCA
GGAGAGGAGAAGAGAGTTTGGTGAGTTTGAGATGAGGAACAGGATGTCTGATGAAGATCTAATA
TAACTCATGTTCCTTTTACCTTCTCCATTGTCTTTCA (SEQ ID NO: 696)

749. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DEPDC7. In some embodiments, the sequences from gene DEPDC7 comprise or consist of:
TGCCTTTATGGTATTCACCATTCATTGTTAATTCCTAGTCTTGCTTTTGCTTTTGGAAATAATTTTG
AATAAGTGCACTTTTTAACTCAAACTGTAACTTGAGTTTTGTTCCCTTTAATATAGTCATATTTGGT
CAATTAAAAGCAGTTTTTTTCTTTTGGCTAAAGTGAATGGGAAGACGGAAATAGCTTTAGAAGCTA
CCCAGCTCCTTCTAAAGCTTTTAGATTTCCAAAATAGAGAAGAATTTAGAAGACTACTGTATTTCAT
GGCTGTTGCAGCAAATCCTTCTGAGTTTAAATTACAGAAAGAAGTAAGTCTTTTGTTTAACTGTTA
GTTGTATTTAATATCCTTAATACTTACAGGTTAAGTATTAGATTATTCCATCTTCAGCATCAAGTAT
GCTGAAATGTATAATAGCTATTAATATTTAATATTCCCTTTTATATTAAACTTGTCTCTTAAATATAT
ACTATTGGATATATTTGTTTTATTTTTATAG (SEQ ID NO: 697)

750. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene DEPDC7. In some embodiments, the sequences from gene DEPDC7 comprise or consist of:
TAAAATTGTGAAAGTAGTTAAATTGAGCTTATGTAATAGATCACTAGATTAAAATGCATTTGAATAA
TGTCCCATGTCCCTTCTTTTTCTTAAGATTCCTGGAACTCTACATAAAATTGTAAGTGTTAAGCTTA
TGGCCATACAGAACGGAAGAGATCCAAATAGAGATGCAGGTAATCTGAGAAATATTATTTTCATG
ATCTTCCAAAGACAAATTTCAGGTGTTTTTTGAAAATGTTTTGCTATAAGTAGTTGGACTTTAATTT
CAACCAAATTTAAAACATTCTCCTCAGAGTTATTCATACAAAGCAACTTTACAAGTGTTAGAAAGTC
AGCAGTGCTTACCATCTTCAGTGCATATTACAAAATGGGGAAGAAAAACATAAAGACAAGAATATT
GCTTGATTTTTCTGCTTAAATATGAGGAATTGAGTCATTAACTGAACTTTTTACTTTTAAACTTTAA
GGATATATTTATTGCCAGAGAATTGATCAACGT (SEQ ID NO: 698)

751. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CTNND1. In some embodiments, the sequences from gene CTNND1 comprise or consist of:
TGAGAGAGGAGACCACAATAGAACACTGGATCGATCGGGGGATCTAGGCGACATGGAGCCATT
GAAGGGAACAACACCCTTGATGGTAAATTCTCTTTATATACTGCTATCTGTCTAAGGCTAGTTCTA
TTTTGAAGCCTATGTGTTTTGTGAAACACAAAAAAAAGTACAGAGAAAGATCGCATCCTTTTCTGG
TAGGGGTTTTCAGGAAAAAGTAAGAGTTCTGACTCATGTTGGGATTTCTTGGGCCGTTATTCTGC

AGTGGTCAAAATGGGGGAAGCATGTCTGTAAAAGTGTTACTGATATGACTAACACTAACTGATCT
ACTTTCAAACATTACCTTTTTCCTCTCCCTCCCTGTTTATGAATGTTTTGCCCTTCTCTTACTATTAT
ATCTTGTTTTGTTTGAGTTTACAAATTTTCAGAGTTTCCCTAGCTCTGGCACACACTCATGAGGTT
CCTGTCTCTACTCATACTAACAAATTGCATGTGTTCACAG (SEQ ID NO: 699)

752. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CTNND1. In some embodiments, the sequences from gene CTNND1 comprise or consist of:
TATGTCCTTCAGTCACCCCCAAGATTGTTCTTGAGGAAGGAGGCTCCTGAGTGCCAGCAACTTGT
CAATCACGCTAATCTGATCAGGCCAGAGACTAAGTAGTCTCAGCCACATGGGGCTCGAGGGGTT
CTGCTTTTGTGATTATTACCTCTTACGAGTCTGGGACATGCAGCTGGTGATCTGATTCTCCGTTAT
GTGCTGCTTTCCTTTCTCCAGATTTGCTCAACTTTTTTGGGGGGGGTCTCCTTAATCCCAACCCC
ATTAACATTCTCTCTTTCTCTTTTTTCTCCACAGCAGAAGATTTAGCACCACTATCTCCGTTCCATC
TGGGCTTATATGTACTTTTATTTTTTGGTGGTGAAATTGACTGATGATTTTCCTTTTTCTTCGCTGG
ACTATTGTGCCAACTGCCAGGCTGCCTCCTGCCCTTACAGCCCTAAGTGGCTGCCTTCTTTCCAT
CAACTCCCAACTTCTTCCTGTGAAGTTTAATTGTCTCAAC (SEQ ID NO: 700)

753. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MS4A6A. In some embodiments, the sequences from gene MS4A6A comprise or consist of:
GTGAGCAAGGTTGGAGGTGATTCTGCCCCTCTCCCCAGGCTTTCTGTGTGAGTCCATTCCTCCT
CTCAGATTTATTGTTAGAACTTAAGACAAGCCAATTACATTTCATAATGTCTGTGTCATTCAGACG
CTGAGAACTAATCCAGCCTTCTAAATGGTGCTTCTTAACTCCTTTCTTCAACAGGAGAGTTAATGT
GTGGAATTAAGTGCAGAATCCATGGCCCTCTGTGGTGACGGTGATGGTTCAGGTTGTGTTTCTG
GGTTCATTCTGGAAGCTCCCCCAAGGAAAGGAGGAAGGAAGCTTGCAGGGTGGGGCTTTGCCA
TTGCCCTGACTGGCTCTGGTTTCCTTGCCTGATACATTGAAGTCAGCTTCCAAAGAATGCCACCC
AAGGTTTTGAAGGGGCACAGTGCCTCTGTCCTCACAAAACCAGCCTGCATATGAGTTTACTGAAT
TCATTTAGGTCCTGCTGAATCTTTCCCATTTGTTCCTTCTCTGTTT (SEQ ID NO: 701)

754. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MS4A6A. In some embodiments, the sequences from gene MS4A6A comprise or consist of:
TTCTGGTTGTTACACATAGGGTGGGATTGTGCTGGCATAGGCCAGGGAGTCTGCTAAGCATCCT
ACAGTGCACAGGATAGCCACCTACTGTAAAGAATTACCCAGTCCAAAGTGGCATTAGTAGCTTTT
TTGAGAAACCTGTCCCAGATCATTAATCAGAACGTGTTATTGATATACCAGTCTTCTCCCTTGTAG
TTAGGTTGGTAGAATTCAGACTCTGGAAAAAACTGGGAATGTAAAAGGCTGAATGAGTGTAAGCT
GAAAGACAAGAGAAAGGAGAATTGTTTTAAGCTTACTAAAGCCAAAATGGAAAAAAAAAGAGGGG
GGAGGATTGGGGGGTGAGGAAGACAGTCAACAGACCGCTTTTAGGCCATCATTCCGAAGGGTTC
TGTGCTAGGAACCTTACACGTGTTGTCTCACATAATCCTTAAAACTCAGAAATGATTTTAAATTAAA
TAGCACAGAGAGGAAAACTGACTGGAGAGGGAGCCTTTGCTTA (SEQ ID NO: 702)

755. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLCO2B1. In some embodiments, the sequences from gene SLCO2B1 comprise or consist of:
AAAATGGGGCTAATGTACACCTCGCTCATAGGAGTGATGTGGGGTTGCAGGGCAGAGTTACTGA
GCCCGTAGTAAGCGCTCCATAAATGCCAGCCACTGGTGTTGTCTGGCAGGAGCTGGCGTTACAG
TGGTTGGGGATGCTGGGGAAGTGTCTGACTGTCCCAGCTCCAGGTCTTGCCAACTGTAGGAGTA
AGGGGAGAATTTGATGGGACCAGTGGGTGGAGGAAGAGGAGTGATGTCTGTGACCAGAAACAT
ACAGAGGTCAGCACAGGACCCTGATGGTCAGTGGGTGTGTTGTCTTGTATATGGGACCAGGCTC
TGCAGGTTGAAAAAGGATGGGGTACGTCCCTGAGCCCCCAGCCTAGATCATCAGATGGGAGAGA
GGCTGGCTCTGGGTGGTGGGAGAGAAGGGCATAATAAGAACCCTTCAACGTTGATGCATGGCC
CTTGGGGGCTGGAACCCCTCCAACCTCATGTTGCCCATGTCTCTGCTTGTTAG (SEQ ID NO: 703)

756. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLCO2B1. In some

embodiments, the sequences from gene SLCO2B1 comprise or consist of:
TAAAGATCTTGCTTGGGACCATTGGTGGTGGTGATGGGGTCCAGATGCCCACTGTGTGCCAGGC
CTGGGGCACAGGCATGAGCGGAATTCAATCCCTGATCTTAGGGCTCACAAGCTCATGGGGTGAC
AGACCTGGCCCAGCTCTCCTAGAGCGGGGTATAGAGGCAGAGTCTAGACAGCCCGTCAGGAAG
CCACCTCGGATGCAGGGGTGGGGCGGGCTTGAGGGCCAGACAGCCAAGAGGCCCCAGTAACC
CAGAGCCCCTGAGGGGTTGTACATGCCAGGGAGGGGGCAGGGTAGGACGGTGGGCCTTCATT
GTCCCCTGAGCACCACCTCCCTCAGCCTGGATGCCCAGCCCCGTGATCCACGGCAGCGCCATC
GACACCACCTGTGTGCACTGGGCCCTGAGCTGTGGGCGTCGAGCTGTCTGTCGCTACTACAATA
ATGACCTGCTCCGAAACCGGTGAGACCTGGTTTGATGGCTTGTGGGAAGGGTGCTGG (SEQ ID NO: 704)

757. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PICALM. In some embodiments, the sequences from gene PICALM comprise or consist of:
GTAAGTAAATAAGGAGAGCTTCAATAGTTCCATGGTAGAGAGAGGCCTGCTGGAAGGTTCAGAA
AATAGGCCGTTTGGAACCTTCTCCTTTAAGCCAGGAGGGCGGCTTTGGGAGGCGTCTTGAAATA
CATTCTTGACTCTGCTGGGAAAGCTCGGGGAGCCAGAGGCCTAATACCCCCCACTTCAGGGGAA
GCTGTGAAGGCAGCTGCACCTCCTTTGTCAAGCTGTTGGTTTCAACCACAGACACGAGGACACA
CTTGAGGTGGGGGGATAAGGGGAGAAGCCTGCCGCCCCGCCCCACCCCCGCCAGCACACCGC
CCTCGCCATTCCTCTCCCGCCCCGCCCCGCCCGGCGTCTGTGACCCCGCGGGCCGAGCCTCAG
GCGACCTGTTGGCAGGGAGAGTCACGTGATGCGCCGGCTGTGCACTCCCCTCGGGCGGGCCT
CCTGTTGCGCCCGCCTGGCGAGTTCCATCACGTAACGCGCGGGCGCCGCCCAGCTC (SEQ ID NO: 705)

758. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PICALM. In some embodiments, the sequences from gene PICALM comprise or consist of:
TATTTTGGATTTGGCTGGCAGATGGTGTACACAGACTTTCTGAGAATGTTAGCATTTCATTTGAAA
CTAGCAAGATTACATGTGACTATCATGGTAACTTAGCACTCACATATTTTTCAACTTATCCCTAACC
CTGGGTTGAATGTAGAGGCTCTAATAACATATAAAAGGCTTTGTTAATGTATGGTCTGGGTCTCAT
TGAATAGTATTTCAGGATGTAATACTTCTTTTAAAATGTCCACAGGGCAGTGTCAACGTCTTTCCA
TGGAAATCTGGCTCACCCAATAAGAGAAAAGAGGCCAAAGGTAAGAAAGACTAAACCAGGGGAG
ATGGCAGGCAGTGATGTCTGGACTGTTTGAATGGGACTTCTCCATTTACCGCCCCTCTCACTTCC
TTCTATGGTCTGGACCTTTAATCACCACAGCAGTCAGCCATGTAGGGTCAAGCTAATCGCTGTTG
ACATCATCCTACTACTTCCCTTTTCAAATTCCAGTGAAGC (SEQ ID NO: 706)

759. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLCO1B3. In some embodiments, the sequences from gene SLCO1B3 comprise or consist of:
TTTAGTATGTGACTTGCAAATTTTTCTTGACAGCCAGACAAAATGTATTGGGTAAAAGGAATTGCT
GTATATAAGCCTTTATTAATGTGGTGTAAGGCGATGAAGACAAAGTAGCATCCTGTAGTTCTATGA
TAAGGCCTCAATCTTTTAGTGAGCCTGTACCTCTGGACTGTGAACTTCAAACTTGCTTCTCAGTTT
CTGTCTCCCACTCCTTAGGTAGAATGAGATGGCTTGAGGGGGCTGGAGTTATGTATTTTCCTCCC
TCCCAAAGGAAGGCTAGAGACAGCTGGGGTTTAGTTTCTGTAGCTTCATATGTTTTTTTAATAATA
GAAAAATATCTTATGCCCCCAATGAAAATAATAAATAGAATTGTTCTCTTAATATTTGTATGTGTAA
CTTGTTTTTCTTTCTTTTAAGATATGCATACTGGGGAGAAAAAAATGTAAGATATTTTACACATTTA
AAATAATAATCGACTCTCTATTTTCTCTTTTCACAG (SEQ ID NO: 707)

760. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLCO1B3. In some embodiments, the sequences from gene SLCO1B3 comprise or consist of:
ACCCATTGATAAGATGTGTCTTCATTGCATCTGTCTGTTCTCTGGGAGAAGCAAAATCTGTGTTAC
TTCCTTGCATACTTGTTTGTTTATTCATTGTGCACAAGAAGATATCTTCCACATCTTCACAAGCTGG
ATAAGAAATAGAGAAAATGAGATCAAATATTTAAATATTGCATTTTCTGGTAGTGATGCAGGATATT
TCTTGGCCTCTTCACTGGACTCACAATAGAGGTGCCCTGTTTATTTGGTCTGCCATGCTCAACCC

CTTGTGGGAGGGAGAGTGTGAGTGACGTAGTGCAGGACCATGTGGGCTGTCCTGGTCATCGAC
ACAGAAACAAGCTCTGTGAGTTTCTCATGGCCAGACCAGGTGCGAGTGAGTGAATGCTGGACCT
GGGCAACCGCTCCAGGCACTGAAACGAGTGAGTTACATGCAGGGCTGGCAGCCAGGCAAGGTG
CAAGGGTGCTCAGGATCCTGAAGCCCCAGAGGGGTTGTTATGGT (SEQ ID NO: 708)

761. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ANO6. In some embodiments, the sequences from gene ANO6 comprise or consist of:
AATTACTGATGCCTGAGGCCACCTCCAGAGATCTGGTTTAATTATTGGAATGCAGCCTCCACTGG
GATTTCTAAAAGCTCCCAGAAGATGTTATTGTGCACCAGGGGTAGTGAACCACAGACCTGAGATG
TCAGGGTCCTGAGAGCTCATCTCATCCAGTGGTTCTCAGCCCTGGCTGCAGATTAGCATCATCTG
GAGAGCTCATGAAAGAAGCACTGAGGTCCCACCACCTGAAACGACCTTTCAGAGGAAGGAGCCA
TTCTTTTTAGAAGGTGCTCAGGTGATTTTGATGCACAGCAAGAGTTAAGGTTAACTGACATCTTAG
CCATCCCATGTTATAGATAAGGAAAATGAGAGCAAAAATGGTCAAATGGCTTGTACGAGGTCAGG
TCCTTGTTGTTACAGAGGCAGGTCTGATGCCGCCTCCTGCTCTGTCTGCAGCCTAACACCATCCC
TTATATTGGCCTGTTGTATTTATTGATGCCTCCTCATCCTTCAG (SEQ ID NO: 709)

762. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ANO6. In some embodiments, the sequences from gene ANO6 comprise or consist of:
TAAGATCCCCTTCCTTTGTATTTGAACAGCATCCTTCCTTCTTTTTCCCCTCCGACTGTCAGTTCC
GGGAGAACAGGCCTGTCTTTCCTGTTATTTCTGTAACAGTAGTGGGGTTTCAGATAATATTTGTTG
AATTGAAGTTCTGTAACTTTTTATTCCTCAGTCCACATGGATTGCTGAAAATAATCCATTCCTATAT
GCATGCTTCAGAAAAGAACTTCAGAAAGCAAAAGTTATTTTTTTTTTGAGACAGTCTCACTCCGTC
ACCCATGCTGGAGTGCAGTGGTGCAATCTCAGCTCACTGCAACCTCTGCTTCCCAAGTAGCTGG
AATTACAGGTGCATGCCACCACACCCAGCTAATTTTTGTATTTTTAGTAGAGACAGGGTTTTGCTA
TGTTGACCTGGCTGGTCTTGAACTCCTGACCTCAAGTGATCCACCCACCTCGGCCTCCCAAAGT
GTGGGGATTACAGGTGTGGGCCACCATGCCCGGCTGCAAA (SEQ ID NO: 710)

763. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KRT8. In some embodiments, the sequences from gene KRT8 comprise or consist of:
GTGGGTGTGGGTACCTCTGACCGGACCTGCTTCCCTATCCCTGGGACCTGGGGTGGGGACGGT
GGGAGCCCCCTGAAGCCCCTTGGGACTTGGGGTCCTGTTGTTCTGGGCCAAGAAGGGCTAGGA
GTTGGTCCTGACACCCCATTTGTCTGGGTACAGGCTGGAGTCTGGGATGCAGAACATGAGTATT
CATACGAAGACCACCAGCGGCTATGCAGGTGGGTGTCCCAGGGCCCTGGGATGAGGGCGGGA
GGCAGGGCCCAGGGAGGCCTCAGCTCCAGGGAGGGGGCTGTGCTCAGTCGCTCACAGTGACC
TCAGCCTGAGCACTCATGTTCTTGGGAGAATCCTAGGGTGGGGAGGCACATATTCAGGACCCCA
GTAATAACTTTATTACTTAGTAACTTTACTATTAGAAAGCACCCAAATAAACCATAGCTGTGTGCCA
GGCACTGTGCTAAGTATCCTACAGGTTTTATGTGATTTATTTTATTTATTAATT (SEQ ID NO:
711)

764. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene KRT8. In some embodiments, the sequences from gene KRT8 comprise or consist of:
AAGGGTGTGGAGGGGAAGCACCTGGAAACTGCTCATGTCTCCCTGATCTGCTTCCTTAGTCTCG
TTTATTTATTTATTTATTTTTGAGACAGAGTCTTGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGT
GATCTCGGCTCACTGCAAGCTCCGCCTCCTGGGTTCACACTATTCTCCTGACTCAGCCTCCTGA
GTAGCTGGGACTACAGGCGCCCGCCACCAGGCTGGCTAATTTTTTTTGTATTTTTACTAGAGACG
GGGTTTCACTGTGTTAGCCAGGATGGCCTCGATCTCCTGACCTTGTGATCTGCCCGCCTCGGCC
TCCCAAAGTGCTGGGATTACAGGCATGAGCCACTGTGCCCGGCCCTTAGTCTCATTTAATTTGAG
CTGGGGGGAGTCAGCCTAGGTGGTGGTGGGGAGGACCCTGAGGGAGGGTGGGAGCACGGGA
GAAGAGAAGGCATACCCAACCTGACCTACTTACCTGTCCCCTACCCCACA (SEQ ID NO: 712)

765. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CSAD. In some

embodiments, the sequences from gene CSAD comprise or consist of:
GTGCATACAGTCCCCTTCTTCCCAAATCCCGCCCTTCAAACCATTGGTCCAGAGAATCATCATGG
ACTAGGGAGTTTAACATGGCTGGGGTAGGAGGCTGAGGGGAGGGGGACTGGAGAGAGGATTGA
TTGGAGCTGGGAGGTCAGACATGGCAGTTCTTCCTGATGCTGGGGTGAGGGTGAGACCAAAGC
CCCTTTGCTGGGGACCTGGAAAAGGAGGAAGGGCTCTGGTTGGGCAGCTGGAGGAGGAGCCAC
TGACCTGCCTTTGCTCCACCCCATCCAGGGCTGACTCTGTGGCCTGGAATCCCCACAAGCTCCT
CGCAGCAGGCCTGCAATGCTCTGCACTTCTTCTCCAGGATACCTCGGTGGGTCTGCCCCTGCCC
CTGCACCAGCCCCACCTCTCTCTGGAGCTCTGCCTTCTCTATCCCACCTTAGATAAAGTTCAGGC
CTTTCTCTATTCTCTTTACCATCCCTTCTGAAGCTGCATCTCAGCTACCACC (SEQ ID NO: 713)

766. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CSAD. In some embodiments, the sequences from gene CSAD comprise or consist of:
CACTATGCCTGACTCAATTTTTTTTCAATAGCATTGGATCTTCCAGTAAAACATTCAAGTTCTTTGA
GAGTATGAGCTTTGGAAATGAAAACCTAGGTTCGAAGTCCATCTCTGCAGCTTCTGCTTGGATCT
TTGAATCTCAGTGTCCCTGGCTGCACATTAAAAAGGACAGTAACACATTGTTGTGAGGTTGAAAT
GGGCCATTTTAGGCATGCAAAGAGCTTAGAGCTGGGCCCAGCATCAGGCTCTGAGTAGCTTTTG
AGATGACTTTACATCTTTCTCCCTCTACATTTTGGCAACAGGGTGCTGTGCCGTTCCTGGTCAGT
GCCACCTCTGGCACCACTGTGCTAGGGGCCTTTGACCCCCTGGAGGCAATTGCTGATGTGTGCC
AGCGTCATGGGCTATGGCTGCATGTGGATGTGAGTGGGACTTCGGCTTGGGGGTGCGGTGGGG
TGGGCTGAGCCAAGGCCAAGGCCCACGTTGTTCCTCCTGCTCCACA (SEQ ID NO: 714)

767. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RDH16. In some embodiments, the sequences from gene RDH16 comprise or consist of:
GTAACCACCCAGGTTTGTCAAGTCTGTCTGTGTCTTCCCTCTGTGTGAAGGGACCACCTCCTGTC
TGCTCCCTGGGAAGATTCCTACAGTGTCTTTCCAGGTTGAAGTAACAGTAGCTTTCTAATATTTCT
CACTTAACAGGCTGCCTGAACCCCATCTCTTTTCAATCCTTAACCTCTCCCGACATTGGAGGTGT
CTAGTCTTGGGGAGAGTTTGCCCTGATGAGATTTTCTCTCCAGAATTCCTCTCTATCCTCTCCCTC
CTGTCTAAGCAGAAGTCATGTGTTGTTTGATGCTAAGAGCCTGGGTTAGAGATCTGGAGACTTGC
TGGAGCATCGTTGAGAAGGGAGCACAGGGCTGCAAGTGTGCACGGAGGCTGTGCCTGTGCTGG
AGCCAGGCTTATGTTCCCAGCACTTTACCTTGTTTTTGCTAGGGCCCATCAGCGTCCACTGAGAG
CTACGATCATCTCCATCTTCAGAGGAGAGTATCAGCTTAAGGAC (SEQ ID NO: 715)

768. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene RDH16. In some embodiments, the sequences from gene RDH16 comprise or consist of:
TTCTCATCCTAGACAGCCTGACCGTGCCCTAGTTTTCAGAGGAGTGATTGATTCTGGGGTGCGG
AGCAGGATGAGGAAACTCAGGCTCAGAGAGGGATTTCCACCTAATGTGCCTGGAAACCATGGGT
AGCTACCCAATAAGGCCTTTCTATGTTCAGAAGGTCATGGACCAGGAGTGTTGGTATCGGAGCTT
TGTAGAGACAGTTTTGACCCCTGTACTTAGAGCAGAGGGGTGTGTTTGCCATGGAGAGTGTGTG
TGGGCAGCTGTGTGTAAGCCTGTGTGAGTTCTGTGTATGTTCCTGTGTGAATATATGTGTGTGCT
CCTTCATGGACACAGCATGCATGTAGTGGGCATAGCAAGGCAGAGAGAAATCAGGAGACTAGGG
GCACATTGCCCAGTAGGAAGATAGTATCTTCCTACTGGGCAGGACTTGAGGTGTGCAAAGGTGT
GCATGAGTACTGCAAAAGCAGTTCAAAGAGCAGAGAGGTGGGGCCAGAA (SEQ ID NO: 716)

769. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MON2. In some embodiments, the sequences from gene MON2 comprise or consist of:
AAGCAGTCTACCTTACTTTTTTTTTTTTACTATATTGTTCTGAAGTCAGGTTATTGCAAGAATAATC
CATATTTCATATATTTTTAATGTAGAAGATAATTGACTTATTTGGGGACAGGTGGAAAAGGGCTTT
ATCATCTATTCGTACTGATTTACTTTGCAGATACAAACTGTATAAATAACTTTGAATCATTTTTACCA
TTCTTTCTCATTTGTTTGCCCTTTCTGTTGTTCATTCCTGTCCAGTCCATTCTTTACATGATAGCCG
GAAATGATTTTTCCATAGTAGGGCTTTGATCATTTATTTCCTCATCCTCCCAAAGCAAAAAAATATT
TTTCATTTACCGTTTCCTACCAAATTGCAAAGAATACTCCAGTCTGACTCCATTCTAGTCACACTTT

ATTTCCCACAATAGATTTCATTTCCCCTACTCTGCACTAAACTAAAATTCTCAATCTTCCCAAATTT
TTTCAACCTTTTGTTTATTTCATTATCCAG (SEQ ID NO: 717)

770. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MON2. In some embodiments, the sequences from gene MON2 comprise or consist of:
TAAATAATTTTTCTTTTCATTGAATGCAAAGCTTTTTTATGTGTACTTGTCTCGAAGCACTCTATTTG
TATTACAATTATGCATGTACATGACTCATCTCCCTTTACATTGTTAAGATTTTTGAGGGGCTTTTCA
GACCATGTTTTGTTCTATTTTGAATCCTCTACAACATTGCTTTTCAAAGTATGGTTTGTTGGACCAG
CCATTGATTGGCTTCAACAGTTTTGTTACTGGTCTGGGACAAGATAGTGAGCTGGCATCAGAATA
TAAATCAGATGTGTCACTAAACACACTGCTTGGTTCAGCTGACTTTTTTTTATACAAGAAGACATT
GGTAAAGAAGAAAACTGTGTGTTGGTTTACATTCTGGCACAAGCTTCTTATTTTGTAGCAGATTGG
CACCTTAAGGAGCATTACTTTTAATATCCAAGAAAAAAGTAGATTCCTAGTAAATTACTAATGAATG
AGTTGTAGGATATTTGTTCCTGTCAACTATTAT (SEQ ID NO: 718)

771. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene BTG1. In some embodiments, the sequences from gene BTG1 comprise or consist of:
CTTCTGACTGTTATTTATGAGCCTTTTCATGGTATTTATCATTTTAGTATTGAAGATGCAGTGTTCT
TTTGGGAATTACGTATGCTTAGAAGAGAGTACTGATGCTCAAAGGTGAAATGATTTGAATCTAGA
GTTGGATAAAAAGGGAAAGGATGGGGAAAATGAAAACTGGGAAGCTAAACTGAGAAGGAATTGC
AAGGTTTGGTGATAAAAATTCATTTGCTATGGTCATAGTTGTGTATCGAGAGGTTTGCACAGCACA
GTCTCTTGGCAGAGTTTAGGAATCTCTACTCTGGGGATTCTGCAGTTCATGAATCGTCAGGGAGA
CTCTGCATTCAATTTGTTTCTGTGAACATGCAGGTGAAAGTGGTAGTACAGGTGGAACTTCATGG
GAACTGGTTTTGGGGGAGGTGTGGATGGAAAGCACAAATGTCTCAGTATTTTCTAAAGGGAGACT
ATTTTTAAAGGTGTCTTGTTACAAACCACTTGATTATAGCCT (SEQ ID NO: 719)

772. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene BTG1. In some embodiments, the sequences from gene BTG1 comprise or consist of:
CACACCATTCTCGAGAGTTAGAATTCGTAGACCCGCAACACATGGACTACCCTTGCCAATTGTTA
TGGTTTTATTTTTAAACCTATTCTGTGAAAAAGCTCCTCGGTATTTCAAACTTGAATTACAATAAAA
ACACCAGGTAGGGTTGTTTTTAAATGGGTCTCACCCCAGTGCTGACTACTGTTGTTTACCAACTA
CATTTCATCTGGTAACTCCATTGAAACTAAGTACCTCAACCATTTTTTTTTTTTATCATAAAGCCTTT
TTTCAAATGGAAAGTTGTTTTTGAAGATCTTGACATCAGACTTTTTCAATCTTTGAAAATGATGGAA
ACAGTTAATAAAAATGTTTATTTTAGAATTCAGGTGATGTCTGGCTTGTGAGGAGCTGTTTATAAG
TTTGTCTTTGAAAAAGGCTTGCACACATCACTCTGAGACCAGCTGTTTCCTGTGACTTTAACCTTA
CCTTCCCCAGACAATTGAGCTGAACCTGTATCTGC (SEQ ID NO: 720)

773. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HAL. In some embodiments, the sequences from gene HAL comprise or consist of:
TTATGGTGTCGCTTTATTCTTAGGTATTTATAGCAAAGTTAAGCGCCTCTAACAGCAGTTAATCAA
GCTTCTGAAGGATTCAGTTGACAGATGTCAACCGTTTTAAGAACAATATGCTTGACTCAGTACACT
CTTTTTCCCATTGGCTAGCAACAAAAGAGTTGGAGGTATCAGGATTTCCTCCCCAGCCCCGCAGG
CTCACCTGGTCTTTGTCACAAGTTGTCTCAGGGCAGCTGGAGGAGGCAAACCCTAAAGAACAAG
GGCTTTTCAAGTCCCTGTTGTGCCACGTTCGCTAATGTCCTGTTGGCTAAAGCGAGTCACGTTCC
AGGCCCAGAGTCAATTTGGGAGGGTAACACTCAAGGGCATGGGCATGTGATTTGACGTGATCCA
TGGGCCTGTATCTGACAATCTACCACATGCATAAAATCCCATCACAGGCTGGGTGCAGTGGCTCA
TGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGTGAGTGGATCA (SEQ ID NO: 721)

774. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HAL. In some embodiments, the sequences from gene HAL comprise or consist of:
AGCTACTCAGGAGGCTGAGGCACAAGAATTGCTTGAACCTGGAAGGTGGAGGTTGCAGTGAGCT
GAGATCATGCTACTGCACTCCAGCCTGGGCGACAGAGTGAGACTCTGTCTCACAAAAAAAGAAA

AAAAACAAAAAAACAAGAAAAAAACCACATAGGTACTGTTAAGACCCTGGAGCAACTATCCTTCAC
TCTATCCACACTGAATTCTCTGGGTTTTGTTATTTGCTTGCTTGTTTTGCTTAGGAAAAGTATGCA
GCTTAAAATCTTTATGATGACTTTAGAAAGTTTTGGACTTTGTATATTTACAGTCTTTAATGCAACC
AAAGACTAATTGACACAGGTCATGTGTCAAATGGCTTAAAATAAAAGCAAGCAAACAGCAGCTGT
GTCTGGTCATGTATAGAGTATGTTTTGACTTCGGATGAAGTTGATGTTTAATAGCATGTGGAAACA
ATGTCGTCAATATTTCAACTTTGTTTTGTCCTTGCTTTTCA (SEQ ID NO: 722)

775. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NR1H4. In some embodiments, the sequences from gene NR1H4 comprise or consist of:
ATTTGGGTGTCGAATGATGCCATGCTCATGATTTGTAGAGCATAATAACAATGTTAGCCTTAGGC
CATTTTTATACATTATCTTGAGGCAGAAGCTAGTTGTTACTTTGCTTTACCATAAAAATTATGACTT
GTGACTAAAAAACTATTCAGCAGAACCTTCTAAAGTTATGTATGGATATGTCCTATGACCCAGTGA
TTTCACTTCTGAGAATATACTCAACAGAAAGGATGCTCACGTCCACCCTACAGGTTATCTTTAGGG
GTTTTGATTGGAAGGGGAATTGGGAGGCTTCTGGGAAGCATTACATGTGTTGTATCTTGATCTCG
TTATAATTACGTGTGTGTGCATAAAAATTCATCAGGTTGAACACTTAATTTTCACATTTTGTGTACA
ACATTTAACTTACACTTCAAAATAGTTAACGTTGCTATAATTATGCTGAATTAATGCTTTTCCACTTT
TTAATTTTGTCATTTTATTTTAAACTTCAAAACAG (SEQ ID NO: 723)

776. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NR1H4. In some embodiments, the sequences from gene NR1H4 comprise or consist of:
TTTCTTTGGGAACAAAATTTGATAAATATACAAACTCATTTCTTTAAATGTTGAAAGACATCCTATT
GAATCTGAGGGGGTAATTTACAGAAAGATACTGTCTCTCGCACTTTTGTCATCTCTGGAAAAGTC
CTGGTGAATAGTCATTCATTTGTAATAGCCCTCTGATCATTTCCTTTTCTTTGAAGTTCAAAGAGAA
TAGCAAACAGAAAAGTTAACAATTTTCACATAAAATATTCCCTCAAGCAATCCTTTCCCCCATAGTT
AGTCTTGAGGCAGGATTCACAAATTCAGAGTATGCAGCTAACTGCAGTGATGGGACCTTCGCTTT
CCTCTCTTAAAAGTGAGGAAATGATTGGCTTCATTGTATCCAATCATCTTTCTGTTTTGTTTTGCTT
TTGAAAACATTCCTACAGCTGGGAGCACAGCTGCTGTATACTTCCCCCAAAGCAGGAATTAGTTC
ATTTCCTTCCTTCATTGTTACACTGTTGCATTCTTC (SEQ ID NO: 724)

777. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IGF1. In some embodiments, the sequences from gene IGF1 comprise or consist of:
ACCTTTTAGAGAATCTCGCTAAGAAACATGGAGAAAACGGAAAAGAAAAATGTAATGCCCTAGAA
AGCGCAAAGAAAGACAGTGGCAAAAATGAAAAAAAAAAATAAAAATTATAAAAGAGGCAAAAAAA
GACACACTATTCTCTGCCTCTAAAACACAATTAAATAAAAGAATTTAAATAAAAATTAAGGCTTCTA
TATGCATTTTTAAATTTTGTATGAATCTGTTATGGAAGAATTGCCTATGTCAATATATGTTCAGAGT
TAAATATTAGCCCCAAATGCTCAGCAAGACTGAATTGTGTCATAGAAGTTCCCAGATTCCCTTTTC
CCGCAATGTCATTGGAGGCTGCATTTCTTAGTCAAGTCCAGGGTTTAGGCCAAAGGGCATCCGG
TATTGCCTAAAACCCTGTGAGGTCTGTGAGGTAACTTTTGAGAAGAGGTCACTGCACTCTTCATC
TTTTTTGCACTTTGGAATCAGATATAAAAGATGTATAAGT (SEQ ID NO: 725)

778. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene IGF1. In some embodiments, the sequences from gene IGF1 comprise or consist of:
TGGTCTTAAACCTCAGCTGAGGCTGGAAGAGGACCATGGTGGCTTATTGGAGATGTGACCCCAG
GGAGCCCCTCTGAAGGATGGAAGGGGACTGGGCAAGACCCAACACACACAGAACACAGTAGCC
ACTGGCCAGGCAGGAAGCAAGGATCTCAGAAAAGACTTTTAGGTGAATGTGGCAGGAAAGCGTG
CTTGCTGGGGCAAAGGCAGATTCATTCTTTCTCTTCCCAGGTGACCCAGCGCCTCTTGGTTTCTA
ACTGGGGAGGGGGTAGGTGTCAAGAGATGAGTCCCAAAGTTCTGGAATGGTGGGTCTTGTGACT
GAGGTCTAGACCCCTCTCCAGCATGAGTGCTGTCTCCTGCATCATATGGAGCCTGGGCATTCTG
AGCTCATTCAAAGGGACACCATGGGAACCACTTGTTCTCAATGCAATTATTTTTGTGATGTTTACA
GTATCAGCCCCCATCTACCAACAAGAACACGAAGTCTCAGAGAAGGAAA (SEQ ID NO: 726)

779. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HPD. In some embodiments, the sequences from gene HPD comprise or consist of:
TACTGTGTCTGTGTTTGTGTTGCGCATAAGGCAGTAGTGCCTTATGGCAGCCAGGGGGAGGCCA
GGGCGGCCGCCAGCGCCGCGGGACCGAGGAGCTGCGGGTGCCAGCGCTTTGCCAGCGGGAC
CACGCGGAGAGGGGAATTCTGGAACCAGGGAAGGAAGGGGACTTGCTCTGGAGGGAAAGACG
GATGACACTGCTTTTGTAGAGAGATAAACGCGATTCAGACAATAAAGCAAGCGATGAGCCGGGC
GTGGTGGCTCACACCTGTAATTTCAGCGCTTTGGGAGGCAGAGGTGGGAGGATCGCTTGAGGC
CAGGAGTTCGAGCCCAGCCCGGTAACATAGCAAGACCCCGACCCCCCTGCGTCTACACAAATAA
CAAATAAAAATTAGCCTGGCGTAGTGGCGCACACCTGTGGTCCCAGCTACTCAGGAGGCTGAGG
TGGGAGGATCGATTGATGGACAGAGGTCTAAGCTGCAGCGAGCCCTGATCCTGACAC (SEQ ID NO: 727)

780. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HPD. In some embodiments, the sequences from gene HPD comprise or consist of:
ACAGCGCAAGGCTCCGTCTCAAAAAAGAAAAAGAAAGTGTCCTGATAATGTCTGCGGGGAGGAT
GGATTGTAAGGATACAAGATTAGAAGCGGGCAGCAGTCTTGAATGGTGCCTTAGGAACTGTAGT
AGGGGGATAGTAATAGGACAGTTTGGGGATATATTTGGAGGTGGCTGAACTGCCAGAAAAAGAG
GTCATTTCCAGACTTTTGGGGTGCAGGAGCCCCTGTGGACTTTCCAAGGATCTCACCGTGCCAG
CCTCCCCTAGCAGAGCCCCCTGTCTCCCGCCTAGGAGCTGAAAATCCTGGTGGACTACGACGAG
AAAGGCTACCTCCTGCAGATCTTCACCAAACCGGTGCAGGACCGGCCCACGCTCTTCCTGGAAG
TCATCCAGCGCCACAACCACCAGGTACTGCTTGTCCCCGGCAGGCCCGAGGGGACAGGCAGCT
AGCACACTCGGTTTTCTGGGTCCTTGGCTCATCTCCTCTCTTTCCCGCCACA (SEQ ID NO: 728)

781. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PHF11. In some embodiments, the sequences from gene PHF11 comprise or consist of:
CTTCTCCAGTCGTTCCAGTCCTCCCCGGCCCTCTACTTGAGTGGGTGGGTCTTCTGATGGGTTC
CTGCCCTTGCGTGTGTGTATAGCTCCAAACGGTGTGCCAGGCTCAGGGCAAGGTCCTGAGCATA
CAAAGATGAGTTAGGCAGACCCTGCCCTAGAGACTCTACTAGGCAACTTTAATGAGGAGGTCAG
AACCACAGAGGTACAGATGAGAGACTCCTGACTCCCAGTCTTCAGGGAAAGCTTTTTGAGGAGA
GGATGGCTGGGCTTACCCTTTTTTTTTTTTTTTTTTTTGAGAGGAGTTTCACTCTTGTTGCCCAG
GCTGGAGTGCAAAGGCGCTATCTCGGCCCACTGCAACCTCTGCCTCCCGGGTTCAAGCGATTCT
CCTGCCTCAGCCTCCCGAGTGGATGGGATTACAGGCATGTGCCACCACGCCCAGCTAATTTTGT
ATTTTTAGTAGAGAGGGTTTCTCCATGTTTCATGGGCTTACCTTTAAAG (SEQ ID NO: 729)

782. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PHF11. In some embodiments, the sequences from gene PHF11 comprise or consist of:
TAAGTCACGGGAGATGCGCTTCCATCCTGACCTCTTCCTCAAACTCCAGACTGGTATAACCAACT
TCTTCCATTTCTGAAATGATCTCAAACTGAGTATGTCCCAAAGAGAATTCTTGTTTCCTCCACTGT
ATTCAGGTACTCCAAACCTGCTCAACCACCAGCCCATTCCATTCGCCCAGGTGCTCCTTGCAAAA
ACCTTAGTGGCTCCTCAGGGCCTCTCTTTCCTCCGGACACCCCTTCTAATGCATCAGTCGGGCC
AGCCAGTTCTGTGTTCAGCCTGACTGTATCTGGAGCCTGACTGCTTCTCACCACTTCCATTACTG
CCACCCAAGCCTACGCCATCATGATCTTCTGTCTGGACTATTGCTTTCCTGGCTTCTATTCTAGCC
TTTAATACAGGCAGGCCTGCAGAGCGGCCAAAATGCTTTTTGAAAAACAAAAAGCAAATGTGATT
CTCCTACTCAAAACCCACCAATAGTCTCCCATGACTCTCAGAA (SEQ ID NO: 730)

783. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CCNB1IP1. In some embodiments, the sequences from gene CCNB1IP1 comprise or consist of:
TTAAGTATCATTTGTTACTATTATTTTCTCTACTGAGCGTGGAAAGCTGGCTGAAAATTCCAGAGT
GTAATTTCTGTGGGTCTGTTTCTCTAAAACTTGCCCCTCACGCAGCTTGTACAGAAGTTAGATTGG

CGCTTACTCCCAGCTGGTGGAAGATTCGGAATTAGCTGCGCCTCTGCTGCGTGAGAGAGGGCTC
AGCTTTAAAGCTTCCCAGCTCCTCTGCTTTCCCGCTGCCCCCTACTCTGCCGGATGTAAAATAGG
CCTCTTAATCTTAACTGTGGCTGCCAGGTGACATACCTGAGGAAACTCACTCAGCGGGGCTATTG
GGATAAAGGTGTGCGAGTGTTCTTTTCTATCGACCTGGAGGGCCAAGGCAACTTTTTTTTTTTTCC
TTCTGGGACGGAGTCCGTCGCCGGCTGGAGTGCAATGGCGCGATCCCGGCTCACTGCAAGCTC
CGCCTCCCGGGTTCAAACGAGTCTCCTGCCTCAGCCTCCTGAGT (SEQ ID NO: 731)

784. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CCNB1IP1. In some embodiments, the sequences from gene CCNB1IP1 comprise or consist of:
AAAGACGGAGGGTCGCTCTTGTTGCCGTGGCTGGAGTGCAATGGTGCGATCTCGGCTCACTGC
AACCTTTGCCTCGTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTGCAG
GCGTCCACCACCACGCCCAGCTAATTTTTGTATTTTAGTAGAGAGAGGGTTTCACCGTGTTGGCC
ACGCTGGTCGGGAACTCCTGACCTCAGGTGATTTGCCCGCCTCAGCCTCCCAAAGTGTTGGGAT
TACAGGCGTGAGCCACCGCGCCCGGCCCACTATCGCTTAATTTAAAGAGCTGTAATGCATGTTT
GTAATGCAGACTCAAGGAAAATTATAATTTCCTTAAATGTGTATAGAGGATGTGTGAGAGTGGAAA
GATGTCTATTCCAAGGTGGATAAAAAATAAAATGGTGGACTACCTCAACATGGAGGTGCCAGCTG
TCCAATTACAGCTGTCACTCTGTTTCTGGGAATTTCTCCCGATTCTTA (SEQ ID NO: 732)

785. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PSMB5. In some embodiments, the sequences from gene PSMB5 comprise or consist of:
AGGACTACTTGCATGACCAAAGCCAAGATGGCAGGTACGTCCTTTTAGAATTTAAGGTTAGTGAA
GCCATCTATTTCCCCGACCCCCTTCAGTGAAAATGGTCTTTCGCATCTGGCCCTTCTTTTTGGAG
GCGTGCTTGCCAGCAGTCAAAATGGCTCCATTCCGGAATAGATTTAATAGGAAGTGAAGCTGTGA
CGGCGAGGCGTTGCCCGGCCTATCTTTGCTAGGCGTTCTCAGAATTAGTTCTTTCTGCCCACACT
AGACATGGCGCTTGCCAGCGTGTTGGAGAGACCGCTACCGGTGAACCAGCGCGGGTTTTTCGG
ACTTGGGGGTCGTGCAGATCTGCTGGATCTAGGTCCAGGGAGTCTCAGTGATGGTCTGAGCCTG
GCCGCGCCAGGCTGGGGTGTCCCAGAAGAGCCAGGAATCGAAATGCTTCATGGAACAACCACC
CTGGCCTTCAAGGTGTGGAGCCAGCCCCCTTGCCAGGCTGAGTACTGAA (SEQ ID NO: 733)

786. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PSMB5. In some embodiments, the sequences from gene PSMB5 comprise or consist of:
TCTCAACCGTCCTCCCGTCTCTGAGATGGTAAATTACTACTGACACTTATTCAGGTCTGAACTGA
GAATCTAGTTTGTGGATTAACTGGACCCTTTGCTTTTTCTTCTTCCATCTGCCTTTTAGGCAATTCA
TTACTTATTCGAATTTCCACCAGAAGGTAGGAGTCAAGAGAACGAATATTGGATATTAATAACCGG
TTACTGTTAAAGAAGGGTTGCTGTATGGCGACTGACAACAAGAGGTATAGCACTTTTATTTTGTTG
CGTTGTTTTACCACTAATTGCTGTGGTTTAACTAATATAGGGAAATGGCCTCAGAATGGATCATTA
TTTTACCCAATTTTAGAAGGTGCCCTTAAACAAGATGGCAACCTCAGGCGCGTTAACAAGGTGCT
GAAGCAGCAGCGATGTAACCTGTTGCTTGGACACCAGGCTGGAGTGGGAGGACTCACCGCTAA
GGGTTCAGAACCGATTTTCAACCAGTCACGCCCTTCTCAAA (SEQ ID NO: 734)

787. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CTAGE5. In some embodiments, the sequences from gene CTAGE5 comprise or consist of:
AAGTCCGGACGTGGTTGGCAGGGCGCACCGGCGCGTGCCCCGCAGGCCATTTTTCTGACTGGA
ATGACGGCGGCGGCTGGCTTCTCGGGGCTGCCGGGGTCTCCCGGGGTACGCCGCCGTCAGGA
CTTCTGCAGGGCGCAGACAGCAGGCTCCAGCGAGGCTGCGGAAGGAAAGCCTTGGGTGTCGG
GGCTGGGCCTGGCGTCGGCCCCTGGGTCGGGGGGGGTGGGGGTTGCGCCGAGACGCCTCTAG
GAGAAGTCTCGCCGCCGCCGCCACCGCGGCCGCCCGAGGCGGGTGCCCTTGGGACATAGCCC
TGGTCTTTGGGGTTGTGCGGCTCACACGACAGCGCGGAGTATGAGGCCGAATCTCATCCTCTAG
TCCCAAGCCTCTCCACTACCAGGGCTGGGTGGCTTCGCCAGGTAGAGCGCCGGCCCCTTTAAG
AGCAAACGACCCGGACACGTCTGCGAAGCTTGCGCGAAGAAGGGGAAGTTTGCGGCTGTCCG
(SEQ ID NO: 735)

788. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene CTAGE5. In some embodiments, the sequences from gene CTAGE5 comprise or consist of:
TGAGCCCAGGCGCGATGAGTGTTACGTGGCCCAGGGGTCGCGGGAGCCGCCGGGGGAAGGAA
GCAGTAGACCGGCTTTGGGGTCTAAGCCGCCGTGGTCAGAGGTCCCGAAGCCAGTCCTCGTCT
GCTGCCCGGCTCCCGCCCGTGTTCGAGGCAGTAGTTAGGCTCGTAGGGCGCTTGAGTGGTTTTT
GTGTGATGGAGGAGGACCTGGGGCTCTGGGAAGGTGAAGAAAGCACTTGCTTAGCTGGACTTT
GCAAAGATGTAAATGTTTCCCGATTCCTAAAACTAATTAGCCTTTCCGCTATGTTGTTTATTTTGAG
CAGAGACACGTGGTTCCTTCGACTGTGAGAAACTTGAGGACTGTTCCTTTAAATTAGTTACATTTA
CTGATGTAACTTCTCGTTGAACCTTGAAAGAACACCTGAGGTTGGGCGGGGAGTTGAAATTTTGA
TTCTGCATTTTTTTTTTTTTGGTAAAGAATGAATGCCCTTTTGAGATG (SEQ ID NO: 736)

789. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERPINA10. In some embodiments, the sequences from gene SERPINA10 comprise or consist of:
GTACTTTGATAATGTTCTGCTCTCCCAAGGCCACAGGGCCCTACGATTGTCTCTCCCTTTCCTTTC
GTTAGGCCAGCATATGATTAACGCTACGTGATTTTCTATGAATGTGTTTTCACGTTTCAAAAACAG
ATTGATACACATATTGAACAGTGCCAGACGCTGTCATTTGAGGCCCTTCCCTGGTATCCTATGTG
CTTGTAGTCCTTATTATTTTCAGAGCACTCTACATAGCTCCCCTCTGACACTTAGAAGCATAGGGT
CTTTCCAAAAAACAGGGGGCTGGGGGATTATCTGGGGGATTTAGGATTGCATCATTGCTCCTTCA
TTTTTACTTTTTGACCAACTCTCTGCCCTTAGATTCCTATTATAGAAAATAGGGACACTCCACCTAC
TACAGTGTTAGAGGCTAAATGAGACAATGAATGTAAAGTGCCCAGATGGGCTTGGCACATAGCA
GACACTGAGTATCTATTGTTTACTTGTTCTTCCAAACTGC (SEQ ID NO: 737)

790. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERPINA10. In some embodiments, the sequences from gene SERPINA10 comprise or consist of:
TCCCCCTTCCTTGCCTAACGGGCATGCAGGCACTCCAATCCCCAGCCAAACAGGGCACTGGGCA
AGGCCGGCCACCCATCTGGATGGGCAGCCTGACGACCAGATGGTCAGGGCAGTGAATGAAGCA
GATCAAGGAAAGGTGTGTGAGGACCCCTGATTCCACCTGCTTGGACCCCCACCTTCTGTGCTGC
CTCCTGCTCCCAGAGTGGACTCTCTTGCCCTGGCCCTCAGGGAGGAGACGGGATGAATGAAAAC
GGGGTCAGGACTGAGAGCTGCCTGCCGGCCTGGCAGGGAATGGGAACTGGAGGAGGTTTTGCT
CTGTGAAATAATGTCCCCTCTTTGGGTGAGCAAATGTCACCCACACTTGCTCTAGGTCTCCCTGG
GGCAGGGCTAACCTACTTGAGCCACAGGAAGGAGGCAGGGTCCCTGAAGAAGCTTTTACTATCC
ACAAAGACATTTTAGGAGGCATTAAAACCATCTCTATCCTCTCCTCTCCACA (SEQ ID NO: 738)

791. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERPINA5. In some embodiments, the sequences from gene SERPINA5 comprise or consist of:
TCCCCTCATTCTTCTGAGCCCCAATTCAGTGATTGGTGCAATCACAGGCTTGGCTACAGTGACCC
ATTCATTGCAGGCATGGTGAGTCTCTCAATCCCTCTCATTTCCACTAGAATCTAACTGTTGGGATC
TATGACCCAGTCAGCATAGCAGGCCTGTGGGGAGCTCTCAGGTTCAAGCATATGCCCCCCCTAA
TCTACAAGAAATTAGCTGCAGAAAACCAAGGAATAGAACCTGGAAAAAGAGAGGGTTTGCTAGAG
CTGTCCCTTTCCCTGTCTCTGGAATGCCAACAATAGGGAGGCTCTTTGGTCTTGTCTCTCAGGAG
TGCCCATGCCATTCCAGGAAAATGATGGCCCAGCTGGTGGTGTAAGGCTTGGGGGGCAGCGAG
TGGGCATCGTGGTGAAAGCCTCGGGATCAGGGAGCTGCGTCTGCAGGCAGGCCTGCTGGCCG
GAAACCTGCCAGGAAAGGAAGGGGCTGTCCCGGGGCGGGGCCAGGGAGG (SEQ ID NO: 739)

792. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERPINA5. In some embodiments, the sequences from gene SERPINA5 comprise or consist of:
TAAGTACCGATGCCGCAAAGGGAGGTCCCCAGGGCTTGAGGGCATGTGAGGCGAGGAGAGGAT
GGACTCTAGAGTTTTGGGGTTTGGGGTCTGCAAAGCTCTGAAGGAGTCTCATCTCTGCAGTTTCA

GGTATCCAAGGCAGCAGAGGTGAGTGGGTCCCCCGAGCTCTGTGACCTTATGCTCCACACTAAC
TCTGGCAGAGCCTCCGTTTCCTCATAGGTAAGATGGAAATAATTACACCCTCTGGATGGTGTGAC
TGAAGATTAAATACAGCGGGTGCTCTCACTCAGCACATCTGGCCATGTCTGCAGACACATTTGGT
TGCCACAACTGGAAGGGGGGTGGGGGTTAGTGACATCTAGAGGCCAGCGATGCTGCTGATGAT
CCCACAATGCCCAGGACAAGATCACAAAGCATCATCCTGTTCAAAAGGTCAACAGGATCAAGGTT
GAGAGACCCTGAAATAAGGCCATGGGGACAAAATGTCGGCTGGATAGGA (SEQ ID NO: 740)

793. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PPP2R5C. In some embodiments, the sequences from gene PPP2R5C comprise or consist of:
AGCGTGGTGGCGGGTGCCTGTAATCCCAGCTACTAGGGAGGTTGAGGCAGGAGAATCACTTAAA
CCTGGAGACGGAGGTTGCAGTGAGCCGAGATCACGCCACTGCACACCAGCCTGGGCAGCAGAG
TGAGACTCTGTCTCAAAAAAAAAAAAAAAAAGTGAGCAATATCTGTGGTTAATCTCAAATAGGGTGG
CTTTCCGTGTCATTTCCCTTTAGTTGTTTTTAAATGCAGATGTTGCTTTAATTAAATAATATTTGAAA
TAAGTGGGGTCCCAACTATAACCTTATATCTTATTGTTTTTAAATGTTGATATTTTGGTGTTTTCAG
TAGAATTTGAGCTGTTAACAGTGATTAGGTTTTTTCAGTTTGTCATCGATGTATGTGACCTCGTTAT
AATACACATGGATTTTTGTCTGCTGGTTGTGTTACTCATGAGCAATGTGTTCTAATTATGGTATTTT
AACTTATAACTTATGAAAAAGTTATGTTTCACTCTAG (SEQ ID NO: 741)

794. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PPP2R5C. In some embodiments, the sequences from gene PPP2R5C comprise or consist of:
TGGGTGGTGAGGGTGTCTGTATATGTGTGTTTACATTTGTAGACAGTTTCTGTACATGTATAATTA
GGAATGGGTTGTCGGTTTTGGTTTTTTTCCCAGCTTTATGTAATTGGTCAGACTTCTCAAAGGGG
GGTAGCACTTGATAATCGCTCTCTTGGAACTCTGAAGCCTTTGCATGGAGCAGTGTTCACCCTGG
GCAGCCTGTGGCCCCTGGGGTCACAGAGCTGCTTTCCAGGGGGTTTGCAAGGCCGTCACTGCC
TCATAAGATTACCAAGATCTAATTTACCTCTCACTGTGTGGACGTTTGCCCTGGTGGTGCAAAGG
CAATGGTGAGGAATATGGCGCCTTTCTTTCATCGAGCAGGACAGCGGTGTTCAGCTAGCAACAC
ACCAGTCTGACCCAAGAATGTCCTCGATAAAGCATGAAGTTACTGGTTTTTTAAGTCTCAACTCTT
TTGTATACCTTTTTAATTTTGTTTTTGTTTGGGTTTGTTTTTAGT (SEQ ID NO: 742)

795. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERF2. In some embodiments, the sequences from gene SERF2 comprise or consist of:
AGGATCCGGCGTCCGGAGCCCGGGATCACCTGCCTAGCGGGCTTCACTTGGAGAGGTGGGGA
GGCCAGAGCTTGCGGAAGCCGCTCCCTCTCCCCTGCACCTTCTCCAGGGTCGCCGGCTGAGGC
CCAAGGTCCCTAGGGGCAGTGACTAGAGAAGAAGGGGGCCGGCCGTACCTGTTGCCGCTGACA
CTCTTGCAGCGCCCGCAGGGCAGCGTCGTTGAGCCTGAGCAGTAAGAGGCTAGTCCGGGCAGC
TTGCGTGAAGCAGAGCCGGAGCTGTCCTCTCAGAGGCTCCTGGAGCTCCTCCATGGCGACGAG
TTCGAGTGCAAGCAGCACGGGGGCCACAGGCGAGGGCCACCACCGCCACCTCCTCTGTTCAGG
GTTTGGTTGGCACACCCGGTAACCCACGTCTGCCCCACCCTCCGCCAGGAACCCGCCCCCGGC
CCCACCTCCCGCCAGCGCCACCCCAAGCTTTCCCAGCCGCGTGGGCGGCGCTTCGCTCT
(SEQ ID NO: 743)

796. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERF2. In some embodiments, the sequences from gene SERF2 comprise or consist of:
TAATTGGGGCCCTGCGGTTGTGGTGGCAGCAGTGAAAGTTGGCTGTCACCGACTGGAGCGCCC
CCAGTTGGTGGGCAGGGATACGGGCGCGGGTAGTGGCAGGAAAGTTGCAGGGCAGAGAGCCA
GAACCCAGTCCTAGGTCTCACCTCGTGGCCTAAACACGCGTCAGAGTGGTGAGACCGCTCCCTG
AGGAGGGCCAGGAGCTGCCATGAAGTCGCCAGGCATTCCAGAGGGCCAGATCCTGGTGCACTG
AGACCCCAGCACCAACCTCTGGCCAGCCCTTGGTGTCTCCACTTGTTCCTGTTTGATTATGTTTC
CCAAGAGCCCCGATGTTGTCCTGTTTCCTAAACAGGATCCCTCTGTTAAATCCCTGGACCTGCAC
AATCCCCGGGAACCTTAACGTCCTCTACTACAAATAAAATTACCTATACATTTGTCAAAACTCATA
AAAAAAAAATACATTTTTTTTTTTTTTTTTGAGACGAAGTCTTGCTCTGTC (SEQ ID NO: 744)

797. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AQP9. In some embodiments, the sequences from gene AQP9 comprise or consist of:
GCCCGCTGCTGTGGCAAGAATGGCCTGGGGTCAGTGCTAGCTGTGGCAGTGGCTGCAATACCC
CTGGCTCTAAGGGCATCTTCAGTATACTGCAACACCCTCAAATTCTGGAGTGGTATTAGGGGTTA
CTGAGAGCCCTCTGGGAATTATAAATTATTCCTAGAGCAAGACCAAGCCCCACTTTGGCTTACAG
TTGACCTCGAAAACTCCAAGAATTCCCCCAAAAGAGAACTCATTCCCAGGACCCTATCGAAGAAT
AATTTGTCCAAGTTTGCAGTGGGCCATTCAGAGAGGCCAAAGGCCTTCTTCCTTTGACCCTCCAT
CCTGGGATTCACCTGGGCATCTCTAAAACTATCATTCCTCGGAAGTAGAGAGAGACAAATGACAT
GGCTATGCCAAGCTCAATCTGAGTGACTGGTTGTTTAGCACAAGGCTTGGCACAGGCCTCCTTC
AACTCTTCCCAGGGAACACTAATGTGCCAGAGCTTTCTCTTTCATAG (SEQ ID NO: 745)

798. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AQP9. In some embodiments, the sequences from gene AQP9 comprise or consist of:
TAAGTGTAGATTCAACAAAGACTTAACTTTGGTGAAAAGATATGCTCTCATAAGGGGAATGCATTG
GAGAATTAGAGACCAATCAGAAAGGAGAGATTATATTTCCAAAGGCAGAGGTTGCTGGGCATAAC
CCAAGCTTTCTTGATAATCGTTTTACCTTTACAAGGAGCTGATACCACCAGAAAAGTTTTCTCCTT
CCTCTTTAATACGTACACTTGTTTAACATTAGTTGAGATCCAGAAAAGAGTGAATGACTAAACATTT
CAATCCCTGTAGACACAAATGGACTTCACTTCACTATTGACTCTTTTGAACAAGTGGTCTAAGTGT
GGAGGCCACAAGAGAAGATATTTCTATTTCAAATCAAAGACTGTGAAGGGTGGTAGTTGAGCCTA
GGGGATCATCAATCCTCTCTGTCTCACCATGTGCATAGGTTTATTTATTTAAACTCTCAAGGTGGC
TAGAAGTATCTCTGCTTATTGACCTTTAAACAAGCTTC (SEQ ID NO: 746)

799. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ANPEP. In some embodiments, the sequences from gene ANPEP comprise or consist of:
GTAATCCAGCCCTGCCTTATGGGCAGCAGCCCCCACCCCATACTCCTAGCTCCTGGCCCATGTT
CTGAGGGCTGTGATGGGCCATTCCATTCAACAAATGGACTTGACTTCTTTGGTTCCAATCTCCAC
TTTGCTGCTGCTTCGCTGTGTGACTCTGGGCAAGTTACCATCCCGCTCTGGTCTCTAGTTCCTCT
TCTATAAAATGAGGCTAAGAGCAATACTCCATTAGTTATGTGAGGATTAAAGGAGAGAATCCTAG
GCCAGGCATGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGACCTGGGGTC
AGGAGTTCGAGACCAGCCTGACAAACATGGAGAAACCCCATTTCTACTAAAAATACAAAATTAGC
CAGGTGTGGTGGTGCATGCCTGTAATCCCAGCTACTCTGGAGGCTGGGGCAGGAGAATTGCTTG
AACCTGGGAGGCAGAGGTTGCAGTGAGCCAAGATCGCACCATTGCACT (SEQ ID NO: 747)

800. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ANPEP. In some embodiments, the sequences from gene ANPEP comprise or consist of:
CGAGAATCTGCAGGAGATGCCCTGGATGGCAGGGACTGGAGGGTCCCACTGATGGCCACGCCC
TCTCGCTCCACCCACAGGCTGTGAACAACCGGTCCATCCAACTCCCCACCACCGTGCGGGACAT
CATGAACCGCTGGACCCTGCAGATGGGCTTCCCGGTCATCACGGTGGATACCAGCACGGGGAC
CCTTTCCCAGGAGCACTTCCTCCTTGACCCCGATTCCAATGTTACCCGCCCCTCAGAATTCAAGT
GAGCAGATGGGGTCACTGAGGCATGGTCAGGTGGGTGGGGTAGAGGGCAGTTACTAAGGGACC
ATAGTAGGACTGGCCTCCTGTGGTCCCAGCCCCAGCCACTGTAGACAGACCCTCCCTCCAGAGC
CAGGAGTTCAGGGGCACTCGGTGCCAGAGCTGGGCAGAAGCTGGGAGCCTGGGCAGCTGCTC
CTCACTGGCAGTGACCACACCGCCATCTCTCACCACCTCTGGATCTTTAATTGCA (SEQ ID NO: 748)

801. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PCSK6. In some embodiments, the sequences from gene PCSK6 comprise or consist of:
ATGAAAATGAAAATGACAGATCTGAGGAAGAGGGAGAGCTCTCTTGAAACCCCTTTCCCAGATTT
GCCCTCAGTTTTAGGAATGAGGTACGCTTGGGCATTCCTGTTGCCTGCATGGTTCGGCATTCTG
GCAGCCAGGTTCGCCCCAGAATAGATAAGTGTGTTTGATTTTCGAACATTTGACTTTATTACCTAT

TTCCAGAAACACTTCGTGTTCAAACTACGTCTCTACAGGCATTTCTACTTGGTCTTTTTCTCCCCT
GACATTTCACAGAGTCCTAACTGTGCTGCATGTATAACTTGTTCTTTCTTTTTGTTACTTGCATAGC
AAGCATGTTTCTATGTCATTAAATATCCTTTGTAAGCAGCATTTTATAGATTTTTATAATACTTCACC
AACAGAAGCACCATAATTTATTTAAGCATCTCTCTATTGTTGGACATGTAGATTGCTTTCCATTTTT
TCCTATTATGAGCGGACAGCTTAGTACAAAAAGCCT (SEQ ID NO: 749)

802. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PCSK6. In some embodiments, the sequences from gene PCSK6 comprise or consist of:
CACTTCCTTGCCTCGGCTCCCCCAGCCTCCCCCACGGTGAAGCCTGGGCGTTGGAATGGCTGC
TGACGTTCCCACCGGGGAGGAGCAGCGGAGGCGCAGGGGCCGGTCCGACCCAGCGGGACCC
CGGGGGGGCGGGGGTTGTGGCTTTTCCCTCCACTTCCAGGTGAGGCTTGGTATCAGGCCTCCC
CAGCATCTGGCTGCCTGGAGGGGGCAGGTAACACAACCCAGAAGGAAGGTTTACCCAAGGAAA
GACAGGACATAAAGTGTATGCCCTTCCTGTCTGAGGGCACATTGGTCTCACAAGGCCTGTTTGG
AAGACTTCCCCCAGCTAAGCAACCACCCCGTTTCTTTGTGGAGCTGCAGCCAGCTTGAAACACA
GCTCCTTCCATTTGTCAACCCCGGGCGCTTCCTCCTGCTGCCCTCCACTCCTGTTGCCCTGGGA
TTGCACCTCCCAATAAAGCTTCAGCCCATGGGCTTCACTTCAGTCCCTTGTTTTCCA (SEQ ID NO: 750)

803. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSM5. In some embodiments, the sequences from gene ACSM5 comprise or consist of:
GTTAACTATGGAAAGAAAAGAAGAAAGACAGGCAAGAAAGAGGGAAGAAAATAGGAAGAAAATG
AAGAAGGAAGGGAGGGAGGAAATAAAGGAAAGAGAAAGGAAAAGAAGGAGGAAAGGAAGGGAA
AAAGATGAATGGAAGGAAGGAAATAGGGAACAAAGAAGAAGGGAGGAGAGAGGAAAATGGAGA
ATGAAATAACGGGGAAAAGAATGAAAAAAAGGAGGAAAGAAAATGAAGGAGGGAAGGAAGAAAA
CAGGAAAGGGGAAAGAAAGGAAAGAAAGAGGAAAGGAAGGAGTGAGCAAGGAAGAAAAAAGAA
AAGAAAGAAGGGAGGAAGAATGGAGAGAAATGGAGAGAGGAGAAGGGAAAGAAAGAAGAAAGT
GAGGGAGGAGAAAAAAGAGGATGAGAGAAAGAGTTATCAGGCAGGGTGAGAGAAAGGCATGGC
CCAGGAAAGAAGCTAAGTGGAAAGGCTCTTCTTTATCTGTACTGCGTTCTCCCCAG (SEQ ID NO: 751)

804. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSM5. In some embodiments, the sequences from gene ACSM5 comprise or consist of:
TAGCAGCCTCCCCCAACTTCTGGCAAGGCCTGGCATGGAGAGGAGAAAGACACACAGGCCTGG
TTGGCACGGGCTGCTGGGCTGCTGGGAGAGGCCCAGGGTGTAGACACTCACGTATGCACCTCT
GTGATGATTTCCTTACCAGATTGTGGATGATGAGGGCAACGTCCTGCCTCCTGGAGAAGAGGGG
AATGTTGCCGTCCGTATCAGACCCACTCGGCCCTTCTGTTTCTTCAATTGCTATTTGGTAAGAGA
CGGGGAACAGCCGTTCTCATGACAGTGACTGTGTGCTAAGCATTGTGCACCACACTTTGTAAATA
TCTATTTGTTTAATCCTTACAATGACTGCATGAGGTAGGTTGCTACTATTATTAATAAAGTTCTGTT
ATTGATAAGGAAGACTATTATTGATAAGGAAGCTACTACAAAGGGGAAGTGACTTATCCAGCATC
ATGCAAATAGTACAGGCAGGACATGGGATTTAAATGTGGGTGTGTCT (SEQ ID NO: 752)

805. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSM3. In some embodiments, the sequences from gene ACSM3 comprise or consist of:
GCTGTGGATCAGAGGACCCTGTGCCAGATCATACAACTCCTTGCAGTTCATGTAAGGACTCGGA
TTTTACCTGGAGTGGAAAAAGAAGCACTGAAAGATTTGAGCAGGGGAGTAACCTGATAGCGTTTA
TGTTTAGTCCTGCCACTTCGACAGATAAACGCACCAATGGGCTTGATGAGATTTAGGCCAACCCA
TAACCGCCCCTCAACTTCTTTCCTTTCAATTTCAAAACTCCTCTATGGCTTCCTCCATCTGTTCTTC
CTTCTGAGAAGTGCTCTCTCTGCCCCTTTACAGAACTAACCACTTCGGCAACTCCTTGGACACTT
TCCTTCTTGTTAATAATTTGCTTTCTCCGCCCCTCAAAAGCTTGCTGTTTCTGTAAATCATTACCTG
TAAGAGGAACCGCTGGGAGTCCTGTAAACTTTAGCCCAGAGCTTGGCTCCTCCTCCAGAATGTC
TCCACCAATCAAGGAAAGTGTTTTGGGCCAGTCTTGCTCCTC (SEQ ID NO: 753)

806. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSM3. In some embodiments, the sequences from gene ACSM3 comprise or consist of:
TGAGTACCTCATCTCCCCTCCTGTGTAAGATTTCCTGAACTGGCACATCTGTTTTTTGAGCAAAGA
TAACAAACAGATGAACAAAACCAACAATCAAAAATGCTGTCATTAAAGTCTTGGGCAGCCAAAGTT
TCTCTCAGAATTTCTCAGTTGTGTGATACTATCTATTAAGTGATGAGGAGTATGCACACACAAAAG
GCTATAAATGTAGCAGCTGAGTTTTCATGTTGAGCCTTTTGGTGCTATTTGATTTTTTGAAAAACTA
TGTACATGTATTAAGTTGATAAATTTTTTTTTTAATTTTAATTGAACCAGATGCGGTGGCTCAAGCC
TGTAATCCCACCACTTTAGGAGGCTATGGTGGGCAGATGCAGATCACTTGAGGCCAGGAGTTCG
AGACCAGCTTGGCCAACATGGTGAAACCCTATCTCTACTGAAAATAAAAAATTAGCCAGGTGTGG
TGGCAGGTGCCTGTAACCCCAGCTACTTGGGAGCCTGA (SEQ ID NO: 754)

807. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TMED6. In some embodiments, the sequences from gene TMED6 comprise or consist of:
GTCTGTTTTCATTACCATGGCTATTATAATAATCATAGGGTCCTATGAAATTACAGAAATAATGAG
GAAGTATACAGAGATGTTTTAACAGTAGGAAAAAAATTCAGCCTTTAACACCAAAAACCAGTGTTC
CTGGAGGCTGCTGACCTCCAAGGATGCCAAGTGGCAGTCTACTGACGATTTGGGGGCAACACTC
CAGGTGAGCATTCTAAGTCTAGGGTTCAGCCGCTCAATTTTATCTCATCATCTCCAGTTAATCAGA
TTCTGGGAAAGTGACCAAAAAACAGAGACCCATTTATAATACAGAATTCCAATTAACAAATGGATT
ACAGGGAAGCATGTCTTTCCAGTCATCAGAATATTTGAGTCAGTTACTAAAAGCAGATTCAGAACA
AAAGAAAATGCATGATATCCATGTGAGATATCCACACTCCACAGCAAAGCACTCCTCCAGCCAGG
TCAAGCCTGTCCCACTTTGGAGAGCAGCAGTGTCTTAACT (SEQ ID NO: 755)

808. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TMED6. In some embodiments, the sequences from gene TMED6 comprise or consist of:
TATAGGCGCACGCCACCATGCCAGGCTAATTTTTGTATTTTTTAAGTAGAGACAGGGTTTCACCAT
GTTAGCCAGGCTGGTCTCGAACTCCTGACCTTGTAATCTGCCCACCTCGGCCTCCCAAAGTGCT
GGGATTACAGGCGTGAGCCACCGCGCCCGGCCCAGAATCATACATTTTAGTGGATCCACACTAG
CTGTGTGTTCCGAGCAAGGCATGTCTTCTTCACACGGGTGCTGTTGGCATTCTGGGCAGTTCTTT
GTCCTGCTGTACTGTTTCTTACATTGCAGACGTTCAGCAATGCTGTGCTGCCTCCCCTTAACACC
ATCACTGTGATACCTCAGAATCCTCCAATCAACTCCAAACCCCAGCAGGGGGTTGGGCAGTCCC
ACCCCAGACAGAGACCGCTGTGCTGATGACCGTGGGACGTCAATCTTACCACTCAGCTGGCTTC
CTCGTGATGTAGCAGGGGTTCTGCTACCTATTTAATGTGTCTTGGCA (SEQ ID NO: 756)

809. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HPR. In some embodiments, the sequences from gene HPR comprise or consist of:
AGGGGGCTGGGCGTGATGGCTCACACCTGTAATCTCAACACTTTGGGAGGCTAAGGCGGGTGG
ATCACTTGAGGGTGGGAGTTTGAGATCAGCCAGAGCAACATGGAGAAACCTCGTCTCTACTAAAA
ATACAAAAAATTAGCCAGGCATGGTGATATATGCCTGTAATCCCAGCTACTCGGGAGGCTGAGG
CAGGAGAATTGCTTGAACCTCGGAGGTAGAAGTTGTGGTGAGCTGAGATCATGCCATTGTACTC
CAGCCTGGGCAACAGGAGTGAAACTCTGTCTCAAAAAAAACAAAAAACAAAAAAGAACACCACGG
GAAAATCAAGTGTGAAGCAAGAGCTCAACTCTTAACAGGGGCAATGTTTGGAGTTTTGTTACTGG
AAAAGATAGAGACCTTACCAGGTCCAAAGTTTGTAGACACAGGAATTACGAAATGGAGAAGGGG
GAGAAGTGAGCTAGTGGCAGCATAAAAAGACCAGCAGATGCCCCACAGC (SEQ ID NO: 757)

810. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene HPR. In some embodiments, the sequences from gene HPR comprise or consist of:
TGGGTCCACAGCTTTCCCTCCTGCCTTTCCTCTGGTTCTTTATTTCAGTCTTTTTTGCATACATTG
GTACAGATGCAGAAATAGAACAAAGAAACAGGGCAAATGGGCTAAATTATAGTGAACCAAAGGG
CTTAGTGTGTTAAATCTTCTCCTTTTCTGCATCCATAGAAGACAGTGCTGCTGTCTTTCCCAGGAG
ATAAGATTTACTCTCAGGAGTGTCTTTTTCCTTGAGGTTACGTTTTTGTCTTTGTAGGGTATGTCAT

CAGCTCCCGTGGTAGGCTTCCTGGCATTCGGAATATATTTACTAGCAGATATTTTCCTCTTTAAAA
ATGTATAATAAGAAAGACTAATAGTAACACATTTGAATGACACAATTAATTGACTAGTACTTGGGAT
ACACACTAGTACCTGGGATACATCTAATTAAGACACTTAGATCTTAAAAAATAAAAAGACTTTTTGA
AATGTTGAAATAATAAGACTAGAAACTTTTTTTTTT (SEQ ID NO: 758)

811. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERPINF2. In some embodiments, the sequences from gene SERPINF2 comprise or consist of:
TGTCCCCCAGGCTGGAGTGCAGTGGCTTGATCTTGGCTCATGGCAACCTCTGCCTCCCGGGTTC
AAGCAATTCTCCTGCCTCAGCCTCCCGAGTTGCTGCGATTACAAGCGCCCGTCACCACAGAAGC
CCAGCTCATTTTTGTATTTTTAGTAGAGATGAGGTTTTGCCATGTTGGTCAGGCTGGTCTTGAACT
CCTGACCTCAGGTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTAGGATTACAGGCGTGAGCCCC
CATGCCCGGCCACACTGCTAGAAACTTTAAAAGCATCTCATTCGGTTACGTGTCCGCCTGCAGTG
GGACAGGTAGTATGACTCCACCCCACTGTGAGGAAGTGGAGGAGCAGTGGGGTCAGTCACACG
CCTGGCAGGATGGCCAGGAGCCCCATTGTCTGCCTTAGGAGCACCTGCTGGCCCCACCCCCAC
TTAGCTTCGGGGCTTTCTGTCCTCATGCTCTTCCCTTCCCTTTTCTGTAG (SEQ ID NO: 759)

812. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SERPINF2. In some embodiments, the sequences from gene SERPINF2 comprise or consist of:
TAAGGAGGAGGGTGCGGGCGAGCCCCCGAGGTCAGGCTGGGCAGGGCGGGTAAGGAGGAAG
CGTCTGGCTGGCAGTGGAGCTGAGTCAGAGCTGTCCTGTGTCCTGCTCTTTTCCAGGGCTTCGG
GAGCGGGGAGAGGGTTGAATATGAGCCCCCAGACCCTCTGTCCTAGAGGAAGTTGGGGTGGCC
CGGGGAATGGGGCTCTGCTTTGCTGCCCAAGACCTCGCATTGCAAGGAGAGTCTGGGTAGAGA
GCCTGGGATGGCATGTGAGCCTCGCTGGCTTCCCTGGAAGGGGAAGGAGGAGAAGCTGGGGT
GTCACACTGTTAAAGAAATGCTGGGTGGAGTGGCTCATGCCTGTAATCCCAGCACGTTGGGAAG
CTGAAGTGGGTGGATTGCTTGAGCCCGGGAGTCCGACACCAGCCTGTGCAACACATTGAAACTC
CGTCCCTACAAAAAATACAAAAATTAGCCAGGTGTGGTGCATGCTACTGGGGAGGTTG (SEQ ID NO: 760)

813. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC13A5. In some embodiments, the sequences from gene SLC13A5 comprise or consist of:
CTGTGCTGCTGACTTGTCTCTGGTTTTCTGCAGTGTGGGGAGCCCAGGGAGGTGGATGAATGAA
CAGTTAGTTACGCCCTGCCCACCTGCTGGGTGCCAGGCCTTCCTGTCCCTGTTGAATCCACTAG
TTATCTCGTTCGATCTTTGCAGCAACCCTGTGAGATAGGAAGGTGTTATTATCTTGCTTTGTCTTT
CAAAAAAAAAGCGAGGCTCAGGGAGGCCAAGGGAAGTGTCCAAAGTCACACATCAAGTTACTGG
CAGTTACAGTTCCAACCAAGAGCTTCCAACTCCATACCCCCTGCTCCTTCTGCTAGCCATGAAGG
GCTTTGGCCTTATAGGGCTTGTAGGGAAAGGTGAGTGGCCAAGAGCAAGTCCATGCCAAGGGAA
GATCTCCAAACATGAGTCCCTGTCTGTTGCCTCCCCTGAGATAGGCACAGGACAAGTGATCAATG
AGACAGGGTGGTCCTTGCCCTAAGAAGCAAAGTGTTTGGTTGGGGAG (SEQ ID NO: 761)

814. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC13A5. In some embodiments, the sequences from gene SLC13A5 comprise or consist of:
CCATGGACTGCAAACTTGACTCCAATCCCCAGTAAAATATCTACAACAGGGTAGTGAAGCGATGG
TTAGTGACCATGAGGGAAGCTTGCAGAGCAGGCATCAGAAAGAGCCTGAGGAGGTCCACAGGG
AAGCTGGCACGTCCTTGTAGGATAGTTAAGGCACTGGGGTGAGCAATGAACCTGGACTCACGGA
ACACTGGGCTCTGTGACCGTTTCCCTGAATGGCCTAAGCTGTTGCCTCCTGTCACTTCTCTGAGG
TCATTTTCCAAATGCGCACGGGCATAGAGAACCCATCCACTCTGCCTACTTCCCAGGGATGCCTT
GAGCACTGAGGATACCTGGGGGACATGAAGTCGCACTGTCCTGGGGGTCGGGACACCCCAGCC
AGGGACAGAGCATGGCACAGGGACATCGAGGCCCAGTGAGCCGACCCTTTGTCCTCCTCTCTG
AGAGCACTAGTCCCCAGCAGGCCTCAGGGTGCTGACTCTGTCTCTTTTCCA (SEQ ID NO: 762)

815. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ASGR2. In some embodiments, the sequences from gene ASGR2 comprise or consist of:
GTGAGGCCACGCTTCCCACAGGCAGGAGGAAGCCCTTGGAAGGCCTGCTCTGGGAGGCTGGAT
CAGGCTTATTTTATCCATTTTTTTTTTTTTTTTGAGATGGAGTCTCGCTCTGTCGCCCAAGCTGGA
GTGCAGTGGCACGATCTCGGCTCACTGCAAGCTCCGCCTTCTGGGTTCACGCCATTCTCCTGCC
TCGGCCTCCCAAAGTGCTGGGATTACAGGCACGTGCCACCATGCCCGGCTAATTTTTTTGTATTT
TTAGTAGAGACGGGGTTTCACCGTCTTAGCCAGGCTGGTCTGGAACTCCTGACCTCATGATCCG
CCCACCTCCGCCTCCCAAAGTGGTGGGATTACAGGCGTGAACCACCGCGTCTGGCTGAACTTCA
AAGTATTTTAATGCCACAGTAGTTAAGCCATATGATACAGGGGCCAGAATATATGTATTGTTTGCA
TTACATCAGGCTCTGTTAGTACTTTACAGCATACTGTGAGTACGAAC (SEQ ID NO: 763)

816. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ASGR2. In some embodiments, the sequences from gene ASGR2 comprise or consist of:
TGTGTAGTGTGGTGTATATGTGTGTGTTGTGTGTGTATGCATGTGTGGTGGTGTGTGTGAGATGA
GTCTGTGTGTGTGCGGTATGGTATATGTGTGTGTACGCATGTGATGTGTGTGGTGTGTCTCTTGG
TGTGTTTGTGTGTGTGTGATGGATCTGTGTGTGGTGTGGTCTATGTGTGGTGTACATGTCTGTGG
TGTGTGTGTGGTATGGTGTGTGGTGTGGTCTATGCATGGTGTACGTGTCTGTGGGTGTATATGCT
TCCCCAGCCACAGGCTGGAGCCTAGCAGGTGGGGACCACACCTGCCGGCAGCACTTTCAGCCT
GTCTGTCCTAGATCACGATGCCCTGCTCTTCCATCTGAAGCACTTCCCCGTGGACCTGCGCTTC
GTGGCCTGCCAGATGGAGCTCCTCCACAGCAACGGTAGGGGTGGGGCCGTCTCCAGGCCCAGT
GTGCCTGCCCCTCCGGCTGGATCTCATCTCCCTGCCCCCTGTCCCCTCA (SEQ ID NO: 764)

817. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TMEM220. In some embodiments, the sequences from gene TMEM220 comprise or consist of:
GTCAGGCGGCCGCGGTGGGAGGGGGACCCGCCCGGCTCCCAGCTCCGCCCCCTGGCCTAGC
GGGCCGTGTAACTGACTAGCGGGCAGAGTCGCAGGGGCGCACAGTTAGTGGGGAGGACGGGA
CTTGGGCTTTCTGCTTGGGGAGCCCCCACTTTCTCCCCCGTCTAAGAGACGCGGATGTGTTCAT
GGAAGCGAGTCCCATACCAGGGCTCACACCCTGGAAGGGGCTGGTTCCGCGCGTGGAACTTCC
CAGGGGACCTCAGAAGAAGCGGCCCTGGCTCCTGCGTTAACGTCCGGCCCGCGGACGACACTG
AACATATCTCAGGGCCTAGGAGACGAAGCCGACCAAAACCCTTTATAGCATCATTAAACTTTTTA
GTCGGCTTGGGGACCCCCTTCATAATCATTTCCCTCATTTCTTGAGACTGGTGGGGGTGGAGGG
CCCTTAAAATACCCGTTCTGGGTTGGCGAGTCCTCTCCAGAGCTCCCGTGAAGGCTT (SEQ ID NO: 765)

818. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TMEM220. In some embodiments, the sequences from gene TMEM220 comprise or consist of:
TGAGCCGTATAAGATGTTAATATAACTGTCGTCACTCTAGAAATTACCATAATGCTTACAGGGATT
TGAAAGTTCCTGAGCTTTGGAAGGAAATGCATAAATACTAAACAGAACACACACACACACACACA
CACACACACACACACACACACACACACATCTCTTTTTCTTTCTCTTTCTTATTTTTGTAAAAACAATTTT
TATCCTTTTTTTTTTTGAGGAGTCTCGCTTTGTTGCCCAGGCTGGAGTGCAGTGGCACAATCTGGG
CTCACTGCAACCTCCGCCGCCCGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAGTAGCTGG
GATTACAGGCTCCCGCCACCACGCCCGACTAATTTTTTCGTATTTTTAGTAGAGATACGGGGTTT
CACCATGTTGGCCAGGCTGCTTTCGAACTCCTGACCTCAGGTGATCCGCCCACCTCGGCCTCCC
ACAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCAGCCCT (SEQ ID NO: 766)

819. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NCOR1. In some embodiments, the sequences from gene NCOR1 comprise or consist of:
TCTGAATTTTCAGAGTGAGAATTGTTGTCCTGTCCTTGAAGCAAATCACCTTCAAGTATTACAGTG
TAATATTCACATTCTCTGGTAGATGAGAGACACAACTTTGTGTAGTGGATATTTCCAATCAGACGC
TGGCTAAGCCTTCACCTTGGCATTTGCCAGCTGTGTGGCCACAGGCAAGTCACTTAACCTTTCAT

AGCTTTAGTTTTCTCATCTGTAAAATGAAAATAATAGTACACGTCTACCTTGCTGTGGTTGTAAAGT
TAAGGAAGGAGCATTCGGTATTGTTATATAACAGGTGGCTCTGCATTATTTTATGTATAATGTAGC
ACGTTATTACATATTAATTAGTGTATTAGTACTGTATATACACAGTAGATACTATGGAGGTACCTGT
TTTCATTGTTACATCACTGTTTTTATTTCAAGTGATGGATTTGAGTTGGTCCGTTGCTGTTTTAGTT
GGTGTGTGATACACTTTTACTTTCTTTAAAAAAAG (SEQ ID NO: 767)

820. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene NCOR1. In some embodiments, the sequences from gene NCOR1 comprise or consist of:
GGCATGCCTCACTGCACCCAGCTAAATTTTTGTATTTTTGGTACAAAGATACAAAATACCAGCCAG
GCTGGTCTTGAACTCCCGACCTCAGGTGATCTGCCTGCCTCGGCCTCCCAAAGTGATGGGATTA
CAGGCATGAGCCACTGCAATGCCTTAAGCATTATTCTTGAAGATAACTTTGATTAAAAAATGATAA
AATCAATTCAACCAATAACATGACAGAAATAAGCATTACATTACTTGTTAAGAGATGGCAATTATTA
CATTGGTTGTTTGCATATTTCGATTTATTTTCTTCCTATAGGTATCCTGCACCCCATGTAACATACC
AATTGGAACCCCAGTGAGCGGCTATGCTCTCTACCAGCGACACATTAAAGCAATGCATGAGTCA
GCACTCCTGGAGGAGCAGCGGCAGAGACAAGAACAGATAGATTTGGAATGTAGAAGTTCTACAA
GTCCATGTGGCACATCCAAGAGTCCAAACAGAGAGTGGGAA (SEQ ID NO: 768)

821. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene UBB. In some embodiments, the sequences from gene UBB comprise or consist of:
TAAACTGCCTCTCGGGAGGTTGGGCGCGGCGAACTACTTTCAGCGGCGCACGGAGACGGCGTC
TACGTGAGGGGTGATAAGTGACGCAACACTCGTTGCATAAATTTGCGCTCCGCCAGCCCGGAGC
ATTTAGGGGCGGTTGGCTTTGTTGGGTGAGCTTGTTTGTGTCCCTGTGGGTGGACGTGGTTGGT
GATTGGCAGGATCCTGGTATCCGCTAACAGGTACTGGCCCGCAGCCGTAACGACCTTGGGGGGG
GTGTGAGAGGGGGGGAATGGGTGAGGTCAAGGTGGAGGCTTCTTGGGGTTGGGTGGGCCGCTG
AGGGGAGGGCGTGGGGGAGGGGAGGGCGAGGTGACGCGGCGCTGGGCCTTTCCGGGACAGT
GGGCCTTGTTGACCTGAGGGGGGCGAGGGCGGTTGGCGCGCGCGCGCGTTGACGGAAACTAA
CGGACGCCTAACCGATCGGCGATTCTGTCGAGTTTACTTCGCGGGGAAGGCGGAAAAGAG
(SEQ ID NO: 769)

822. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene UBB. In some embodiments, the sequences from gene UBB comprise or consist of:
GTTTGTGTGGTTTCTGGAAGCCTTTACTTTGGAATCCCAGTGTGAGAAAGGTGCCCCTTCTTGTG
TTTCAATGGGATTTTTATTTCGCGAGTCTTGTGGGTTTGGTTTTGTTTTCAGTTTGCCTAACACCG
TGCTTAGGTTTGAGGCAGATTGGAGTTCGGTCGGGGGAGTTTGAATATCCGGAACAGTTAGTGG
GGAAAGCTGTGGACGCTTGGTAAGAGAGCGCTCTGGATTTTCCGCTGTTGACGTTGAAACCTTG
AATGACGAATTTCGTATTAAGTGACTTAGCCTTGTAAAATTGAGGGGAGGCTTGCGGAATATTAA
CGTATTTAAGGCATTTTGAAGGAATAGTTGCTAATTTTGAAGAATATTAGGTGTAAAAGCAAGAAA
TACAATGATCCTGAGGTGACACGCTTATGTTTTACTTTTAAACTAGGTCAAAATGCAGATCTTCGT
GAAAACCCTTACCGGCAAGACCATCACCCTTGAGGTGGAGCCC (SEQ ID NO: 770)

823. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LRRC75A-AS1. In some embodiments, the sequences from gene LRRC75A-AS1 comprise or consist of:
CCTGAGGTCAGGAGTTCAAGACCAGCCTGGCTGGCCGACATGGTGAAACCCCATCTCTACCAAA
AATACAAAAATTAGCCGGGTGTGGTGGCGTGTACTTGTAATCCCAGCTACTTTGGGGGCTGAGC
CAGGAGAATCGCTTGAACCCGGGAGGCGGAGGTTGTAGTGAGTCGAAATCGTGCCACTGCACT
CCAGCCTGGGCAACAGCGAGACTCCATCTCAAAAAAAAAAAAAAAAATTACAACCTACTGAGAAGC
TAATTAAGATTTGTAGTCCTCAATAATTTACAAAAACTTAGAAAAATTACCTCTAATTAGGTCTTAA
GGGGCTTTTGTTAGGATGGACTTAAATTTGTAAAGTCATTAATTGACTGTCATCAGAAATGCCTGT
CCTGCTCTGCATCTGCAGTCTCTAAGGTGTATGCGCCTTCTCCATTCCCCCAGGTTTTGAGAACA
GAGTGCTGTTTTAGAGCTGGCAGCAGCATCTCAGCCCAAGAGAAG (SEQ ID NO: 771)

824. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LRRC75A-AS1. In some embodiments, the sequences from gene LRRC75A-AS1 comprise or consist of:
AAAAAAAGATATCAAATGATGAAATCACCCAAAATAGCTGGAATTACCGGCAGATTGTGTAGTGG
TGAACCTATGGTTTTCTGAAGATATCTCTTACCCTGTGATTGACTGTCAGTTGGTGCAGAAAGTGA
GATTGAAATGTAGTTTCTTTGCAGGTTATATTCCCAGAGGATGTCAGTCCCAAGGACCAGTAGCT
GCCATCAGTTTGGATTCTGAAAACTAACTGGCATCAACACTGGGTGTAGAAACATGCTTGCCTTA
TGTATCAGAGGACATGCTCAGCAGATCCAAGAGATATATTTGGCAACTTTTTCTAGAAAAGGCAC
ATTGGGTATCATTCATTACATTCTTGAGTTTTTTTGGGTTTTTTTTTTTTTTTTTGAGACAGTCTTGC
TGTATTGCCCAGGCTGGAGTGTGGTGGCACAATCACAGCTCATTGCATCCTCAATCACCCAGGC
CTAAGCAATCCTCCCACCTTGTAGCTGGGACTACAGCTCAC (SEQ ID NO: 772)

825. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SKAP1. In some embodiments, the sequences from gene SKAP1 comprise or consist of:
GTAAGGACAGAAAGTGTGGGGCTTAAATAGAAAGTCAATTTTTTCATTCTTGATTTAGTCACCATA
AACAGAATTATTCCATGTCATACACTTCCCATGGCTCCCTCACAATATAAATTCCCATTTATTCATA
ATTGTTAGGAAAAGTTTTAAATGAAAATCCAGATTCAGGAACCATTTTCACATTTAAAAATACAAGG
CTAGGCCGGGCGTGGTGGCTCACGCCTGCAATCCTAGCACTTTGGGAGGCCGAGGCTGGTGAA
CTGCCTCAGCTCAGGAGTTCAAGACCAGCCTGGGCAACATGCTGAAACCCAGTCTCTACTAAAC
TACAGAAAATTAACCAGGTGTGGTAGCACATGCCTGTAGTCCCAGCTACTTGGGAGGCTGAGGC
ATGAGAATTGCTTGAACCCGGGAGGCGGAGCTTGCAGTGAGCTAAGATCACGCCACTGCACTCC
AGCCTGGCGATGGAGCAAGACTCCATCTCAAAAATAAATAAATA (SEQ ID NO: 773)

826. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SKAP1. In some embodiments, the sequences from gene SKAP1 comprise or consist of:
CAAAGTTCCTATGGACAAAGAAGGCCGAAAAGTGAGCTGTGATCCAGAAGCCTGCTGGCTGACT
AAGCCTTTCTTGTAAATAGGCAGAAGTCACAGATTTACTCTGATCCTTCAAATGCATAATGAAGAG
AAAAACTAGATAGTTAGTTGCCCTGGATCAGGAAAGTCTGGCGGGAAACCTCTGCACTGCTTACT
TACAAACCAAGTGAAAAATTACCTGCCTGATTTTCTTTTATTAATAAATAAATATATTTATCATATTG
TTGAACGGCATCCTACTAGGAGTGATCTGTAAATATTTAATGTTAGTTAATGATCTCCTTCTCCCA
TAGTCCTTTGCTCATGCTGAGTGTTTGGCTGTATCTCATCTCAACTCCCCTTAATCTGAGGTTTCC
TAGGGGCAATATCAGAACCCTGGTTTCCATTTGCAGCAAAAACATGGGTACCTCGGAAAAAATAG
AGTCCTTTTAACTTTGATTTCTCCTCTCTTTGATCAGTA (SEQ ID NO: 774)

827. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TOM1L1. In some embodiments, the sequences from gene TOM1L1 comprise or consist of:
ATTCACCAACAGTTCAGTGATACTTGAATTCTGGTCTTCTTTCCCAATCAGGCTGCTCCTATTATT
CAGAGTCCTCAAATACTTGCTCTATGCATTCCGTCCACCTTTAAGTGACATTCAGTGGAGAGACA
GAGTGCAGTACGTTTGCTCCGCTTTATCCTGGACCGGAGACCTCACAGCTTTCTTCTTAACCTGT
GTTCTATACTACTTCTCATCCTTTAAGAAACGATGGGGTGGTAGCTACACTGATGGAAAGACTAAA
GGCTCTGGTCTTAGTGTTCCGTGCACACTCCACAGTCTCAGGGCTCCCACCACCCATGGCATCA
TAACCTGATGTGCACTAAAACCAATTGTTTTATAAACAGTTATTACAAAATGACACTTTATGCAGTC
TGAAGGTACCTTTTAGGTTTTGTTTTTAGACTAGGAAAATTATCTTACTTTTTGCATTTGTGTTCTC
ACTGTAGGGTAATCATTCTGTGTTATCACACTATCCTAG (SEQ ID NO: 775)

828. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TOM1L1. In some embodiments, the sequences from gene TOM1L1 comprise or consist of:
TAAGTAACAAAACTCTTTTCTAGCAGTGCATCTAGTCAGCAGATTATTGTAGCCAGAAAAGAACTC
ATGGTCATTAATTCCCATGTTCTGCTCAGTATTGTGTTGATGCGCAGCCCCTGTTAGCAAGATGG
TAAGGATCAAAATTTTTTTGGAGTTTGTATTTGCTATCTCCACTTCCTTTCCTTGTATTCTCTTTGA

CTTCAGACATGCTCTTCTACCACTCTATGGACATAACTCTTGTCAAGGTCACTGGTGACTTCTGTA
TTGTGAAATTTAGAACTGCAGTTCCATAGTCCCTCATTTTATCAGCAACAAATGACAAAGTTGATC
ACTTCCTCCTTCTTGCACACATGGCTTTCAGACACCAGTCACTTTGGTTCTTCTCCTGCCTCACGT
TCATTTCTTCTCCATCTCTTTTGGTGGCTCTTCCTCCTCTACTGACCTTTTCTTGTTGGAGACCCC
AGGGATCAGGCTTCAGACTTTTCTATCTACATTCATT (SEQ ID NO: 776)

829. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ABCA6. In some embodiments, the sequences from gene ABCA6 comprise or consist of:
GTAAGTTGATACATTTATTACCACTTTCTCTGCTTTAGATCTTAGCTATATGTAGCTAATATTAATG
CCCTAGTAGGTTACTGCAATCACTACTTTCATGTCCATTGTGTGTGTGCATGTGTGTGTCCTTGTG
TGTACTTGAAATAGTTTCTATGGAGTGAAAAAGTTATGTAATCCAAATAAAATTTGACTTGCCTTTT
GCATAAAGGTCTGAACTAATGAAATGATGTATCAAAAAGAAAAAACAATGCTGACTCTAAAATATC
AAAGTCTTTTCTGTATAATTATTGAGGTTATTTTTGAGGGGTGGACCCAATTTTTTTTCCCTTAAGG
GTGCTCATCACATGGTAGCTGATCACAATATCTCTTCTCCCTCTAATATTCTGTCTCATACTTACTT
CTCGTTTCACTCCGCTCTGCCTTCTCTGAACAAGAACCTCTAATTTCCATCTTCCAGGTTGTTTTC
TGCAGAAAGTATGTAGATGCTCCTTCTTACATT (SEQ ID NO: 777)

830. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ABCA6. In some embodiments, the sequences from gene ABCA6 comprise or consist of:
TCTGCCTTCTAGGTTCAAGCGATTTTTCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCATG
CACCACCATGCCTGGCTAATTTTTTTGCATTTTTAGTAGAGACGGGTTTCACCATGTTGGTCGGG
CTGGTCTGGAACTCTTGACCTCAAATGATCTGCCCACCTCAGCCTCCCAAAGTGCTGAAATTACA
GGCATGAGCCACCGTGCCTGGCCTTGGCATCCTTTCTATTGGTTGGTGCCTATACCAGTGTTCA
GCATCTATCATCTCTGTATGCATATATGGTAAAGGTAACGAAGATGAATGGCAATTATAAAGAAGG
AGAATTGCGATTGAAAAAGGATATGCAATGAGCTTCTGCTGTAGGATTAACAGTATAGTTATTAAT
CTAGAAGGTACAAGGGTAGTCATTACATTGTTCTTTAGATGCTTTTGTATATATTAAATATTTTGTA
AATAAGTTAACATAATTTATATAACTTTTTGTCTTTATTTA (SEQ ID NO: 778)

831. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AFMID. In some embodiments, the sequences from gene AFMID comprise or consist of:
GCTTGGGAGGCTGAGGCAGGAGGATCGCTTGAGCCCAGGAGGTCGAGGCTACAGTGATCCATG
ATCGCACCATTGCACTCCAGCCTGGGCGACAGAGCGAGGCCCTATCGCTTAGAAAACAAAAAGT
TACATGAAGTTCCCCCAAGGTCCCGTAGCTAGCATGTGATGTGGCAGGGAGAGAGCCTGTCCGC
TTCACTCTCTCACATGGGACCAGAAAGGGGTGATGCTGTGCGTGGACAGGACATCTGGCAAGTG
GTGTGTCCAGGACACAGGAAGCAGCGTAGTGGCCAAGCTGCCTCCAGCTGTCACATCTGTGTGT
CTCTGCAGTAAGGATGAGTCTGCCTTCATGGTCCACCCGCTGACGGCACAGGGAGTGGCCGTG
GTAATAGTGGCTTACGGCATCGCCCCCAAAGGTAATAGGAGTGGTTGCTGCAGGTCCGAGGGC
CGGTGGGCTTTAGGAGGAAGTGCATCCCTGACCCAGCTCATGCTCTCTGTGCAG (SEQ ID NO: 779)

832. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene AFMID. In some embodiments, the sequences from gene AFMID comprise or consist of:
TGGGTGTTGCCAGTAGATTTTCTTCCTGTTGGACCTCAGTGGGTGGGAGGACAGTGCAATCAGT
ACCTAGGATACAGCCAAGCTGCCCCTCTGGCCTGTGGAGCAGAAAGCAAATTGGGACTCTTCGA
AGGGGGCCTGATGTTGTGGGGAAACTGCGTGCAAATCCAGCTCTCTGCTCTGACCCCTCCCAGG
GGAATTTACCTGTGTGGACACTCAGCCGGGGCCCACCTGGCTGCCATGATGCTCCTGGCCGACT
GGACCAAGCATGGGGTCACGCCCAACCTCAGAGGTTTCCATGGGAGCTACAGCCTGGCTGGGC
AACCTTCATCTCCCCATGAGCCTTGGGGTTTGGGCCAACTGCTTGAAATCCTCCCGGCCATGAG
TGGCTTGACCGCAGGGCTTCGAGCCCTCTGAGCAAGGCCTTCTCTGCCTCCTCTGTGCCCCTTC
CCCTGGTCCTGCCCCTCTGGCGGTGGGGGTGGGCTGGCCCTGCCTTGCTCCG (SEQ ID NO: 780)

833. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TTC39C. In some embodiments, the sequences from gene TTC39C comprise or consist of:
AAGAACTGTTGATCCCAAAAGGGAAAAATTAGACATAGGGTGTGACGTGTCTAGATACCTCCACC
TGCGCTCATGCACACATTCCTGCGCCATAAAGGATTGATTTTTTTTTTTTAACCTTGGTGTTTTGT
GTTTGAGCTGTGTGCTAACAGTCAGTGTCAATGTCTGCCTTCTGAGCTGTGGGCGATTCCCATTG
TTGTGAGGTTTCCTCCAACTGGACGTTAAGTTACTGAGAACAGGAATCAGGGATGCGATTGGTGC
GTGTCTTCTGTGGCTACCTGGTCAGCATTCATAAACGGTGATAATGGATTGAATGCTGCAGTTTC
AACCTTCCTGACAACAGAGGAGAGTGTTACTTTGGGGCATGAACAGTTATTGATCCAGCTGGGC
CTTGGTTAATGAGTCATTTGGCTTACAGTGTTCCCGAGTCACAGGCTGTCCTGAAGATCACCTGC
TGACTCATTGGTGCCCTTGTTTCCCCGAGGCCTCCTGCAGTGAC (SEQ ID NO: 781)

834. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene TTC39C. In some embodiments, the sequences from gene TTC39C comprise or consist of:
TATGTGACATTTAGCATTTCTCAATGCCTAAGATTAAACTGATGCTTTGAATCCTGATCATGCTTTT
GAGCTGCTCCTCTTGGGTACTTGTGGCATCGTGTTGGCAGACCCTGAGTGACATCTTCAGCGGC
GGGAAAACGAAATGTATTTCACTGGGAGTAAGTAGAGCGGACATTTGAGAGTTTGCTGGGTCCC
AGACAGTGTTATGTGAATGAAAGTGTTGGAAATGTAATCTGGATCCTCAGGGAATTTCTGAAGTG
TCGGGAGAGGAGATTTGATGAGCAGAAGCAATTGGAGAACAGCATTCTAGGGTATAGAAGCAAA
CTATCAACTGTATGGTGAAGAGCTCACTGAGAACTGGGCTAATGGAGCGGCTTCGTGCATTCACT
CAGTAGCGATTGAGAGACTTCTGGGCCAGGGCTGGGCGCACACGGGGATGAAATATGGTCCCT
TCCCTTTCCACACCTGTGTGGTAACAAGGGGCTAGATTAGCAAACAA (SEQ ID NO: 782)

835. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MOCOS. In some embodiments, the sequences from gene MOCOS comprise or consist of:
GTTCAGTACTGAAGACCTAAACATTTGTCACAAGGGCAGTACCATCCACTATTTACACACATTTAA
AATTATTAATGTGAGGTCCAGGTTTGCCAGTTATAACAAACTTGTTTTCTTAAAAGTGAGTTAGTG
GTGCCAGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCAGGTGGATT
ACTTGAGCCCAGGAGCTCAAGACAAGCCTGGGCAACATGGTGAAACTCCATCTCTGCAAAAAAT
ACAAAAATTAGTCAGGCATGGTGGTGAATGCCTGTCGTCCCAGCTACTTGGGAGGCTGAGGTGA
GAGGATCACCTGAGCCCAGGAGGTTGAGGCTGCAGTGAGCTGTGATCATACCACTGCACTCCAG
CCTGGGTGACAGAGTGAGTGAGACCGTGTCTCAAAAAAAAAAAAAAAAAAAAGAGTGAATTGAGA
ATTTACATAAAGCTCATGATTCTCTTGTGTTTCATGATTGATTTGAG (SEQ ID NO: 783)

836. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene MOCOS. In some embodiments, the sequences from gene MOCOS comprise or consist of:
TGGGTTTTCTTTCCATCCTGCTGACTTTATTACAACTCATCCTAGTTCCAGACGAGAGCAATGTAG
TGTGACAAAGTCCATGCACTGTTGAAGAGGCCACCAGGCCCTCAGCCACATGCCTTTCCACCTT
CATTCACCCTCGTTTTTCAGTCCTCTTTACTCAGCCAAAAGTGGTAACTTTCAAATGGGAAGAAAG
AGGCCAGTTCTTCTGATGGCAGGTGGGAAACTGTTGGGTCTTTGCCATAGTAGAATAAGCTGTTC
ACTTCACTTCCTGGTCCACTAAAATGTCCAGAGTTGCACTGAGCACTCAGGCATGGTGGTAGGTG
GTTATCAGACGGGGTGTCACAGATGGACAACAGGAACCAAATGTTACTCCCAGAGCAGCACTGT
GGGGAATGGATTCAATCGTTGGGTGTTTGGAAGACGGTGCTGGTTTTTCCTTGAAAGCACATCTG
CATCCCCATTTTTATTTATTTTTTTGAGGTGGGGTCTCGCTCTT (SEQ ID NO: 784)

837. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PET100. In some embodiments, the sequences from gene PET100 comprise or consist of:
CTAATGTCTGCCTCCCATAAGCCGACCCTGCCCTGATGTGGGGCTCTGGAGGCCTTTGGCTCGT
GTCCCATTTGTGACTTTTCCTTACAGAGGGAGCTGTGGCCACCTGAGAAGGTAAGTGATCTCTTC
TTCCTGCCAGAGGGATGGAGGAGGCTGGATTCTTGTATCCGGGATGGGTTTTAGATGAAAATTTT
AGGCCAGGCGCAGTGGCTCATGCTTGTAATCCCAGGGCATGGGAGGCTGAGGTGGGTAGATCA

CTTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGCGAAACCCCATGTCTACAGAAATAC
AAAACTTAGCCAGGCATGGTGGCAGGCGCCTATAATTCCAGCTGCTTGGGAGGCTGAGGGAGAA
GAATCACTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCCCAAGATCACGCCACTGCACTCCAGC
CTGGGCAATAGAGTGAGACTTTGTCTCAAAAAGAAACATTTTACTCTCAG (SEQ ID NO: 785)

838. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PET100. In some embodiments, the sequences from gene PET100 comprise or consist of:
TAATTGGCAGGGGGCTTCCAGTGAAGACACTGAACCCTGAAGCCGTGGTCTGGGGCAGGGTGG
TGGGAGAGGTGGGCGGGGGGGGGTGGTCCCGGCTCTGAGGTGTGTGCCCCTCCCCCCTTCCT
GTCCCACCCGCTTCTCCACCCCTAGCTTCAAGAGATAGAGGAATTCAAAGAGAGGTTACGGAAG
CGGCGGGAGGAGAAGCTCCTTCGCGACGCCCAGCAGAACTCCTGAGGCCTCCAAGTGGGAGTC
CTAGCCCCTCCCCTGATGAAATATACATATACTCAGTTCCTTGTTATTCATTTAAGTGTTTTATTCT
TTTATCAGTTTTTGGGGGCCGAGTGAGACCCAGGATGCCTCAGGCCCTCAGGGGGCTTGTGTCG
GGGGCTGGGGGCTGCTGTTCCGACGGAAGCCGAGAGCGGTCGGGTCCTGAGGGGTGAGCAGG
GGTTGGGGACTGAGGGTCCCAGCTCGTTTCTGTGCTCCGTCCTGTGGATGAAGA (SEQ ID NO: 786)

839. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PRKACA. In some embodiments, the sequences from gene PRKACA comprise or consist of:
GTGAGGCTGAGTCCTGTTACTATAGCAACTTCCTAGGCACACTCTGCCCCTTAAGTCAGGGAGG
GGCTGCAGCGGGGTCTGGGGCACAGGCGAAGAGAAGAAGGATGTGAACCCCTGGCTGGCCCT
GGAAACGCCTCCTGTACAGCCCCGGGCTGTGCGGCCTGGGGAAGAGAGAGGGGATCGGTGGC
CCAGTTCAGACAAGGGAGGATGGTCCACCCGGCAGGGGGCCAGCTCAGAGAGGGGTGGTGGA
GTGGTCCATCCCAGTGTTGGGGTTCAGCTCAGACTGTAGGATGAGCCATCCCAGTGTTGGGGTC
CAGCTCAGAATGGGGGTCGTTCCAGCCAGTGTTGGGGTCCAGCTCAGAGTTGTGTCATTTAGGT
AAGCCCAGAGCAGGGAATCCAGGCTCCACTGGAGGAATCAGCCAGCCTCGAGTAGGGGGCCCA
GCCCAGGCTGGGCATTCCTGCCCCAGAATTCCCAGGACAGCCAGATTTCAAAAGGGCA (SEQ ID NO: 787)

840. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PRKACA. In some embodiments, the sequences from gene PRKACA comprise or consist of:
CAGCGGCCCCAGGGGGCAGGCGCCCAGGTCAGACAGCCAAGTGGGGCTCAGGTCGTGGCTGG
CACTGGCTGAAGATACCCCTGGGAGCTGGCCCACAGGGGAAGGGGCAGAGCTAGTAAAAGGGA
GCCCCCGATCCCCAGGACACAAGCAGATCCTGGCAAAGAGAGAAAAGCACCCCCCAAGAAGAC
CCTAGATGGGAAGAACTAGTGCCGTGTAACATCCTATGGATGCCTAAGACGGCCAAACACCTTCT
GTGCCTTGGCAGTTGTATGGGTGCCCAAGAGGTCTTATCAAGGCAGCTCTCCCCTTAGCGCAAC
CGCGTCTACAGAAACTCGGAGGGCCCTATCTGTCCCTCCTCCACACCCAGTGGCCTCTGGGTTG
GGTTTCTCTTCCTGCTCCCACCCCACGGCTCCCTAGCTCCCCCTGCAGGCAGGGTTCTGGGGAC
AGACAGCCGAACAGACACGGCAGGTCTCATGAGCCTTCCCAGCCACCGTAGTGC (SEQ ID NO: 788)

841. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC27A5. In some embodiments, the sequences from gene SLC27A5 comprise or consist of:
GTCCGAGGCAGGGTTTCTCGGGGCGGGGCTGGCGCGGGGCCACGGACGCTTTCAGATCCTAG
AGGGAGTCAGGCTGAAGAGGCGGGACTTTCCTGTCGTAAGAGGGCGGAACTTGGAGTCAGGAC
TTCTCACGCGAAGGCGGGGCTTCTCGATTTTCGAGGGGGCGGGGCTGACTGGGCCTCCTGATC
CCCAAAAGGGGCGGGGCGGGGGCAAGAGGCGGGGCCTCTCCTTCCCGGGGGCGTGGTCACAA
GCGCCGGCTCCCTCCTTGCAGATGGAAGGGCGAGAACGTGTCCACGCACGAGGTGGAGGGCG
TGTTGTCGCAGGTGGACTTCTTGCAACAGGTTAACGTGTATGGCGTGTGCGTGCCAGGTGCGGA
GGGTTCTCATTTTAAACTTCCAACAGCTTTGTGGGTGGAGGGGTCGTTATTCTGATTTTACAGGT

GGGGAAGTGCTAGGGCCCAGAGAGGTTTAGAGACTTGCTGGCTCTCACAGCCAGTGAG (SEQ ID NO: 789)

842. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene SLC27A5. In some embodiments, the sequences from gene SLC27A5 comprise or consist of:
TTACCACCATCTGGGGCCTCCGCCTCAGCTTCTCGGCTCTGTCCAGCTCCCCTGCCTTGATCTCT
TGCTCTGATTTACTGGGTCTCTGGGTGTCCATCTGATTTGTTCTCTTGAGCTTTCTGTGGAAGAC
GGCATTCCAGCCATTGGTCCCTTGTCCTGTACCTTCTGTTAGTGTCTTCTCCCAGGGCCTTGCAA
GGTCCTGGTCATATCTATTCTCACTGCCATTTGTCTGTCCGTCTTCCATCCCTTGTTATCCTTTTC
CTGTTTCTCATGGGCTCCCCATACCGCCTTCTCTATACTTCTCTCTCATTTTCTGTGTCGCTTGTC
GCAGTCTCTCAAGGTCTCTGAATGTCTCTCTCATCTCTGGATCTCCCTGTCTGTGTCTTTGGGTCT
GTCCTTGGCAGGGTGCTGGGTGATGAAGAGTCCACCGTTGTTGAAAACCTCCAGCAGGGGGCTT
GGCTGGTGGGCTCCAGGGGTTCTTGTTCCTGCTCCTACCCCA (SEQ ID NO: 790)

843. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSS2. In some embodiments, the sequences from gene ACSS2 comprise or consist of:
CACTTGATGAGGTCTGCACCTTCTCAGTGATGTCCACTCCCACAGTGTAGTTGGCAGCTCCTCAC
TGGAGTTTGAGTCCTCTGGTAGGGTCCACGTCTCCTTAGTAAAGTCTATATCCTCTGTATCTCTTA
GGGGAAATCCATGTCTCCTCACTAGGGTAAGTGCCCTTCAAAGCCATTCATGTCCTATTAGCAGG
GCCCAGGGCCCTTCAGTCAGATCTGAGAACCCCCAGCAACATCTGTGCTCCCTTAGTGGAGTCC
ATGTACTGTCAGTGAAGTGTGTGTCCCTTCGGTGCAGTGAATATCTCCTTTATGAAAGTATCTGAC
CCCTTGGTGGGGTCTATGTCCACCCCAAGAGGTCTGTACTCCTTCAGTGGGCCCTCAGATTCCC
GCCCTCCTTGGGATTGGGCAGACTCTCGGTCTCCCATAGAGAGATTTTTTTTCAGCTTAGGGTGT
GCAAGGTTTACAGTCAGCTGGGCAAAGTGCAGGGAAGTAGCTGG (SEQ ID NO: 791)

844. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene ACSS2. In some embodiments, the sequences from gene ACSS2 comprise or consist of:
TGAGAGATGGAGGAGGGTCCTGCCTGACTTCTTTCTGGGGTGGAGGGGCTAGAGAGAAGCTAG
AGGTAATTAAGCCCAGGTTGTGGTGGTGGTGGTGGGGGTTTCCCTTGGTGGAGTAAAGAGATTG
TGAAGGAAAGAAGAGAATGTGGGCCAGGTGTGGTGGCTCACGCCTGTAATCCTAGCACTTTGGG
AGCCCAAGGCGGGCAGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGACAACATGGTGAA
ATCCCATCTCTACTAAAAATACAAAAATTAGCTGGGTGTGGTGGTGTGCACCTGTAATTCCAGCTA
CTCGGGAGGCTGAGGCAGGAGAATTGCTTGAATCCAGGAGGCAGAGGTTGCAGTCAGCCGAGA
TTGTGCCATTGCACTCCAGCCTGGGCGACAGAGCGAGAGACTCCATCTCAAAACAAAAACAACA
ACAAAAAAAGAGAATGTGAATGATTTTTCCTATTTGCACAGACTTTGATATT (SEQ ID NO: 792)

845. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LBP. In some embodiments, the sequences from gene LBP comprise or consist of:
CCAAGGCAGAAAATCGCTTGAGCTCAGGAGTTCAAGACCAGCCTGGGCAACGTGGTAAAACCTG
TCTCCACAAAAAAATACAAAAATTAGCCAGGCATGATGGCACATGCCTGTAGTCTCAGCTACTTC
AGGGGCTGAGTTGGGAGGATGGCTTCAGGCCAGGCGACAGAGGTTGCAGTGAGCTGAGATTGT
GCCACTGCACTCCAGCCTGGGTGACAAGGTGAGATCCTGTCCCCCACCCCCCCGCAAAAGAAAA
GAAAAATGTGGATTCTCAAGCCGCTTCCCCAAATCTGCTGAATGTGATCATGCGATTGGGTGCCG
CAGGCACTGGGAAGCCAGACACACCGAATCAGGCTGGATGTGCTGGGACACAGCAGGGCGCC
GGGAAGGGGTGGAGAGGGCTCCCTTTGTGGACTGGCCTGACCAGGGACCAGGGCCTGGCTTTC
CCAGGCACCCGGCCATCCCCAAGTTCAGTGGCAGACTGTGCTTCTCTCCCCAG (SEQ ID NO: 793)

846. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene LBP. In some embodiments, the sequences from gene LBP comprise or consist of:
TAAGAAGGTCCAAGCCTCTGGCCTCCCCCGAGCTTGGCGAGGGCTGAATGGAAGACCTCACTG

ACCAATGGCCCTGGACCAGGCCATGGGGGCTGGTTTAGACGTACTTGGGCCCAAAGCCCAGGG
AGGACAAATCATTTGCCCAGGTCATGGAGCTGTTGTGGGGCACGCTGGGGACAAAGCTCCAAGT
CCGTTCGGTTGGGCAGAAAATGGTCAACTGCTTGACCAAGGGTTAAACAGCAGGGGCTAAACAG
AGACTCCAGCCCCTCCCTCTGCTCCACCTTGCTCAGTGCCCCACACTGCCCTGCATTCCACCAA
GGTCCGAAAGGAAACCATTCCTCAGGCGCCTGCAAGAGACCAGGCAGGAAAGCTCAGCGAGGG
CGTGGGCCAGGTGGGAACTGGGCGAGCTCATGAGCACCAGCCCTGGATGGGGAGGCAGCAAC
ACTGTCAGACTGGCCTGTTAAAAAGGAGTATGTGAAATCTTCAGAGTGTATCATCT (SEQ ID NO: 794)

847. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PABPC1L. In some embodiments, the sequences from gene PABPC1L comprise or consist of:
AATCCCTCCATGCCAAGGTAAGCAGGAGCCTGGGCAGCAGGGAGCCCGAGGGGGCAGGAGGA
GAGCTAACGACAAGGGCTCTCCTAGTGGAGCCAGTGGATAGCTGTTTGGCCAGATAAAGTGTTT
CTTCTTGCTAATACCTGAAGGCCTGCTGAATCTTAAGAGTGGAAGGGGCCTTAGGTAAGGGTTTG
CTACTTCAGCCCTTCCGTAGACTAATTCTGTGTTGTTCTGTAGGTAGGTCTTTTGGTACAAGGAAG
TGTGTTGTGACTCAGTGTAAGGGTTAAGATTTTTCCAGCTGTCCAGCAATGTACCTCTGTGTCAAA
GGTGACAGACAGGGCCATGGGATCTTGCAAGCAGTGGTGGATGGGAGGGTTCCACAGAAACCC
TGTGGATGGAGGAGGATCCTGTATCCAGGATGGTGAGCGAGGGGGAGATCAAGGCTCTTCTGT
GACCTGCTAAGATAGCTGCACTAAGCCCCCCCGCCACTCATGTCTCACAG (SEQ ID NO: 795)

848. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene PABPC1L. In some embodiments, the sequences from gene PABPC1L comprise or consist of:
TGGGTGGAATGGTGACAGAAGCAGCTGAGCCCGGGAGAAGCTGTAAGGAAATAGGCAGGGACT
GACTTTCACAAACACTGAGAATTGCGCCGTGTTCCTGGCTTTCTCTGAAGCACCAAAGAGTTTGG
AGGAAGTTGTGAGAATCAGAGGAGATGATTAACTGTGATCGGAATGGGGGGTGGTGGAGGGTG
AAGGAGGTGCCCTCTTGCCAGCTGCCCTGCCTGGCTTCATGCAGAATAGTTTGGGCTTTCCCAG
GGCCCTGCCTGGCTCCATTCTGCCTGCCTGAAGGCCTGGCCAGGATGTAACCACCTTCTTTATT
GAAGACTGGGTGTCTGCCATACTTTAAAAACACTTATTTTTACCTTTTTGTCCTCAGAAAAGGAAA
TCCTCGCTTCCATGGCTGCCAAAAGGACAGTGTTTCTGGCTCTCAGCCCTAAGGCCCTGCAAAC
TCTAACTTATTTCCCAATTAGTCTGTATCTATACTTGGGCTCTGTATGTG (SEQ ID NO: 796)

849. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene UBE2V1. In some embodiments, the sequences from gene UBE2V1 comprise or consist of:
GTATGCTTGCAGGTTTTGCTGTTTCCTTTCAAATACCATATGTAGTACTATTTAATATTTTTCTTGTA
ATCAACTGACTCTTTTGCTTACATTTATTTTAAAGGAAACTTTTACCATTATTATAAATGGGAAGTTA
GTATATTACTTACCCTAAATAAGTTATTCTTAAACATAAATACGTGACTGTAAAACGAAGTGTTCAA
TCACATACCACCGAAAGTCCTCTAACATACCACTACCAACTCTGTCCTTCAGTTGCTTGGACCAAA
AACCTGGGAGCTGTAGTTGACTCTTGTCTCTCACACCTCACAGGCAACCTGATAGCAAATCTCCA
CAGCTCAGACCTCTGAAATGCCTAGAATTACGCCACTCCTCACTACTTTCCTGCTATCACCCTGG
TCCAAACGGGTATTATCTTTTGCTAGGATTATTGCAGTAGCCTCCTAGCTGCTTCTGCCCTTGCTC
CCTTCACTCTCATCCTCACACAGCAGTCTGAGGG (SEQ ID NO: 797)

850. In some embodiments, the intronic domain that promotes trans-splicing primarily in the liver comprises or consists of sequences from the gene UBE2V1. In some embodiments, the sequences from gene UBE2V1 comprise or consist of:
AACAGCTGTTAACATCTTGTTCTGTATCCTTACCAACTCTATAAAGCTCCTTAAGATGTCACTTATC
ATCTATATGAGTTTGCTAGTGCTGTCATAACAAAATACCATAGACTGGGTGGGGCTTAAACAACAA
ATTTCTCACAGCTCTAGAGACCAGAAGCCCAAGATCAAGGTGTCAGCAGGTTTTGTCACATTCTG
AGGTACTGGGAGTTAGGACTTAAGTATATAAATTTGAGGGGAACACAGTTCAGCCCAGCCCATAG
CACGATCTGTGAACAAGTACCTCAGTCATCAGCCTTCCTATCAATATGATTCTTTTGATGTTCATTT
TTATTAGTGCAGGCTTGTAAATTAACCAGTAGTAATGTAGTGACTTTTCCCCCGCTAGCCTAATTA
GGATTATTAAAGATTTAGATTGAACCCTTTCTGAACAATAGTTGTGTTGTCTGGCTTTTTGCCTATA
ATGTCACCACTATCTTTCAGTTTTATGTTTGCTACA (SEQ ID NO: 798)

Intronic domains that promote trans-splicing primarily in heart tissue

851. In some embodiments of the compositions of the disclosure, there may be an intronic domain that promotes trans-splicing primarily in heart tissue.
852. In some embodiments of the compositions of the disclosure, the intronic domain is derived or isolated from human genes that feature exons that are primarily included in heart tissue during the process of RNA splicing.
853. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MASP2. In some embodiments, the sequences from gene MASP2 comprise or consist of:
GTGAGTTAAAACAAAGTACACCACGATCAATGACGATTGCTTTGAAATGTAAACATATTTCTATCT
GCAGATATGTGAAAGGAAAGTGAGAAAATCGTGTGTCAGCATGATTTCTTTTGTCTATCTTTAAAT
GATAAAAAGCCAAGAAATAAGTTTTCAGAGGACAAAAAGGATGGCTATGGAAAATGTGATTCTGA
ATCCCGCCCTTTTTTCTTTCTTTCTTTATACTTAACTTTAAATTTACATAAGCGAGCCCTTTGTTTTA
AAGCTAGTTTGGAAAGCTGGTGATTAAAATGGGCAACTTGGCCAGGCGCGGTGGCTCACACCTG
TATTCCCAGCACTTTGGGAGGCAGAGGCAGGCAGATCACTTGAGGCCAGGAGTTCAAGACCAGC
CTGGCCAACGTGGTGAAACCCCGTCTCCACTAAAAATACAAAAATTAGATGAGGTAGTAGCCCCG
TCTCCACTAAAAATACAAAAATTATTAGGTGGCGGGCGCCT (SEQ ID NO: 799)
854. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MASP2. In some embodiments, the sequences from gene MASP2 comprise or consist of:
TTCACAACAGCCCTGGGGCAACTATTATCGTCAACCGCCCCCCATCTTGCAGATGAAGAAACTGA
GACTCAGAGAGGTTACACATAACCATGGGGAAATGGAGAGCTAGGATTTAAACACAGCTCCAGT
CCCATGCAAGTCCCAAAGCCTCCCCTGAGCTCTTTTCCTCGGAGTTACACTCTCTCTTGGTTTTG
AGCCATGGCTCTGAAGTTCCTGGCATGGAGCAGATGTTCTATTTGTGGGGACTGCACCATCTTCC
CACATAACCCAGCTTTCTCACATACCTTTTGCTCAGTCCCAGGGAAAACAAGAAACCTTAATTTGC
AAAAGCACCTGAGAGTTTAATCTTGCCTTTGGTTTTAAAGAACCCTACCCCACGTATGGTGAGCT
CTCTTTACATGTTAAGTATTCTTTATAAACTAAGAACTTCAGATGGCTCGATTCAGTCTTGGCTGCT
GTAGACCACATGAAAACCAACAAGCCTGGTTTCCTCTGCGCA (SEQ ID NO: 800)
855. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AGMAT. In some embodiments, the sequences from gene AGMAT comprise or consist of:
GTAAGGAGATTCCACCAGTGAAGATCCTGGGGGTGGAGACACTTAACACCCATTTTCCTGGGAC
TTGAAGCGAATCTTTAGGAATCAGGATAGGATTTTTGTTTGTTTGTTTGAGACGGAGTCTCACTCT
GTCGCCCAGGCTGGAGTGCAGTGGTGCGATCTCGGCTCACTGCAACCTCCGCCTCCCAGGTTC
AAGCGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGAGATTACAGGCACATGCCACTACGCCCGG
CTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGGTCAGGCTGGTCTTGAACTCCTG
ATCTCGTGATCCACTCACCTCGGCTTCCCAAAGTGCTGGGATTACGGGTGTCAGCCACCGCGCC
TGGCTGCCAAGGTAGGATTTTAAGAGCAGAGCACCTAGGCCTTTTCTGTTCTCTGGGCTGAGGA
TAAGTTTGAATACCCTCTTACTGAAGGGTGATTGATTTTGGCAAGGGC (SEQ ID NO: 801)
856. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AGMAT. In some embodiments, the sequences from gene AGMAT comprise or consist of:
TGAGATCGCGCCACTGCACTCTAGCCTAGGTGACAAAGTGAGACTCCATCTCAAAAGAAAAAAAA
AAGAGGGGAGGAAGTCCGGACCCAAGATGAGTTGCCACCTTCTTAGTTCTGGTCCTCGTACCCT
CTAGGCAGAATGGCTCTCAGATAGACGTGTATGACAAGACCCCAATGGAACAGACCCAAATCCC
TTGCTTTTAGAGCGTGCCAAGGCCAGTCTTCTGGACAGAGCAATTCAAAAGGTGCTAGCGTGAG
CTGCTGTTTCCCACTCTTGCTTTAGCAAAGCTTCTCTCTGATTCCAACTCCATCAGTCAGCTTTGA
CCCTGCTTCCTTACCACTCATTGTCCCTCCCTTCCTCACCTGTAAAATAGGATAGTTCCCTCTTCA

TGGAGATGGAGGGTCAAGTGTCATGTGCACACAGAGCTGAGCATGGGGCTGGCAAACAGGAAA
TGCCCTGTAAATGCTGCCAGACAGAAACCTCAGTCCCTGTCTCTGCA (SEQ ID NO: 802)

857. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MFSD2A. In some embodiments, the sequences from gene MFSD2A comprise or consist of:
GCTTCCGCAATGAATTCCAGAATCTACTCCTGGCCATCATGGTGAGTGGGACCTGAGCAGGGGC
GGGCAGCCTGGGCTGAGGTGACATAGGCTGTGGAATGGTTCTTGGAATAGGCAGAGGATGTTTC
TCAGGCTGGCCCAAGGTCATGAAAGGATGAGGGAGGCTTCTCAGGGTATTTGGTTGGACCTTGC
GAAGGTAGGACTGTGAAAGAAAGAGTTTGAGGTTAGATGTTTGAGTAGTGAGCACAGCAAAAGC
AAGGGCGAGGACACCAGGAACTTGGCTCAGAGGTTTGAGAGGGCAGCAGACAAGGTGGGCCTG
GACCAGCTCTGAGCTCCCCTGGGGAGCCGTCAAAGGTGCCTGTCATCTTCGTTGCTGCCCACAT
GATGTCATCTGGCTGCTCTTGGGCAGGGCTGGGAGCCACTTTGGGGTTCTGGGAAGGGCAGGA
GGGGCTCTGTGGCTCTAAAGCACCTCCCTTTAACCCCCTTTGTCCATCCACAG (SEQ ID NO: 803)

858. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MFSD2A. In some embodiments, the sequences from gene MFSD2A comprise or consist of:
TGAGTGGGGTTGAAGAGCAGAGCCTGGGTTGAGTTGGGATGTCTGGTGGGAACCTCCCAGCTG
ATTCATCTTCCTGCACCCCCTTCCCTAGTCAGCAGTGCCATTTCTCATCTTGGTGGCCCTCATGG
AGAGTAACCTCATCATTACATATGCGGTAGCTGTGGCAGCTGGCATCAGTGTGGCAGCTGCCTT
CTTACTACCCTGGTAGGTATATACAGGCCCCCCTCCTCGGGTATCTCCAGCCCCTAGTCCCCAG
TTTTGAAGCTCCTTAGGGAGAGTTCTATGCAGTGTTCTCCCACAGGCCATTCTGTGGGTCCAGGT
TAGGAGTGGGGGAGGTCTGTCCTGTACAGTTGTACAGGTAGTGAGCTTTGCAAGAACACCTAGT
CAGAGTGAAAAATGGGGGCTGTAATCTGGCCTGGGCTCCACTTGCCACGCTGAGCACCTCCAG
GCAGGGTTACTTCCTCTTAGAGCAAGAGGCCTTTTCTTATTCATGTGAAGG (SEQ ID NO: 804)

859. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene EBNA1BP2. In some embodiments, the sequences from gene EBNA1BP2 comprise or consist of:
GAAGCGGAAGTCCCAATCAAAAGTTGAGCAGTAGCTGTGAGTTGCTGGCGCTGGAGCGATTCGG
TGGCACGTGGAGCCACGGCGTGGGAGTAGGGGGCTGAAGGCAGGCAGCAGCGGCCAGGGCC
GCCCTCTGCTAGCCGCTTGGGTCTCGGGATACCCCGTTTCTTCCTGTAGGTGTGGGACGTGCGT
GCGGCGAGATGGACACTCCCCCGCTCTCGGATTCGGAGTCGGAATCCGATGAATCCCTTGTCAC
AGACAGAGAGGTAGGTGTCAGCCGAGCTCGTGGGGCTGGGCGTGGGAGAGGGGGCCTTACAC
CCCTGGGAGTGACCGTGATTGTGTCCTGCAGTTGCAGGATGCGTTTTCCCGAGGGCTTCTGAAG
CCAGGCCTCAATGTCGTGCTAGAGGGGCCGAAGAAGGCCGTGAACGACGTGGTGAGCGTGGG
CACAGGGTCGGGGGTACTCGGACATGGGATGCGCTTCAGGCGCTGTTGGGCTTGGGAG (SEQ ID NO: 805)

860. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene EBNA1BP2. In some embodiments, the sequences from gene EBNA1BP2 comprise or consist of:
AGTTTCATAATACAAGTCGCCATTTATTTCCTCTACATTTATAATACTGCATATATATTCAAATTGG
CCAAAATCTTTCTTTCCAATCATCATGCTGGGATTATGGGGTTATATGTGGCACATACCATTCCTG
TATATGTCAGGATGGAAAAAGTTTTACCTGGAATGAATTTTTGCCATTTCTGATCCACATTGTACTT
CACACAGTGATTTCCTGAAGGAAATATAATGATCTGTTCATCGAAGTAGAAGATATTGTTGGCCAC
GTGGGATCGAAGACCAAAAACATGCAGCGTCTGAGCTACCACGGCTGACATGATCTCCCGCCAA
ACAGTTCTGCTGAAGACCAAGGCAGCGCTTCAGAGTGGAGAGCACCGCCCCGCTCCGACCCCG
CCCCCGGCCCGGACTCGCCCTCCCCGCCCTTTGCTCCTCCCCTTGTCTCTCCCCTTTCTCCTCC
CCTTGTCCCTCCCCTTTCCCCTCCCCTTGTCCCTCCCCTTTC (SEQ ID NO: 806)

861. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PRDX1. In some embodiments, the sequences from gene PRDX1 comprise or consist of:

GTGAGTGAGACTCCGTCTCAAAAAAATGTGGAATAGAACAAACTTTAGTTTTAGGAACTAGACTTT
ATATTGTAGATCTAGTTGCAATTGACACGTCCTTGTTTTATGGGAGGCTACATACTTTAAAGGTTT
CCAGGGGAGCAAATAATTAATTATGATTTTGTGTATGTGTGTTTGTGGGGGGTAGTCATCAGGAA
ATGTCTGAGGCCTTTTGCCTTACCGTGTGGGTCTGGCTAATGTGTAATGTTTTGACTCAAGATTGT
AAAGTCAAATTATTCATCCGGGGAGAGGATGGTCGTGTAACTGAATCAGCCTCCCAAGATGAACT
TTCCCTCTGGCGTAAGTTTAGGAGTCCTGATATTTTATTTTCCTTTACAACAGAAAGCAGCAACCC
TGTAATTAAAGAGAACAATGAAGGAAGCTATCTAAGCCATGAGGGTTACTGAGGATCTGCGCTGG
GGTTAAGGCTGCGAACTTAAGAAATATTTGGATAGACAGT (SEQ ID NO: 807)

862. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PRDX1. In some embodiments, the sequences from gene PRDX1 comprise or consist of:
GCCTCCGGGTTCAAGCGATTCCCCTGCCTCAGCCTCCCAAGTAGCTAGGACTACAGGCGCGCC
ACCACACTCGGCTAAGTTTTTGTATTTTAGCAGAGACAGGGTTTCACCATGTTGGCCAGGATGGT
CTCGATCTCCTGACCTTATGATCCGCCCTCCTAGGTGGCCTAAATCTACATTTTTACATAAGATAA
GGTGAATGTTTGAAGAAAAAGGGAATGGAGGAAGAAAACAATTATGTGGTGGACTCAGGGTAAT
CTAGTAGTAAGGTACTACTAGAAAGGTAGAAAGTAGTCTAGTAGAAAGGTAATCTAGTAGTGAAC
ATTTATGGAATTTGTGGAATAGAGGCCAGGTGCGGTGGCTCGCGCTTACATTCCTAGCACTTTGG
GAGGCCAAGGCGGGCGGATCACCTGAGGTCAGGCGTTGGAGACCAGCCTAGCCAACATGATGA
AACCTCGTCTCTACTAAAAATACAAAAAATTAGCTGGGCGTGGTGGTG (SEQ ID NO: 808)

863. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene FGGY. In some embodiments, the sequences from gene FGGY comprise or consist of:
CTGCCCAAGACCATGGGAACCCACCTCTTGCATCAGTGTGACTTGGATATGAGACCTGGAGTCA
AAGGAGGTCATTTTGGAGCTTTAAAATTTGATTGCCTTGCTGGATTTTGGACTTGCCTGGGCCCT
GAAACTCCTTTGTTTTGGCCAATTTCTCCTGGAATGGCTGTATGTACCTAATACCTGTACCCGCAT
TGTATCTAGGAAGTAACTGACTTGTTTTTTATTTTACAGGCTCATGGGTGGAAGGGACTTGACTTG
TCTCAGATGAGACTTTGGACTGTGGACTTTTGGATTAATTCTGAAATGAGTAAAGACTTTGGGGG
ACTTTTGGGAGGGCATGATTGGTTTTGAAATGTGAGGACCTGAGATTGGGAGGGGCCAGGGGC
GGAATGATAATGATTTGGCTGTGTCTCTATTCAAATCTCAACTAACTTATATCTCCCAGAATTCCC
ACATGTTGTGGGAGGGACTTAGGGGGAGGGAATTGAATCATAAG (SEQ ID NO: 809)

864. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene FGGY. In some embodiments, the sequences from gene FGGY comprise or consist of:
TAAGTCAAATTAAACATCCTATTCTTCCCAGTCTCAGGTTTGTCTTTATCAGCAGCATAAAAATGG
ACTAATGCAGTAAGTTAGTAACTTTCCCCCATATTTTTGTTAGTGGAAAGATAGAATAGTTTTTTTT
TGTTTTAATGGAAAGATAGAATAAGAATCTTGGATTCTTTAAGGCCTGAACTTAGATGCCAGCAGT
GGCTGGGAAGGGCACAGGAAGGTGATAGTCCATGATGACGGGTTGATACAGACTTACTTAATAT
ATGTTGACTATGTTTTATCCTTATTATGCCTTCTTATGCCTTCTTATGCCTCTTTCTTTACCCTTCAC
CTTACAGCCAATCCAAGAGTTGGATATCTCAAAAAAATTAGGAGGCCTGGGTGCAAATGTTTCCT
TTCATTTCTACCTTTCCTATACCCCTATTAGGATGTGGAGGTGAACAGATGCCTGAAAATCTTGAA
AAGGTTGTCCATGGGTCCAACTCTATATTAACTAAAT (SEQ ID NO: 810)

865. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LEPR. In some embodiments, the sequences from gene LEPR comprise or consist of:
TCTTTCTCCTTCCCCTTCTCTTCCCTCCCCTCCCATTATATAATCTATGCTGTTATGTTACCTATTT
TATCCACTACCCCATCTTTACTGGAGGTGTTGTTCTAGTGGACTCTCCAGGAACTCCTCTATCCTC
CTACTTCAATCAGGACTAGGCTTTCTCTAAAATTACTATAAGCCATCACTCTAAACTTTCCCTTAAC
TGGTTTCTGGTTAGTACTGTTTCCTGGATTCCTTTCCTTCATCTTTCTTAACTACACCCTTAAGTAA
CCTCCTAAGAAGTATGCGATAAGTCTCCATCTCTCCATGCCTGAACTGCCTTTTATTCTGCCCTCC
TCGATTGTTAGTTTGGTGGAGTATCAATTCTTAGAAATAGCCTTTCCAAGAGAACATTGAGATAAT
TCCTGCCTTAACATATAGTATCCAGTGTTGCTTCTGAGCAGTCAGATACTATTGTGATTTTTACTC
CTCACTGTTTACTTATAATTTCCTTTTTAAACAG (SEQ ID NO: 811)

866. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LEPR. In some embodiments, the sequences from gene LEPR comprise or consist of:
AAAAAAAAAGAAAGAAAAAAAAATTCTCCTCATTTTTGTTGTTTTGAATTTTCAGTGATGAATCTGG
AGTGGTTCTTTTTTTATTTAATGTGGTTATTTTTTGAAGAGACTTTCAATTCCATGTCTCCTGTCAAT
TCTAAGAAATTATATTATTTCTTTGATAATTTCCTCTCCTCTTGTTTCTTTGTTTCTCTTTCTAGAAT
CTGTATGTTGGATGATGGACCCTCTGCGTAGATCTTCCACATCTCTTACCTTTTATCTCATATTTTC
GGTTTCTTTGTTTTGTGTGTGTGTGTGTGTGTTATATTCTGAGACCTTGCCATACCCTCTTCTT
CCAGTGCTTCTGTTGGATTTTTATATACTATTATTTTTGTAAATTTCCAAGTATTCTTTCTCAGAGTA
TTCTGTTCTGGTTTTATGCATATTTTCTTAAATGTTGCTAGAAATACCAATTCGAGGATTTTTGTTC
TTTTATTTTAAAAATTCTTTTTTCTTCT (SEQ ID NO: 812)

867. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GBP7. In some embodiments, the sequences from gene GBP7 comprise or consist of:
AAAGAAAAACTATGAGGTTCTTGCTTCAATTTATCATGGGCTTGAAAGAACAGTTTGACAGGGCA
CTGAGCTGGCAAGGGTTTGAGGATATTGTCAGTGTCTCATATTTGCTAGTGAGAGTGTGAACTGT
TGGAATCATATATGAAATATTTAAGTGCACATACCTTTGATCTAGCATTTCCACATTTAGAAATCTA
TCATATAGATTGATTTACTCAAATTGAAAATGGTATATATAAAATAGTACTTATGTTGCAGCATTGT
TGTAATGCCAAAAGACTGAAAAAAACATTAAAGCCCCTCTTTCAGGTACTGATAAGGGAAATCTTG
GGAAACACTCATAAAGGAATACTCTACAGCCACTAAAATGAAGGGAGAAGCTCTATTTGAACTAA
CAATGACAAGTCTCCAAGATGTATCATAAGTAAAAAAAAAAAAATGATGCACGAAGCATGTATAATT
ACTACCACTGAATTTAGAAAATAATAAATGTATGCATA (SEQ ID NO: 813)

868. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GBP7. In some embodiments, the sequences from gene GBP7 comprise or consist of:
GAAAGTATCAGATTTGGCTTGATATGAAATGATACTGAATGATCTCAAATTGCTCCATTTGTTTCT
GTATCTGCCTGACTCATCCTATACAACTAGAGTAAAACATATTCCTTGTCCCAAACTGGAGCTTGA
CAACCAGTGTTTTATACAGGGTCAGCAGTCCCCATTATTTGCTAGATGAGCATGGCCTTGCTATA
TCGGTGGAAAGGGGAATCAATTAGAATTAAATCTGCATTCCCTCTCAAAGGGCATTCATTGTGCT
GGAACAAAATTCCTCCCCACCTCCAGTGAGATGGTGCTGAGGAAATGTCACAAAGGTGTATATCA
TGGATACTCCCCTTATTTAGGTCCAGTCATCTGGAAATGTCAGACCAACTCATCAAAGATTTTCTA
AGATGTTAGAGAAATGGACACATGTTTAACTAATGAAATTGTTAAATACAAACCTCGGTCTCTTAA
AAATTGGGGATTTTCAAAAGTAGGCTCTTTTACTTTTATA (SEQ ID NO: 814)

869. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ENSA. In some embodiments, the sequences from gene ENSA comprise or consist of:
GTGGGTGAAACATCCCTGTGGAGGATCCCAGTTATTGAGTCTTAGTCACAGATGATAATGTGATG
CTGATTTGCATTTACCTTGCTGGAGGCAAGGCAGGCGTGGGCAGGCTGTCACAGTCATGGAACA
TGTGTGGGAGCTGTGAGAGTCAGAAGGAAAATACATTATCCTCATGAACAGGCCCAGTTTCTATT
CCTGGTCTGGGAGAATAATCATTTTGAGGTTGTTGGCTTGTGGTTGATCTCCTGGTGGCTAGGAT
AGCCCCATATTTATCCTTCTCTATATCTTATTCATTTCTGTTTCTCCAGTTCCAGGCTATTGCCCTG
TACCCAGTAAGGTCCTCAGTTACCCTTTATGAATAAGTGATTTTGGTGGAACGATCCTCTACTGAG
TGGAGTACAAAGGATGGCAGGGGCTATCCCTTGACTCCAAAACTATATACTCTAGCTGGGAAATT
GCTTATGTACCTGAAAAAGTCAGAACACACTGGGGAGAAGAC (SEQ ID NO: 815)

870. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ENSA. In some embodiments, the sequences from gene ENSA comprise or consist of:
GAAGTGAGCACCAGCCATTAATTATACTCCTGCAGCAAATGTATTTTTCTTGTTCAGAGTGGTCCT
CCTTACCAAGAGAGAGTCTACTTTCATAGCCATGTAGCTCCTGATCAGATTTTTAGTTCCCAAAGG
TACCTAAAGCTGACTGAGGGATTATATTATCGTTTTTTAAAAAAAAAATTTGGCCAGGCGCAGTGG
CTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGAGCACGAGGTCAGGAGATC

GAGACCATAGTGAAACCCCGTCTCTATTAATAATACAAACACTTAGCCGGGTGTGGTGGCGGGC
GCCTGTAGTCCCAGCTACTCGGGAGGCTGAAGCAGGAGAATGGCGTGAACCCGGGAGGCGGA
GCTTGCAGTGAGCCGAGATCGTGCCACTGCACTCCAGCCTGGGCAACATAGCGAGGCTCCATCT
CAAAAAAAAATTTTTTTATTTTCCTTACTCTCCTCTGCAATGACTGTA (SEQ ID NO: 816)

871. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC39A1. In some embodiments, the sequences from gene SLC39A1 comprise or consist of:
GTGGCCCACGAAGCTACCCAAGACATCTCTGCACAGCCCTAGCCTTTTTGGCTTCACCCACTCC
GTTCGGGAGTTGGGGACCCGGCCTCTACATTCCTTAGGGGAACTCCAGCTCCAGGTCCTATTTG
GAGGCGGCTCCTAGTTTCCTAGTTTTCTGGGGGCACCAGGTGAAAGGGTGATGAGATATCCATA
CAGCCTTTCTCATGCCTCGGTTTCCCCCGTGCAGTCTCCCTGAATAAGTCACTTGGGAAAGAAAG
TGTGAGAAGAGAGGAATGTTCCTGGTACAGGAGTAGATGAGTCACCCTGGGTAGGGGAAGGTCA
CAAAGTGGCTGGGGCCAGGGAGCTGCACTCTGCTGACCAAGCTTCCCCATTCCTTGCCCCATCT
TCCTTTGCATGATTTTTCCCAACCACTCTGGTCTGTCTTCCTAGGTCTGAGAGTCACTGGAGCTA
CCAGAAGCATCATGGGGCCCTGGGGAGAGCCAGAGCTCCTGGTGTGGCG (SEQ ID NO: 817)

872. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC39A1. In some embodiments, the sequences from gene SLC39A1 comprise or consist of:
AGACTTGACAATGCGGGGTCTCCCTCTTTTAAAAATATCCATATAATCAAAGCCTTTGTTGACTGG
CCCGCTCCGGCCCCTCAGTCCTCCACAGATGCGCCCCAGGGCCCCAGCCCCGAGGTCCTTTTC
CTAATATCCGCTCTTGCTCTCGCTCACTCTCCTCAGGTCGCCTGCTCCGCCCGCTCCCGCTCCC
GATCTCTGATTGCTCCTAACTGACGTCACTCCCGGTCTGTCCCCGCCCACTCGGTGCTGCCATT
GGCAGTCGGTCGTGGGTACGCGGCTCCTGTGGGGGAGGGGGGAGCTATGGGAGGGGGCGGG
AATTCCCGACTCTAGGCCGGAAGCGCGCGGAGACCATGTAGTGAGACCCTCGCGAGGTGAGTG
CGGGCTGTCTGGCAGCGGGGTCCATGTCGGCTGCCCAGGCCTCCCCGGGCCCGGGAACAGGA
GTCCCAGCTCACGCATTCTTCATCTGCTTCCCGCGACGCTTGGCGGCCTCGCACCC (SEQ ID NO: 818)

873. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RAB13. In some embodiments, the sequences from gene RAB13 comprise or consist of:
GTAAGGCTCCTAAATTCTAGTCCCTCAACCCCTGGCTCTGACCCTTCCCCCGTGCATGTCTCTGT
ATAGTAACCAAACCTCTCACCTCTCTGAGGCCTTCAGGTAACTCTTCAACTGCTGCCAGCTCCTC
ATTTTCTTGGTACCATCGCCTTAGTCTCCCCAAATCCACAAGAACTCTTCTCTATTTTTCTCTGTTC
CCCTCTTCCCCTACCCCCACCACCTAGAACTCTCTCGATCCTATCTCCATGTTTCCTGTATCCCTG
TCCGCCACATCTTTTTCTCCCGATCCGATGCTAGCCTCTTTCTGTCTTGCTGAGCTTCAAACTCTC
CCACTGTGTCCCCACCTCACCATCTACTTCCCAGGTTCCCTGCCCCAGTCTCCCTGCACCTCAG
CTGAACAAGGGTTTGGGAAGGGTGGAACAAGGTGGCTGGGTGTGCTGGAGGGTGGCCCAAGGA
CTGTGATCATGAATATGCAGCCAGCTTGGTGAGGAACGTGGAA (SEQ ID NO: 819)

874. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RAB13. In some embodiments, the sequences from gene RAB13 comprise or consist of:
TCGTCGTGGTTAAACCTCTACTTCCCTTCACCCCAGCCTCTCTGGCCTCAGAATGGAAGAGTAAG
GTCCTAAGAGGGGAGCTACAATTACCGAAAGGCTGTGGAAAATAGCGAGAGAGACAGGCCGGC
CTAAGCTAGGAAGGGAAAACCGAGAGAACAGAGGCCGGGCTGGCAGCCTTGGCCTGCTCAAAA
GGGTGGGCGGGCAGGGGGTGGAGCCCGGAGGGGTGCCGCCTCTCCTCTTTCCCGGAGCCTGG
GCGGAGAGGGAGGAAAACTTCTTCCTGGCCTGGGCTCCGTGCCGCTCTGTTTGCCAACCGTCC
AGTCCCGCCTACCAGTGCCGGGCGCTCCCCACCCCTCCCCCGGCTCCCCCGGTGTCCGCCATG
GCCAAAGCCTACGACCACCTCTTCAAGTTGCTGCTGATCGGGGACTCGGGGGTGGGCAAGACTT
GTCTGATCATTCGCTTTGCAGAGGACAACTTCAACAACACTTACATCTCCACCATC (SEQ ID NO: 820)

875. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene FMO4. In some embodiments, the sequences from gene FMO4 comprise or consist of:
CTCCCAACGTGCTGGGGTTATAGGCATGAGCCACTATGACCAGCCTAAAATGGGGTCATTTTAAG
TGTTTACATCTAACCAACTAATAGCTTTAACACAAACATGCACACACACACACACACACACACG
TACAATGTGGAGGGTATACATACAATATAATATAAATTATATTATTTATACAGCAAAAGCAGATGAA
GAGAGACAGGGCAGGCCAACTGGCACAGGTGCAGGTGTCTGGTGAGTGTGGCGCAGGCTGAC
AGCTGGGCCATAGAGGCATCTCTCCTCACAATTCTGGCAGTAGAGTACCCTGGTTAAGTGAACT
GGGCGGGGAATTTTACCTCCAGAAAATTATTTTCTGTGCTGCATTTCCATTCTGAGCTTTGACTAT
CATGTGCTCTGAAGTTAGAGCAGTGGGAGGCTAGAAATGAGTGGGTGGAGAATTTAAATAAAGG
AAAAGCCACATGTGACTTTAGTGTTGTTTGTGATTTTTCCCACAG (SEQ ID NO: 821)

876. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene FMO4. In some embodiments, the sequences from gene FMO4 comprise or consist of:
TATGAAATGTAGCTTGCTCTAGGGCAAACTTACAGTATATTCTGTTACAAAAAAAGGATTCAGAGT
ATAAAAGCCATTCCTAGAGAAGCAGTATGGCAGGTTGGAAATAACTCTGCATTAGGAATCAGAAG
GATACATTTTTAGTCCTAACTCTGCCACCAATCAGACGTGGCCTTAGACAAGTCATCTGGGGACA
CCAGGTCTTTTCAGTGGAACACACAGCCTGGCCCCCTACCAGTGGCAATCCTGTCTTCACTTAGT
CCAGGAAATCTATTCTGACTTCACTCTCTTCCTACCTCTCAGGCTGCTCTTTCTCTGTATTTGCTG
GTATCGCCTCTTCCTCACTCCCAAAATTTAGTGAGCTCCAAACTTAGTCCTCAGGCCTCTTCTCAT
TCCTATTTACACCCACTCCCAGGTGGCCTCATCCAGGCCTGTGGCTTTAAATATCATCATATACTC
AGGGCTCCCAAACTGTGTCTCTGACTCAAATCTTTCTCCA (SEQ ID NO: 822)

877. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CFHR3. In some embodiments, the sequences from gene CFHR3 comprise or consist of:
CAGATGACTATTAGAAAGATTATACCTTTCTACAGTTCTGTTTCTACATTGTGGGCATAAGAGAAA
AATATAAACATAGAATTAAATTAGCAAAATGTGAGTACATTTGGAGTGCTTGTAGTCACGGCTTGT
CGAATGGGGGAAAGGAGGATAAGTAACCATGACTCCAATGGAACATGTTAGCATAATCCTTTTTG
ATATGAAGTCACTAGGGTGGACACAACATATTTTAGGAAAGAAGAGTTCAGGCTCTAGAGAAAGA
CTGCCAGGGTTCACGTTTATCACCTCACCTGATGATCTCTGCTGTGATGTTGGGGAAGTGCAACT
GAACTTATTATATTTTTGAAATGCTAACGTCAGTATGTAGCACAAGTTAATAACTATTAACTATTTG
GATTATTTTATAATTTTATTTTATCCTAAACTACTCATTAGGATGCATTTTATTTGCTCATGAAAGAG
AAAATTATGATTGTTAATTGTTTTTTTCTGCTTTCAG (SEQ ID NO: 823)

878. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CFHR3. In some embodiments, the sequences from gene CFHR3 comprise or consist of:
AAAAAAGAAAAGAGGTTTTGCTAACCCTTTCAGAGCATTGGGAACACAGCCAGAAGTGCATTAAA
TGTATATATTAACTTGGGCAATGTTGACACTTTAGGATGCTGAAGCCAGGTGCAGTGGCACACGC
CTGTAATCCTAGCACTTTGAGAGGCCAAGCTGGCAATCATCAGAGGTCAAAAGTTCAAGACCAGC
CTGTTCAACACGGTGAAACCCTGTCTCTACTAAAAATAGAAAAACTAGCTCGGCATGATGGCGTG
CACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGTGGGAGAATCACTTTAACCAGTGGGGCAGAG
GTTGAACTGAGCCAAGATAGTGCCACTGCACTCCAGCCTGGGCAATAGAGTGAGACTCTGTCTT
AAAAATAAATAAATAGGATGCTGAAAATTCCTATTTAAGGAAATAATTCTTTTTCTGATTTATTTAAG
GCTACATTTGTATTTTCTTAATACAAATATTTTGAAAGTTTCT (SEQ ID NO: 824)

879. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene C4BPB. In some embodiments, the sequences from gene C4BPB comprise or consist of:
TGACCTGACAGGAGGTGGAGCTCAGGCAGCAATGTGAGCAAAGCAGAGTGGCTATAAATACAGC
TGAAGCTTTGCTTGCCTGCCCGCTGCTCACTTTCTGCTGTGTGGCCCAGTTCCTAATAGTCCGTG
GACCGGTACCGGTCTGTGGCCCTGGGGTTGGGGATCCCTGTTATAGAGCAAAGCACATAAGCAC
AATGCGTGAGAATTGGAAAAGTCTCTAAAATTCTTCTAGGCTCCAAAACTAAACAAACAACACTGA

ACAGATCCATTTTCATTGAGATTCTTCTTTTAGTTCATATTTATTACTGGGATAATATTAATAAGTAT
ATTTAAGCCAGAAAATATAAATGATTTGCCATGTTGAAAACCCAAATCTTTACTTAAGCTAGCCTG
GTTCTGAGCCCCCATTCAGAGAGCTAACTGCTGCTCACTGGCTTCAGAGTATATAGCTGGGTCTC
AGTCCTTATGTTGTAACTTGTGAAAAATTTTCTTTCTTCAG (SEQ ID NO: 825)

880. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene C4BPB. In some embodiments, the sequences from gene C4BPB comprise or consist of:
TTGGTTTCAGATTTACCTCTTATTGGGCTGAAATTGCCAACAGCAGTTGTATAATGCACCATGTGT
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATGTGTGTGTGTGTGTGTGTGTTGTTC
TCAGAATGTGAAAAGGCCAAATGTAGTGGTTGTCTAAGGCCAGAATTAGCAACATATTATTGGAG
AATAGAGGGCTTAATTTCCAGTCTGTAAGGAGAATGGAAAACTCTGATCTCAGCCGAGAGAGTAA
CTCGTATTTTAACATGAGACCATGAATTATGAAACCAAAACTAACCGCAACTTATGAGGCAAAAAT
TAACCTTCCATTTTGGAAAAGATGCTTAGAATAGTTACATCCTTAAAAATGACCCACTGGGACAGA
AGGAGAGCTAGGACCCAAATTCTCCTCCCAGTCTTGCCCACATCTGGCTTACGGAAACAGGTTTC
CAAAGCTGCAGGAAAATTGCTTACTGCCTCTTGAATGAAAC (SEQ ID NO: 826)

881. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene EPHX1. In some embodiments, the sequences from gene EPHX1 comprise or consist of:
AAGGCGGCAGCGGGGTTGGAAACCCACCCCCACACAGTCAACACCTGCTGTCACACCAGGCTA
ATCAAGAACACTTTTCTTTGGTGCATTAACCACCTGCTATTAAATAAAGGGCTGTTACTAGGTGGC
AAAGTAACACACTGCAGTAGAGCCTATTTGTAATCTGAGATCAGTGGCTGTAAGGCACCATCCTT
GAGCCAAGCAAGTACTAATATTCTTGTTATCTTAATTAGAATGCAAGAGATCGTGTTTTTAAAATTC
TCTTTGAATCTGTCACTTTGCCCTCCTCTTCCTGGGTGATACACCTGGTAGTGCTGGTGGGGGCC
ATCATAATGCCCCTTGTCCCAGATTCCCTTCTTTTAGATGGGACTCGAGCACTGATCATTTCAGCC
CTGTATCTCTCAGGTCAGCGTGGTTCAGTTTGCTGTGCAGAGTCCAGGGGAGATAACCACGCTG
TGCACACATGAGATTGGCTGACTTGGCAGGACTGTGCAATTGT (SEQ ID NO: 827)

882. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene EPHX1. In some embodiments, the sequences from gene EPHX1 comprise or consist of:
TAAGGAGGGTGGTTTGTAAAGTTCACTGGGGAGGGTGATCCCTCTTTATTGTTCTAATATTATGCT
CGCAGCCTCCTTGACAACATCATGCAAAATGTGTCTTACTAGCTTCTAGTGCATAAAATATTGGTG
GAGCTCTTCGCTGTGCTGGGCCAGTCACCAGTGCTGGGCACTGTGGGTCAAGGCAGTGCCCAG
GACGGGCACAGCCCTGCCTTCCCAAGCTATGGTTTATTGTGGTAGGATCTGCCTGCCCAGTGAA
GTGTGTTCAGCTGCTCCTGTTGCTGGGGGAAGCTCTGCTCTCTGCCTTCGGCTGCCTCCCACAC
GCTCCCATGTGTCTCCCAGTCCCTAACCCCTAGTCCTGCTTTCAATACCGCAGGGGCTTTTAGCT
GACTTTTCTCCATCTTCTTAAAGGGCAGGATTTCCTGGCAGAGACATAACGTCTTTCTGGAAATGA
AAGAAGCTGATGCATGTTTTTTCTTTTCTGAATTACTTAAATAAG (SEQ ID NO: 828)

883. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RBM34. In some embodiments, the sequences from gene RBM34 comprise or consist of:
ATGAAAGCCTGCAATGTACTTTGGAGGGTGGATGGGTGACTTATTTACTGTGTCAGCAGAATAGA
CTGAAAAGTTAATACTGATTATCATTGCTGGAATCCTAGGCATTCTCTTCCTATGTCCCATCATAC
ACATTAGTATGGGAGGTGGGTATGATTGCTGCAAACAGTCTTTGTTCTCTGAGCACAGACAGATA
AAGAATTTATGTCAATTTAATATTAAAACTTTATAGAAGTGAGTTGGATTTTACCAGCTCAGCACTC
TGAACCAGTTATAGCCACATTCTTTGGAGCAGGAAATAAGTATCATTTATATTTGGTTTTCCCATA
CATGATTTTTTTTTTTAACTGCATAGGCATAGTTAGTTGACGTACCATAGTGTACATTTTTGGGCAC
TATTACATAATTAATGTATATTAGAATATAGGAAATGTTTATTCTATTTTTTTTTTTGAGACAGAGTC
TCGCTGTGTCTCACCCAGGCTGGAGTGCAGTGGTG (SEQ ID NO: 829)

884. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RBM34. In some embodiments, the sequences from gene RBM34 comprise or consist of:

CCTACTTTCCTGAAATGTTCTTAAAAACTGGCAGTAGGCCGGGTGCGGTGGCTCATGCCTGTAAT
CCCAGCACTTGAAGAGGCTGATGTGGTTGCATCACCTGAGGTCAGGAGTTTGAGACCAGACTGG
CCAACATGGCGAAACCCCGTCTCTACTAAAAATACGAAAATTAGCTGAGCATGGTGGCGGGCGC
CTGTAATCCCAGCTACTTGGGAGGCTGAGGTATGAGAATCACTTGAAGCCGTGGGGGCGGAGG
TTGCAGTGAGCTGAGATCACACCACTGCACTCCAGCCTGGGCGAAAGTGCAAGACTCTGTCTCA
AAAAAAAAAAAAAAAAGCCTGGCAGTAGAGGATTATCAGACAATTTTTCTTAATTCCTTTTTGTAGCA
CTTATTTGATGTTCTGAAGGTCAGCTAATGTGTATTTTTTTTTTTAATTTTAGAAGCTGAAGTCGTT
TTTTAAAGAGTATGGACAAATAGAATCTGTACGATTTCGTTCTCT (SEQ ID NO: 830)

885. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KMO. In some embodiments, the sequences from gene KMO comprise or consist of:
TCATGAAATTTAAATGTAAGACCTTTTTGTCCAGTATAGATAAGTTCTGAAATAAGGCAAAAGATAA
AGTAAAAAATATATATATAAATATATAATGTATGTGCATACATTATATATGTGTGCATATACACACAT
GTACACATCTAGATATGTGCATGTGTGTGTACATATATACCAGGTATAATTATACCAGCTATGATT
CAAGATTTGAGAACATAAGATGTTCTCTCTGTCTTTTTCCTTACATATACACACACACGCACGTATT
CTGAAATCTTGAAATATACCTGGTATCAAAAACCTACCTAAGGTTGAGTTTATAAAGACAGAACAC
AAAGTGTTTTCTAAGACAACTTCTATTTTATGTAGCAATAGATGTGCGTATCATCGTGTAGATGCT
ACTGGTTTTAATTACTGTGGAAACTATTATAAAGCTGAGTCCGTTTTATAGGTTTGCTATATGAATG
CACTAATCAATCATATATTCTTTTTTCTGCAG (SEQ ID NO: 831)

886. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KMO. In some embodiments, the sequences from gene KMO comprise or consist of:
TAGTATAGAATTTTTTATCAACTGTAATTTTGCATTTGTAATTAATGTTGTTTATTACTTACATTTGTA
CTTAGAATGTATCTACCTAATTGATCTCTTCATTGTTTAATCCATTTAGTGATTATAGCTTTGAAACT
TTGGGATTACTGAGGAAAAATCTGAAGGATTTCCAATTATTTACTTTGGAAAGGAGATTTAACTTA
CATGAATGGATAACAAGAGTTTATGTGTGGTGGTGCCTGTCATCTCCACTAAAGACAATTTAGGA
GGAAACAGCCCTTCCAGTAAAGCCAAAGAGATTTAGGTTATCTATCAGGAAGTGATTCAGCCTTT
AAGGTCTGTAGTACATTGGAATACGCATTATCAAAAGAGAGCATGGGGATGGGCGCAGCGGCTC
ACACCTGTAATACCAGCACTTTGGGAGGCCAAAGCGGGAGGATTGCTTGAGCTCAGGAGTTCAA
GACTGATGTGGCCAACATAGCAAGACCTTGCCTCTACT (SEQ ID NO: 832)

887. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RMDN2. In some embodiments, the sequences from gene RMDN2 comprise or consist of:
ACTTGTCCTAGGAATATCACCAGTTGTTTTTGTTCTTGAAAAGAAAAGGATAGAGAAAGAAGACTG
AGGAAAATGATTATGTAAAGAAATCTGAAAACCATAAAGTATCTCATTGCTTTGTAAGCTTTATGAC
CATGGTAATCAATTTTATTTTAATGGCTAAATGCAAAGGCTATGTTTCCACCCAAAAGATACTTAAA
CTGATCAAGTGATTCAAATGTGAAACAACCAACCTAAATTCTTAGGGCAGTTTGGTTCATAATATT
TGATTTATTTAAATATATTCTCTTCACTTGTGGTTACTGTTATTTTAATATTGCCCTGTTATTCTCTC
ATGTTTTTCTCTCAAATCAGGCTGAAGAACTATGCCCTGGTTATTCTAATCCCAATTACATGTACTT
AGCAAAGGTAATGAAGACCACTGTTCTGCTTTAAGATCACTTTGAACCTATCGCATAAAAACGGAT
TATGTTTAATATTGGTTATTTCTCATTTCCAG (SEQ ID NO: 833)

888. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RMDN2. In some embodiments, the sequences from gene RMDN2 comprise or consist of:
TAAGTCCAGAAAGTGACAGTGAGTGCTGTTGTCTTGTTAGTACTATTCGAGCTCAAAACAGGAAT
AACTCGCTTAGATACATTTGTAGTTTTCTCTATTCAATTTTATGTATTTATTTTTATTCTACCTTTATT
GAAGTATAATTGACAAAAACTATATGTATACAGCATGATGTTTTGATAGACATATACATTATGAAAT
GACTACCACAATCAAGCTAATTAACACATTCATCGCCTCACATAGTTACTTTTTTTATTGTTGAGAA
CATTTGAGATCCACTCTCTTAGCAAATTTCAAATATACAATACAGTATTATTAACTACAGTCACATT
GCTGTCCTTTAAATCTCCAGAACCTATTCATCCTGCATAACTGAAACTGTGTACCCTAGACCAATA
TCTCCCCATTTCTCCCACTCTTCCAGCCCCTGACAGCCACCCTTCTACTCTCTCCTTCTATGATGG
AGTTTTCTTTCTTTTTTTTTTTATTATACTTT (SEQ ID NO: 834)

889. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SPTBN1. In some embodiments, the sequences from gene SPTBN1 comprise or consist of:
GCTCGCCGGGCCGCCGCCGCGTGGTTGGCGCCAGCGCACTGGGGCAGTCGCGCGCGCCCAG
GTGCGGGCCGCGTTACCTCAGCAGACGCTAGAGAGTGAATGAGCCGCGCGGGCCCGGGACCC
TTGGGGCTCTTCACTCTCCAGGCCGTCCCGTGGGCGCGCTAGCCTTTTCAAGTGATAGTAATCG
GAGACTTTTCCGTTACATGAGGCTCAACAAAAGATTGTAATTCCAGCAGCTCTGTTTGGGAAGGC
ACTACCGCGGCGAGTCCAGGGCCCGGCCGGGGGTCGGCGGCTGCCGGGCGGCTGGGGCGAC
CGCGGACCGTGCGGGACCGGTAGGGGGTCGCGGGCCGGCTAGGCTCCCCCGCGCCCCTCCTC
GTGGTATAGCCTGCATTTCTAATACAATGCTGTTATGCTAATCAGGTGACATCACCGCCCAGCAC
ACGGCGAGTGGCTCCTGATAAAATTACAAACCGGCGGCCGCCGCGGGCAGCTGGGAGGA
(SEQ ID NO: 835)

890. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SPTBN1. In some embodiments, the sequences from gene SPTBN1 comprise or consist of:
TAAGCCCCCTCCCAAAGGCCGGGCCTGTCCTGGGTGCCAACGGGGGTTCTTGGAGGCTTTATTT
GTGACCCTAATGAAGACGGGCGGCTTCACAGCTCGGCCCCAGACCCTGTGGTTGGCTGCGGGC
ACCCCATTCACGACTTAGGGAAGGCAGTTGCTCATACTCCACTCCAGAAGAGCTACCATTTGGAG
TCCCTGTCTCTCCAGCACCTTTTTGGCTTTCTAGGTTGTCAGATAACTGCTGCACACACATTTTCT
TTACTTTTAGCTAACTTTACCTCCTAGTAGATCAGTGCTCATAGACTTATTAGTATGCAGGTATTTG
ATTCCGGGTCGCCTCTGGCTCCCAGCCCCCAGCCTCTTACCTCTGGGAAGCTTTAAAGGTGTAA
AGTGCCGTGCTCAGACCCAGTCCTGTAGAACAATAGCAAAGGGGAGGAGGGAGGGGTCTTTTTG
TTCCTAAGCCTTTGGTAAATTACAGTTTTTTATTCAGAAGCTTAAT (SEQ ID NO: 836)

891. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NFU1. In some embodiments, the sequences from gene NFU1 comprise or consist of:
GTGGGTAGTGCATCTGATGGAGCCGGCGGGTCCGCCCTGTCGCCGTAGTTGGGGGTGAGCCCT
GAGGCTGTCTGTGCGGGAGCTCGGCGCTTCTGTGGCCTAATCCGGGCGGACTCTCTGGAGCTT
CCTCTCAGGCTCAGAGACCCAGTTCTTGAGTCTCTGCGGTACGGAAGCTTGTAGAGACTGGCTG
TAGAGCCAGAACGGAGGAGCTGTTTTAAAATCGTGTGCCTCTCCCGCCCCCAGGCCCTCTACCG
GGTGCATTCCCTCCTCTTCTAAACGCAGAATCAGAATGTCACACAGAAGGGAAGAAAATACCTTG
TCTCGTTTCCTCATTTTCCCAGTAAGGCCCTGAAAGAGGAGGTGACATGTCCAAGGTTACACAGT
TTCTAAGTGATGGAATTCCGACGAGAACCAGGACCCCTAGATTCCCTGCACCCACCACCATTAAG
CCCACTCTGTTCCCTTGTTTTTTCCGCCTCCCTGAGCCCTACCTTTGAGT (SEQ ID NO: 837)

892. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NFU1. In some embodiments, the sequences from gene NFU1 comprise or consist of:
CGAGAACCTTTTAGAAGGAATGCTCCAGGGAGTCTTTGGGGGCAGTCACTGAGCTGGGCCTGGA
GGCTGAGTAGGGTCCTAGAGGAGGGAATGGGTCAGGTTTAGGGGCTGGAAACAGCATTCGCAA
GGCAGCACCAGCACCAGCTAAAAACCTAGCCAACAGGGAAAACAAAGTACGGAAACACGCATGC
GTTCACAGTGCTGCGTGAATTAACCAAGCGTTGGCGCAAACGGGAAAGGTTCCCCGGCCTCTCT
TGGTCAGGGTGACGCAGTAGCCTGCAAACCTCGGCGCGTAGGCCACCGCACTTATCCGCAGCA
GGACCGCCCGCAGCCGGTAGGGTGGGCTCTTCCCAGTGCCCGCCCAGCTACCGGCCAGCCTG
CGGCTGCGCAGATCTTTCGTGGTTCTGTCAGGGAGACCCTTAGGCACTCCGGACTAAGATGGCG
GCGACGGCCAGGCGGGGCTGGGGAGCTGCGGCTGTTGCCGCCGGGCTGCGCAGGC (SEQ ID NO: 838)

893. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PCBP1-AS1. In some embodiments, the sequences from gene PCBP1-AS1 comprise or consist of:
GTTGGTTGAGGGGTTTAACAAGGCTAAGAAGGTGAGTCAGGTTTAGACTTTGGAAGTTGAACCAC
AGGATTTATGCTACATACAGAGGAATGATTGTTGCTTCCTCTTATGTTAAGTTGGTATGTCACGTA

AAACCTTTCAGAGTGCTTTCACGTTACTTGTTTAATCATCACAGACAACTTTGCCAGTAGGGTCTT
ATGCCCATTTTACAGAAGAGCCATTTTTGGATTAGAGGAGTGAAGTGACTTGCCCAACGTTACAC
AGCCTGTTAGAATTTGAGCTGAACCTCTTGACTCTTAGTTATGGATTACACCTTTCCATGGCTTCT
GATGCTTTTGATATGGACTTTGATGTGTGGGATAGCTTTACCTTAAACTCAAAAGGCTTTCTAGCC
AGTTACTATTTTTCTGTCCCCAAACAGCCAATGCATTTACCTTAAGTTCCTAACTCTTGTTTTAGAA
AATCTCTTCCCTCTTTTCCCTGATGTTTACATTTATGG (SEQ ID NO: 839)

894. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PCBP1-AS1. In some embodiments, the sequences from gene PCBP1-AS1 comprise or consist of:
CTACCTACTGAAATATTTCCATAATTTCCTGTTATGTACTCCTGGGACTTAGTGCACCTCCTCAGT
GAAGCCTTCCCTTTCCCAGCTTCCCCAGCTCTTAGCCTCCCTCCTTCCCCGAGAGTCTTAACAGT
TTCTCCCTTCGGTAGCCCACGTTTGGACGTTGGTTAAATTGTAATGTGTCTTGGGGTTGGTAACA
TGTCATACAGACACCTTGGGTGATGCTGTGGTCTGGCAAAGAGGTCATTGGACCTTGGAATCTG
AGGCTCTGGGCCCTAGTCCTAGCTCTGCCCCTGTCTAGCTCTGAGACTTCTACAACTCATCTGTC
AGGGTTTCAGTTCTCCCTTTTATAAAGCAAGAGATTAAATGATCTCTAAGGGTCCTTCTACTTATG
TCCAGGGACTGATGATATTTGATGACTTTGGTTATTTTTCTTTGGCGGGGTGGGAGGTTTATGTAA
ATGTTTTCTGCACTTTTGGTAAAATCTCCACTCCCTTCCTCA (SEQ ID NO: 840)

895. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IL1R1. In some embodiments, the sequences from gene IL1R1 comprise or consist of:
TCCTTAAGTGAAAAATCTGTGAGGAGTTTTCTATCTTTCTAAGTCTTTGTGGCACACTTATCACAT
GCATAGTACTATTTCTCAAGTTACCCAGGCACACACAGATGTATGGCTTTCAGGAAGCCATACAT
CTGTGTAGCTCTGAGGCCCAGCCTTGTTCAACACTTCACTCAGAAGAATTGCTGGCCTGATGACC
AACAATAATTGTCAACAACTTAAAACTTCATTGACGGCTCCTAAAAAAAATCAGTGTGCATGTGTG
TGTGTATGTGTGTGTGCGTGTGTGTGTGTGTGTGTGTATGAGTGTGTGTATAACATTCATTACTG
CAAACTGGAATGGAGTGGGGCTGGAAGGCAGCCCAGAAGCAAGGCTCAGAGCCTGGAGCTGCT
GACCTCTTGGGGACACTGCAGCCCTGGCCTGGCCTACTTTTCTCTTCTCCCATATCTGGAAAATG
AAAGTAGCCTGACGTATCCGGGGACCCGGCCCAAGACTCCACCC (SEQ ID NO: 841)

896. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IL1R1. In some embodiments, the sequences from gene IL1R1 comprise or consist of:
TAAGGTTTTAAAGGGCCCGCCCTGGCTTCCTTGGGCCTGTAGTTTGTGACTGTGTCGTTTTCAGA
GTGGGAAGGCCCAGAGTTGGCCCCATGGAATTCTTTCTGCTTCTAGGGTGTTTGAAGAGATAGA
AAGCCAGGGTAAGGTTCACCGAACCTCCAAGCAAAAATAAATTTCCAGAAGGGGCCCCTTTACTC
TGAGGACATTGAATAGCAACAAAAACTACCACTGAAGAGTCATTTTGTCCCAGGCCCTGTGCTGG
AAACTTTGAACACCTGTGTTCACCCCTCCCTCATGACACTCATGAAGATATACCATGGCTGTCTTT
ATTTTCTAGGTGGGAATCTCAGGCTTGAGGGTTGGGGTGGCTTGGGGAAGGTGTGTATCTAAGA
GGTAGCTCTTATTTATTTTTACTTCTAGAGATTAAGACACATTCTTTTTCAAGATAGACATGGAACT
GTCAAAAAGGATTAAAAGTTAAATAAGGATAAGGTTATGTAAA (SEQ ID NO: 842)

897. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DBI. In some embodiments, the sequences from gene DBI comprise or consist of:
AGCGCGTGCACAGCCAGGCTGCGAAGGTGCAGCGGGCGGGAGGCCCGTTGGGGGCTCAGCC
GGCTGCCAGAAGCTCTCGGGCTCTTTCCTTCCGTGCCCCTCACTTGCTCATGGGCCCATGCCTA
GCCCTGATTCGTTGGACAGAGCCTTGTGAGCGGGATTTTCCGTTTGGGGATTTCTAAATCTGCTG
CCCACCCCGCAACTGCCGGAAAGTTGCCCATGGGGTGGACTTCGCTGTGTAGCGGGAGAGGGG
TGGGAGTCGAGGGTGCTTGATGGAGAGATGGGGGAAGGGGTTGCACGGATTGGAGGAGCGAG
GAGACTCAGTCCCCATCCCGAAGCACAGGGCAGGACGTCGCGGCGGAGTGGGGAAGCGAGGA
GTCCGTGGCCGAGAGCTTGGAGGTCAGGGGAAGTACGGGGCCGGCTGCTCAGAGTGCGGGAC
GAGGAGAATCGCGGCCCGGGGAGAGGTGACCCAGGGGCCCCTCCCTTCTCTCCAGTGTAG
(SEQ ID NO: 843)

898. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DBI. In some embodiments, the sequences from gene DBI comprise or consist of:
TCGGTGTTGAACGCGCGGGCCCCAGGGGGAGGGAGGGGACCAACGGGCTCCGGCGCTGACAC
CGCGGCACTCATGCCCTGTCCCCTTTCAGCTGTTTCCAGCATACTGTGCCCCGTCTGTCCTCAG
GCCAGGGCTTCGCTGCAGCCCCGGCCACTCCCTAGTGCCTGGCCCGGTGGTGGCCAGGCAGTT
GGCCGCGCTGCTTCTCCCGCAGAGGGGACCCCCACTGGGGGCGAAGGCTTGGCCTGCCCTCTT
CACTGCTGTATTTCCAGACCTGATGCCTGCGTTTGTGAGAGCTCTGGATATATGGTTTTCGATTG
AATGAGTGAACTGGAGGGGCTTCCCCTTCTTGTGTTGCTGAATCTTTCTAGCTGCCCTGTTGGGG
CAGGGAGGGGCAGACACACTTCAGGGGCTGCATTGCCCGAAGGGTGCCACCTTTCCCACCTCT
CCATCCCCGTAACTGGGCTGTCATCAGGCCACAGTAGGATTCTTACCCTCTCCC (SEQ ID NO: 844)

899. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HNMT. In some embodiments, the sequences from gene HNMT comprise or consist of:
TCCCTAGAGTTGACTATTGCCTTGATTTTGGTTTCTTTTCTTAGTTCTCCATGTACCTATTACTATT
TTGATCCCCAAGCAGATATATTAATCTCCTCTCAATATATGCAAACATATCAAGGAATCTGTTTATT
TTACCCCAAGGGAACAACTTTTCTGAAGCCCTCTGTTCTTTTTTTCAGTTTAGGAAGATCTGCTTT
GGCCTGCTATACAACTATTAAGGAGGGAATTTATTTCACTTTCTGAGAATCATTTTCTTTCTCCATT
ATTTGATTCCCTGATTCTATATCTCATGCCTTTCTTTTCTTTGTTTCCTCGGTCCTTTGTTTCCTGA
ACAATTCTTTAAGAACTTTAAGAGTGAACGAGAGGTAAACTTTTTGAGACTTTGTATGTTTAAAAAT
CCCTTGGTTCTATGTTAATCGTTTGACTGGATATAGAACTCTATACTGAAAATGGTTTTGTATAATA
GATCTAAAGGTACTTTTCCACTGTCTTTTAG (SEQ ID NO: 845)

900. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HNMT. In some embodiments, the sequences from gene HNMT comprise or consist of:
CCTTGGCATGTGGAATAACTTTTACATTGCTATGTGTTTTGTTTTCCCTATTTTGAACTTTTTAGAA
TCTTCTTACGTCTAGTATTCTGAAATTTTAAAATACTGAGCTGTGAAATGGTTCCTTTTTACCCATT
TTATGGGTACTCCCTGGGCTATTTCAATTGAGATTCAGATCCTTCAGTTATGCGGAACTTTGGTAA
TCATTCTTCACCACTGTTTTCTTTTTCTGGAACTTTTATTCATCAAATACTTCCTGGATTGATTACCT
AATTTTCTTATATTTCCAGTTTGCTACAACTTTCCTCTTTCAGCCCATGTATTAACTTTTTACTATTA
TATTTTTAATTTCCAAGAATGTTTTCTATAGCATTCTTTTCATCATTCCCAGATGTAATACCTTCTTA
TTCATTACAAAATGTTCCTCTGCTCTCTCTGCCTCTTTCCATCTCTGTTTCTTATGTTAGACAGCTC
CCCAACCACCTAAAGAGCCTTGGTTTTC (SEQ ID NO: 846)

901. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KYNU. In some embodiments, the sequences from gene KYNU comprise or consist of:
GATCTGCCCACCTTGGCATCCCAAAGTGCCAGGATTACAGGCGTGAGCCACACACCCGGCATGT
TTTCTTTTTTTTGGAAACAATAACAGGATATCAGATTGATAAATGCAATACCAATTTCTGATAATTTAT
CTTGCTATATAATACTTCATGGACTTCTTGCACTTTGTGGTGTTTTATTAGTCAGGAATAAGGAGA
AAACAACTTATAGCTGTGGAAAGAGTACAAATTAATTTTTAAAAACTGGAGAATAAATCAAGCAATT
CGGCTTTTGAAGACTTTCACTTGAAAAAACACTTTTTACTTTTTAATTATCATTTCTTAATAATAAAA
ATTATGCTCAAATGCTGCTCTTATGCCAGATTTTTAAAGAACCTTAATCTGAAAAAAAAAAACTATTT
TATAATGCAAAAGGGCTCACGGTGAAATTTAGATCGGCAATATGAAATTACAAATTTATTATTATC
GATATGACCTAACTTGTGCCTAACTTGATTTAG (SEQ ID NO: 847)

902. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KYNU. In some embodiments, the sequences from gene KYNU comprise or consist of:
TATGCACGCCATTTACTTCTTCCCACCTTACTCCAAACATCACTCTACTTAAGAGTGTTCTAATTG
CATGACTTGTGAAGTACTTTAGCTTGTGTCTGAGTAAAACTATTTCAAAAGTTAAAAAAAAAAAGA
GTAAACCTTGGGCCAGGCACGGTGGCTCACGCCTGTAATCCCAGCACTTGGGAGGCTGGAGCA

GGGGGATCACGAGGTCAGGAGTTTGAGACCAGCCTGACAAAAATGGCGAAACCCCATCTCTACT
GAAAATACAAAAATTAGCTGGGCATGGTGGTGGGCACCTGTAATCCCAGCTATTCGGGAGGCTG
AGGCAGAAGAGTCACTTGAACTCGGGCGGTGGAGATTGCAGTGAGCCAAGATCGTGCCCCTGC
ACTCCAGCCTGGGCAACAGAGCAAGACTCCATCTCAAAAAAAAAAAAGCGAGTAAATCTTACATT
TTTAAAAGAAAATCTGTAATCTTTTTTGCTTCAGGCATCTCTATTTAA (SEQ ID NO: 848)

903. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GRB14. In some embodiments, the sequences from gene GRB14 comprise or consist of:
GTAAGTTTGGTATTTTTAATTTTGAGTACTTGTGAATTGGATTTCTCCTATAAGCAGAAATTATTTAT
TCCATAGCCACAAAGAGTTCTTGATTTGGGCTTATCATAAAACAGAAGTGACATTGTTCTATAAAT
GAGGTCATCACTGTATTCTAACAGTATCTATATTATACCTGGTACATAGTGTGTGTCTGGTATTTG
TATATAAATGGACAAATAACGGAATAGAGTATCTTGTTCTTAACCAGTGATCACTAATATTACCCAT
TATGTCCTGATTCTAGCATCTCAGATATCAATTGATGGGGGAAAATGAACTTCTTTTTAAGTGTCA
ATATTTTGATTTGAACATATGATTTCGAAGTATGGTTTATATTATGACATTATGTCAAATGTATTTTT
TTAGGTATGATGCAACATGTATTAAGTAAAAAGCTGTTTCTTAAGTGTTTTGAACACTTATTTTTTT
GTGTGTTTACATCCCTATTGTCCTTTCTCTA (SEQ ID NO: 849)

904. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GRB14. In some embodiments, the sequences from gene GRB14 comprise or consist of:
AAAAACACTGAGAGAAAAACACTGAAATTGAAAAACACTTTCAATTTATTTGAAAGATAACTTTCAA
AGAAATTTTCATAACTCAAATGTGTTTCTTTTTTCCAGAGAAGTATATCAGAGAATTCCCTGGTAGC
AATGGACTTCTCAGGCCAGAAAAGCAGAGTTATAGAAAATCCCACTGAAGCCCTTTCAGTTGCGG
TTGAAGAAGGACTCGCTTGGAGGGTACAAGTAGCTTCACATGCTTCAAAATATTTATGATTTCAGT
TTGTTTCACCTAAAAACTTGAGATTTGTTTTCTCCTTCCTTGCTCAGAAAAAAGGATGTTTACGCCT
GGGCACTCACGGTAGCCCCACTGCCTCTTCACAGAGCTCTGCCACAAACATGGGTATGTCTGTT
CATAGTCATTGCCACTGAGTAGACGGATAGACATGGAAAGGACATGTAATGAAATTGCAGTCATC
TCAAACAAAGCTTTGCATTCATCCATCCTATTTCTTTA (SEQ ID NO: 850)

905. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SPATS2L. In some embodiments, the sequences from gene SPATS2L comprise or consist of:
TCAGAAACAGTTATTGGTATTGCCAAAAAAAAAAAAAAAAAAGGAAGCTAAGAAGTCACCCTTCTA
AATAAATAAATAAATAAATAAATAAATAAAAACCTGAATTGGAGAGCTGCCTGCATTTCACTCTACT
GCCTCTGGAAGAAGAGTGTTATCTAAAGTGCTTCCATCATGAATAATGATTGAGAAACTGCTTTTA
CTCTCCCGACTACTGTACTCCCAGGCAGAAACCCACGGCTGAAGCCCACGATGCCCATGTGTAA
CTTGGTTATTACACACACGTTTGGAGCCCAGTGTGCAGACCCGCAGCGCAGAGGAGGCGGCGG
AACACCCCGGGTTGGTCGGGTTTCCAAGGGCTGACCCGAGCTCCAGCACTTTTTCCGCGCCTGA
TTTTTCAGGTCATTTTCGAATGGGCTATCTTTGCTTACATTTTGAGCTTGGATCCTCTCCAGAAAG
CATTACTACCTTCTAAAAGGAAAAACATCTCGTATTTGCAGAC (SEQ ID NO: 851)

906. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SPATS2L. In some embodiments, the sequences from gene SPATS2L comprise or consist of:
TAGGAGAAGATGATTCTCTTGCAACACGTGCGGATTGTGACAAAATCTTTCATTAACAAGGGGAG
TTTCGGTGAAGTGGAGGTTTGGGGAAAGGCGAGGAAGTCGGTCTGGAGCAAGCAAGCAAAGTG
CGGAAGCTGTACTGGGATTCTTCTAGAAAGTGGGGTGGGAAAGGAGCTAGGGAGGGCGTGTGG
AGGGACGAGATCTGTGTCAGAACGTGCGTGTGAGCGGATACAAAACCCGAGAGAGGCGTGAGC
AGCGCTGTGTTTGCGAGCGGGAGCGAGGGGCGCCGGCTGGGGTGTGTGCTCCTGGTGAGTGA
CACCGAGGGGAAGGCGGGCGGGTCGGCGGGCGGGGGCAGCCTGCGAGGGGCGGGAGTGTCC
CTGCGTGGGGCGGCCGAGCCGGAGTTGTGTCAGTGAAGGAATCCAGTCCGGGGGCCGAGCTG
GCTGCGCCCTCCGCTGCAAGCGCCGGCAGCGCGGGGCGAGCTCCGGACGGCGCGCGGCCC
(SEQ ID NO: 852)

907. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CPS1. In some embodiments, the sequences from gene CPS1 comprise or consist of:
AGGGCTGAGGATCGCTCCATCTTCTCAGCTGTCTTGGATGAGCTGAAGGTGGCTCAGGCACCTT
GGAAAGCTGTTAATACTTTGGTAAGGAGAGAAACAAGTATCTGTTTCTAATGTTCTATTTTGAAGA
GCTGCAACCTGAATGTTGACTGAATGTTGACTATTGGATATGTTAACTACAGGGCAGATAGAATG
CATACACTTAGTGAATTTAAAGTTGTTGTATATCCATGATTGCAGTTAATGCTGATTATGAGTTGAT
AGCAGTATTCTCATTAAGATTCAGACAATGAAAATAATTTCAAACCAGTTTTGAACAAGATTTGATA
TTTAGAATCAGAAGCTAGGAATTTTATGTATTTCAGTGTCCAATTTACATTTAATGGTGCCTTTAGA
GAATAAAGAAGCTGGGCTACCACTCGAGCTAATGATACATTCTGTAATTTTATTGCATATTTTAAA
CTACTCATACATTTTTATTGTTGTTTCTATTAATTAG (SEQ ID NO: 853)

908. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CPS1. In some embodiments, the sequences from gene CPS1 comprise or consist of:
TAACACTGTATATTGTTTTCCAAAACAATGATTCAAAAATTGGGAGATACAGAAATGCATGCTGTA
TGCTAATAGCACTAGGGTTCTATATGTAGTAATTTATAAATCCATTAACAATTTCCAAACCATCACA
GCCAGTTTAAGGACCAATGTGTGGTCTTCTAGTTTAATGCTTTCCCTTCAGGGAGTGGCCATAGG
AAGACTACAGTTCTTCATCTAGAAGTGTAGTGTAAGGCATCTCCTTACCAAACAGAGAGGGTAGC
TTTATATTAAAGAACAGGACAATTTAAAAAAGACACACAAATTGAGGTATCTCTCGCCAGCGTGTT
TTCTGATACCCAGAAATGACAGCTTATCTTTGACTATTGTCAGCACCTTCTGATAGTGCCTTTGTT
TTAAAATTTTCAGTTTTTGAGATCCGATTGTTTAATAGATAAATTATAAGGGTGAGGAACAGGAAC
AGTGAGGATCTTTTATATTAAACTTTAAAACAAAGTTT (SEQ ID NO: 854)

909. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PECR. In some embodiments, the sequences from gene PECR comprise or consist of:
GTAGGTAAACGATCTATATTGAAATTTATTGACAAATTATGCTTTCTGATTCCATTTGTGATGTTGA
TAGAGGTATTTGGTAATAAGCAAGTATAGCATAAAAGATTGACTTTAAAACATAGATAAAATGGAA
AGCCTAATTTTCTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTCTCTGTCGCCCAGGCCGGAGTGC
AGTGGCATGATCGTGGCTCACTATAACTTCCACCTCCAAGGCTCAAGTGATTCTTGTGCCTCAGC
CTCCTAAGTAGCTGGGACTACAGGCACAAGCCACCATGCCCAGCTAATTTTTTGGATTTTAGTAG
AGATGGGTTTTCACCATATTGCCCTGGGTGGTCTCGAACTCCTGAGCTCAGGAGATCTGTTCGC
CATGGCCTCTCAAAGTGCTGGGATTACAGATGTGAGCCACCGCACCCGGCCCAGAAGGTCTAAT
TATCATTATGGAAGTACTCTTTGATTTACAGCCAGATTGTC (SEQ ID NO: 855)

910. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PECR. In some embodiments, the sequences from gene PECR comprise or consist of:
CCCGGTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAAC
TCTTGACCTCAGGTGATCCGCCCGCCTTGGCCTCCCAAAGTGCTAGGATTATAGGTGTGAGCCA
CTGCACCTGGCCTCCTTTGTTATTTAAAATCGATGTTAAAAATAACCACAGGCTTGAAATCCTTAA
AATTACCAATGTGTTTTCCTTTGTAATCAAAGTTCTTTAAAGTATTCCTCTTACGTAGTGATTTGGG
GAGCCTTATCTGGGTCTATGCCATGTGAGATTTGCTTGATCATCAGCTGTGGCTTGGATTTAATAT
TGAAGGACATAGTTTTTTCTTCGTTGTTTAGACAGAAGCTCAACAAGACAGACTCCATAGCAAGAA
GTCTCTTGTGGAATTCTGTCAGGTAGTTGGCACACTTGTGAGCTTGATGAACAAGAGAAATATTC
AACAGAAGCTGATTGTCATGTTTATGTTTTGTCTTTCAAA (SEQ ID NO: 856)

911. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SP100. In some embodiments, the sequences from gene SP100 comprise or consist of:
GTAGTTATTTTCAAATCTTTTCGAAAGGAAAGAAGGAAGGAAGGAAAGAAAGACGCAGGAATATG
TATAAAGGTATAGCAAACATCACACTTAATGGTGCTGCTAAGTGCTTCTTCCTTGAAATTGGAAAT
AAGGCAAGGAAGTCCACTCTCATCACTTCTCTTCAACATTGTATTCAAACTCCTAACCAGTGAAAT
GAGACCAAAAAATAGAAATAATTGTTTGGAAAGAAACAGTAAGTCAGTCTATTTGTTCATGATATA

ATTATTTTCTTTAAAATACAAAGGAAATCTATAAATAATTTACTAGAAATACTACATGAATTTAGCAA
TGCCATAAATTCATGGTTAATATGTTTCAAACCAATTATATTTTCATATAATAGTAATAAGGAATTTG
AAAAGCATTATCATTTAAAGTAACACCAAAACAATAAAATAACTAGGAATAAATTTATTATTTTTTAA
ATTTAATTAAATTAAATTTTTTATTTCAATAG (SEQ ID NO: 857)

912. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SP100. In some embodiments, the sequences from gene SP100 comprise or consist of:
TAAGTAAATGGAGAGATATACAATGTTAACAGATTGGAAGCTCAATGTTGTTGTCATCTCCCCCAA
ATTTATCTGTAGCTTCAATTCAAATCCAAAAAAAAGTCCTAAAGTTTTTTCTTGAAGAAATTGACAA
ACTGATTTGAAAAGATAATGTATAAAAGCAAAGAATCTAGAAAATCCAAGCCAATCTTTTCTAATTG
ACTTCAAGACTTTTGTTAAGCCATGATATTTAAGGCAAAATCTTACCAGCATAAGGGTAGACAAAT
AGATCAATGGTATAGCATAGAAAGTACATATATAAACCCATGCTAATATTGTAAATTGTTTTTTGAA
TATTTTCATGACCTTGGAGTAGGCAAATATTTCTTAGATAGTACACTAAAGTCATTAATTATAAAAG
AAAAAAAAATAAATTGGATTTCATCAAAATTACAGATTTCTTCCCATCAAAAGACATGATTAAGAAA
ATGAAAGAGAAGCTACAGACTGGGTGAAAATA (SEQ ID NO: 858)

913. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TRPM8. In some embodiments, the sequences from gene TRPM8 comprise or consist of:
CTTACTTTAAGGAAGGTCCCTGGAAGTTGTTCATTTCCTGCATAATAGTCCGTTGATTCTTGCATT
TGCTGCACTTACGTTCTAGTTCATTAAAAGAATCTAGGCTGTTCCTTGGGGGACTCATCAAAAACC
CACATTTTTATGTTATTTCAGTTTTAATTCAGTTTTTAAAAATTTATGCAGAAACCACTGAGCAAATA
AAATGCTCAGAAACATTCTGGGTTTTAACCTAGATTGAATGAGTTTGAATGAGTTGAGCCTTGATC
ATTCAACCTTAGTCACGCAGCTCACACCGATAAACTGGTCAGAATACACATCTTTAAGAGAAAAAA
ACATTCTCAGAGCTGCTTCTATAAAAAAAAAAATCTCTCAACTTTGGTGGTATATTTGGATCTATTC
CCAGTATATTCCCAGTATATTTTGAAGCAAACCATATCCTGCCTGAGAATGGAAGTGGGAAATCTA
TTCTTAACACAGTGTTCTTTCTTTGTTTTTACAG (SEQ ID NO: 859)

914. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TRPM8. In some embodiments, the sequences from gene TRPM8 comprise or consist of:
GTGTTGCTTTTGTCATTTTATTGAGAGTGACAAAATAAAATTCCTTAATTCGGTCAGATTCACTTCT
ATAGGGATTTGGTTCCCAGAGTTACATGAACTGACTTCTCTAAGCAGATGACTAGAGCATTCTGA
TTAAATGCAAGCAAATGAATTCCCCCCTCTGGTTCTGGTTCTTGTCAACATGGCCAGATCTGAATT
CTGTGGCCCACTTTTTGGTTTCCCCCAAGTCAGGCATCCATCTGTAGCCCCGGGGACTCCAGAT
TCATTGACTCAGAGCCACCCCAATGTGTCATGGGGCTTTTTTGAGGCCTCATGTGGGCTCACAAA
CAGGTGCTCCTGCTCTATGTTGGGGTCAACACGAATGTTGATTGTCCACAAACCACTTGACAATG
GAGCTTCGGGCCCAGCAAAGGACATGATTCCCTTGTTGTAGGCATTGTCTCCAGAGTGTTCCTG
GGCCCTCCTGCTCCAAACACACATTCATTCCAGGAAGAATCTG (SEQ ID NO: 860)

915. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SEPT2. In some embodiments, the sequences from gene SEPT2 comprise or consist of:
AGTACATTCCTCACATTTGTGAACAGTTATGTTTCTAATTATATGATGTTCAAGTTCTGTAGTCTCA
TAGACCTGGATTCAAATCTTGGCCCTGCTCTGGATAGTACTCTGACCTTGGGCAAATTAGAGTTT
CTTTGAGTACCCTCAAAGATCATACTGCAAACATAGTAGTACTGTAGGTACTAAACACAGAATGAT
GTTTGTGAGGTACTTAGCCCAGTACCAGGCCTTATGTAAACACTTAACCGATTGAATGGTGTCAT
ATGAATAAGGTCATGACAAGGTTTTTCTTTTTATTTAAAGGTGAATCAGGTCTAGGAAAATCGACT
CTCATAAACAGCCTATTCCTAACTGATCTGTACCCAGAAAGAGTCATACCTGGAGCAGCAGGTAA
AAACATTCTTATGTTACTGTAAGTGTAATTCTACATGAAAGATGCTGAAGACTGCCTAATTAATATT
TTATGTCTTAGCTGTGTGTTTTGTTTGTTCTTGTTCAG (SEQ ID NO: 861)

916. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SEPT2. In some embodiments, the sequences from gene SEPT2 comprise or consist of:

TAGGTGTGCTGCACCGAGGTCCTTGGATTTGGGTTGTAGACTTTCTTTGACACGTATCCATGGAT
CCATCCTCTCTTGAGTTTGTCTGTAAAATGTAATAAGTAGTTTCTGCCTATATTAAATATTTGATGG
AAGGATTAAGTGAGAATGTTTTACATCAAAAATGCTGTGTAACTAGAAGATTACTAGGATAGATGT
TCGAATTCATCTACTGTCAGAAAGTTCCAGCACAGGACACCAGCATCCACAAATGACTGTTGAAT
GAAATAGGCACACATAGTGAGAGCCTAAGACTTGGGCTGCTGCAAGAATATGTAGCCCTTTCAGA
ATATTTTTGAATTCAGTTTTTAAATGAATTCGTAAATTGCTTTCTTTTTCCCAGGAACAGAAATTATA
ATTTTTAACATTTGTGTTTTTTAACCTTCCCCAGTAGCACAATAATCTTAGCTTTAACCTTCCCCTTT
CTGACTTCTCTGGGATCTTTTTTTCTTAATCCCCAT (SEQ ID NO: 862)

917. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RPL15. In some embodiments, the sequences from gene RPL15 comprise or consist of:
CAGAGACTCCGCAGGGGGAGAGCCCGCGGTGCGTGAAACAAACCTGTTCTCTCCTCAGACCTC
AAAGACAGCGGCTCCACCGCGGTACGCGGCCACCGGCTTTGGAGCCTGGACCCCAACTTGCCT
CCTCTCGCGGAGAGACAGTCGCCGACGCTCGCTTAGCCGCCGAGACCTCGCCGCCAACTCTCT
CACCTCTCGAGACGCCCAGGCCGCTCAGGCTCGAATCTTGCGGAGCAGGGGGCGGGACAATAG
CGGCCGCGGCGCCCCACTCGGCAGAACTCCGCCACCAGGCGCGATGCCGGAACTACATGTCC
CATGACGCTCTGGGAGGCCGCAGCTTTCCACCGGAAAGAGGGTGGCTGAGGTGGGGGAGGAG
CCCAAAAGGCATTGTGGGAGTACAGCTCTTTCCTTTCCGTCTGGCGGCAGCCATCAGGTAGGCT
GCGTTGAGGATCTTTGCTCTTCCATCCGCCTTTGATCGTCTTCCTCTTCAGCCATCCAG (SEQ ID NO: 863)

918. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RPL15. In some embodiments, the sequences from gene RPL15 comprise or consist of:
TCAGGATGCGGGACAGCAAAGGGGTGGAGAGGCGGCCCCCGGGGCGGGTTGAGCGAAGATGT
GATGGCGGCGCGAATTCGAGCTGGGCCCGGATCCTGGAGGAGGCGTGGGGCTGACGAATGGG
GCGCCCGGGACAAGGCAGCCTAAAGTGAGGCTGCTGGTTGGGTGGGGTAGATGCATTTTCCTC
GAGAGTTAATCCTCGGTGGCCGCAGCAGTACCTTGTCCTGTGATGTCAGCGGCATCTCCTTTCA
GGTCCTCCTTGGGGACGCCGCCTGCCGCAGCCACCCGCCCCCTTGGTGCTCAGTTCTGGTTCT
GTTAATTCGCCCCACCAAAACGTGCCGAGCACCGCTCTGTGCTGGGGTTGCGGAAGTGACTGAA
CGCGGCTCCGTGGGCGCAGTGGTGGGGGTTGGGCTAGCTGTCCCCGGCAGTTGGTGCAGAGC
CATTTTCATTCCCGGCGGTTTCCTTGTTTTTGTTGGGGAACTAAGATGGACGGATACAG (SEQ ID NO: 864)

919. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AZI2. In some embodiments, the sequences from gene AZI2 comprise or consist of:
GTAACGAGCTCTTCTCTTAGGTTTTGGAGTCAGAGTTTGATTTGAATCCTACTCTACCCACTCTTC
ATTCAGTAATCAATATTTATTGAGCAACTTCTACACAGTGATGAGTTGGGGACACAAATGATGGGC
AAAACAGACAAAGCTTCTGCCCTCACAGAGCTTAACATTCTTCTAGATTTAACAGGGCTAATTCAA
CTTTCTAAGACCTACCTATAAAATATAGATGATACATATTTCATAGAATTGTTCAGATAATTAAAAG
AGATAATATTAAAAGAATGTAGTGCATTATAGTGGGACATATTGGACACTCAAATGTTAATTAATTT
GTCTTCTATTCTAAATATACAACAAACATAGCCAATTACTGGTATGGAAAGATAGAGTATGCATTA
AGACTTCTATAATATAATATTAATATGTTGTTGTAATGAATTATACTCAAAGAACTTTTGAAAATTTA
TAAATTGAGAAGCTATGAAACTTGCTACTAATA (SEQ ID NO: 865)

920. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AZI2. In some embodiments, the sequences from gene AZI2 comprise or consist of:
TATTCATGTGATCTGAAATAAGGCAAAAGAAATGTTAAAGGGATTAGTTGACACAGGAGGGAGAT
TAGACATTTTGGAAGAAAGCAGGCATAGTGAAACACGGGTTGGAAACGTGGCTGTAGTTAAATTG
CCTATGTTTACATCTCAACTCTCCACTTACTATGTTACTTTGGAAAAAATACTTAAATTCCTCCTAC
CTCAGTTTCTTCATCTATAATGTTCTTGAACAGTGACTGATATTAGTAAGTAACCAAATTTTATTTC
AAGCAAGGGATAGTTAAAAACTCACTTTCTAGTAATAATTACTGATCTAAGATACATGAAATTCAAT
TGATAATCTTTATTTAGAGTGCTATATTTAGTTTTTTATTTTAAACTAAAAAATATTTAAAAGGACTTT

TTAGGTTCTCTTGCATGGTCTAAAGTCCCTCTTATTCTGTTTTTCCCAGGAGGTCTTAAAAGGTTT TAGCCACAGTTTCTCCTTCCATCATGTTTTTCA (SEQ ID NO: 866)

921. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IP6K2. In some embodiments, the sequences from gene IP6K2 comprise or consist of: GTAAGAATCCATTAAAGAAATTAATTTTAAATGTGCATTACCTGGTTACATAAAGGACTCTAGAACA ACTTAGGTTCTTTTGGGACTGTTGAAACATTGTCTTTAAGGACAGAATGTACTGGGTGCCTTTCTC TGTACTCTGAATATGCATGTGTATTGCGGTGGGGATGGGGGAGTTGGGGGCCCTCACTTGGTCC TTCTCTGTTGTTTTTTTCCAGGACAAAGCCAAAGGCCCCTTGTTAGCTGGCCATCCCTGCCCCAT TTTTTCCCCTGGTCCTTTCCCCTGTGGCCACAGGGAAGTGTGGCCTGAATACCCCACCCCGGCT CCTCTGCACCCAGAGCTGGGGGCCACCTCAGAAGTGTCATCTCTCTCTGAGCACGCATTCCCCT GCAGCAGTCGAGGACTGAGCAGATTGAGTGATGCTGGGGCAGAGAGGCCTGGGAGGAAAGGT GTTCAGCCAGTCGTTTGTAAGGCGCTCGTCGGCACCTGCTGAAACGC (SEQ ID NO: 867)

922. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IP6K2. In some embodiments, the sequences from gene IP6K2 comprise or consist of: AAGGCCCTGGCAGCCATCCCTGGAGCCCTCACTCCCTCCCACTCTGTGCTTTCCCTCCCTCTCC TCCTTCTCCTCCTCCTGGCCCTCAGCCCAGCATCTCACACCCTCAGTTTTCAATCCCTGGTAAGA TTGCTCAATTCTGTTTTGTTGTGTGGATTTGAGTTTGATTTTGGTAGAAGTGTAGTTGTGTTTTATG TTCAGGTGTCTCTTGATCACAGTAACCCATAGTCCCCCACTGGGGGGACGGTGGGGGAAGACTT TGGGAGGATTTTACCCAGAATACTTGCCGCCTGCTTTTTGTCCTCCAGGAAACCAGAAGCCCGG GTAATTAGGTAGGCCGGGGAGCAGCGTTGAGTCAGATGGAATGCAGGAGTGGGAGGCCTGTGC TGATTAGCCCAAGCCCTTTGCTGTTACAGAATGTCCCCAAAATTGCTATATGAAAGCAACCCTTC GATTCACATATGATAATTTTTTATTTCTTTTTATAATGTATTTTATA (SEQ ID NO: 868)

923. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MST1. In some embodiments, the sequences from gene MST1 comprise or consist of: GTGAGCACTAGTGACGCTTCCCCCATGACCCTGCCTCAGCCCCCACCCAAAGGCTGGCTCCCTT AACCCCAGTGAACTTTGTCTTTCAGCTGATGACCAGCCGCCATCAATCCTGGACCCCCCAGGTTA GGAGTTGGGCCAGTTATGGGTCAGGCCCTTTAGCCCACGACATCCACACAGTCTGGGTTTCATC CAGCCCACCCCATCCTACAGACCAGGTGCAGTTTGAGAAGTGTGGCAAGAGGGTGGATCGGCT GGATCAGCGGCGTTCCAAGCTGCGCGTGGTTGGGGGCCATCCGGGCAACTCACCCTGGACAGT CAGCTTGCGGAATCGGTGAGGCACAACTGCCTGTCTCCCACAGAGAGGAGCTGAGGTTGTGTC CTCTGTGGTTATCCCACTGGGGGCTGGGAATCTATCCCTGCCCCCAGAGGTCCTAGCCAGAAGA TGGCAGGTCTAGCATCTGTCCCAGGAGTCTGTTACCTGTCCTAATTCCCCACT (SEQ ID NO: 869)

924. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MST1. In some embodiments, the sequences from gene MST1 comprise or consist of: GGAGGCTGGCGGGCTAGGGCTGAGTGGAGCGCCTGCTTAGAGACCTTCGGGAGAACTTCTGCC GGAACCCCGACGGCTCAGAGGCGCCCTGGTGCTTCACACTGCGGCCCGGCATGCGCGCGGCC TTTTGCTACCAGATCCGGCGTTGTACAGACGACGTGCGGCCCCAGGGTGAGGCCCAAGCTTGG GGGCTACAGAGCCGGGCTGGAAGCCTGGAACCGGAGGGCCGGGGCGAGGTCTCGGCCTGATG GCTGCCCGCACCCGCCACAGACTGCTACCACGGCGCAGGGGAGCAGTACCGCGGCACGGTCA GCAAGACCCGCAAGGGTGTCCAGTGCCAGCGCTGGTCCGCTGAGACGCCGCACAAGCCGCAGT GAGTCCCTGGTGCTCCCGGCCCCGCCAGGGCCCTAACCCTGGGGCGGCATGCTTTGGTGTCTG GGACCAGAGCCTGGAAATGGTTGAGACTACCCTGCCACGATTTTGCTCCCGCTTCCGCCTA (SEQ ID NO: 870)

925. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ITIH3. In some embodiments, the sequences from gene ITIH3 comprise or consist of:

ACATCCCATTGCCACCAGCCCCATAAAGGGCTTCCCTGGACGTGCCCGATTTCCAAAGCCTAAT
CTTTGTAGTCACATCTCCACCTCTATCTGCCAGTGTTGGGGCCCCTCTGGGGCCCAGCAGCGCT
AAGACAGGAGGAAGGCACGGGGCTGGGGGAGAAGGAACCCCTAGACCCTGCTCACCACTGCC
CTTCGGCTTTTCAGCCACACCGGTGAGCCCCGCCATGTCCTACCTGAGTGAGTACATGCTGGCA
GCTGCCACTCCTCCCACTGCTTAGAGCCTGCCCCTGCCACATGTCCCTCCACCGTGGCTACTCA
CTCAGCTCTCCGGGATGGGCAGATGGACAATGTGCCCTGAGGAGATTGCGGGGTGGGAGGGCA
ATGGCATTAGCGAGCGGGAAGGGGAGGGGAGGGGCATAAGCTGAACTCCTATGGGGGTCGTC
GGGCGCCTCCCAGGGCCACTTGCTTAGCTCAGCCCTCTCTCCCTTTGTATCTGCAG (SEQ ID NO: 871)

926. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ITIH3. In some embodiments, the sequences from gene ITIH3 comprise or consist of:
TGAGTCCCTGGCTGCTCCTCGGGAAGGCTCAGGGGCCTGGGCACGTGCTCCTGCCTGTCTCGG
AGTCGAGCCCATGGAGGCCAGAAGGCTGGGGGAGGCCCCAGGTATGATGAGAGGCCCCGGGA
GTCAGCTCCTTCTCTAATGTGTCACCAGTGGACGGGGATCCCCACTTCATCATCCAAATTCCGGA
GAAAGACGATGCCCTCTGCTTCAACATCGATGAAGCCCCAGGCACAGTGCTGCGCCTTATTCAG
GATGCAGTCACAGGTGAGGCTTGTGGGCTAGGGCCGGGGCCAGGGGGCTCTTCCTGGGAGGG
CTTGGGTCCCCCGAGGTAGGCACAGGGAACAGGTTCTCACTCTGCCCAGTAAGGCATCATCTTC
ACATGCAAAGAAACCCCTGGGGGTGGGGAGTGCCCAGGGCCACAGGCTTGCTCAGCCCCACAT
GCCAGTGCTATTGGGAGATGATTAGCGTGAATGGACCACCTGGGCCTAGGGTAGGA (SEQ ID NO: 872)

927. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ITIH4. In some embodiments, the sequences from gene ITIH4 comprise or consist of:
GTGACAAAGTAGGAGGTGGGGGGAGGGGAGATTGACAGATTGGGCTCAGTCCTGGCTGTGGAG
GGTAGTGCCTTGCCCAGCTCCTCTGGCTGGTGACAGCCCTCGGGCCTCAGTTCAGTTGTATCTG
ATCAGGACTTGACCACACAGAGGCTTCCTTTTCTCCAAGAAGAGGATGGAATAGACAAGGTAGTT
TGAGGGTTTCTGCCAGGGGGAGGCATGACATCCCTGGGGGGGAGCTTGAGGGAGGTCCATTAT
TGTTCATCTCCCAGCTGTTGGGGGAGAGGCTCCCCAAGTTGGCCGGGTGTGGGGAGAGGGGAC
ATAGCTGCCCTCTCCGCACCCACTCCTGGGTGGATCTCAAGCCCTGGCTGTGAAGACCCACACC
CCACCTGAGAGAAGACTGCATCTGTCGATTTCTCCAAAGCTGGAGCTGCTGGCTCCCGGATGAA
TTTCAGACCTGGGGTTCTCAGCTCCAGGCAACTTGGACTCCCAGGACCTCCTG (SEQ ID NO: 873)

928. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ITIH4. In some embodiments, the sequences from gene ITIH4 comprise or consist of:
TGAGGAAAGTGAAGCCGGGTCTCCTGTCTCCCCAAATTCATTGCACCTACGATATAGTCCAGGAT
TGGGTAGCAAGATTAAACACAAGCGCTTCAAATTGATGAAAACCACCCTGACGGTGTCTGTCTGT
GTCTCTGTCTGTCTGTCTCTCTCTCTCTCTTTGTTTTATCCAGAAAGTAGAAACAGGAATGTCCAC
TCAGGTAAGCAGCGAACATCCTCAAAGGCTGTGCTGGGTGGTGGTCTGCTAACACAGGGTCCAG
GGCACCAGCCCTGTGAGGTTGCTGGCCAGGGCCCAGGTCCACCCAGGCCTCTCCAGCCCATCC
CTGCTGCCAGGAGGCAGTGTAATCTGACCCAGCATGCTGGTGCATTTAGTCGCCTGTGCATTCA
AATATTGGCTGTGCCTCAGGCCCTGTCCCCAGCACTAAGAATACAGTCCCCATCCAAGTGGGGC
CACAGGAAGGTGGGTGCAAGATGCAAACCCAGGTCCCACTGATTTCCA (SEQ ID NO: 874)

929. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IL17RB. In some embodiments, the sequences from gene IL17RB comprise or consist of:
TTTGTGTTAGAAGGGGAACATTTTAAAGAACCTGAGGAAAGTACCATGGACTGCATTCAGAGCTT
TCTTTTGTTTATCTCCTTAGCATAGCTACTCCTTAACCTGGGGTAGCCCAGTAAATACTCTAGGCC
GTCCTAAAAACCTAGAGTTAAACATTAGAGTGTGAAGGGGCCTCACATCGGTCCCAAGTCATCCC
CTGCTTGCAGCAGGGAAGGATGACATCCAGAGACAGATGGAGACCCACCTGTGGTCTTCAAGTG

AGGTTATGCACTGGCTTGAGGATCAGGTATACTGATGGCTAATCCATGGTCCGTCATAGCCTACA
GTGGGACAGCTTAGTTCCCCCCTAAGCTGTGAAGCAGAACCAGTTCATCTTTTCTTTGAAAGTTT
GTCACTTGTATATGCATTTAAGGGGAAAATGGTGTTCTGCCTAATTTGGCAAAGGAAAGCTTGTG
GTTTGCCGGCTTCAACGTGACGCTTGGTTTTTTCTCTCCCACAG (SEQ ID NO: 875)

930. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IL17RB. In some embodiments, the sequences from gene IL17RB comprise or consist of:
TAGGTGCATTAGAGAATGGGTATTTGGGGCTTTACATTGAAAGCACAGTTGGACTTTTAGGAAGC
CTAATATAGGCAATAGGTCATCGAAGACCAGACACAGGGTGACCCATTGCTTTATTGGCTGATGC
AGATGAAGTCTCTGTCTGCTCGAAGCAGAACTCTGGGGCTCTGTGGGAATGAGGCCGTGTTTCA
GACAGGCTAGCCTCTTGGCCAGTCAAGATGGGACTTGCCATACAAGGTGGAAAGTGATGCCTGC
CACTCTGCAGAGGGAGATCAAGGCCGTGGAAGGAAGGTCACTTAGAGTTGGGACCGAGAAGCA
AATGTTTCATAGGAGAGCGGGTGTTTGAGATGGTGGCATTTGAAGAATGGGTAGGCTTCTGCCC
AAAAAATGTGGGTAGGAAGAGTGAGCTGGAGGAGAGATGGCACCAGCAAAGGTTAGGAGGTGG
GAAAGTGGGGGCTGTGTGGGCCAGCTGGCTGGAATCCAGGGCCAAAGCCTG (SEQ ID NO: 876)

931. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DNASE1L3. In some embodiments, the sequences from gene DNASE1L3 comprise or consist of:
GTGAGGACTGCTGTGTCAGACGAATTCCCATCTAGCAGGGGCAGGCTCTGGTCCCTGAGTGGG
ATGAGTACCTCTCCAGGGAGGGGGAGGAGGAAGGGCATGTGCAGGCTACCACCACTTACAGCA
TTCTTTAAGGCCTTTCTTCAGCCCTAAGTATCCCTTTTGCTAAATCTGCCTGGGTACCCTGCATGT
GGGCCTTGGGAATTGCCACACTTTCCCATTAATAACAGATGCCAACATTTACTGAGTGAATAGCT
AGTGCCAGGCACTGTGCTGAGACTTGACATGGACAAGTTTATTTAATCCTCCCAATAATCCCTTG
AGGTAGCTACAGTACCTTTCTCATTCCCACTTTGCAATTGAGAAGTGTAAGGCATAGAGCAGTCA
GGATTGTTTCAGTTGCAAGGGACAGAATCTTAACATGGCTCATGAAAAAAAGGAGCAATTGATTG
GTTTGTGTAACTGAAATGTCCAGGAGTACTTCAGGCATAGCTGGATC (SEQ ID NO: 877)

932. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DNASE1L3. In some embodiments, the sequences from gene DNASE1L3 comprise or consist of:
CTGGAATGTGCCTGCGAGCTGGAATGTCCAGCACAAATATCTTGGTTAAGGTACAAGGACATAGA
ATGTACTATGTGCCTGTGAGCATGTCTAACAGCTACATAGGATAGAGCTTAACAAAGAGTTATTAG
CACAAAGCAAGGAGACTTGAAGGAAGTTAGTCTTTAAAGGAAACTATTATTTCTAACACTTATGAT
TTATTCTTTAATAAGAAGGGAAACTTTGAAGAGGAAACTTTTTTACTTTCTACAACAGTCTACCAGC
TTTCTCTTAGCCATGAAGGGCAACTGGGAGAAATGAGTCTTTCGTGTACTAAAAATAGGCAGCCT
AATGACCCCAAGATCATTAAAATCTCGGCCACTGGCTGGACCCTCTGGGAACTGGGGACCCAGA
TAATGCAGCCTGTGCCTTCTGGAGGGGACAGCTGGTTTCCCTCCAGCAGTGTTTATGAGACCTT
GACAGGGGAAGTGTGTGACCCCCGCCTCTTTCCTGTTTCTCA (SEQ ID NO: 878)

933. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MYLK. In some embodiments, the sequences from gene MYLK comprise or consist of:
GTGAGTGCCCCCAGGAGCTGCCCCTCCAGGCCATGCCCCCATCCCCACCTTCCTCCTGGCCCC
GGCAGCTCCAGCCCAGCAGCCCTAGATTGTTTGTGTCCTGCAGCTGAGGCTGCCAAAGCCAGAA
GGGAGAGCCTGGAAGGGGAATGAGGGAGGGAGAGCAGGGGAAGGAGGGGGTGATTTTTTTTTT
TTTTTTTTTTGCACACACCCTTATAAGGCTACTGAAGTCATTACCGATGTAATAAACCAACTAAGCA
AGCGAGCGCCTCTCACCAATGTTCCCATCTATAAACACAGCCTGGCCGGCCTCCCCCATCCCCT
CCCGCTCCCCTCTACCCTCCCACCCTCAGGGATTTGCTCTCCCCTGAAGTTTCTTTCTTACCCAG
CCCCTTTTCCTCCTGCTACTTTCCTTTTTCCCTACACTGGTTGCAGGGGGAGGGAGCCTGCCAGC
TGCGAGGACCTCTGTGGTGGAGGAGTTGGTGCTGATGGTGGTGGTAGT (SEQ ID NO: 879)

934. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MYLK. In some

embodiments, the sequences from gene MYLK comprise or consist of:
TGAGTGGGGGTTAAGGGTGCTTCCATTCCCGAGCAAGAGAGGGAAAGGAACTACTTCTGTGTTA
AGGGATCATGGAGTCAGAGTCAAGGTCACTGGGCAGGCCCACCACCAGGGCCTATCTGTCTAG
ACCAACCTGCTACATCACAGTTCCCAGCAGGGTTAGCCTTTCTCCTTCCCCTTTTATTGGTTGAGT
GAGTGAGTGATTGATTGAATGATTATATTATATACTTACAGAAAAGTGTTCCTATTTCTGGATGCCT
GCCTTAGCTGTTGTCCAGACATTCTTTTTTTCTTCTTCTTTTTAAATAAGAGCTGAGAAAATAAAGG
GTGACCACACAGTGAGAGGGTCCTGCCCTAAATCTAAGGCTGGGGTGAATGTCTCAGTCAAGCC
GGCGACTTCCATCTTCCCCGCTGGCCAGCAGCCTGTGATCAAGTCCACACTGAACAGGCCCTTT
GCCCAGAGGGCCTCTTGATCTTTATTGATCTTTGGAATTCTTCA (SEQ ID NO: 880)

935. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CDV3. In some embodiments, the sequences from gene CDV3 comprise or consist of:
TCGCCGCGCCCGGCAGCGTGAGCGCAGAGCCGGCCTCGACCCCGAGCTCGGAGCCCCGCGG
GCCGCGCCCGCCGCCGGCCCCACCCATCCGGGTCGAGGAGGCCGAGGCCATGGCTGAGACG
GAGGAGCGGAGCCTGGACAACTTCTTTGCCAAGAGGGACAAGAAGAAGAAGAAGGAGCGGAGC
AACCGGGCGGCGAGTGCCGCGGGCGCAGCGGGCAGCGCCGGCGGAAGCAGTGGAGCCGCGG
GTGCGGCGGGCGGCGGGGCGGGCGCGGGGACCCGGCCGGGTGACGGCGGGACCGCCAGCG
CGGGGGCTGCGGGCCCAGGGGCCGCCACCAAGGCTGTGACGAAGGTGAGGGGCCGGGAGGC
CGGCACTCGGGGCCCGGGCCGCGCGCCGGCGCCCCATGTGCCCGCCCCCGCCTGCCGGGGA
AGCGTCCGGGAGGGGCCGCGGAGGCCGGGCGGACGGGCGCGGGCCGCCACGTGACGCAGG
CTCTCCACCTC (SEQ ID NO: 881)

936. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CDV3. In some embodiments, the sequences from gene CDV3 comprise or consist of:
TCTGGGGCCGCAGTGCCCAGCACAGAGCAGCGTTTATCGGGTGACGTCTAGGCTGAGTAATTCC
GTGTGCTGACCTCAGCCCAGTAGTTTGAGCTGAATTTTCGCTTTCAGCAGCCGCATTTGTAGCAG
CTCTTTTGTGATGACTTAGTCTCTAAGCCCGTGAAAGAAAAAGAAAACTCTCGGTGGCAAGGTTG
AAGTAGAAATGTAGTTGTGAAATTCCTATTGACTTCTTCCTTCGGCTTTTCTTAGTTGCTTAAAGTA
ACAGCTCCCATGCAGGAACCCAGCGGAAGTATAGTGTTAGCCTACGAGCATGTTTGTCCTCCATT
TAGCCTAGTTTGCCCCAGAACGAAGCAAGGGCTTTGACCAGAAGACAAGTACATACTTAGTTTAG
GTTCCAGCCACTTGATCCACTTTTCGTAGTGTGTTATTTGCTTAGTTATATGTCTACAAATAGCTTT
AATTGATCAAATGGCGTTTGTTTTACAGGACGAAGATGAAT (SEQ ID NO: 882)

937. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PLSCR4. In some embodiments, the sequences from gene PLSCR4 comprise or consist of:
GTATGTATAATTTTTGTAGTGCTCAGCAGTATTTTAATCAGATGGAAATTTGCATTATCCAATATCT
AGTTCCTTCTTTATATTGATCATGTTTTAGTGGCTCAAAGAAAAAAAAAACTGCTCTATTACCCTATC
TTCAAGAAAGTAATAAAGTGAATTATTTTGTATAATTTTATCCTTCTATACATCATATAATCATAAGC
TCTTAGATTTGAAAAGGGCTTACATTTTATCTGGTCAATAGCCCTACACTTTACCCATTGTTCCTAC
TCCACATTTACCTTTCAAAGATGAGTAAAAAAAGGAGCCAAGAGACTAAATGAGTTAGCCAGGGA
CACCACAGTCAGCTAATCACCTCCAGATCAGGAAATAGCATTTAAACCACAGTCAGCTAATCAGT
GGCAGAGCTGGAAATAGAATCCAAATCTGCCAAATCGTAGTGCAGTGCCCTCGCTTTGGAAGTA
AGAAGAAAAGATCTCAGTCAAAATGATGCCTGTTCT (SEQ ID NO: 883)

938. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PLSCR4. In some embodiments, the sequences from gene PLSCR4 comprise or consist of:
TAAAATAATATAAAATGGGGACACTCCATGTGAGGTTCACCCTGGCTTGTTTGTTCTCCTTAAGCC
ACTGAGAGACTTCCCTTTTCTATGGCTGGTCCGTGTTAATCGTTCTGAACTTAACTAAACAACTAC
AGGCTATGGATGACATGTAGAGAGACCAGTGAGTAGGGACTTATCTAGGAACAATCTATAAGCAC
AGCTTCTTCTGATGTGATTACTACAGCAAGTAGATGTTTTGTTTTTCTGATATAGCAGACAACTTTT
TTAAAGTGGTACTGAAAGAAAGTGTTTTTCTAATATGGACAACTCTGCTAATATCCATCCGATCAG
ATGCAGATAAGCTAATTTCAGTTGGTAAAATTTTTTTGATTCTATTGACTTTCAAAAATATATTTTGG

TATCAATTGATGCATTTTAATATCTATTTCATCAGTTTATTTTACAGTGGTATTTTAGTTCTGTTATT
TCTGTCTTCTGATTGCTTTGTTTTATCCCAACA (SEQ ID NO: 884)

939. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene BCHE. In some embodiments, the sequences from gene BCHE comprise or consist of:
GTGTGTCTGTTTTTAGTGTTTGGTTATTTAATAGATGATGGGTTATGTAAAAAAGGGATGAAGTAT
ACTCTCCAAGGCACGGTGATGGAGTTACTATATGTATCTCTGACTTTAAAATAACTTGGTTTAATG
AACACATTATTTTTAAGACTTTCTTCTATCAAGTTTAGATATGTTTTGAACTCTTACTATATGACCAG
TACTTTAGTAGTTAAATAAAGAAAACTAAAATATAGATTTCACCCTGTGGAAATATAAAATAGAAAA
AGGAAACTAAAATAGAGCCCTACTTGTTATTCAGATAATCTTTGTGGAATTAATTAATGGACAAAG
AAATAAATATATCAAATAATCATAATGTATGGAACTAAAAAATAAGATGCATAAATTGGTAAAAACA
GATTTATTGATAAATAATAGAACCTTGATTTAAATGGAGAAAAAAACTCCGAAGTTTACATATTTAA
AAACACAATAAAAAATTTCTAAATATTCTGAA (SEQ ID NO: 885)

940. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene BCHE. In some embodiments, the sequences from gene BCHE comprise or consist of:
TTTCCTGGAGTAATGAGATTATTACATAATAAGATTTGTAATTAAACTTGGTCTTAAACTCAAGCAG
TATTAATAAGAGTATATAGAATGAAATAGATGCAAAAGATGAGTAAGTGATATGATTCCTTATTGTG
AAATTTTTGGGCCTAGGATAAGGGAAGATAATGAAACAAAAGTAACACCACCCTTTGAGCACGTT
TAAGTGTGAATGAAGATATATTTTATTGAAATAAAAAATTTCTTCTTCCAATATGTTAAGCAGAAAT
GCATATAAAAAATTCAACTTTAAATTTCAATTCTTACAATTTTAAATAACATAGTGGTTCTCAGTGCT
CAAACCACTAAGCCCAGTTCACATACGTTTCATATCATCAATATATATCCACATTTTTTCTGTCTTA
AATTCTTTAAAGCTCTTGTGAACAGTGTTAGAAAACAATATTCTTTTTAATCTAACAATGATTTCAAT
TTTACTATAATGTCTCTATTTTATTATTTA (SEQ ID NO: 886)

941. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MASP1. In some embodiments, the sequences from gene MASP1 comprise or consist of:
GTGAAGTTCACTTTATAACCTACAGACAGTGACACCTCAGCTCTGCACTGGGCCTTCCTGCTCCG
TATTGTTCCCTTAGGGATTTTGAGGCTTGGGTGGGGGTTGGTGAGTGGGAAACTAGGAGCCCAG
ACCCACCTCCAAAGTTCAATGGGACTTTGAACCCCAGAAAGCTTGATTTGTTTGTTCTACATGTCA
TGGACTCTAGCCTCTAAACACGGTTAAGTTTTTCTGGTAGCTTATTAAAGGCTTAGCTTATGAAAA
TTCTCCCAGAAAACAGCAAGTTTAGACACCCCCATGGTGACAATCCAGCTGTGCACCATGAGAAC
TGTACACCAAATTGGCCAGAATGAGCCAGGCTCTTGAGAACCACAGTCCTTGCAGTAATGAACTT
GGCAGTTACACTTAGAAGTTCATATTCCTATCAGTTCAAGGAAAAAAAAAAAAAACACTTAACTAA
AAGTAAGGAGCCATAGTTTCAAGTCTTGGCTCCCACTAACTT (SEQ ID NO: 887)

942. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MASP1. In some embodiments, the sequences from gene MASP1 comprise or consist of:
AAGGGGTTTTAGAGAATACCAAGTCCAGCCTCCTCATTTTATGGATAGGAAAACAGAGGCTTAGA
AGGGGAGCAGAGAGGAGGGCTGGCTAAAGGCACCATAGCACATAGTGGACTAGGCTGGGCTTT
TTATTTATTCGCTGTTCTTGATTGAGCACCTACTATGTGACAGCATTGCTATAGGCACTGTGATAT
AGCAGTGACCAAGAATGAGATTCTGCTCTCATGGACCCTAGGTTTCAGACTAGTTGAGGGTGGG
ACAGAATAGAAAACTAAACAAGTAAGCCAGTAACACATCATAGAAACCAGTGCCCCTAGCTCTGC
TGCAGGTAATCTGTAGCCCAGCTGCCTTTCACGTCTTCCTCCCCACCACACCACCTTTCTCTGAG
AAGAACAATCCAGTCTTTCCTCCACAGAAGAGGATGATGGAGCTGCAAGCTGCACCCCTCCAAA
CACCCCACAGATAGCTTCTCTGTTCTCACAGTATCTTCTCTCCTCCA (SEQ ID NO: 888)

943. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IL1RAP. In some embodiments, the sequences from gene IL1RAP comprise or consist of:
AACCCAAAAGGACCTGGCCCCAGAAGCTTCTCTCTAAACTGATACAGCATCCTGGCTCAGAAGTT
TAAGCAAAAGAGACATTTTGTTTTGAAGAGAGATCTATAAAAAGAAGCCAGTATTGGGATTTGGTC

TAGACAATGGGATAGTGTGTAGCGTAGATGGTATAGTATAGTGTTAGAATCTTACCATTAATACTT
TGTAATCACTGCATTATAGGTGGCTCAGCTTATCAACCTTCCTCGCCCTCACCTGTAGTGGGGGT
CTGTGGTTGCTTACTTGTCTGATTCCTACACAGTCCATAGCTCTTGAGTCACTCTCAAATGCTTTG
ATTTTCTTCTCTCTATTTCTAGTATAAGTCATAGTAGAACAGAAGATGAAACAAGAACTCAGATTTT
GAGCATCAAGAAAGTTACCTCTGAGGATCTCAAGCGCAGCTATGTCTGTCATGCTAGAAGTGCCA
AAGGCGAAGTTGCCAAAGCAGCCAAGGTGAAGCAGAAAG (SEQ ID NO: 889)

944. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IL1RAP. In some embodiments, the sequences from gene IL1RAP comprise or consist of:
TCAGACTGTGTCTAAAACTTTCTTTGTGTCTCTCACCTAACACAGAATCCCAGAAAATCCCTTCAA
GGATGTTTTCAATGGTCTTGAGAAAAGTAATGATGAGTTATCACACATGAAATCATGAAATCAGGT
CATTCAGAATCCTCCTGGCTCCTAGTCTATAGAGTGTGTAATATTTCTTCAAAAGTGAATAACATA
GCACATAATTGTTACATTTTACAGAGACTTAATGCTTTTTTAAAGCTGATGAAAAACAGGATTCACC
TCAAACTTTCATTACAACTTTAAAACTAAATAGCAAAGGCCTGAAATGTATATGCTGCGTATGAAG
TACTAGTGAATCAGTTCAGGGTAATTCATTGCTTCTGCTCCTCAGAAGCCAGTGTGAAAAGGAAA
GACTGAAGTACATGATGTAAGGCAGTTTCCCAAATTGAGTTCTCGGGAACACTACTAAGAATCAG
TATTGTCCTGCAATGCATTATTGTACTCTAGAATCAGA (SEQ ID NO: 890)

945. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PI4K2B. In some embodiments, the sequences from gene PI4K2B comprise or consist of:
ATTTAGAATTCAAAGAAAGAGTCTTAACAACTAAAAAAAAAAAAATGAAAAAAAATTATTTATTGTATT
TTATGTCATAAAAAGAATCTGGAAAAGTTCAGATAAAATTGCACTGTTACTGAATAAGCAGGATAG
GTTTAAAATTTGGCCTCCATAATTAAATTCACCTTAATGAATATTTTTAGAAAAACGGCATTCTTTTT
CAGAGTGTCACCTTGAAGACATGTGTTTATTCTTTTTTTAAATTTTCCCAAAATAGCTGCTATGCTC
CTTGAAAGTCTAGGGGTAAGCATTTTTTATTTGCTATGTATTCTTTATGTGATTATTTAAAATTAGT
GTATAAAAATGGTTTTCTTGATAAATGTGGCTTATCTAAATTAGTGTTAAGTTTTCTTATTGTGTTTA
CATGACATATTTTTTGACAGTACTGCTGAGAAATATAAATATTAATCCCCTTGTTCTTGTACTTTCT
TTTCTAACTATAGTTCTTAAAATTATAG (SEQ ID NO: 891)

946. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PI4K2B. In some embodiments, the sequences from gene PI4K2B comprise or consist of:
TATTGAAGTTCTCTCATTTGTTCACGTAAATCTTGTTCATTTTCAAACTATATTCTTGTTATCCAAAT
CAAAGCGGTAAACTTTTGTTGCAGAAGTCTTGAAGCCACTTTCTCTGTCTGTCTTGGCAAACAGAT
GTAGTATTGACTCTCCTGGGCAGAATTCATCCTGTGTGGGATAGATTCTGACTCATAGCAGGCTC
CTAGATCAGTTCCTGTCCCCTAGGGAGGAATTTCCTAGGGGCAGGGCAAAGTCAGATATTGGAA
ATGTTATCTGCATAATGTGAGTAATTAAGGCTTCATTGTATAAATTATGTTAGGTGCTTATTTTGAC
ATTATGTAACTCTTAGTGTAGTCTATAAATACACTAAACTCTTAATTTTTCCTGTGCTATAAAGGAG
CAATGACGTAGACCAGGGATGTCCAGTCTTTTGGCTTCCCTGGGCCACACTGGAAGAAGAATTG
TCTTGGGCCACACATAAAAACAGTAACACTAATGACAG (SEQ ID NO: 892)

947. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SULT1B1. In some embodiments, the sequences from gene SULT1B1 comprise or consist of:
GTATACTCCAGACTCCATGTCAGTTTTTTAGTATGGCCCTATCCCTTTACCCACTCACATAGTTTA
TTTTTTAAAATATTTTTTGTTTCTTTAACCATATACTTGCAACAATCTATACTATACCCACTCACGTT
GTACGTAAATCTTCAAAAGCCATTAAGTTTTAGTCTGAGTTTATATACTCAAGTTTTCCAAACTTGA
GCAGCAACAGAATCCAAACCTCAGCACAATATTACTACTTTTTTTTCCAACTCTCCCTAGATCTTC
AGGCCTTCTGTAAAAACTGAACTTAAGGACGTTAGTCCTTATTTGAAGATTTGGTATAATTCTTTGT
TGTAACATTTGTTCCTGCTTATCTGCTTTTGGGGAAATTTTATACTTCAAATTCTATTTATTTAATAG
CTACAGTGCTATGTAGATTATGTGTTTTTTTCTTATCTGACTTTTGACAATTTGTGATGTGTGAGAA
ACTTTTCTAAGTTGTTGACTTTATGAATGA (SEQ ID NO: 893)

948. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SULT1B1. In some embodiments, the sequences from gene SULT1B1 comprise or consist of:
TAATGAAAATATAGATAAAACAGCTGATATTATATACAAAGTTAACATCATCTATGCTACAGTACCT
AATACAACACGATAGCCAGTTTTAGACTTACTAGTTATTGATACCTCTTTGGCATGAAGAAAACAT
TTAAATAGTCATTTATAGCAATGCACAGGTATAATAAAACTCCAAATTATTAAAGAGGGTATTATTA
TCTCTCCTTTTGGAGATGGAGAAAGTGAAGTACAGAGATTCTGAGATACTTTCAAAGTGTCTCACA
ATGCTTAAGTGATAGAGTTAGCATTTGAACTCAGGGTGGCTAACCTCAGAATGTGTATCCTTGAAT
GTTACACAATACTGACTCTAGTAATGTGGTGAAATGCCTGTGATTGTTTCAGAATTTATCTGCATT
ACATAATGCTCAAAAATGTCTTGAAAAACTGGTTGGCAAAATAAGGAAACGTAGCCTTTCTGGAG
ACTCTAATATTTCCCTATACTTAACTAAATTTCTCA (SEQ ID NO: 894)

949. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CXCL2. In some embodiments, the sequences from gene CXCL2 comprise or consist of:
GTAAGTCTCGCCCATCGCTGCCGCTGCCACTGCTGGGGTCCCCGACTCTCCCGCTGCCCCAAA
CCCTGTCCTCAGCCCGACCTCCTGTCTCACGAGATTCCCTTCTCTCTGCAGAGCCACACTCAAGA
ATGGGCAGAAAGCTTGTCTCAACCCCGCATCGCCCATGGTTAAGAAAATCATCGAAAAGATGCTG
AAAAAGTAAGTTATAATTTCCATGTACACAGGCGACTGGAGCTGTTGGTCAGAAATACTGGCGTC
TGCCCCCTAAAAAGTAAATCAGGAAAACCCAGGGTTAGCTGCAGGACTGAAAAAATTATTATTTTC
ACAAAGTTGCCATTAAGGTTATTAATCTGTTCTGGTGCCAGAGGATATTCCCAGTGCCCAGGGTC
ACCACCCAGGTTCTTCCCTCCTGCCAGTGAATGTAGGTAAAACTGCTTTCATGTAAGGTCTCATT
GGAGTTTGCCAGTTGTGCTGAAGTGTTTTCCACCTGTTAAAAAAC (SEQ ID NO: 895)

950. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CXCL2. In some embodiments, the sequences from gene CXCL2 comprise or consist of:
ATTCGGGGCAGAAAGAGAACATCCCACAGTTGGCGGGAGTTACGCAAGACAGTCAGACCCGGA
CGTCACTCGTGAGTGCCCCGACCCCCCTCCACCCCAGAGGCGGGGCCATCGCCTTCCTTCCGA
ACTCGGGATCGATCTGGAGCTCCGGGAATTTCCCTGGCCCGGGACTCCGGGCTTTCCAGCCCC
AACCATGCATAAAAGGGGTTCGCCGTTCTCGGAGAGCCACAGAGCCCGGGCCACAGGCAGCTC
CTTGCCAGCTCTCCTCCTCGCACAGCCGCTCGAACCGCCTGCTGAGCCCCATGGCCCGCGCCA
CGCTCTCCGCCGCCCCCAGCAATCCCCGGCTCCTGCGGGTGGCGCTGCTGCTCCTGCTCCTGG
TGGCCGCCAGCCGGCGCGCAGCAGGTGGGTCCCGGCGCCCTGGGGTCCCCGGGCCGGACGC
GGCTGGGGTGGGCGCCCCGCGCCGACAGCCCCGCTCAATCAGCGAGTCTCTTCTTCCCTA
(SEQ ID NO: 896)

951. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HSD17B13. In some embodiments, the sequences from gene HSD17B13 comprise or consist of:
GTAAGTACAGCACAGAACACCCAAATACTAAAACACCAATAGAGCTTTTTTTTTTGCTTTTTTTTTT
TTTAGACAGAGTCTCACTCTGTCACCCTGGCTGGATTGCGGTGGTTGCAGTGGCATGATCTTGG
CTCACTGCAACCTCCGCCTCCTGGGTTCAAGCAATTCTCATGCCTCAGACCCCCAAGTAACTGG
GATTATAGGTGTGTGCTGCCACACTACACCCAGCTAATTTTTGTATTTTTTGATAGAGACAGGTTT
CCCCATGTTGGCCAGGCTGGACTCGAACTCCTGACCTCAAGTTATCCTCCTGTCTCGGCCTCCC
AAAGTGCTGGGATTACAGTCATGAGCCACCATGCCTGGCCCAATAGAGCTATTATTATGGAGCAT
CTTTCAGTTGTGAAAATTGGCATGGAAACTCTCCATCCCTGGGGAGAACAGTTATTTCCTCTGTTA
TTTTCCTACCCAGTCTATAAAAAGAGAGTGATTCATTTTCTCT (SEQ ID NO: 897)

952. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HSD17B13. In some embodiments, the sequences from gene HSD17B13 comprise or consist of:
TTTACCCAGACCCTATTCAAGATGGAGTTGCTCTGATTTAAACGCCTCTGACAAAATGACGACCT
CAAAACAATCCAGCTTTATGGAATACCTCCACAAGAAAGAAAGTATACTTAGCTATAGAATTTTCT
CCTTGCATCCAACAGGCTTTGAGATGTCAGATGTTTCCTTCCTGTCCCATGATTAATCCTAGCCAT

TCCTCTTTCTTGTCTGGCTCCACTACTCCTTACCATCTAATGCCTCGCCACCATTTTGATATTTTGA
CTAAGTGAGCTATGAAACACACCTACTGGATATGAAAGTATAAGTTTCTGATAACAAAACATCAAC
ATGGGATGTGGAGGAAGTGGGTAGGGTGGCATTAATGCAGCAAATCCTGGAATATTTTAAATCTT
CATTCTAAATTTAGTAAAAATATAGGATAATTTTCCTGCCATCATTTACTTATAAAATTAAAATTTTA
GAAAATAAAAATAATATTTTCCTCTTTTTAATCACA (SEQ ID NO: 898)

953. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ADH4. In some embodiments, the sequences from gene ADH4 comprise or consist of:
GTCAGTTTTTTTTTTCTTCATAGCTTTAAATTCTTTTCCTAGTAGTTCTGAAATTCTTAGAGTGAAG
GTTATTGAAAAGAAATAAAAATAATTTATTCAACCATTGAATCCCTAGAGCATATCCAAATACTACA
TAAAAACTATTAATGACTTATAAATAATTTATATAAAAAGGTAATTATAATTTGCAAATTGAAATTTA
ATTTGCATTTGAATGAACCAACATGGAGGAACAAAAAATAAACATTGACCTTATTGAGATAATTTCT
TATATAGAGTGGAAAATAATCTTAAATTTTTCTTATAAAGAAAAATTTTAAAATAGATATAAGTACAG
AAAATTAAAGATGGAAGGAGTTTAATCTATTTGAAGCAAACCAAATCTGACCTAATAATTTCATTCA
TTCAGCAAATGCTGATTAAACTACTTCGTGTCAAGTGCCATGTCTTTATTTTGCATTTTGTCCACAT
TACAGGTTGGAAAAGTGTAGATTCTATC (SEQ ID NO: 899)

954. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ADH4. In some embodiments, the sequences from gene ADH4 comprise or consist of:
TTTTTTTTTTTTTGAGACAGAGTCTCACTCTGTGACCCAGGCTGCAGTGCAGTGGTGTGGTCTCG
GCTCACTGCAACCTCCTCCTCCTCCCGGGTTCAGGCAGTTCTCCAGTCTCAGCTTCCCGAGTAG
CTGGGACTACAGGCAGGCACAACCACACCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTT
TGCCATGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGTGATCCACCCACCTTGGCCACCC
AAAGTTCTAGGATTACAGGAATGAGTCACCTGCACCCGGACTGTGCTGAACATTCTATTTGTAAT
GGAACACTGGGCCCTCAAGGCTCAATCTACAATGATACTATGATGTCATTAGCTTGAATCCCATT
ATCTTACATGCAGAGTTGGATTAATTTTTTTCTAAAGCATTGTACATTGCCACACTGGAGTTCATAT
TCTACTTTTCCACTGACTCAAGTATTCTTTTATGCTCCATCACA (SEQ ID NO: 900)

955. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ADH6. In some embodiments, the sequences from gene ADH6 comprise or consist of:
TTTGAATGTCTTGTTATGGTGTAGCTCGTTGCAAAATTCACCTAATTTTATCACAAATGCAGGAAC
TTTTTTTCCTTCCTGTTAATATACAGTCAAACATATTACCAAGTACTGGAGACTATCTATATCACTG
TATAACCATTCACTGTTGTTGCCAGCTTCAAGACCACATTTGAATCCTATCAGGCCCAGTAAACTC
TGTGAATAGACTCTGTGAACTGTCTCTAAGTCTCACTGTTTTGTCCACATTAAGTGTCTTGTTTGA
AGCACAAAGTAAAATCTTTCTTTCCAATCCCTGTCACTGCACCTCCCTAGACAGTCACTACATGG
GGCAGTTTATGGACTTCAGCAATGTTTACCTAACTCCAGATCCACACTATAGGAGTCCAGCCTTC
AGGGAGAACTAGTTTTTTACATTTTTTGCCTGCATAATGAGAAGCTTTAAGTTTTTCATATTTTTAC
CTGAGAACAAGAATAATTACATTCTAGGCTATCACCC (SEQ ID NO: 901)

956. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ADH6. In some embodiments, the sequences from gene ADH6 comprise or consist of:
AAAATACATAATCCTGAAAGTATTTAAGTGTTCACCTACCGTTACTTTTGCCATTAGCATTGTATTT
CCAATATGGATTTTTTTTTTACATGACATATTAATGGAAGTCAGCTTATAAAATTGTAGCTCAAGTT
TAAAAACATAAGAAGGTAGTTCACAAATAGGCCATTGTTGTATTTGTTGTTCTACTTTGGGGGAGA
AGAGGAATTATTCATAGGATTCCTAATTCTGAATCCTATCTTTGACCCAAAAAACAGAAACCAGCC
ATAACCCAGAAACTGGCATTCCCCACACGAGTATAAGCTTGCTTACCTACTTTTTACCCTTGGAGT
TTCATGTCATTTTAAAAAATCTTCCCATGGCTTATTTAATCTTCTCATTTTTCACCTAAAGAGAAAAA
AAATCTAGTTTACTGCTCTACAAAGTGAGAATTTGAAATCCAAAACACAAATGTTGCTCTAAAAAT
GTTCCAACCTTTTTTCTCTTCTTCTTTTTTTCA (SEQ ID NO: 902)

957. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ADH1A. In some

embodiments, the sequences from gene ADH1A comprise or consist of:
TACTTGTGTCATCTTTGCCATTGAGAAAAGCTATTTCCTATGACTTCCTGCATTTTTGGTATCTTCA
TAATCTTTAGTCATGGAATCCCAGTGGAGGGGACCCTTCACTTGCCCTGAATATACACATGCTGG
GCTATTGTGCTTGTAGTCTCCTGCATCTATCTCAATTTTCACTGTCGGCATTTTCGCCTTTTTTTTT
TTTTAATAAAATATACCGAATTCCTAGGGTAAAAGCTGTAGTAGGGTAAAGGATATACTCATATTTA
CAAGTGGTGAAAGTCCAAGAGTTGTAAATCCAGGAAATTTCTTAGGAACTCAAATAAAATGTCACA
TGTTTTCTTACAGTGAAGGAGAATGTTTTTCTGACATTTATACTATGTCTTTATGGTCAATATACAA
TTGATTTTTAAAAATAATAGCTGATTTCATGCTTCATATGACTAAGGTACAATTACTAATTGCAAAA
ACTGAACTATTCCTGGAATTATGTTCAAAAAAT (SEQ ID NO: 903)

958. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ADH1A. In some embodiments, the sequences from gene ADH1A comprise or consist of:
ACTCTATACTAGATATGCGACCAGACCAAGTTACAAATCTTTCTAAGTCTCAGTGTTTATAATCTCT
AAAATCAAAATAATATGAAAATCTACCTCCTAGTGTTGATGTTTAGGTTGAAGTTTAAGACAGAAAA
TGCATGAAGAATGTGACAAATAGCAAAAACTTATCACAAGTTATTATCCATTGTTGTTTTATATTCC
TTATTATAACAGGAACGTGGGCACACAACAATGATTTTTTGAAGATGCTAACGTAGTATTGAAGTC
TAAATGACAGGCATACTCAGAATGTTGTGAGTGAGCTTAAAGTTGAAGAAAACACAAGAGAAAAC
CAAAAAAGATGAGCTTTCCTTTGACTTCACTTGACCCGAATGCATGGGGGTGGGATTAGAGTGGC
TGAGAACAGACAGATTTTCACTAAGTCATTTCAAATGCTCCTTGGACTCTCACATGGAAGCATGTC
TAAATGCTAATACAATGTCTCTTCTTTCCTATTGCA (SEQ ID NO: 904)

959. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NDUFC1. In some embodiments, the sequences from gene NDUFC1 comprise or consist of:
GTAAGTGTTAAGAGATCTTTTCAACTGTAAAATATAATATGTCACCTTGGATGAGTAGCTGTCTTC
TTTAAGCTTCATCTGTAAATTGAGGCTTATAACCACGGCATGATATGTGCTCGTTTTGAAGATGAA
ATAAGACAATGAATGTAAACCATATGATACATTAATGCACCGTGCCTGGACCACAGAATTCAATCC
AAATGCTAGTTATTATTCAGCACGACACTTTTCTTTCTTCTGGCTCATGTAGGAAAATTTTAATAAA
CCTCTTGATGAATAGCCGTAGAGATGGGGTGAAAAACCCCCAGAGGACAGAGAATAGGTAAACT
CTTTTTTCTTTTAATTATTTTCTTCCTAATTCCACTGTATAGACAGAAGGCTGAGGCCGGGGTGCT
AGAGAACCTTGCCGTGCTGGAATTCACGTTGACGCCCCCACGGAGCTCTGCTGCAGAGCCCTC
GAGTCCCGCACTTCCGGCCGCCAGGTGGCGCTGGTTCTGTT (SEQ ID NO: 905)

960. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NDUFC1. In some embodiments, the sequences from gene NDUFC1 comprise or consist of:
TTTTGGTTTTAAAATTAATGACATAAAGTTTAAAGGATTAGTTTTAAAGGGTCAAAATGTATTGTCT
GTTACCTATAAATATTTTTACTGGTCTTTAGACATCAGATTGAACTGAATTGAATGTACAAAGATCT
GGCTCAACTGTGCAAGATAAAACCTATTCCTCAGAACGATGTCTTTAATAGGCAAAACCAAATAAA
TTGTTTACTACTACCAGACACTTGTTTAAGCTTCTCAGCAACCCTATAGGTTTTATGTTACAGATGT
AAAACTTAGGTATAGAGAGGTTAAGTAATTTGCCTAGAAATCATAGAGCTAAAAAGTGGTGAGCA
GAATGGCTTTGAACGCTGATTCTACAGCTTATGGTCTAGGGTGGTCCAAGTCTGTTAGGTGGGCT
AATGAGGATCACTAGATCTGGAGTCAGAAGACCTCAAACTGTATCCCACCTCTGCCATCTGTGTG
ATCTTAAGCCTACCTAAGGCACTAATTCTACTTCACA (SEQ ID NO: 906)

961. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SORBS2. In some embodiments, the sequences from gene SORBS2 comprise or consist of:
GTATAATATCACTAACTCACACAATGTCGCACTTGAATGGCTTCTAGCTCTTCTGACTGTTTTTGTT
CTAAACGTAAAAAGCAAAGGAAAATGAGATCTTGTAGGAAACATTTTAAATGTGTAATTAAAAACA
GCAGTCACTTGCCAAAAATAGGTTGAGTAACTGCGAGTGTTAATAACTATTCACGTTTTTGTTATC
TCATGAACTTAAGTAGCATAATATTTCATTAAGATAACTCAGAGGTTTTGGGGTTTTTTTTTTTAAC
CTAAAAACTTTTGGGGTAGGGGTACAGGGGTACAGGATGAAAAAAGGGATTTGTAGGAAACTGA
ATCTTCATTAACTGGATTCTTTGTCAAAGGTTGTGAACAGAATGATAGAACATTAGTTTTGAAAGA

GACCTTTGCTTTCCTTTAATCCAATCAGCAAATACCCTTCTACTATATATATTTAAACATACCAAAA
TCTTGACCAATTAAGATTCACATGTACCCACAGATA (SEQ ID NO: 907)

962. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SORBS2. In some embodiments, the sequences from gene SORBS2 comprise or consist of:
TTTACTGCAAGAATTATTCAAGCTCTCTTTGGGAATTATAACAGCTAGAAGATGGTAAAACTTAAAT
GATATTAACTTAAAAGTATGTTGTACCATAGCCTTTAATCCTGACATGGAGCTAATCCTTGACTCT
AAAAGCCAGATCCAGTGCTTATAGATTTAGTATAAATTGAATTTAAATGGTATAAACAAAGTTGAGT
TCTGTGCCTGAGTTTTCACAAAGAAAACCATAAAATGTTAAGTATTAAGTCTTCCATGCTTTCACTA
AAACAGTGATACCTATTTCTAAGACAGATCCCTGGTCTTCTTTTGTTTTGTTTCGTTTTGTTTGTTT
TAGTTTGAGGGTGGTGTGAAATTGGCAGGTGCATTCCATGATTACTAATTCTAACTGTTCATCTTT
CTCATGGATGTCTGGCACATTTCTCTTAAAACGCATGATATTGCACGTGCTTTTCCCGTTGCCTTG
GCCTCTGCTATATCATTTTTTTGCTTCCAGATA (SEQ ID NO: 908)

963. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KLKB1. In some embodiments, the sequences from gene KLKB1 comprise or consist of:
GATATGTACACAACTAAAACAAAACTAAGATATAAGATCATATTAATGTAATGATAATAAAAGTGGA
TTGTCTCCTGTTCTAATTTTAATAGGCACAAGGCATTTTTGTTAATCACTTCTTATTAAAGAATTTTT
TATAATATTCAGGAAAATACAACAAAAAAACCCTTACATTCCTAAGGCCTCAGAGTCAGAGTAATA
TAAAGGAAATGTAAACACATGCTGAGTAATGCAAGCATTTGGCAATGGTGGTGACTGGAGCTGG
GAGCACAGCTTTTATTTCTCTGAAATAGGAATTTGCCCCTTAGAGTTAGACCAATTTTGCCTTCCT
CTAAATGGCAAACAGTTTGGAGATACTTTAAAGGACATTTTTTCACTTAGGATGTTTAGTACTATG
AATAATAAATAGTCACAATTTCCTTAACTATGGTGACAAAATACAAGCAAATTTAGCCTCATGTCAT
TTCCTAAGGAACATCTTCTCTCTGTGAGTTCACAG (SEQ ID NO: 909)

964. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KLKB1. In some embodiments, the sequences from gene KLKB1 comprise or consist of:
CGAGTATGCATGGAAAATCGCATCACAAAGGCGAGTATGCATGGGGAGCACTTGCTGCTGTACT
TTCATCACTTTTATAGTCTGAGTTCTTAAAAGTTTCGTTCATTTCCCTCAAAACACTTGAACCTGCA
GTTTCAGTAGGTACTGTTCTGCCAGGTGCAGATTAGTTAAGAGATTAGCAGACTTCTCTGCCTAT
CTTCTCTTACTTTAAAACAAATGTTACCATTGAATCAAGGAAGCAATAGCCATGAGAAAAAAGAAG
GATCTGACGCCTTTGAATGAAGATTCAAAACATGATCTTCATGTTTTGTATTAGCTTGGAGTAAAA
TCCACTTGCTGGCAATATAGCCCTTAAGCTTGTTGCCTCTTCTCTTTGTTTCAGAAACTAGAGCCC
TGTTTATTCTGATCAAGGCTCTGGCCCACTGTCTTTATCTCAGATAACCCACCCTCTTCTGCACAC
AGCATGGAGCTAAGAGAAGGGTGTCTAGTTATGTAATAT (SEQ ID NO: 910)

965. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene C6. In some embodiments, the sequences from gene C6 comprise or consist of:
GTAAGAGATACCCTACAGACTGTGTCTGGAAATTGGGAAAACCAGTCTAGTGTAACCAATTTGAT
GGAAGAGCTGAGCTTTTTGAAGCACAGACATGAAATAAATGAATTTTCCACATAACTGATATTCCT
GTGCTCTGCTGAATTCCTCCTTCCCCATTGGGTAGCAAGTTTCTTAATTATCTCTCAGCCCAGTTC
CCTGTTTAAAATGAGATTGTTCATTATAACAGTCTCATTTTGGTTTTAAAGACTTAACTTCTGCACA
TGTAAAAACTTTAAACTCAGTTATATCAACACTTTCCTGTTCCTCTCACTCAAGCCCAGGGCTTGG
AGTGGGGTGGGGAAAACAGGCAAAAGAAAACTGGTTGGTGAGTGAACACACTACATTGGCTACG
TGCCCCCTGTTTTTTTCTGATCTTCATATAGAAATGCTTGCTTTCCTCTCTTGGGCAGCCATCATT
CAGAAGATCTCTGTGTGTTTGACACAGACTCCAACGATT (SEQ ID NO: 911)

966. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene C6. In some embodiments, the sequences from gene C6 comprise or consist of:
AATCTTTCTAGCTACATCAATTTTTTATTATATGCTTCTCTTTGATAGCCCTAAGAAAGGCAACAAT
TCTATATTTATATTAGTGTGCTCATTTGATTAATGTCTGTCTGCACCCACAAGACTATAAGCTTGGT

GAGCACAGGATCTGGGTCAGTTTATGCTCAATCTACTCTCTCCAGAACCTTACAGAGTGATGAGA
ATATCATGTATACTCAATAAATATTTGAAAAACAAATGAACAAAAATTTCAACAGTTCCATTTTCTTT
AGTTATCTGAACATAATCGCAATTTTAGGTTGGAAAATGACACCTCATGTGCACTGGAAAGGACC
TTTCAGGTGGAATATTTAATGACAATGTATTTAGAGAAGCCAAAATGAATGATCTAACTCCAAGAG
ATAAATATGAATCCTTTACCACTGCCTCTTCTCTGAATTCAAGCTTATCACTTAGAATCCATGCTGT
GCACTGTTCTTTTCTCCTTTTTTCTTTTGTTTCA (SEQ ID NO: 912)

967. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MRPS27. In some embodiments, the sequences from gene MRPS27 comprise or consist of:
GCAAGTGCCCATTCCAGAGACTCACTCACCTGACATATTACTACTGGAAGTTGAAAAGTCCCCAC
ATTTATTTGTCTGAACTGCTTAAAAAGTCACCAACAGGAATTCTTCTCAAACTTGCCATCCAAAATT
GAACCCCGCTGGCCCAGTGTTTTGACTTGTTTATATTCCAGATAGCCACTCACGTAAGTTTATCTT
TTTAATGCTGATGGGGGCCAAGAAAGGAGTTCATTTGCTTCCTGGCTGGGAAATTCAGGAATTGC
ATTTTGGGCAGCATATTTTATAGTATGTGTGTAAGTATTTCACTGCTTTTCCTCAGTTTATTTTTTGT
GAGAGTTCATTGAAAATGTCCAAGGCTGGGCACAGTGGCTCATGCCTATAATCCCAGCTCTTTAG
GAAGCCGAGGTGGGAGGATCACTTGAGGCCAGGAGTTTGAGACCAGCCTGAACAACATAGCAA
GACCCTGTCTCTACAGAAATAAAGAAGGAGGCAAAGGCAG (SEQ ID NO: 913)

968. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MRPS27. In some embodiments, the sequences from gene MRPS27 comprise or consist of:
CTAGGCAAGCTCTGTCTTCACCTGAAAATCCTACTCAACACTGGGGACAGAGATCTCTTTAGCCA
TGGGATACCAACTTTTAGAACTAGAGCTAGAACTTGAGAGTACACTTTGTCACTCTTTCTTATGCT
CCTCCAAGAAATACACATTTCCTCAGAATTGTAAGTGTAATCACATTTTATAAGCTGAAATCTCAG
AGTACCTTTAGCCTTCATGAGCACAACCTTGTTGGGGATATTTGGGTTGTATTTGTTTCTCTTTTC
TACACTCACATGTTTGCCTATCTTGACAGCCTGTTGGCCTAGGCAATAATAAAGCTTCTGTCGAG
GTGAGCAAACAGCTGATGGCATAGGCGCACAGAGGGGACTCCTACAGTGGCTGGCTGTAATCT
GCCAGGCTGGTGGTCAGAGCAGGCGAGAACAAAAGCCAGTCTGTTTGCAGGCAAATTGGAAAAT
CAATGTGTTAGTTGTATTCTTTTCTCTTTGCCTTTCTTCTGACA (SEQ ID NO: 914)

969. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DMGDH. In some embodiments, the sequences from gene DMGDH comprise or consist of:
GTAAGCATATCATTTTTTTGAAATTAGTGTTTTTTAAGTGCCAAAGAAAGAAGATATTTAGCCGTAA
TGTTTCGTACGATGGACATTGTCATGAAGCACTGTGATGCTCCCAAGTTAAACATTTTGTCTGTTT
CTAAGTGACAAAGCCCTCCCTCTATCACTTTGCTCTTGGTGGATGCGCTATCACTCTGTCCTTGG
TTATCCAAAAAAAGTTGCTTATTTTCTCCATTCTGCATTTTATTTTGCTCCAGATTGTGTTTTTCCAA
ATTATGTTTATTTTTCCTTCCTGTATTCACTGTTTCTCTATATGAATAACCAGATTCTAGTGTTGAAG
TTCATAAGCATCCTCTTTGTGTCCAATTTGCTTTTTAGGGCAGATTTGATCATTTGGGTTCTCTCTC
ATCCATTTCTGATGACTTTTGACTCTAGTTGAAAAAGTTTTTAAATGCTTTTCCTTCTAGAACATTAT
TAAACATATTTCATAATCTTCTCTTTTTGT (SEQ ID NO: 915)

970. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DMGDH. In some embodiments, the sequences from gene DMGDH comprise or consist of:
AATAGATGAGACCCATATATAATATTTCACTGATCATTCTATCAACGTATCCCATCTGAGTTTCATT
CTTCTTTGTTTTCCCCACAGTACCTTGCCTGAAGGCCTAAAACAAAGTAGATATGCAAGAATTAAT
TGTTGAATGATTGAATCAAACATAAATTTCCTGACACCAGATATATTATTTAATGTGAATTTATTAA
CAGTATTAAAAATTAAATATAAATTATAATTGATATATCAGTTGGAATTAGATTTGTCTTCAAATGTC
AGAAACCAAAATAAGAAGGTGTAAACAAGATAGAGGTTTATTTCTCTTTCTTTTCAGCAGTCCAGG
ACTTGAATGGTGGCTTTTTCATGAAGTCTTCAGGGACCCAGTCACTTTCCAGATCAAGAAACACTT
TTGAAGTCCAGTTTTACTAAACGTTTACTAGCAGGATATATTTTTACTGAGTAATAAGTATATATAT
ATTTGAGTATTGACTCTGGTATGATTGATTTA (SEQ ID NO: 916)

971. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ZCCHC9. In some embodiments, the sequences from gene ZCCHC9 comprise or consist of:
GAATGCTCAACGAGCACTGAAGGGGGGACATGAGGCACTGCCTCTCACCCAAGAGAGCCCCCA
AATGTCCTTTTCAGACTTTTATCACAGTGACCCACTCCCACCGCGCCTTTACCTTGCCTCTGCCT
GGAATGTCCTTAACTCCCTCTTGCCGGCAATTTCACCAGATTTTTGATTTCTTATCCAGTCTCACG
GGAAGCCTTTCCGGCATCTCCCACCCTACCGATCTTCCCGTCTATCTCGCCTGCTACACTGTGAG
TTCAGACAGCACGGATTGAACTCTTCATCTTTTCGTGTCGGCGTCCTGCACAGGGCCATCCCATC
ACTAAGCGCGCCACAAACTCAGCCCAGTATTGACGCCCACGAGTCGCTTGTAAAGACCGTCTGT
GACGCCGGAAGTGACGCGCTCTCGGGCACTATGTGCTTCCGGTCTCCAATACCGCAGGAGGGC
GGTCTTCCCCGGCTCGCCAACTCGGCTGCTCTGGGGGATTCGTGCGCG (SEQ ID NO: 917)

972. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ZCCHC9. In some embodiments, the sequences from gene ZCCHC9 comprise or consist of:
TGAGGTTCTCAGCCACCAAAGCTGCAGGGTCTCGTCGTTCGTTCCCTCTGGCCTGGCGGAACTT
GCGTGGGAAGCTGGGAGGACAGAAGGCTTAGCCGCTGGGTCCCTGAGCTGGCTGGAGCGCGG
GCTGTCTAGGGGCGGCGACCTCAGCTGTTGGGCTCCGGCTGCTGGGGGCTGTGCGTCCAGCC
GCCCTGGAATCCGCCTGTGGGTGGGCCGCTTGGCTCTCCCACTTCACCCTCTTGATAACCCAGA
GCCTCCCCCTTCCCACGTACGTAGGGGAAGGATAATCTACTTCCTTTTGAACAGCTTCGGTCCCC
ACTATGACAGTCGCATAAACTTCAGCGAAGAGTGCGCTGGTAAAGTGGCATGGAGTTTCTCACAC
CAATTCATTGGGTCCACCCTTCAGCTTCTGTGGAAGGGGTCTTTCTGTTACTAGGAGCTGAGACT
TGGGGGGTTGCCAGGGATGCTGGTCTTAAAAGGTGATAATTTAGGCCGGGCG (SEQ ID NO: 918)

973. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LEAP2. In some embodiments, the sequences from gene LEAP2 comprise or consist of:
GACGATCTGGGGAACTGTAGGCCTTGCTGAAGCATCCTCCCACAGAAAGGAGATAAGGGCCTTA
TCCAATTGGCTGTACACAATAGATCAGTGCTTCTTTCCTAGACAAGGCTGAAAGGGGCCAACATT
ATTTCTGAAGACTTCATTATTGGAATTCTATGGGAGTGATCTCACTGAGCTATTTTGGAATAGAAA
TGTGGCTAGTTGCCTGACCTCCCTCAATGGTTTCACGTGGCTTTCAAAGGGAAGGAAGGGCAGT
GCTGACTTTTGGTAAAATGGGCGAAAGGGTCCATGCCAGCAACACAATCACTCAAAGTCCAGAT
GAGGGATCAGTAAATACAACGTGCCTGAAAGGTGGCCCTTGAGCACATTCCTCCGGTAGACATT
AACTTATTAAATTGATTCTGATTACAAATATAAACTTTGCCCCCATCTCACCCAGTAACAATGCAAG
AGTTGATGTCAGTCTATAAAAGGAAGTAGGAACTGTCCCTGGCTT (SEQ ID NO: 919)

974. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LEAP2. In some embodiments, the sequences from gene LEAP2 comprise or consist of:
TAAGGAGGGAAGGATACTTATGTGTGTGTGTGGAGTGTGGAGATGATAGTGGTGGTGGAACTTG
AAAGCTAGATTCAGTCCTGAGGAATGGTTCCTCTGTTCTGAGTCTACAGCATCTGCGGAATGGAA
TGATCACTCTTCCAAGGTGTGCAGCAGGGTGTCAACACTTTCATATCTGAATGTCTTTGCCCTTAC
AGATAGATGGCTCCCCAATACCAGAAGTGAGTTCGGCAAAGAGAAGGCCACGGAGAATGACCCC
ATTTTGGAGAGGGGTTTCCCTCAGGCCTATTGGAGCCTCCTGCCGGGATGATTCTGAGTGTATC
ACAAGGCTATGCAGGTACTCCCTGAACCTGGGAGCAGGGTTGGGCCAGAGAGCCCTGGGAAGC
TGGGCAGAGGAGTGACAAGGGGACACATGAACCTAAGAATAAAGCTGGGATGGAGGAGTTCTA
GACTGAGACTGGGAGCTCCATGGAAAATCCCTTAGGAGTTAGGAGCCAAG (SEQ ID NO: 920)

975. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ETF1. In some embodiments, the sequences from gene ETF1 comprise or consist of:
GTAAGGGGCCCGCGCTCCCCGGTTTAGATCACTCGGCCCCCCTCGTGGTAGGCCACCGCTACT
TTTGCACCTCTCCCGGGCCCTTAAGTCCAGGTCCTCCCTCTTCGGGCTCCAGGTGCTGCCACCC
GACTCGGGTGCTATTGTGGCAAAGTGTTCGGCCTTCCTTTCCCAGGGCCCTTCCCTGATTTCCTC

TTCTCCCTTCATTTCTCAGCCAGGCCTCATTAAAATGGCCTCTCCCTTCTGGGCTTCTGAGACCC
GGGTGGGTGAAGTTTGGATGGGACGGGAAGCAGAGGTGGCCAGGGACAGCTTCTTTCTGATTC
CTGATTTCTCTGGGTCTTCCACCTGTCCCAAGATGACTTCTCCCAAGTCCTCTAATTACCCCGGA
GCTTCCTGGTTTTAGCTGTTCCAGGACCCACCTATAAACTGAAAATGCCAACGTACGCGCGATGT
GAGGGGTGCTGGGTAGGTTTTGGTTAATGAATCTGCATGTGTATGTCCA (SEQ ID NO: 921)

976. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ETF1. In some embodiments, the sequences from gene ETF1 comprise or consist of:
GAGAAGTCGCGGCGGACGCCCAGCTTCTCCTCACTCGCACCGGCCCCCTCCCTTCCGCCTGCC
GCCTTCCACTCCGCCCCTGGCGGAGGAAGTGATGTCACAGGCCCCATGTGAGCGGATTGCAAC
ACATGCAGCTGCCTGGAGAGAGGGAGCCGGTGTCCTACGTCAGAGCCGCCGCCGCCGCGGAG
CCGCCGCCGGGGAGGAGCAGCCGCTGCCGCCCAGGACTGGGCCCTTAGGTAAGGCACAGGGA
GGGAAAGGCCGGTGACCTTTGTGGCGAGCTGCACCGGACGGGAGGAGAGGGCCTCTGGGGGA
TGGCGAGGAAGGGGGCCGCTCTGCCCCAGCGGCGGCGCTAACTCTGTGGTCTTGGTGTCTCCG
GGCCCCGCCGGGCCGCTCTAGGGAGGAGGAGGCGAGAAGATGGCGGACGACCCCAGTGCTGC
CGACAGGAACGTGGAGATCTGGAAGATCAAGAAGCTCATTAAGAGCTTGGAGGCGGCCCGCG
(SEQ ID NO: 922)

977. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RNF14. In some embodiments, the sequences from gene RNF14 comprise or consist of:
CATTGCTGTCTTTTATTACATCTTTTTATATTAAAAATAAATAAAAATGTCATAAATAGTAATTGTGT
AAATATAAAAGGCCTTATTAAAAAAACAAATCTTAGTGCCTCAGTTTTCTCTTCTGTCAAGTGGGC
ACATAAAATTACCTAAGTCATAGGGTCCTGGGCATTTAAATGAGAGAATGTACGTGAAATATTTAG
CACAGTGGAGGGCTAGGCACACGGGGAGACTGCAGTTTAAAAGACTAACCAGGCACATGAGAC
CAAAGACACAAAAGTCTGTTATTTTCCTAGAGTCAAAAACAAAACTTATTAGAAGGCTGTCTTTAC
CCAATCTTGTCCTCAAAATTGACTCTAAATCTTTAGTTCACTTTAAACATTCAGTAAATTATTAACA
CTGCTTTGAAATTCTCTTTCTATTCTCTCTATCCTGTGACCTCTGACATGATGTCACAATTCACCTT
CTGCTCTGACTTTGTGAGGATTTCCCAAGCTGGTTG (SEQ ID NO: 923)

978. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RNF14. In some embodiments, the sequences from gene RNF14 comprise or consist of:
TAGGGTTGCTGTGTGTTTTGCTCTTGGTCTAATTCCTTTGGCTAAACATGAATAATTATATTAATGA
ATGGCTTTGGAGATTCTTCTTCCGTCCTTTGCATTTTTCCGAGATATGTTTCTGGTTTTGGTATCTA
TTAGAAGGGTATTTTGGTTTCTGTTTTGTGACAATCAAGATTTATAGTACAGAAAATTAGAAGTGAT
TATTTCTATTTCAAGGTTCTTTCTGTGGCAGCCAGGTAATCCCTTGGGTGCCCTGATTTACTCACT
TGGTTTTTTTCTCTCTCCTGGGTATAAGACCAACTACATAATTTACAAAGCCCAGGGCAAAATAAA
AATGCAGCCTCTCATTCAGAAATTATTAAGAACTTCAAGAGGGTGAGAGCACAGCATCAAATCAA
GAGCAGGGCACTTCTTTTTTATTTTAATTTTTCCATAAGTTATTGGGGTACAGGTGGTATTTGATTA
CATGAGTAAGTTCTTTAATGGTGATTTGTGAGAT (SEQ ID NO: 924)

979. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NR3C1. In some embodiments, the sequences from gene NR3C1 comprise or consist of:
GTAGGTTATATTTTTATTCCCATTCTATAGCTGGGTAAAGTGAGTTCTAACAAAGTTACTTGTTAAA
GGTCACTCAGAGGTCAGAGCATCAGAAAAAAAGACAATCACAAGGCTGATGTTGTGTGCTGGAT
AGTTTAAACTGAACAGGAAGAAAACATTTTTGTGGGCTTTATCTAAAAAGAAATAGTTTGCTCTGA
GTTTCTCAGTTTCATTTATTCAGCAAGTATGTGCCAAGTGCTATTGTAGGCAATGAAGATACAGCA
GGGAACAAAACAAAACTGACATGGAGCTTCCAACTAGAAAGGAGAACGAGACAACGCGTTTTAAA
ATATATATAATGTGTTAGGTAAAAAGTGCTATAAGGAGAGCTAAAACACAATGAGAGGCTAGAAG
AGTGATAGTGGCGGAGGGGCTTCTCTGAGGAGATGACATTTGATCAGGGGTCTGAATAAAGTAA
AGAGGCCAGTTATGTGAATATCTGGAAGACTCAAGGGGCAGG (SEQ ID NO: 925)

980. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NR3C1. In some embodiments, the sequences from gene NR3C1 comprise or consist of:
TAACTATAAATTGTGCATTCTTGCATAGATCCTCCTTGGGAATGAGAAATTAGGAAAATCCAGTTG
TTAAAATGAATGCCTAAAATCAAAATAAAATTTGTTTTTCTGGCACCTGCTTGATGACACAGACTAA
TAACCAATGACAAAATTGCCCTTGAACCCAAGTTTTCATTTCCTCCTATTGTGTGGTCAGGTTATG
TAAGGGTTTGCTTTCACCCCATTCAAAAGGTACCTCTTCCTCTTCTCTTGCTCCCTCTCGCCCTCA
TTCTTGTGCCTATGCAGACATTTGAGTAGAGGCGAATCACTTTCACTTCTGCTGGGGAAATTGCA
ACACGCTTCTTTAAATGGCAGAGAGAAGGAGAAAACTTAGATCTTCTGATACCAAATCACTGGAC
CTTAGAAGGTCAGAAATCTTTCAAGCCCTGCAGGACCGTAAAATGCGCATGTGTCCAACGGAAG
CACTGGGGCATGAGTGGGGAAGGAATAGAAACAGAAAGAG (SEQ ID NO: 926)

981. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ECI2. In some embodiments, the sequences from gene ECI2 comprise or consist of:
GTAGTGCTAAAAAGTGACGACCTCACGCGCGCCCTCCTGCACCGCTGGGCCCGGAGTGGTCAG
GATGGGCGCGTCGGGAGGTCAGGGCTATGGTTCCCTGTCAGCAGTCCCCAAGGTCTCCGCCTG
CCTCCGCGCACGCTCCCATCCTCCTGGGGCCGGACTCCGGGCGGGTGAGCCGCCCCAGCTGA
GCACCCGGGCCTGCACTTCCCAGCCGGGCTGCTTCTGGGGTGCAAAGCGTCGCTTGCTAAAAG
CGAGGTAAACGCAAGCCGTTATCACTCGTGTGGACTTAACACTCTGCTTCTTGGAGAACACGTAT
GCTATAAAGTGAAATGGCCGGGTACAGAGTAACGGCTAAGAAGCACGCTGCACCTCCCTGGGGT
CCCGGGAACCCGCACGAATCTGTGCATAGGGAACAAAACCGAAACACGGTGGTGGCCTTGAAG
TGGTAGAATTATGAGTGATTTTCCCGACTTTATGTATTTTCTTAAATGGTCGTGTT (SEQ ID NO: 927)

982. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ECI2. In some embodiments, the sequences from gene ECI2 comprise or consist of:
GGCCCCGCCCCCGCATCTGAGCCCCGACTCCTAACCGCCTAGAGCTCCCGCCCCGCCCACGCA
CCGACCCCCCCCGGCCCCACCCCCGAGCCCCCGCAGCCCCAGAGGAGGCCACGGGCTAGCGAT
GGCGAATGCGGCGTGGCTACGCTCTCAGCCTGGCCCCGCCCCAACCCTGGCCCCGCCCATGC
CCCAGGCTCCTGCCTGGGCTCTGCTCTCGGCCCCGCCCCGCACCCAAGCCCCGGCCCCACCC
CCGAGCCCCCGCAGCCCGGGAGCCTAGGCCCCGCCCCCGAGTCCCGGCTCCACCCCCGAGAC
CCGGCCCCACCCCCGAGCCCCCGCAGACCGAGCTAGGCCCCGCCCCCGAGACCCGGCCCCAC
CCCCGAGCCCCCGCAGCCCTAGAGCCGCCCAAGGGATGGCGATGGCGTACTTGGCTTGGAGAC
TGGCGCGGCGTTCGTGTCCGAGGTAAGCTTGGAGTCCCGGCCGTTCGGCCCATGGTCGCCCGC
(SEQ ID NO: 928)

983. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ALDH5A1. In some embodiments, the sequences from gene ALDH5A1 comprise or consist of:
TGTTCTTTGTGCTTCTTGTATTTGGATGTCTAGGTCTCTAGCAAGGCTGGAGAAGTTTTCCTCGAT
TATTCCCCCAAATATGTTTTCCAAACTTTTAGAATTCTCTTCTTCCTCAGGAACACGTATTATTCTT
AGGTTTGGTTGTTTAACATAATCCCAGACTTCTTGGAAGCTTTGTTCATATTTTCTTATGCTTTTTT
CTTTGTCTTTGTTGATTGGGTTAATTTGAAAACCTTGTCTTTGAGCTTTGACGTTCTTTCTTCTGCT
TGTTCAATTCTATTGCTGAGGCTTTCCAGAACATTTTGCATTTCTATAAGTGCACCCATTGTTTCCT
GGAGTTTTGATTGTTTTTTATTTATGCTATCTATTTCATTGAAAACTTCTCCCCTTATTTCTTGTATC
TTTTTTTTTTTTTTTTGTGACTTCCTTAAATTGGGCTTCGCCTTTCTTTGTTGCCTCCCTGATTAGCTT
AATAAATAACTATCTGAATTCTTTTTCAG (SEQ ID NO: 929)

984. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ALDH5A1. In some embodiments, the sequences from gene ALDH5A1 comprise or consist of:
TGAGCTCATGTGATTTTTGGGGGGTGTTAAAGAATCTTGTTTTTTCATATTATCAGAGTTGGCTTT
CTGGTTTCTTCTTATTGGGGTAGGCTCTGTCAGAGGGAAGGTCTAGGGCTGAAGGCTGTTGTTC

AGATTCTTTTGTCCCACGGGATGTTCCCTTGATGTAGTAGCTCCCCCTTTTCCTAGGGATGTGGC
TTCCTGAGAGCCGAGCTGTAGTGATTGTTATCTGTCTTCTGGATCTAGCCACCCAGCAAGTCTAC
CAGGCTCCAGGCTGCTACTGAGGGTTGTCCGCACAGAGTCCTGTGATGTGAACCATCTGTGGGT
CTCTCAGCCGTAGATACCAGCACAGTATTTGGGGTGTCTCCCAGGTCCTGCAGGAGCAATCTGC
TTCCTTCACAGGATCTGTATGCTCTCCCAGTTTTCCTGATTTATTCCTGCAGTCGTTCTGGAGCAA
AAGTTCACAATGCAAGCCTCCACATGCTGTTTTGTCCATCCGAGT (SEQ ID NO: 930)

985. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene APOM. In some embodiments, the sequences from gene APOM comprise or consist of:
CAATCCACCGTGCCCCAGCACCTGCATCATACCTGTTCTAAAGCATTTACCAAGTTGTATTGCAAT
GGTTTGTCTACACAGCTAGTTTTCCCTCTAACGACTTCTTCAAGATCAGGGGCTATGTCTTATTCG
TTTTTTTATGTCCCCGGGGATTAGCTAGTTCTTGGGAAACAACTGGGACTTGGGATTCAAAACAG
TTTGCTAAGTGAATGAATGAGAGGCCCAGTCAAGCTACTTCCCTTCAGTGCTGCACAGTGCAACA
AATAACCAGCTCAGATACAGGTTCAAAGACCACAGGCTTCTCCCTGGACAGCTCAGCTCTCCTCA
TAACTCCTGAGAAACCCTGGACATGCCAGGGTGTACTATGGAGTGGTTGCATCCGGAAGAGGGG
GAGGAAGTCCCAAACACTAAGTAATCCAGGTTTGGGTTGGAAAACAAGGTTGAAGTTACTCATTA
GCAGGTGAAAGGGTCAAGGGTCGAACGCAAGGGAGCTGAAAGC (SEQ ID NO: 931)

986. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene APOM. In some embodiments, the sequences from gene APOM comprise or consist of:
TATGGACTGAGATTGGGGGAAGCCTATGGTGGAGGCTCTGAGGGACTTGGGTGGATGGCCTAG
GATGACTGGAGACCATCTTGGGAAAGGAAGAGAGGAAGGGGGTGTGAGTGTTGTGATAATGAAA
GCAAGAAGAAAAATATCAGTACTGTGGCCATCAATGCAGAGGCATGGCAGAATTGGGGGGTGGG
GTGGTTACCCAGGTTGACTGGGGAGGGGCAAAGAGGAAAAGTCATTTAATGACTCTTTGTCATG
GATCCAATCCCCAGTTGGAAAGAGGAAGGCAGCCAACACCTCTACCCCTAAATCTTGCTGTTTTG
ACTGATGAAGAGGTTGAACCCATCCTGTGCTGGAACCCACCCTCTTTTGCTCCCTTCATTGTCTC
TCCAGTTCCCAGAGGTCCACTTGGGCCAGTGGTACTTTATCGCAGGGGCAGCTCCCACCAAGGA
GGAGTTGGCAACTTTTGACCCTGTGGACAACATTGTCTTCAATATGGCTG (SEQ ID NO: 932)

987. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene FKBP5. In some embodiments, the sequences from gene FKBP5 comprise or consist of:
GTAGGGACCCCATGGAGTACGTGACGCCTGGCCCTCCAGCTGCATGCTCCAGTTATCAGGACA
GAGACCCCTCCCCACCCATTCCCAGGCTTCCCTGGCTCCCTGCTCTGCTGCTGGGAGGCCCTGT
CACCACACATGCGCGTGCACGCACTAACATACACACACCCCTCTCAGGCACCCCCGGAAGACCA
GCTGCAGCTGGGGGGTGGGGGTGCACGGAGCACAGCCAGGGTTCTCAGATCCCTAGCCTGCTCT
CCCACCCCGCCCTAGCCCCCAACTGCCGAGCTGCTTCTAGTTTTAAAGCAAAACATGACTCTGTC
CTTCCTGCTGCTCAGTGGCAGCAACACTGCCTGGGGTTATTTTTAGCAGGGATGCAGGGAAGGC
ACAGTTCTCCTTGACTTTAACTAGGGACAACCCCCACCCCTCAGCCAAGACTCACTGGAGGAGG
CCGGGTACGGAAACCCCCCTCCCAGAAAGGGGAAATGGTGTGTTTTCTGTTC (SEQ ID NO: 933)

988. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene FKBP5. In some embodiments, the sequences from gene FKBP5 comprise or consist of:
GGACAGTCATCTTGGACATGCTCTGTGTTCCATATCATGACTTCAAGCCTTGCCTTTTTCATGTAC
TACCAGTGGGATCCTAGACTAGCACTTTACCACTTTAAGCCTCAGTTTCCTAATTTGTAAATAAGG
AGTAATTGTAATCATTCCAATATCACAGGCTTGCTGGGAGGATTAAATGAGATCATCCACATCAG
GGTCAGCACAGTGCCCGGAATGGGGTACCTGTGAAATTAATGGTGATTCTTCTTTATTGTTACCT
TGGAAAATGGAGGCCAACTGCAGGATGATCGTGGCTCCAAGGAGCTGGGGACCCAAGACATGC
ACAGAGAAAGAGAGACCAACAATGTGAGGCCTCTGATGCATGAGACAGGCAGGGGAGTAGTGG
GAGGAGAGAGCAAGAGTGAGCAGCCAGGAGGGCCTCTTCCCTTCCCTTTACTCAGCCTGTCACT
CCTCTGCTAGGATCCTGCATTGACACATCTTGTACTTCCTGTTTCCA (SEQ ID NO: 934)

989. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC22A7. In some embodiments, the sequences from gene SLC22A7 comprise or consist of:
AGGTGTGTCTTAGGCCAGGGCATCAGCTCCCAGCAGGGGAGAGGGATGCGAGGAGGCCTCATG
GCTCAGCAGAAAGAAACCTGGTTAGGATCCAGCTTTCAGTCCTGAATCCTGGGCTGTCGGCCAG
GCCATGGCTGTAGCTGCAAATAGGCAAGGCTGACCTAAGGTCTCACAGGACAAAGGGCACCCTG
GGAGAGCTGGCCCCAGGCCCCAGGGGCCTCCTCTTCTTAGGGATCCTGGGAGCTCTGCTGACC
AAGGGGCTAGGGGCTCACCTCCTATGCCATCACCCAGCTACCTCATCATGGTAGCCTTGGTCCC
TGAACACTAATGGGTAAGCCCCAGAGCCACGAGCCAGTGACCTCTGAATGGATGGCTTCCCCTT
CCCCCAGGCACCAGGCAAGACAGGTAGAGGTCCCTGGAGACCTGATGGCTGGGGAGGGCCCA
GTCCTGGGCCAGCCCCTGAGGGCTGGATTCTGGCTGCAGGCTCTCCAGTCCATCC (SEQ ID NO: 935)

990. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC22A7. In some embodiments, the sequences from gene SLC22A7 comprise or consist of:
TACTTAAGCCCAGAAGTTGAGAGACATGTGAGAGGGATGGGCCTGCCATTGCCTTGGGTGGTTA
CTGTGTAGGCATTAGATGTATTACTTTACCTCTTAAAGTCTCAGTTTACCAATCTGTAGATGGGGG
CTATGAATATAAGGCACTTTTAGTTCATGGCTTGTAGTAACAGGATCCTACACAAGAACTGTTATC
ATCATCATTAATTGGGAGGTGATTAAGGCAGGGAAGGGCTAAAGTGGCTTCAGGGAGTTGAGAC
AAAGAGCTGAGAAGGCAATTTCTGCAGCAAGAGGTGGAGAAACAATAGAGGCCTTCTTTTCTCCC
TTCCTCTTTTCCAGTCCCAGGTCGGTATTTACATAATCCATCTGGAGGTGGAATGTCGGTGGAGG
CAGTCTCCCTGGGAGGCAGCAGGTCGAGGCCTTCCTTGGGAAGAAGCTGAGGCTGCAGGACTG
GGGAGGGACAAAGTTTCCTATTCCCCAAGCTGGCGTGAATCGTTGG (SEQ ID NO: 936)

991. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MLIP. In some embodiments, the sequences from gene MLIP comprise or consist of:
TCACTACAGATGCTCCTGTATTGTTGCTTACAATTTATATACTAAGGATAAAGTTACTGATATTTTG
AAATAACTGTGTGTTTTCTAGTTCTTTATTTGGACACAGTGTTTGCATGTATTTATACCTCTAAATG
TTCTCTATGAGCATGACCAACTGATTATTGAGATTGGCAGGTGCTAGCGCCCTTCAATCAGCTTC
TCATTGCTGCACAATCTGGCTTTTCTCTTCTTTTCACAGAATATATAATTGGAATACATGCATGAAA
AGAAAAGAGGGAAAACACATATCAGTGGCTTTTTTTCTTTTTCTTTTTCTTTTTTTCACTTCTACTG
ATTCCATTTCAGCAGTTAGTATGACCTCTCATAATGTTCCAAATCTAAAAATTGTCAAAACAGAAAT
CTACTCTTCGGAGCTGACACAATTCCTCAATTTTGGAATGACTCTGCTTTACCTCTTTTTAGAATTT
CTTCTTTCTGCGTGAGTGTGTGTGTTGTTT (SEQ ID NO: 937)

992. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MLIP. In some embodiments, the sequences from gene MLIP comprise or consist of:
TAAAAGGAAGTCTTTGCTTAATGCTTTCAGTAACTTTTAAAAGCAGTGTACGGTGCTGGTGGTATT
TGCTGCAAGGATGTGAGGGAGAGCTGCCCAGTGAAGATAAATTTGTATGTATATTGAAATGAAAT
GCTATCTTCACTTAGAGAAAAGGGTGAGCTGATAAAGACAAAACTGCTCATTGGGCAAAGAAAAT
GCTCAGGATTGCCCTTGGCACAGTGATAATGTAAGATACCCTGTAATGCCTTAACAGGAGGCTAG
AGGCCATCTGCGAGTGTGGGTGTCAACATCTGAAGGAAGAGAACTTTTAGGGAAATATAAGAAA
GGAAGGCATTACAGCCCAAAACTGAGCAAAGGAGCTGTTAGCCTGCGTGGCATGCGGGAAAACA
GTTTCTCAAATTATTAGGCTATCCGGTGAGAAGATGACGTTCTTAGAGATTTTGAGCATTTCAAAG
TGTATTTAGAAAAAGATTTTAATCCTTTTATCTCATATTTCTAT (SEQ ID NO: 938)

993. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ENPP1. In some embodiments, the sequences from gene ENPP1 comprise or consist of:
TAGGAGCAGCGTGCCTATGGAAAATAGAAAATAGGTTCTTTTTGTTTTTGTTCTTGTTTTTTGCTTC
AGAAATAATTATAGAAATCTGTGTTTAGAAGCAGTCCTAAGAAGTTACATGCAAAGAAGTACCAGT
CTTGGAATGAGAGTGAATCATACACATACACTCCCAGTTAATATCCTAGGTGGTTTGGGGCAAAT

AACTGGGCTTTCACATTCGGTCTAAAAATGTGATAAGACATTCTTCTTTGCTCACATAATGATATT
GTAATATATAAATAAGAAGAAACATTAACCAAAATTTGGGTGACGGAAAAGATTTTGAAAAAAGTG
AAGTGATAGGTACAGCTGAAATTCTGTCTTACCTATCAGATCTTCAACTAATATGAGTGCTACACC
CATGTTTAACGAATTTAACCTTGGAAGTGAAAGAAGTTCTGCTCTGCATATTAAATTTTTTGTTAAA
GTTACAGCATGTTTTGGGATTTTTTTTTTCTCCTAG (SEQ ID NO: 939)

994. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ENPP1. In some embodiments, the sequences from gene ENPP1 comprise or consist of:
TAAGTATATCTCTGTGATAACTTTGAATATGGTCATATTAAGAATACCTTCCTTTAGGCCGGGCAC
AGTGGCTCATGCCTGTAATCGCAGCACTTTGGGAGGCCAAAGTGGGTGGATCACCTGAGGTCAG
GAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTAAAAATACATATACGATACTATACTATA
TCTATACTAAAAATACAAAAATTAGCCTGGCTTGGTGGCAGCTGCCTGTAATCCCAGCTGCTCTG
GAGGCTGAGGTACAAGAATCGCTTGAACCCAGGAGGCGGAGGTTACAGTGAGCTAAGATCATGC
CACTGTACTCCAGCCTGGGCAACTGAGTGAGACTTGGTCTAAAAAAAAAAAAAAAAAAAAAGAA
TACCTTCCTTTAAATCATTATATCGCTAAACTAAAGGGAATCACAGTTAATTTTTTTATGATTAAATC
TCCAATGCAGAGCTTTTGTACACAAATGGATTTTATGGGACT (SEQ ID NO: 940)

995. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene VNN1. In some embodiments, the sequences from gene VNN1 comprise or consist of:
GTAAAGAAACAACTTGTGAAAAATTCACTAGTAAACATCAACTTGATTTACCTGGGAAAACTTTGT
TGATGATCATTGCATAGATCCATGATCAATTCTTAAGTTTCAGTATAGCTTATTTTTCATCTACTAT
GGGTATATTTACTGGGAGAGCAAATATGAATTATGAAGTCACAGAAGTCAGAGCTAGAAAGTAGC
TTAGAAATCATCACATTCAGTGTGAACATCTCTGGTCTCTGACTCCTCACCAGTGAACAGAAAAAT
ATTTCCCTGTGTAGGTCTGTGATTTGAAAACTATATGAGTAAATGGCAAAAGAGAGTCACATCAGT
TTAAGATTAATAGTTTTCCTTTCTCATTGCTAAGATAGCTGATGAGGTTAATGTAGTAAAGTCCTTA
AAGTGTAAGCTGATTGTAATCTAAGAGGTGATATGGCAGGATTTTAAGTGGTTTAAGTCAGGTCT
CGGCTACAGAGATATTAAGTGTGGTGAAAGCAGCACT (SEQ ID NO: 941)

996. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene VNN1. In some embodiments, the sequences from gene VNN1 comprise or consist of:
CATCTCTACTAAAAATACAAAAATTAGCCAGGCGTGGTGGCAGATGCCTGTGATCCTAGCTACTT
ATGAGGCTGAGGCGGGAGAATCGCTTGAACCCGGGAGGTGGAGATTGTGGTAAGCCGAGATCT
AGCCATTGCACTCCAGCCTGGGCAGCAGAGCGAAACTCCATCTGAAAAAAAAAAAAAAAGAGAGA
AAAAAAAATGCTTGACTAGAAGCCCAAACCTCACCATTATGTAACATATCCATGCAACAAACCTGC
ATTTGTACCCTTTGAATCTAAAATTAGAAATAAAGAAAAGAAAAGAAAAAGAAAAAGAAGTGACAG
TGCACTGAAAAAAAAGGAAATTAAAATGCTTTGGAAAAGAAAATAAATTATAAAAATATAGAAAACA
AAATAAGATTTAAGGGGTGTGGGGGAAGCCCAAATAGTTGTTACTCAGCCACTCAGCTCCTCAGC
TCCTCTTGCAGGCCCCCCTTTGGATTAAGTTGCATTTTTAACA (SEQ ID NO: 942)

997. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SGK1. In some embodiments, the sequences from gene SGK1 comprise or consist of:
GTTCGTACTTACCGTACTATATTTTGCAGATGCCTCAAAGGATTTGGGGTTACTTGGCATGGGGA
AGGCACATAAGGTGGGGTGTAGGAGAGGGTCTCTGGTTGTAGGTTTCTTAATTTAATGTTTGAAA
ACAAACATGCAAAAGTCTGTGTGCAGGTTGATGTTTCTGGGCAGCCTGAGCAAAATTTGCTCTCT
CAAGAGGGAAAGGAACCAGGTGGGAGCAGAGCTAGGCTGGGCTAGGCTAGTTGAATGGTGGGA
CATGACATACGGGTGGCACTGGCAATAACAAAGTCACATTCTATGAAGATTCCCTGCAAGAGGAA
GCAGACATGGGCCAGTTACTGTGATTTGAAATTGCCTAAACATTGCTTTAGGTTGGCATGTCAATT
TCAGGTACTAGTGTTTTTTTTGTTTTTGTTTTTGTTTTGTTTTTGTTTGTTTGTTTGTTTTGAGACGG
AGTCTCGCTCTGTTGCCAGGCTGGAGTGCAGTGGCGTGATCT (SEQ ID NO: 943)

998. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SGK1. In some

embodiments, the sequences from gene SGK1 comprise or consist of:
AGTAGGTTGCTGGGACAGAACAGGGGGCGCCTGCTCCACCCATCACGTATCCGGTTGGAAGAA
AAGCCAGTCTCAACAACTTGATTCTCTCGGTTAAATGATAAGTTTAGCCGACCATCCGTCTCCAA
GTGCTGAACATTAGGGTAGGGGAGGAAGGAGCACATCAGACGTTCCCTTTCTTTTCCAACCACA
AATCATACGGTTGCATCTATTCTCTATTCCGCGTAGAACCCTCCGACCTGAATGCCACGTTCCTC
CCGGAATGCATGCCACAGAGCCTCTGAGAAAATAAATCCTGTGCATGTGTTTTGAATTTTTTCCG
GACTGATTTGTGAGGATAATCAGTTAAGTTACATTTCTTGTGTGCGTGCTGGGGGTGTAATAAAG
CTAGGACACTGATGACTGTAATTTTCTGAGTGATGTCGCAATGGGGAGAATAAATGGCCCAGTGT
TGAACTTTGCAGCTTGCTCCCTTCCTGTACTTAAATTGCCTTGATAT (SEQ ID NO: 944)

999. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PLG. In some embodiments, the sequences from gene PLG comprise or consist of:
ATATCCCCAGAGTGGGTGTTGACTGCTGCCCACTGCTTGGAGAAGTATGTTTAGGGGACAATTG
ACATGAAGTCTTGTCTTAAATACTTTTTCTGTCCTTCTTTTCCTCCTTTCCTCCTTTCCTTTCTCACT
CTTCCTCCCTTCCTTCTCTGGCTGTGACACTAGGGACCAGGCCAGGGCAATTGGATAAGAGAGA
AGGGAAGGGTTTCTAGAAAGAAACTGCAGAGGAAAGACACAGTACAGATGATTTTGTGGGCCTG
AATAAACTGCAGAACAGAGCTGTTCACTACCATAGGCTGTATCAGTCTCTGCCCAAACAGCCCAA
GAACATTCCTTAACTGCCTGTTTCAAGCAAATCATGAATTTTGCTTCTTGCCACTCAGAAGTCACT
AATTCTGAGTGGCCAAGGGTGTCAGGGAGACAGCACCAATTTCATGGCACAGAGGTTACCTGAA
GGGGCTGGACCATATTTTCCTCTTGACGTCCTCATCTTTTCTAG (SEQ ID NO: 945)

1000. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PLG. In some embodiments, the sequences from gene PLG comprise or consist of:
TACTCGTTCACCTGTGGTCTTCACCCCACGCTGGTGAAGATATTTGCTTTATGTCTGGGTTTTATG
GGCCATGGCCACTGCATGGCAGTGGGGAGGAACTGTCTATCACATGAAAGGCTCAAGGGCTTTG
GGGACAGCATCAATCTTCAACCCTAGCCCTGCCACATGCTAGCTGTGCTCTTGAGAAAGGCAGC
AGGACTCCGTTTTCTCATGTGGAAAAAGAGTTGAAATGAGGTACTCTGTTACTCCTAGAACTCACT
TAATGTTCACCAGTTCATACACATTCATGATCAGAGAACGATTCAGTTATTCCAGGCTGACAATTC
CCCCTTCATCATAATATGTTTAAGAGAATCATATAAGACTATATTTGTTTCAAAGCACTTTAAAAAC
CACAAGATCGAGTTGGGTGTCTGGTGTGGGTGCCTGTAATCCCAGCTACTTGGGAGGCTGAGGC
AGGAGGGTCACTTGAGTCCCGGAGTTTGAGGCTGCAGTGAGT (SEQ ID NO: 946)

1001. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ABCB4. In some embodiments, the sequences from gene ABCB4 comprise or consist of:
GGTCTCGAATCCTGACCTTGTGATCCGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCG
TGAGCCACCTTGCCCGGCTGATAGTGGTTATTTTGAAGTAATGGAATATTTTATTCTAAATTTTCTA
AAATGATTATATATTTTATAAAGTAAAGCATTCAAAAGAAAAAAGCTGCACAAATTACATTTTTAGC
ACATTAGGAATGAAAAACTGGAAAATACTCAAAAGGGAACTAGTTAAACAGAAGATTAGAAAATTT
AAATACTTATGAATTTTTTTACAGCATGGGAACCCATTTGTGTTATATTTAAAAAGCAGAACATAAC
TATGTAGATTAAATGTTGATTATACAAAATACACATGCATAAAGTTCAAAGATTCTAAGATACTAGA
AATTAAAAGTTGATTAGAAAGGTAACATTTTCAAATTTACTTGAATGTTAAAACTAATTTATACAATT
TTTGGGATAAGGTGTCTGTCTGATTTATCAATA (SEQ ID NO: 947)

1002. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GSAP. In some embodiments, the sequences from gene GSAP comprise or consist of:
GTACGCAAGTATTTCTCACTTTTATCATGGTGTACAAAGAGTGGAAACAACTCTGTTGTAGCAAAA
CCCTTTTGAAATGCACTAGTTCAAATCAGTTCTCACCAGCTTCAACACCATCTAGCTTAATTCTATA
CTCAGCATTTAAAGTTATGCCCCCCTGCATATGTACCCTTTAATGTATAATAAAAGCTAAAATTAAA
ACAAAGTTATGCCCGTTACTTTACCCATCCTCTTTCCCTGGCACATGGTTGGTGACAGGGGAGGG
ACAAATGAGCCCAGTACTGCCAAGAAGGGGAATTTCACTTAATACAATGTGTAACATATGTTCCTA
CTCTGATTAAATTCTAGGCATTAGGCCGATGGTCACATTCATATTTATGGGGCTTTCTACAAGGCA

TAGCATTTCATGATTAGCATGAACCCTTGTGTAGTACTCAAAGCCACTGCTTAGGACAAATGGAG
CATCACAGATGAGCTCCTTGGCTGACATGCTGCTTTG (SEQ ID NO: 948)

1003. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GSAP. In some embodiments, the sequences from gene GSAP comprise or consist of:
TGAGGACACTGCAATTTGGAGAGGGTGGGTAACTTGTGTAGGGTAACACAACTAGTAATGTATAG
AATCTGGACTTGATACCAGTCTTACTTCACAGCTCATGATCATGACCTCCATTCTGTGTCTCTTTT
CTTCTGACTGTCCACTGTTGGCTCTTGCGTTGTGACAGGCCTGGAGCAAACCCTGTAGCACTTTA
CCTTCACTGATGGATGGGGGTCTGTAAGTGTGAGTGGTGGGGCCAGTTAGCTGGGCTGGGGAG
GCTGAGCTGGGGCACTGCCCACACAAACAGAGGATGCTTTGTTAGTTTCTGGTGCACATTTTCAG
TCTTTCTATTTTGGGTTCAGTGCTTCAGAATTGACCTCAGAAAGGCTAGTTGTGTGTCTGGATGCA
GCCTGAATGCCAGCTGCCCTGAAATGCTTATCTGAGTTGTGGAGGCCTAGCTGTGGGGCCCTTG
AGGGAAGGAATGGAGCAATGGTTAATGGACTGTCTTCACCCTCCA (SEQ ID NO: 949)

1004. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ABCB4. In some embodiments, the sequences from gene ABCB4 comprise or consist of:
ATCTGACTTGTAAAATAAGTTTCTGGTTTGTCATCATAAAACATAGGTATGTCTGTCTCATTCTAGA
TCAATTTAGAAGACCCAATTTGGGGTTTATTACGGCATTTGAAATTTGAGAGTTAGAAGTGACACC
TGTCTTGATGAAGTATTGAAACAACAGGCTAGCTCTCCCTAAGTTATTAGAAACATCCAGAAAAAG
AACAAAATTCAAGGTAAGTACAGGTGTAGAAATATAGAAGCCACAGACATAGGGAAATGGTCTTA
TGGTCCTGAATGGGTTGGGTAGACAGGAAAGTTTGGGAATAATTTTCCCAAGTACAAAAGAAAAA
TAAATTGTTCAATAGCCTCATCTCTCTTGGTAATTTTCTAAATCATTCTATTGTGGAATCAAAGTTTT
TTAAATGAATGAATTTCCAGCTTTATCATCCAACATCAAGAGAAAATGAAATTGCCCTACCGAGCT
AACTCTGAAAGCACATATCGGTTCCATAAAGCAAGA (SEQ ID NO: 950)

1005. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene STEAP1. In some embodiments, the sequences from gene STEAP1 comprise or consist of:
AAACTCTGTGTTGAAAAAGTCATCTATTTTAAAATTTTTATTATAATTACACTAGGGCTTGGTTGTC
AGTCGGTTTTATATTGAGAAATGTTTTTTAGGCTGAAAATAAGGTACAACTTTAGCAACATAAGAA
ACATTTTGTTCATGGACGAGGCCATATTTCAAACTTCTACCACCCTCACAAGATTACTTTTTAATAT
TGTTGTTCTTCTCCTTGTTTACCAATATGCATGCACATTACAGTTCTATCCAAGTAAACCATCAAAT
AATTATTAGAAAATTAATAGATTATGGAAGTGTTGCATTCAAGAAAAAAAGTGATAGCTCCTATGTC
ATTTGTCTTAGAGGAATGCAAAAAAAAAAAAAGAAAAAGTCATAAATTTGTGGAGACCTGTTATCA
GGGCTTCATAGTAGGCACAGGGAAGAGTGTAGAAGGAGATTCACATTCAGGAAATAACTGTTGTT
TGCATTTCTTCTTTCTTTATTTACCTTCTGGTAG (SEQ ID NO: 951)

1006. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene STEAP1. In some embodiments, the sequences from gene STEAP1 comprise or consist of:
TAAATAATATATAAAATAACCCTAAGAGGTAAATCTTCTTTTTGTGTTTATGATATAGAATATGTTGA
CTTTACCCCATAAAAAATAACAAATGTTTTTCAACAGCAAAGATCTTATACTTGTTCCAATTAATAA
TGTGCTCTCCTGTTGTTTTCCCTATTGCTTCTAATTAGGACAAGTGTTTCCTAGACATAAATAAAAG
GCATTAAAATATTCTTTGTTTTTTTTTTTTGTTTGTTTGTTTTTTGTTTGTTTGTTTGTTTTTTTGAGA
TGAAGTCTCGCTCTGTTGCCCATGCTGGAGTACAGTGGCACGATCTCGGCTCACTGCAACCTGC
GCCTCCTGGGTTCAGGCGATTCTCTTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGCACCCA
TCACCATGTCCAGCTAATTTTTGTATTTTTAGTAGAGACAGGGTTTTCCCATGTTGGCCAGGCTGG
TCTCGATCTCCTGACCTCAAATGATCCGCCCACC (SEQ ID NO: 952)

1007. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PON1. In some embodiments, the sequences from gene PON1 comprise or consist of:
GTAACAATATTTACTATTTATTAAAACCAAAACCAAACTTAAAACAAAAACAGAAAAACATGCCAAT
AAATGAATTATTTTTTCTCATTCAAACAAAGCATAGTCATGAATAATGTTCTTACTCTGGGTTTTAA

ACTTACCCTCTATGTTAATTGAACTTTATAGTAAAACCACTTAAATACTTGAGAATGCTAAAATATT
TAAGATTTGTAAAGCATCTAATTTTGTAAAATACTAACATTCACATTATCCCTATAATTACCATAATA
ATAATATCCAGCCCTGATCATTATAGCTTTTCCATTTTAAACGATTTTCAAGACTCGGGCATTTACA
GGAACAGATTTTTCTAACCCAAGGCATCTGTAAGCTATAGGTCCAGTGACAGAAAGTCACCATGG
TCAGCTTTCTGCCGGTCCCATTATCTTCAATGCCTCCTGTCCGCTGGTTCCTCTGTTCTGTGTTCA
AAATGCTCCTCTGCATGTTGGTCCCTTTCAAC (SEQ ID NO: 953)

1008. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PON1. In some embodiments, the sequences from gene PON1 comprise or consist of:
TCTTATATGGGAACACAATATATAAAACAACAGCTTTATTGTTTTGATTGAAGGCTAAGAAAGGAG
TAGTTCCTCTGGCCCACCAAAACTCTGTCTTTGAGATGCTTCCAAGGACCTACCAGGGAACAGTT
TAAAAGCCATAAGCAATATTCTCTCTGTATTCCTTGCTTATATCATTGAAGACTATTATTAATTGCC
TTTTTGGTCTGCTCTTCCATTTTTGATCTTTCTCATGGGCTGGAAGCTGTAGTGTCGTGCACATAT
GACTTTGCTGCAGGGGATGAAAGGGTTTGTGTGGGGTGGCCTAGTGGAGCATGTGGCTTCCAG
AAGACTTCTCCTGGGGACCCATTACAGAAGCTAACTAAGAGGCTTCCTATGTGGCCATCTGGCTA
GCCCTGTGGTTTGGAGCAGTCAACATGAACCCATGGGCCATGCAGCGCCTCTATTAGCATTTGA
AGTACTGGTATTGTGCTTGATTTTTCTCCTCCATGGTTTATAA (SEQ ID NO: 954)

1009. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TFR2. In some embodiments, the sequences from gene TFR2 comprise or consist of:
GTGAGTGCGCGCGCGGGCGGGGGGCGCGCGGGGAGGGGGACGCGGCTCGGGGCGCTCACC
AGCCCCGCTCCCCAGGGCTCACCCCAACACCCTGCACTGGGTCGATGAGGCCGGGAAGGTCG
GAGAGCAGCTGCCGCTGGAGGACCCTGACGTCTACTGCCCCTACAGCGCCATCGGCAACGTCA
CGGTGAGCACCCCCTGCCCGCTCCTAGGATGGGGCGCGGCACGAGCCCTTTCCTGGGTCTCGA
AGGAGGGACGCGGGGAGCGCGCCTCACCGTCCTCGTGTCCCCAGGGAGAGCTGGTGTACGCC
CACTACGGGCGGCCCGAAGACCTGCAGGACCTGCGGGCCAGGGGCGTGGATCCAGTGGGCCG
CCTGCTGCTGGTGCGCGTGGGGGTGATCAGCTTCGCCCAGAAGGTAAGTGTCCCTGGACAGAG
GGAGGGCTTGAGCCCGGGAACCGGAGGGTCGGACTGCCAGTGAGAATCGTTCAGGGTGCTGT
GA (SEQ ID NO: 955)

1010. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TFR2. In some embodiments, the sequences from gene TFR2 comprise or consist of:
AGTCTCCGGCGCCGCCCTGGTGGTGATGGGAGAAAATGGGTCCGCGGAGGGCCCTGCACTGC
GGCTCGCGCCTGTAATGCCAGCACTTTGGGAGGCCGAGGCGGGCAGATCACCTGAGATCAGGA
GTTTGAGACCAACCTGGTCAACATGGTGAAACCCGTCTCTACTAAAAATACAAAAATTAGCCGGG
CGTGATGGCACGTGCCTGTAATCCCTGATACGAGGGAGGCCGAGGCAGGAAAATGGCTTGAAC
CAGGAAGGCGGAAGTTGCAGAGAGCCGAGATTGGTCCACTGCACTCCAGCCTGGGCGACAGAG
CGACACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCGTCCGCGGGGAGCGCTCTTTT
CCTAAACTCAGGAACCCCTCGCCGCCCCTGCCCCTGGCGACCCCACGTCTCTGGCATCCTTCCC
TCTTCCCTCCCTCTCCTCCGGGCGCCCAGAAAAGTCCCCACCTCTCCCCGCTTA (SEQ ID NO: 956)

1011. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC39A14. In some embodiments, the sequences from gene SLC39A14 comprise or consist of:
ATCTCGGCTCACTGCAACCTCCGCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAG
TAGCTGGGATTTCAGGCACGCGCCACCACGCCCAGCTAATTTTTTGTATTTAGTAGAGATGGGGT
TTCACCATGTTAGTCAGGCCGGTCTCGAACTCCTGACCTCAGGTGATCCACCTTCCTCAGCCTCC
CAAAGTGCTGGGATTATAGGCTTGCGCCACCGCACCTGGCCTACTTGTATGGTTTTTAGGCTTCC
ATTGCTGTTTGCATCCGTCTCTCCATGGAAAAGGTGTTTCTCTTGGATAGCAATTTTGATAGTTTC
CCTAGGCTTCTCCGCAGCATCTGGTGAGAGATGGACTCAGCAAATGTTTACTGATGGGTTGGTG
GATCTCAGTCTGCCCCATCACACCTGAATTCAGAACAGGGCCGCCCCAGGCAGCAGGAGTGTCC
CCACCCTCAGTAATAGAGGCCCTCGTCTGTTCTTGTTCCTCCACAG (SEQ ID NO: 957)

1012. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC39A14. In some embodiments, the sequences from gene SLC39A14 comprise or consist of:
TGCAGTAGAACAGAAACTTGCGCGTCCTCTTTCCCTGGGGCGGCACAGCTGAGCCAATCCCCTC
CTCCCCTACCCTGGGCTCCAAGGCACCCAATGACTGCCACCTGAGAAATGAACCTGTCCCTCGT
ATCAAAGCCACAAACGACTTCTAACTCTGGATCTCAGGGCCCACCTCTCACTCCTCTGGCCTCTG
CAGGTGCTGTCAGATGCAAGGTTCTTCCAATTTCCCTCCTCCTGGGGACTTGACAGTCTCCCCTC
CCTTGTTAAGCCCCATACATAAGGCATCAAGGGAAAGCAGCAGCTATCGACTGCCGTCCATGCC
TTTGGTGCTAAGTACTTGCTCTATTCTAAGGAGAAATCCTGGCAGTACTCAGGTCTGGGCACCAA
GAGCTTATCCATCTGGAATGAGATGGAAGGAAAAGAGGTTACCAAGTGATATGTAGAATTGGCCT
AAAAAGCGAGTGTTCTTTAATTTTGAGCAGGCCATCGTTTCTAGCAT (SEQ ID NO: 958)

1013. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RBPMS. In some embodiments, the sequences from gene RBPMS comprise or consist of:
CCTTAGGAGTCGCCCAGCAGCGAGACAGCTGTGGATCCCCTCCAGGCGCATGGGAGGCTCACA
AGGCAAGGACTCTGATGGTTTTGGCTTCCACCTCCTGTACGGTGGCCAGTGCTGTGAGGGTGGT
TGGTCCCACAGGGAAACCTGTGAACAGAGTCATGTCTGGGGCCCCAGGGACATGGCTTCAACC
CCTCACCTGGCAGTCCTGCCTCCCAAAAGTAAGGCAGGAGTCCGGAGATTCCCATTGCTTGCTT
CTGTGAATCTCAGGTCACTTTAGCACTTGACCCCTGACCCCAGACTGCCTTGTCCTTGAGGCCTG
GGATTCCTAAGGTATATACTGTCTGCTCCAGAGCTGTGGCTGTGGCTATCCGGAAAACGACAGC
TTTGAAGGACTGCAGAGCTTGCCTTTGGGGCTGTTCTGCCCAAGGCCTTCCATTGTTTTCAGACA
TAAATGAAATTGTTAATCCTCTGACATTTACCTTTTCCTCTCAACCTGCAG (SEQ ID NO: 959)

1014. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RBPMS. In some embodiments, the sequences from gene RBPMS comprise or consist of:
TGAGGCTTTCTAGGAGCACCTGGCTTAGCTCTCACAGGAGGAGGGGCGGACGGGGAGGCCAG
GCCTCATGCTCACAGCGCCAGCCTCCTGTGAGAGTGGGCTGGGTCTCCTTTCCTTTCCCAGGCC
CTTCCTGGAGGCGATTTCTTTCTTTCTTTCTTTCTTTCCTTTTCTTTTCTTTTCTTTTCTTCTCTCTC
TCTCTCTCTCTCTCTCCCCTCTCTCCTCTCTCTCTCTCTCTCTCTCTTTTCTTTCTTTTCTTTCTTTT
CTTTCTTCTTTTTTTTTTCTGAGGCAGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGTGT
GATCTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCATGCCATTCTCCTGCCTCAGCCTCCCAA
GTAGCTGGGACTACAGGCGCCTGTCACCACGCCTGGCTCATTTTTTGTATTTTTAGTAGAGACGG
GGTTTCACTGTGTTAGCCAGGATGGTCTCGATCTCATGACCTT (SEQ ID NO: 960)

1015. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DPYS. In some embodiments, the sequences from gene DPYS comprise or consist of:
GTAAGTCTAAGTTCTTGTATTCCTTGGCTTCATTGTGGAGAAAATGCACTAACTTGCACAGAAATA
ATGCTTTGGCATTAATCAGCCGCTTCTCCTTAGATGACTTCTTTAGCTGTGCTCAGGTATTTTGAT
CCTGTACACAAGATAAAGGTTTTGATGTGCAAATATTCCTTTGTTTTTCTTGGCATAGAGGATGTA
GAAGTTGTGTTGCATTCTCTGACAATGGATCTGTATATAAAACCAATATGAATTTACCACTTCAGT
GCCTGGCAAATGCCCGAGTTCACATGGAAGAAAGGTAAAGCGTGATGAAGGAAATAAAAGGCTT
AGTTTGAAAAGGGTTGAATTGAAAACTCAAAATAATTACAGCCTTTTTAAAGCTTTCAGATAGAAAA
ATTCCAGCACAAAGGATGTCACTTTCAGTTAGCCAAATTTTCCAGTTGAGTTCATCTTCAGCCTAT
CATTCCTAGTAGATTCCAGCTTTTTGTTTCCAATTTCC (SEQ ID NO: 961)

1016. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DPYS. In some embodiments, the sequences from gene DPYS comprise or consist of:
GCACCACTGCACTCCAGCCTGGGCAACGAGAGTGAAATTCCATCTCAAAAAAAAAAAAAAAAAAGT
GTTGTCACCTATTCTCACTCTATAATATTCTATCTAATGTCTACATGATTATCTCATAAATCTTAGGT
CTGTAATAAATAAGTCAGATCATAAATGTGGTATTGTCAAACTTTAAAGGAGAATCGAAAATACCA
TTACCAAAATTTAGCTGTCACCTATAACAATTTTTGTGATTCTAGGATGAATGGGAAGAATTAGTG

TGGATGCTAAGTAGTGGGGTTTCTGAAAAGTCATCTTCAGGCTTCCATATGTTACCCCATCATCTC
CATCATTGGCATTATGACTGTTTAATACTTACCAGCATCCTCAGATGCTCTACAATATAAGAAATTA
GGTGCAGTTCTGTTTGTTTAAGAGATGCAAGTCTTGTCATTTTATCGATAGGATACTTTTTAGTATT
TGATCATTAGAATGATTCTTTGAATTGCTTTACA (SEQ ID NO: 962)

1017. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RCL1. In some embodiments, the sequences from gene RCL1 comprise or consist of:
TATTGGGATGGGTGAGAGGAGGAAGATGCTTTTTGGGAGTCAGATCTGTTTAATTTTGAGCAAGT
GTCTTAGTTTTTTTGTCTTAGTTGTCTTTAATGTAAGTCCTAGAACTCGGAGCCATGGCCCTCAAC
ACAGGGTTACTGTGAGCATAAAGTAAGGTGATAATAGATGTGAAAGAACTTTGGGAGCCGTGAG
CTCTGTGGGATTATGTGCTAGGATGGTGACATCTCTTGTGCTTTCCTGGGGACAGTGGGCAGCC
TCAGACCTCAGAAGGACAGCACCTGCTTGGTCCAAAGGGTATGAGATTCAGGACTGTTTGTCTAA
GCTGTCTGTGGTCAAAAGTACATTCTGGACTGAAGAGATGGTGATGTAACTGGGCTGTGTGTGTA
TTGAAAAATCCCTCTTTGCTCTTTCCTCATTTCAGGTTTGTCCTTTGAGTCAAGTTAAATATTTATT
GAGCATTTCTGAGTACAAAAGTGGTGTATTGGAGAGTTGGGAG (SEQ ID NO: 963)

1018. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RCL1. In some embodiments, the sequences from gene RCL1 comprise or consist of:
TAAGTTCAAGTGGAGCTAACACTTGGGTGCCGGCTGGAGGGTTTCAGGAGAGAGATTGGGACCT
CGGGCTGGGAGAATGGGGCAAAGCAGCTCAGGTTGAGGAATTTGGTCAGTTTGGATGGGTGGA
AGGAGTTGATGGTGCAGAGCTGAAGATGGACACAACTGAGCAGGCTGGGGGCTCTAACAACAA
GATATGGGAGGACCAGGAGCCACCGAGAGACTGTCACCAGCATGAGGAAGATTGGTCTTTTAGT
ATGAAGTTCAGGATGGGTCAAAAAAGGGAGCTAGATACCAGATCAGGTCATGTATCGTCTCTGAG
CACTTTGTTTCTGCAGTTCAGATGAAAATTAAATATGTTATTGTCAGCAGTTCTTGAACATTGGGC
TGGATTGGGCAGATTATATACCTCGTTCTACCTGTTGGACTTGTCACGTGGGGTTTGTATCAGGG
TAGTGGGAAGGTCACATGTTATTTCTCCATTTTTTTAGTTCCAAATATA (SEQ ID NO: 964)

1019. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TOMM5. In some embodiments, the sequences from gene TOMM5 comprise or consist of:
GTAGCGGGGAGCAAGGAGGGTGCGCGTTGAAGGCGACGGGCATATGCGCGGTTTGAGGTCTG
CGGGTCAGGGTCCGGGCACTGAAGTGCACGTGGTGGCCGGCGCGCGTGTTTAATCATCCTGGT
TCTCCCAGCTTGAAGAATGTTTGAGCTGCCGGGCGCGTTGGCTCACACCTGTAATCCCACCCAG
CACTTTGTGAAGCCGAGGCGGGCGGATCATTTGGGGTCAGGAGTTCGTGGTGGCGGGCGCCTG
TAATCCCAGCTCCTCGGGAGGCTAAGGTGGGAGGATTGCTTGAATCCAGGAGGCGGAGGTTGC
AGTGAGCCGAGATCGCGACACTGCACTCCAGCTTGAGTGACAGAGCAAGACTCCATCTCAAAAA
AAAGAATGTTTGAGCTGAAAGAGCTCAAGTAATTATCCCTAGAGGAACTCCCTCGTTTTTGCAGA
CAGAGAAACAGAGAAACAGAACCATAGTTCTAGAAGGAAGAAACAGCCTTCTTGG (SEQ ID NO: 965)

1020. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TOMM5. In some embodiments, the sequences from gene TOMM5 comprise or consist of:
AGGCTGGAGCGCAGTGGCGCGATCTCGGCTAACTGCAACATCCCCCTCCTGG
GTTCAAGCGATTTTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTGTAAGCACG
CGCCACCGAGCCGGGCTGATTTTTGTATGACAGATGTTATTAAAGACAGCGTGG
AGAAACCAGAGCCTGCGTTGCTGAGCTTGCGGCCGCCCGCTTCACACCGCACT
TCAGATCAGCTGGGTCAGGACGTGGATTGTCCCGTGCAGGCATCCATCGTCGA
GTGTGGCAACGAGAGGGCGGGAACAGGAAGTGAGGATAGGCCGAGTTCCGGG
CGCGAGGCGGCCACCGTGGAGAGCAGAGCGCGGCGGCTGGAAGCTGCTAAG
TCAGAGCCGCGATGTTCCGGATTGAGGGCCTCGCGCCGAAGCTGGACCCGGA

GGAGATGAAACGGAAGATGCGCGAGGATGTGATCTCCTCCATACGGAACTTTC TCATCTACGTGGCCCTCCTGCGAGTC (SEQ ID NO: 966)

1021. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CBWD5. In some embodiments, the sequences from gene CBWD5 comprise or consist of: GTAACTAACCATCCCAGTCACAAAATGCCGTGAACTCTGGTGTCATGGGATTTTGCGGGCTGCC GGTGCCTCTTCTCCTGAGGCATTGGGGCCTCATGATCAAGAGCAAATGTCTTTGAGGTAGGGGC TGGGTCACTTGCTTCTCGTATGGGTTACCTCTCATCTTGGGAGTTAATGATGCCCGGTCCCCTCT GCGTTAGATTCCCATTTCTCAAGTGAGATGGAAAGTTAGCCTTTGAAACAAGGCTTTGAAGCTAA GACACGCCCCCCTAATTGTCTCTGTGACCTCTTACCAAGTTATCTTACCTTCCTGACGCTCATCTA CCTCACCTGAAAATGGAAAAATACCTGTCACCTGTGAAATAGGGCCGGAACAACCTACCTATTGC CATTAAAGGATGTCCCGTCTGTAAAATGTCCGACACGTGGGGCTTTCGTCAGCAGATTCCCCTTC CCCAGGAGCCAAAGTCCTCCAGCCAGTTGGCAGGAAGTGCTCCTA (SEQ ID NO: 967)

1022. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CBWD5. In some embodiments, the sequences from gene CBWD5 comprise or consist of: CTGAGGTCCAAATAAATAATGAGGAAAAAGTAAATAAAAGTGATGCATGAATACTAAAAATTTGGA ATTACATATATAATATGTAATAATAAAAAAAGAAAAAATTGTCACTGGTTATCCTTCAGGTATAAAA ATTACAATTAAAATTGTAATGTTATAACCTTCCATTCTTTCCCCTATGAATTAAAACTTTTTTTTTTAA CGAGACTAAAAAATCAAGTTGATAAAATCTATGCCCTGTGGGAACTGGTTAGGTCAGGTTACCCA CTCCAGATTTCCAGCAGGCTAGCCTCAGCTCTACCTACAGCCAGTAGCTTATTAAGGCTCTAGGC GCCAGTGACACCTTCAGACAGGTGGTTAGTGCGCCCTAAGGGCTCTCCGCAGCGTCGCTCAGG TTCACAGAACACGCCCAGGGGCGTGTCCAGCTGTCGTCGGGGAGAGCCCACCTCCCCGGGGG GTGTGGCTAAGGGACGAGGCAGTTCTCGTCCAGAGCCCAGGT (SEQ ID NO: 968)

1023. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TJP2. In some embodiments, the sequences from gene TJP2 comprise or consist of: AGAAAAGCAAGACAGACTGAGAAAGTGTGGCTTAGCCGCGGTATGGAGGATGGATGGTAGCACA GATAGGCTGCAGGGCCCCTAATTTGAGTTCCTGCACAAAAACGACCATAATATCAACATTGTACC AAAGCCAAGTGATCTCAGGGAGAAAAATAAAAGATGCCTTCCCTGGCGAGCACATCAAGGTTTCA GTCGCTTGGCTGTGTCCTTGGGAATTTTCTTGAGTCCCCACTCCCAGGAGCCACATCAGACCCC ACTGACCGTCCAACACAAATTCCTCTAGATGGAAGGGATGGATGATGACCCCGAAGACCGCATG TCCTACTTAACCGCCATGGGCGCGGACTATCTGAGTTGCGACAGCCGCCTCATCAGTGACTTTG AAGACACGGACGGTGAAGGAGGCGCCTACACTGACAATGAGCTGGATGAGCCAGCCGAGGAGC CGCTGGTGTCGTCCATCACCCGCTCCTCGGAGCCGGTGCAGCACGAGGAG (SEQ ID NO: 969)

1024. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TJP2. In some embodiments, the sequences from gene TJP2 comprise or consist of: GCATAAGGAAACCCAGCCCAGAGCCACGAGCTCAGATGAGGAGGGCTGCTAGCAGCGATCAAC TTAGGGACAATAGCCCGCCCCCAGCATTCAAGCCAGAGCCGCCCAAGGTACGTGGCTGGGAAG CCCAGGATGGGAAGGAAGAGGAAGCAGATGCCTCTGAAGCCTCCTGGACGGCCAGGGAGGAG CATGCACACTGAGATGGTGTTTAATTACGGTTCTGACTCACTGTGTTCTCTATTAGAGCCTATCTT TTGGCCTGTTGGGTGAACTCCCAAATTAGGGAAGGGCAAAAAGGAAGGAAAGGCAATATTAGGA GAGCATATGATTTTAGGACTGTTAGTGTTTATTTAATTTACTCTTCTTGTTAAAAAAAGATTGTAAA GAAAAAGATTGAAAAATACTGTACTGTATACCCAGAATCACCAATCGCAGAACGTGTTTTTCTTTT GCTGTCCAGCTAAAGTTTTCTGCCCAGTCTGATTTAGATGCACCAGAT (SEQ ID NO: 970)

1025. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ALDOB. In some embodiments, the sequences from gene ALDOB comprise or consist of: GTAAGGATATTGCCCACTGAGATGAATCATGCCAGTGTAAGCTAGAAATGAAGGCAAGTAAAGAA

GGAAGCAAGGAAAAACAAAACACAACTATTACACTGGTCTTAGAGCCACACGTACCTGGTTTTCA
ATACCAGCTCCTCCATTTAACAACTGTGACCTTGGGCCAGTCACTGAAATATTGTGAGCCTCAGT
TCTCCTATCTCAAAATGGGGATTTCTCAAAATGTTGTGGGGATTAACTTAGACAATGTACATAAGG
TGCTTACCACAGTACCTTGGACAAAGAAGATTAAACTCTGCACCCGGAAGTATTATTTTTAGAAAA
AAATTAGCAGCAGTAGAGTGGAAAGTCCCCACACTTTGAGGTCAGACACACCTGGGTTTGAATCC
TGGTTCTATCACATGCTACCTAGATAATTTTGCAAGGTACTTCTGCCCAAGTAGACAAGCATTAAC
TCACAACATTGGGTTAGCTAAGCAGAATTTGAATCCCAGCT (SEQ ID NO: 971)

1026. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ALDOB. In some embodiments, the sequences from gene ALDOB comprise or consist of:
ACTTCTCAAAAGTGAAAACTAGTATCCATTGAATAAGAGTTTTTACCATTCCAAGCATTCATTTAAT
TCTCATAACCTCTGGTAGTAGACTCAATTATTACCCTTATTTAGAGATGAAGTGAGAAAACTGAAC
TACGAAGAGTAACATAACTTGCCCACACAACAAGGCAAGGTCAGAGCCAGTTTAGGCTAATTCTC
AAGCTCATGACTTTTGCCTTTGCTATGTAGAGAGTAGAGGTTGTATCCTTAATTCTCTTTACCTCC
TGTACTAACACAACACCTGGTGCATGCAGGTGCTCAATAAATGTTAGGGTAGACACTCTCACAGT
GTACCTTCTAGGTAACTTCCCTTCTGCTATGGACTGAACTGGGTCCCTCGCACTAATACACTTTAC
TAATTCAACTCCTTGATCTGTAAAAGATGCAAACTGTTAGTTAGTTCAAGAGTTCTGCTTGTGTTTT
CCTGACATCTGACACCTGTTAATTATTTGTATCCACA (SEQ ID NO: 972)

1027. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PTGR1. In some embodiments, the sequences from gene PTGR1 comprise or consist of:
GTAAGTAGACCTCCTGCTTTCTTTCCTTCCCTTTTCTCCCTCCTCTAACCCCCTTGCTTTCTTCCT
GCCAAGTTTCTAGACGCCCCAGTGGAGGAGGTTTGCTCTTAGACCTCCTCCCCTTACGTCGAAAT
GACCGCTGGGTCTTGCACTCGGAGGATCTTGGGAGCCGACGTCCCGACGCCTCCCGCCCCCGC
AGTTCCTTGGAGAGCTTGGAGCCGCGCGCCGGAGGGAATAGGAAAGCTTGGTTACAACCCGGG
ACACCCGGTAGCTTCCTGCACCCGGGAGGGGGCTGGCCAGGGAACTTGCTGGACTGCACAACT
GGGGGAGGGTAGAAGAAGAAAGATCGGGGTGGGGATTCGGGAATGGGCAAGCGGGCGGCGG
GCGGCGGGAGGCGAGGGTGGGAGCAAAGGGCGAGCGGGCAAAGGCCGGGCGCCGCGCCAG
GCCCCCTCCTCGGGCGGGCGAGACTTTCCCGGGACCTGGCCCCTCTGCGGCCAGACCC (SEQ ID NO: 973)

1028. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PTGR1. In some embodiments, the sequences from gene PTGR1 comprise or consist of:
GAAGCCAGGTCAAGGCCTGATGTTTGCTAGGGTGTGATGGGTGGGGTGCCTCAGTGGCAAGAG
TGCTCACTCCTGCCTGGGGGAGTCTGGCAAGGGTTCACAGAGGTGACCTTGAATTGGCTGGTG
GAAGGCGAGTAGGTGTTCAGCAGGCGGACTGGGGACAGACAGGCAGGGTGTCTGCACCGCAG
CCCTGGGCGAAAGCTTGCACTGCGGGCAAGCGGCAGGGCTGACGGGGAGCCCAGGGATCGGA
GCCAGCACCGGGGGCTTATTAGGGCTGCGGCCGCCCCAGGCCCTGCCTTTGGACCCTTCCGGC
CTGCTTGGCAGATGCCACGGTTGGTTCCCCCACGGGGCATATTTCCGCCGGGCTCCAACTTAGG
ACCCCAGGCGGAGGTCCAGTGTCAGCTGGACAAAGCTCTGTTAGGAATTTTCCTATCAGGAGTC
CCTAACCCCCTACACGCACACACACGGGCGCGCGGGCGCGCACGCACACACACGCACA (SEQ ID NO: 974)

1029. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ORM1. In some embodiments, the sequences from gene ORM1 comprise or consist of:
AGCCTCCTACCTCTGCTGGAAGCCCAGATCCCATTGTGTGCCAACCTAGTACCGGTGCCCATCA
CCAACGCCACCCTGGACCGGGTGAGTGCCTGGGCTAGCCCTGTCCTGAGCACATGGGCAGCTG
CCTCCCTTCTCTGGGCTTCCCTTTCCCTGCTGGCTGTGGTCGGACCCCCACTCCCGGCTCTGCC
TTTTTCTCTTCTGGGTCCCCAGGGTGAAATTCTCACCAGCCCAGGGGACTCTGGAGGCACCCCC
TGCCTCCAAACACAGAAGCCTCACTGCAGAGTCCTTCACGGAGGACGGTTCTGTGCTGGGCCTG
GAGGGGCTGCCTGGGGGGCAATGACTGATCCTCAGGGTGAGCTCCTGCATGCGCACTGCCCAC
CAGGGGCCTCATCTCCCCATCTGCAAAATCAGGGAGAGATCTGCCTGAGTCTCCTCCCAGCTGA

CAGTCAAAGATTCAGCATCAAGCCCCCATCACCAGCTCCCACCTTCTCCCCAG (SEQ ID NO: 975)

1030. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ORM1. In some embodiments, the sequences from gene ORM1 comprise or consist of:
TGAGAGCCCCCATTCCAATGCACCCCCATCTCAGCTTCTGGCCAGAAGACCTGAGCAAGTCCCT
CCTTCTTCCTGGCCTTGGCCTTCCCATGGGTGGAACCGGGAGGGCTGGCTTTAATCTCCACCAG
ACTCTTGCCCCAGGACTGTGATGGGCGATTGGCCACTTCTCAATAATCTTCCTGTTTTCCTTCCG
CCTTCTGTTTGGCTTTAGACAGGACCAGTGCATCTATAACACCACCTACCTGAATGTCCAGCGGG
AAAATGGGACCATCTCCAGATACGGTGAGGGCCAGCCCTCAGGCAGGAGGGTTCACTGTGGGA
ACAGGGCAGGCCAGCATAAGGTGGGGGCTGGATGTAGAGCCCTGGAGGCTTTGGGCACAGAGA
AATAACCACTAACATTTTTGAGCTCTAACGATGTGCTCAGAAACAACTCTAAGAGGACACTGAGA
GAATTAGAGGAGGAAAAAGAAGAACAGAGACCTCAAATAGTTTCCCCAAG (SEQ ID NO: 976)

1031. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ORM2. In some embodiments, the sequences from gene ORM2 comprise or consist of:
TAGTTTCCCCAAGGTCACACAGCTTATAATTAGAACTAGAATTGGAACTCCAGGCTGGCTTCAGA
TCTGCCTCTCTCTCACGCCCTCTTTAAGATCCTTTGCAAACCAATGGTAGAAGCCTGTATGTTGG
AGAGGTGGTACCTTCAACTATGTCCCCCATCACCGCAGAGGTGGCACATGGCAGGGATCTGATG
GAGCTGAACTGACATCATTTAGCATCCCGAGCCTCCTCTCTGGGCCTCATTTTCCTCCTCTGTAA
AACGGGGAGAAAGGCCCTGACAGCCACAGTCTGTGTGAGGCTCCTGAGATCTCATGTACAGAAA
GTGCTTGGCGTGGAGCTGGGCACGCAGCAGGGGCTGGGCACACGGTGGCCCAAAGGAGACCC
GGGCCTTCACTGATGGGCTTTGTGGCCCCGGACACACCTAGGACTCCTCACCTGTAAGACAGGC
ACCATTGTGCCATCCCATGTTCTCACCCAGAGGCTCTTTTTCTCTTCCAG (SEQ ID NO: 977)

1032. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ORM2. In some embodiments, the sequences from gene ORM2 comprise or consist of:
TAGGCATGCTTAGCAGCCCCAAACTCATGCCCCTCTCAGGCCTCACCCCCCATTCACCCACCCC
TGGGCTGGCCCCTAGAACCCCAGCCCTCCCTGGCCTCCCGCCGGGCCCCACCATGTCCCCAGT
CAGTCTCCTTGCTCCCCCTGCAGCTGACAAGCCAGAGACGACCAAGGAGCAACTGGGAGAGTTC
TACGAAGCTCTCGACTGCTTGTGCATTCCCAGGTCAGATGTCATGTACACCGACTGGAAAAAGGT
AAACGCAAGGGATTGGACAGTGCCCACCTTGTCCATGGCCCAACTTGGGCAGCCCCAGAGGCC
CAGAGCAGGAAAGCTGCCAGGCAAGGCTGCACAGCTAGGCAGATCTTCTGCTTTTAGGCACCTG
CCTCACTGTAGGGACAGCTGAGCTCTACAGAGGCCCAGGGGTGGTGGATGAGAGCCCAGGAGG
GAGAAGTCCCTGTGAAACCAGGGAGGACCTGAAAGCTAACAGGAGGGAACAGC (SEQ ID NO: 978)

1033. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene C5. In some embodiments, the sequences from gene C5 comprise or consist of:
GTAAGTAAAACAAGCTATCTTCATTTTTCAATGCATCTTAGTTATGACGAATGAAGAGTTAAATTTA
ACAGATTCTGTTAACTTGAAAATAACTTGCTACTTCTGAGAACAGCAAGTGAATAGTATCATCTCT
GAATGAGAAAGTCATGGAAGCATTTTGATTTGATGAGTAGCTAACAACATGACAGCTTTTATGGAA
TTGTTATTTATTAAAATTTACGTTAAGTGATTATTCAAATTCCTCTTCAAAAAAGCACAAAAGAAACT
CCAGATAATAAACTTTCTTGACATTTTTTGCTTATTTTAACTTGGTGTTTAGTTTTCTTTGTGTTTTT
CATAGACTATACACAGTTAAACCAGGGTTATTTAGGAGTCAATCTAATACTGTGATCTGAAAATCT
GTTGTTGTAGTGACTTCTACCATACATTTATGAGCTGACTTTTCACAATTTTTAGTGTCATTATTGA
GATAATATGCATTTTAAGTAATGTTTTAAAA (SEQ ID NO: 979)

1034. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene C5. In some embodiments, the sequences from gene C5 comprise or consist of:
CTAGGTTATGCTCAGACCATTTGCAGCACCAAGGACACTGCCATTCAGGTCACCAAAAAAAGATC

ATCTTGTGAGCCCTGTCTAAACCAGGCCCCTTCTAAAATCATTTCAGTGTGAAACTGAGTCCAGG
TGGGTCTTCATCAGTATTAGAGTGGACCTGCCAGATGTATGCTTGCAGATGATGCAACATCAAAG
CAAATGCCCTGGGCAAGAGAAGAAAGGCCAAAGCAATGGGCTTACTGGTTTCTAGCTTTGAGCC
ACTCTTCATAGTGCCAAATTCCCATTTTAGGGTCCCTTTATTTGTATTAATAAAAATAAATTCCCTG
GGTGTAAGTTCCTGTAAAGTACTCCCTATCTGTATTCCTGGGCATGAAAGGGTGTTTTAGTTCCAA
TTCTAGTTTTCCCACTTAGAGGTTCACCTTTCTGACATTAATAATTAACCAGATTATCTGAATTCTT
CAAGTTCAGTTTATTTAAAAGGAGACTATCCTCAAAAGTG (SEQ ID NO: 980)

1035. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DMD. In some embodiments, the sequences from gene DMD comprise or consist of:
CGTCTTCACCTCTTTTCAACCTGCTCCTCTTTTTTGCCTTAACTCTGATGGCAGTCACACAACTGT
GTGTTTTTCTTTTAATTCACTTTACACCTTGGTTTGGCTATTGCTTTCCATGGTTCATACTTAATTG
GCTGGATTTTATTTATTTTGACCTTTCAGTAAATTTTTTTGCGGCTGAGTTTGCGTGTGTCTCCTTC
ACCACCTCATTTTTTGTTTTGCAGTCCCGTTACTCTGATCAACTTCTGGCCAGTAGATTCTGCGTG
AGTACTTTTTTTGCTGAAGGGTGCTGCTACCACCAACACATTCGCTCGCTTGGTTCTCTTTTGTTC
TGTTTATTTGTTTGTTTTCTTTTGTTTTGTTTTGTTTTATGGACATATTAATTCCCCTTCCTTCATTTC
AGTTTTTTTTTTTCTTTTCTTGATGAGACTTTGAAAGTACCATCTACACAGATCAGGAGAATCAGAG
TGGGTTTTTTGGTTCCTCCACCAGGTGAAAT (SEQ ID NO: 981)

1036. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DMD. In some embodiments, the sequences from gene DMD comprise or consist of:
AAAATACCATAAAGTGTGGTAAAATTTAATGTCACCTTTTTGACCTTAAGACCTATAAACTACCATT
TATTGAGTAGCCTAGTAAGCTTGTATGTTTCTTTTATTTATCATAACAACGTGTTGAGGTGTTGTTG
CTCCCATTTTACTGATGATCAGAGCCTCTGAGAAGTAAATAACTCAGCCAAATTAGTACATGCCAG
GCCTGGTTTCAGAGCCCCATTTGTCTGATTCCAAAGCCTTTGCTCACAACCACAACACTCTCCTT
AATTACAAAACAAGTGTCATGGGGCAGAAGACTGGAGTGGTCATTAGTTTTGAAATCATCCTGTC
CTAAATCTGATCTCACCATGATCTCCCTTTTAGACTACATCAGGAGAAGATGTTCGAGACTTTGCC
AAGGTACTAAAAAACAAATTTCGAACCAAAAGGTATTTTGCGAAGCATCCCCGAATGGGCTACCT
GCCAGTGCAGACTGTCTTAGAGGGGGACAACATGGAAA (SEQ ID NO: 982)

1037. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GJB1. In some embodiments, the sequences from gene GJB1 comprise or consist of:
TTGCCCAGGCTGGTCTCAAACTCCTGGCTTCAAGTGATCCTCCCGCCTTGGCCAAAGTGCTGGG
ATTACAGGCATGAGCCACCATGCCCGGCCCTGTCATACAGTTTTAGAGGCTGGGAGCTAGAAGG
GTTGACCAGGATGGCAGCCTGTACAGGATCCCTCTCTGCAGCTTGCCCGCACTGTGGATCTGCC
TAAGGCCAGGGCATGGGGGAAGCCTGAGGGATGCTGAGGAGCACAGGTCCAGCTCAGTCTCCC
AGAGAGACTAAACATGGGTGGGTGACAATGATGCCTCTCTTCCTCTGGGACAAGGCAGTGACTC
CAGGCTATGTGATCTGTCTCTCCAAACCCATAGGGAGCTCAGAGGATCAATCTTGTTTAATGATT
GTATGTGGGAGGAGGTGGGGCTGGTTAATGTTTGTCTGGTTCCTCTTGGGCTGTGGGCCATTTC
TGGCTCTGGCCCTGGGTTCGTTGTCCCTCCCCTGGGCTGGGCTGACAGTAC (SEQ ID NO: 983)

1038. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GJB1. In some embodiments, the sequences from gene GJB1 comprise or consist of:
TGAGGAGACTGGGGGCTGAGGGAGGTGGGCCAGGGAGGGCTGATGTGGCACAGTGGGCCGGA
AATAGGGGCCGGGTCTTGCCTTCTACTGACCTCCGCCTTCAGCCACTTAGGTCCCTTCCATGCTT
CCCTCTGAAGCTGGGGTGAGGCCCCTCCTGCCAGGTGCCAGACTTGCTTAGCCTCTCTCTGCAG
CCTCTTTCCAGGTTCAACATTGCTTTTCCTCTCACTTTTTTTCCTCTGGCCAAAGATTCCCCTTATT
CCCATAGGGCCAGATTCTCAGGAAGACTTGAGGGACCCCCTAGGTGCAAGGTGGCCAAGTTTGT
CTCTCTGAGACATTTCCTGCCACACAGGGTTAGGGTTTAGTGGGAATGTTGGGCACTGCCAGGT
GCTGTTTTCCTTCCTTGATTACAAGGCAAGCCAGGCATGCACCCAACACGGGGCTGCGAGTGGA
TGAATAAAGCGTGCTCAGCGGGCTGCAGAGGGCTAGCCAACAGGGCCAA (SEQ ID NO: 984)

1039. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TXLNGY. In some embodiments, the sequences from gene TXLNGY comprise or consist of:
AGAAGAAATTGTCCTGGATCATACAATAAGCTAGGATTTGCTCCAGACCATTTTTTTCATTTTATCA
GGCTACCTACAATTAAGGAATTTCAGAAGATTTTGTGAACAAAAAATGTCCAGGAATTATGTGTGT
AATAAATGAATTTGATATTTTGATCTCCTTATCCATCTTTTTCTTGATAAAATATCAGCTTTTTTTTTT
CCAATGTAGGGCAGAAGCAAGAAGTACAGATATTTTGATGGGGACAGCCCACGTCTGATAGGGT
GGGACATGGGGCAGCAGTTAGAGGGTTGTGCTCTTTCTAGTGTGGGATAGTTTGCAAGATGATA
TGTTGTAGCCACTTCTGCAGTGACGGGGACAGAAGGAGTCAGTGTTCTTAACTACAGTGGTAGC
AGCAGAAAAGAAGGGTAAGCAGGGTTCTAGAAATTTGTGTTATGTTTTCTCCCCACTGTATTTATT
TCTTTGGTTAGTGGTGCAAGAAATTCTGTTTTCCTGTAG (SEQ ID NO: 985)

1040. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TXLNGY. In some embodiments, the sequences from gene TXLNGY comprise or consist of:
TAAGTTCTACTTCTTGGAAAAAAAAAAAAGATCGCCAAAATTGTAACCAAAGCCATTTAAAACAAA
CTCCTCACTTAACATAGTGCCAGGGCATGCAATTTTGTTTCTTACTCTCTGGATGTGGGATATGC
GAGTGTGTGTGTGTGTGTGTGTGTGTGTATTAAGCTTTCTGTTTCTGATGAAATTTTCATATGA
AATTTACTGGAGATAAGATTAAATTAGTGGAAAAACAAGATAATTTTGCTTTCTATGTAGTGGTCAC
CAAGTTAAAGAATTGTGCCAGTTATTAGGCAAGATAGGCTTTGAGATTTAGGGACAGTTAAATTTT
ACACCAACTTAGTGAACATGAGACTTCTACCTAGTGTTACATTTCATTTTTAAATAAGCAATTTAAA
AATTGGTAAATGATTTGTTTACTTTGATTATATTCTGGTATAATTTTCTGACAAAATTATCTGTGTCT
TGGTCAGCATTGTTGCTAGAATATGTATTCAGAT (SEQ ID NO: 986)

1041. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MICU1. In some embodiments, the sequences from gene MICU1 comprise or consist of:
GTACTTTTTAAATTGATCTTTGAAGGCTTGGGCTCTTTAATGGTAGTTTATAAATTATTAAAATTTAT
TCATTAAAATATTACTCTCACATTTCTGGTGGCTGGCAGTCTTAAAAATATAAATTAAACTGAGTTG
TAGTAATTAAATATAAATTAAGCTGAATTATAAACATCTTTTGGTTTAAAATAACTAATATAACTAAC
GAAGACCACAGGGTGCTCTTTATTTTTACAGTACATTTTTTCTATACTTCCTTTGTTTGAAAAATGG
GGTGTAATTTTTGGTAGTCCCTCTTACCAAACCCTCAAATTAGGTATCTTATTATTAGTACAATGGA
TTATCTTCCTAAATACCTTTGTCTTTAACTGCATTCTGAACCAAACCAACAAATACATTAAAAATTAT
GTCAGAATAACGTATAGACGATTCCATTATCAATGTTTCTAATCCTGGGAATTCTATTTTAGAACA
GCCATGGCACAAACATCATACAGAGTAC (SEQ ID NO: 987)

1042. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MICU1. In some embodiments, the sequences from gene MICU1 comprise or consist of:
AGGTTAAGAAATTTTGTTGTAATCACTCTTGTTAAGCATAAGAGATACTTAATTAATTGAGTCACTT
AAATAGTCTTACTTGGAGGCCGGGTCTGGTGGCTCATGCTTGTAATCCCAGCACTTTGAGAGGC
AGAGGCAGGAGGATCACTTGAGCAACCGGGAGTTCAAGACCAGCCTGAGCAACATAGCAAGAC
CTCATCTCTATGAAAACATTTAAAAGCAGTAGTAGTCCTAGCTACTCAGGAGACTGACGTGGGAA
GATCGCTTGATCCCAGGAGTTGGAGGTTGTAGTGAGCTAAGATTGTGACACTACTCCAGCCTGG
GTGACAGAGTGAGACCCTGTCTCTAAAACAAAAACAAAAAAGTCTTATTTGGGATATTATGTTCCT
ACTTGAACTGTAACAGGACTGATGAGACAACAGTAACTTCAAGTTAAAAATTAATCTTTTTTTCTTT
TGAAATTTCTTACATAATAAATACAAATAAGCAGTTGCTTGGT (SEQ ID NO: 988)

1043. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene VDAC2. In some embodiments, the sequences from gene VDAC2 comprise or consist of:
GGCGGCCAAGCCGGAGGCCCGCGCCGGACTCGGAGTCGGCCCTGGCTTCCTAAGATGGCCGC
GCTGCCCCGCGGCCCCTCGCCCCTCTCTGCCCGGGATCTCCCTTTGGCCCTTTGACCCCAGCTT
ACCGCACTTCTTGTCCCTCCCGCAGATTCCCCTCTTCCCGCGGCCTCGCCATGGCGACCCACGG
ACAGACTTGCGCGCGTCGTAAGTAAAGCTGGGATCTCTGCGGGATGGGGCGGCGGAGAGTCGA

AGCCTGTCGACCAGAAACCCAGTTTGTTTCCCCCTATCTTTCCAAGAACTTGGAAATTCGGCTGC
TTTTGGTGGTCGCCCCACCGTCTGACCACCTCCTCTGCGGAGGAGGGGCTGGGCTGCTGGATT
TCAAATGGGGAACAAGGCCCGGGGAGTTGGTCTGTGGCCGCATGGACTTTTCAGCCTTTGTACA
TGTCTTTGACGTATAGAAGTAAAAAGTTGTTAATTGGGGATTCTGCCTTTGGAG (SEQ ID NO: 989)

1044. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene VDAC2. In some embodiments, the sequences from gene VDAC2 comprise or consist of:
TAAGTTTGAAGCGCTATTTGATATTTAGTTGATGTAGACATTTGAGTGAAACACACATGGCAGTAT
TTTTTCCAAGTTTCAATATTTAAATTCCCAGTATTAAATTCTCTTCCCACTCCAGGGTGTTGGTTTT
CCCCTCAGCGAAGATATTAAAGGACGTATCAGGGTAAAGGGCCTAGTCTTAGGTTTCGGTTTTAT
CTAATTTAGTTAAATCAGCTCATCTCAGTGAATTTTGGCAGATACATAAATATCCATACACACAAAT
ACTTGTTTGATTCTTTGTACTTGTCCAGTCCTAGGAAGTGAGGCTGTAGGTAATAGACTGTTTTTC
CGTTTTGAAACGAATTCCCCAAGTTTGTATAATCATGGTTATCTGTTTTAGAAATAATTCGTTGGTG
GTATCTCCTTTATGGGTCGTTATAGTTCTATTGTAGCTCCTGACCGCATAAAAAACATTCCAACAA
ATGGGATTGCTTGAATTTTAATATCAGCAGTGGGT (SEQ ID NO: 990)

1045. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CYP2C8. In some embodiments, the sequences from gene CYP2C8 comprise or consist of:
GTAAGTCTGCCTTATGTTCCTCCAGCCAATTGCAAAGGGTAAGTTATTTGACTGCTATTTTTAGAC
AAAATATATTCCTGGAAGCACACTATTATAATAGATCATTGTAAAGCAAAATACTCCCTCTGAACTT
CTTTGATGTTTCTTTTGTCTTCCTATTTTTTTTTTTTTTGAGACGGAGTCTCGCTCTATTGCCCAGG
CTGGAGTGCAGTGGCACTATCTCCACTCACTGCAAGCTCTGCCTCCCAGGTTCACACCATTCTCC
TGCCTCAGCCTCCCCCGAGTAACTGGGACTACAGGTGCCCTCCACCATGCCCGGCTAATTTTTT
GTATGTTTTAGTAGAGACAGGGTTTCACCGTGTTAGCCAGAATGGTCTCAGTCTCCTGACCTCAT
GATCTGCCTGCCTTGGCCTCCCAAAGTGCTGGGATTACATGTGTGAGCCACCGTACCTGGCCTC
TTTTGTCTTTCTAAGTCTGTCATTGTCAGAAATAGCGGAGT (SEQ ID NO: 991)

1046. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CYP2C8. In some embodiments, the sequences from gene CYP2C8 comprise or consist of:
TATACATTTATTAGCTAATAATTTGATATATGTATGGTAATTCAACATGTATGAGTTATATTCACTAT
TTCATGTTTAGGCAGCTGTATTTTAAGTGAACTATACTAAATATTTGAAAGGCTTTTGTTATCAAGG
GCTAAGTCTCCTATTTTTTGATATAGCATTACAATGTACATTTTTTATACACAAAATATAGAATACAC
TGATTTCCCTCAAGGTCATAAATTCCCAACTGGTCATTAATCTGAGAATATTGAATTTTGAGTATAT
TCTAACATAGAATCATTTACTTCAGTGTTTCTCCATCATCACAGCACATTGGAACAACCAGGGACT
TTTAATTAAAAATACCTGGGCTCCAATCCAATACAATTAAACCAGAATCTCCTAGATTGGCACTGG
AAAGAAGGAGTAGGACAAAAGAACATTTTATTTCTATCCATGGGCCAAAGTCCACTCAGAAAAAA
AGTATAAATTGGATCTAGGTGATTGTTTACTT (SEQ ID NO: 992)

1047. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GPAM. In some embodiments, the sequences from gene GPAM comprise or consist of:
GTGAGTGAAGACCCTTCAGTGTTGCCTGGTCTCTTTTCTTGAGCGTTTTCATGAAAACGTAACCC
CCCGTGTTTTTCTGTTAGATAATGTTTGACCCATTGTTGATACTTTATATTCCACTCCTGGATTTCA
GTGACCACCAAACCAATATGTCATTTACTATCTTGGTTTGCTCTCTGGGTCACTGCTCCACTGAAT
CTATCCTGCAGCTATGAGCCATGATAGGACAGATTGCTCAATGTTCTCAGGCAGTCACATCCAAA
GCTAGTGAGCACGTATTGTGTGTGAGGCACTGGGTCAGTGGTTTGTAAATAATTAACACACCCAC
CTGTAGATGATGGAACCACAGATGGTAAGAGTCAGAAGCAGCCTTAAAAATCATCTGCTCGGCCA
GGTGCGGTGGCTCACGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACGAGG
TCAGGAGATCGAGACCATCCTGGCTAACGTGGAGAAACCCCGT (SEQ ID NO: 993)

1048. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene GPAM. In some

embodiments, the sequences from gene GPAM comprise or consist of:
GCCTAAAACACATAGTGGTATCTGCTTTAATTTGGGTGATAGCCCCTTGCTTGAGGGAATGTGGC
TATAATTTTAGTTTTCAAACGAAAATGTAATCTCCTGTTATATCACTGTTTACAATGAGTAGTTACT
GAATTACCGTTTGTATAGCATTACCCTTATTTTTCAGGAGAGGTAGAGTGTCTTGCTATCCAGGAG
CTGAAAATCTAACTGAGATGAGACATACACAGAGCAGCAAAGTGAGTGGAGGGCCTCATTTGTG
ATTAAGAGAAAAGAGAGGAAGGAGAGAAGAGGGGGCTTATGTCTTTGGAGAAGGTTTTTGATGC
AGTTGGGATCATATGGAATCATAAGAATTTAGTCTTATGGGATTTACTTAAATTTCTCCAAATACAG
GCCATTATTTTTGATGTATTAATAATCTCTTAAGGTTATTCAAGCCAGTTGAAGTTTTTCTTGGAGA
CTTTGAGCTGGCAACTTCATTGTTGCTTTTCTTTTCTTA (SEQ ID NO: 994)

1049. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSL5. In some embodiments, the sequences from gene ACSL5 comprise or consist of:
GCTACCTATTAGCTACATAAAGTATCTTTCTCTCCACCTCTTATTTCCTACAGGTGACCCCAAAGG
AGCCATGATAACCCATCAAAATATTGTTTCAAATGCTGCTGCCTTTCTCAAATGTGTGGAGGTCAG
TGGTCAGTTGAAAAAGAGGCTCTCATTAAAATGTGAATCTGTCATAAGATTTTTATTTTTGAGGTTA
GAGCAGGCAGACACACACACACACATACACACACACACACACACACGTTAAAGGCTGGAGTGTG
GACAAACACCAGCGTGTTCTTTGTTTAGAGGACTGTACATTTTCAAGCGTTGGTCTTTTAGGATCA
CTGCAAATTTCTACACTATATGCAGTTCAAGGCATCTCAGATCTACACAGTGTACCGCCTATACAG
CTGTCTGTGGTAGTCCTGGGAGGAGGTAGTTTTAAAATCTCCATTGGAATTGAAAGTTGGCATTA
ATCTCATGTTGCCTCCTCTTACTTCCCTGGCCTACATAG (SEQ ID NO: 995)

1050. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSL5. In some embodiments, the sequences from gene ACSL5 comprise or consist of:
TGAGTGTTCTGTGTTCCTAGCAGTATGTGGCAAGGGGGTCCTGACTTGCTATCACATGTTTATTC
CAAAGGCAGCTACACAGTATTTACTGTTCTTTCTCCGGTGTGAGAGGTGCAGGCAAGGAGTTGG
CTCATGGGAGCCCTAATCATGGCATGGCCCCTCATTTCCTGCAGAGTCTTCCTCTGCTAAGTCTG
CATGTGTCCAGGGAGGATAGTACTTGCTCCTGCCTTCATGGGGGTGTGTGAGTCTAGTGACATC
ACAGCTAGGAGCTTACTATCTATCTGCCCTTAATTCTGAGCTGACACAAGACATTGTCTTCTTTTT
AAATTTTATTTTGGTTAGAATTTTTGAAAAGATCTAGGATTAGAGAAAAGGAAGTTCCCTACAGAG
GATCAGGGAAGGAGCATTTGATCTACATAAGGTGTGAGATGTCCCCCGCGCCGGTTTTTGCACA
CCTGAGTGTGTAAGGTGGTGCTGTCAGCATGGTGCATACCGGAGG (SEQ ID NO: 996)

1051. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HABP2. In some embodiments, the sequences from gene HABP2 comprise or consist of:
TGAGGTTTAAAACAAAACTTTTGAAGCCAACAAGCAACTGTGGGCAACACTTCAAAGGGCCCAGA
ATCAATGTTTGTCAATAGCAGTTTTGCATCCTTTAATTTATGTCTCATGAATATAAAGTGTGATGTT
ATTAGGAGCCCATCCATGCCTTAATTCTGTTTGAGATTTGATGAACCAGAAGTCTATTAACATTCT
GTACAAATCAGCACTGGCAGAGGCCTGTGGCACAGGCTTCACCTGATCTTTTATCCTGAGGCTG
GGATGCTAGTCACGCTGTCAGGCTTCCTGCTCGGAACACCCAGCAGCTGTCATGTGCACCGTGG
AGCCAGGGGGCTATGTCAGCTACTTTCTTTGGAGAGTTTCTCCCCAGAAGAGAAACCACTTCATG
ACTCAGCCCAGCCCCAAAGTTGCCATTTGTTTAATCAAGATAGTTAGTTTGCAAAACATTAAACAT
TAAACAGTATTTGATGCCTAGTTAATAATTTGCATCCTCTTC (SEQ ID NO: 997)

1052. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HABP2. In some embodiments, the sequences from gene HABP2 comprise or consist of:
TAAGTGTTCTTTTCTAATATTTGTAGTTGAGAGACTCCGAAGTTTACTAGGAGGACCAAGCTAGGC
TGGGAGTGATGAGAAACTTTAGAGTGAAAGGCTGGAGTTGCCAAGTTGGAGATGTTCTAACTACA
AGAACCAATGCAGGCCTGTGGCTTGGTTTCTTTTGAGCAGCCACTCCCATGGGAACAGGTGTCT
GACTTGAGCCATCTTGGAGCGGAGCCTCCATGAATGCATTCCAGCAAAGGAGACTGGGGCAAGA
AAATGTGCCCCAGGGCATGGATTGTAATCTGTCATGGATCTCATAGACCCCTTTGAGAAGCCATG
GAAAGCTATAAACTCTCTCCCCAGGAAAATATACCTATCTATTGGTGCTGACACACACAGTTTTCC

AGCGATTTGTGGCTGACACTAGGGTAAGAAGCAATGTGCTATGGCCTTAGAGGGGAAGCCTGCT
GACTGCAAAAGATCCTGGCAGTGGGTCTGCATAAATAGTTTGGAT (SEQ ID NO: 998)

1053. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IGF2. In some embodiments, the sequences from gene IGF2 comprise or consist of:
GTAGGATTTGAGCTGTGTTTCCCGCCCTGATCCTCTCTCCTCTGGCGGCCGGAGCCTCCGTAGG
CTCCAAGCCTGGCCCAGATTCGGCCCGGCGCAGCCGGCCTTCCGCGCGTCCCGCACCTGGCG
GGGGCTCCGGGGCTCCGGCGCGGCACCGGGGGGCGCTCGGGATCTGGCTGAGGCTCCAAGC
GCCGCGTGGCCGGCTCCTCCTGCTGGGGCAGGTGGCGGCTGCGCGCCCCGCCCGAGCCCAG
GGGCCCCCTCAGCCGCAACAACCAGCAAGGACCCCCCGACTCAGCCCCAAGCCACCTGCATCT
GCACTCAGACGGGGCGCACCCGCAGTGCAGCCTCCTGGTGGGGCGCTGGGAGCCCGCCTGCC
CCTGCCTGCCCGGAGACCCCAGCTCACGAGCACAGGCCGCCCGGGCACCCCAGAAACCCGGG
ATGGGGCCCCTGAATTCTCTAGAACGGGCATTCAGCATGGCCTTGGCGCTCTGCGGCTCCCTGC
(SEQ ID NO: 999)

1054. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IGF2. In some embodiments, the sequences from gene IGF2 comprise or consist of:
CCGCATCTGCTGCTGTCCCGCCGGTGCTGGCGCTCGTCTCCGGCTGCCGCCGGGGAGGCCGG
CGTGGGGCGCGGGACACGGCTGCGGACTTGCGGCTGGCGGCTGCGCTCGCTCCTGCTGGGCG
CCCCGAAATCCGCGCCACTTTCGTTTGCTCATTGCAAAGATCTCATTTGTGGGGAAAGCGGCTG
GAGGGTCCCAAAGTGGGGCGGGCAGGGGGCTGGGGCGAGGGACGCGGAGGAGAGGCGCTCC
CGCCGGGCGGTAAAGTGCCTCTAGCCCGCGGGCCTAGGACTCCGCCGGGAGGCGCGCGCGGA
GCGCGGGCGAAGTGATTGATGGCGGAGCGAGGGGGGCGAGGGGGGCCAGGGGGGCGCGAGA
TTCCGCCGGCGGCCCCTTCCCCTTGGCTAGGCTTAGGCGGCGGGGGGCTGGCGGGGTGCGGG
ATTTTGTGCGTGGTTTTTGACTTGGTAAAAATCACAGTGCTTTCTTACATCGTTCAAACTCTCCA
(SEQ ID NO: 1000)

1055. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PSMA1. In some embodiments, the sequences from gene PSMA1 comprise or consist of:
GTGAGAATATCTTTGCTTTTTGATAAAACACAGAATGCATAGATTTCACATCTCACTATGTGAGCC
CCCACAAAACAAAACCTAGAGGAGCATGTGAGAAAAACGCATCTCTAGGCTAGAAAACAAAAAGA
GAAAAAAAGAAAAATGTCTGTGTAAGAAAGCAAAGGAAAGAAGATGCTCAAATCCAGCAAATCAT
ACCAGCCTTGTCATAGGCACAAAAAGAAAGGGATTAACCTAAGTTACAAGGTGAATTATCATAAAA
TCAGATGAACCTTTCTGAAAAATAGTCATGGGACAAAGGAGGGATATATAACACTAGAGGCTTAA
CCCTTTCCTGCAGAGAAAAAAAATGTAACTGAAAGAAATGCCACTCAAGGCTTGTGACATTCAAA
GTGAAGACAAGATAAGGTCTTATGTAGTACATGACATAGGTGTAGACACTCACTAGACTGAAAGG
AGTACATGTTTCCAAAGCAGCTTTAATTCACGTCTCTGCTGA (SEQ ID NO: 1001)

1056. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PSMA1. In some embodiments, the sequences from gene PSMA1 comprise or consist of:
TGACCTAATTGTATTCATTTGTCAAGAGGCCGGTTCCATATCGGAGACAGGCTGTATTCATAGAT
GATTTTAAGGACAGTTTAAGGCATAGAGTTTTACTCTAAAAACTGAGAAACAAAAAATCCTTCATT
GTAGAATTTGTTTTGTTGCCCTAGCTCTACTATTTATACTTTTCCACTTTAGCTATGCACAGAACAT
AGCTAATTTTCATCTCAATTTTTCAATTCTTTTGCTATATAATTGTTAACATTTATTGACCACTAACC
TCATTTTAAGGACTGTGCTAAGTATTTTATATACTTTCCTGGGGAGGCACTTATTCCTCACTTTTGA
TATTTCCCTCCACGTGGGGAACATCCATTAGAGTAACTCTCCTGGCCTGTATCTACTTACCCCCA
GGAGAGGAGAAGAGAGTTTGGTGAGTTTGAGATGAGGAACAGGATGTCTGATGAAGATCTAATA
TAACTCATGTTCCTTTTACCTTCTCCATTGTCTTTCA (SEQ ID NO: 1002)

1057. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DEPDC7. In some embodiments, the sequences from gene DEPDC7 comprise or consist of:

TGCCTTTATGGTATTCACCATTCATTGTTAATTCCTAGTCTTGCTTTTGCTTTTGGAAATAATTTTG
AATAAGTGCACTTTTTAACTCAAACTGTAACTTGAGTTTTGTTCCCTTTAATATAGTCATATTTGGT
CAATTAAAAGCAGTTTTTTTCTTTTGGCTAAAGTGAATGGGAAGACGGAAATAGCTTTAGAAGCTA
CCCAGCTCCTTCTAAAGCTTTTAGATTTCCAAAATAGAGAAGAATTTAGAAGACTACTGTATTTCAT
GGCTGTTGCAGCAAATCCTTCTGAGTTTAAATTACAGAAAGAAGTAAGTCTTTTGTTTAACTGTTA
GTTGTATTTAATATCCTTAATACTTACAGGTTAAGTATTAGATTATTCCATCTTCAGCATCAAGTAT
GCTGAAATGTATAATAGCTATTAATATTTAATATTCCCTTTTATATTAAACTTGTCTCTTAAATATAT
ACTATTGGATATATTTGTTTTATTTTTATAG (SEQ ID NO: 1003)

1058. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene DEPDC7. In some embodiments, the sequences from gene DEPDC7 comprise or consist of:
TAAAATTGTGAAAGTAGTTAAATTGAGCTTATGTAATAGATCACTAGATTAAAATGCATTTGAATAA
TGTCCCATGTCCCTTCTTTTTCTTAAGATTCCTGGAACTCTACATAAAATTGTAAGTGTTAAGCTTA
TGGCCATACAGAACGGAAGAGATCCAAATAGAGATGCAGGTAATCTGAGAAATATTATTTTCATG
ATCTTCCAAAGACAAATTTCAGGTGTTTTTTGAAAATGTTTTGCTATAAGTAGTTGGACTTTAATTT
CAACCAAATTTAAAACATTCTCCTCAGAGTTATTCATACAAAGCAACTTTACAAGTGTTAGAAAGTC
AGCAGTGCTTACCATCTTCAGTGCATATTACAAAATGGGGAAGAAAAACATAAAGACAAGAATATT
GCTTGATTTTTCTGCTTAAATATGAGGAATTGAGTCATTAACTGAACTTTTTACTTTTAAACTTTAA
GGATATATTTATTGCCAGAGAATTGATCAACGT (SEQ ID NO: 1004)

1059. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CTNND1. In some embodiments, the sequences from gene CTNND1 comprise or consist of:
TGAGAGAGGAGACCACAATAGAACACTGGATCGATCGGGGGATCTAGGCGACATGGAGCCATT
GAAGGGAACAACACCCTTGATGGTAAATTCTCTTTATATACTGCTATCTGTCTAAGGCTAGTTCTA
TTTTGAAGCCTATGTGTTTTGTGAAACACAAAAAAAAGTACAGAGAAAGATCGCATCCTTTTCTGG
TAGGGGTTTTCAGGAAAAAGTAAGAGTTCTGACTCATGTTGGGATTTCTTGGGCCGTTATTCTGC
AGTGGTCAAAATGGGGGAAGCATGTCTGTAAAAGTGTTACTGATATGACTAACACTAACTGATCT
ACTTTCAAACATTACCTTTTTCCTCTCCCTCCCTGTTTATGAATGTTTTGCCCTTCTCTTACTATTAT
ATCTTGTTTTGTTTGAGTTTACAAATTTTCAGAGTTTCCCTAGCTCTGGCACACACTCATGAGGTT
CCTGTCTCTACTCATACTAACAAATTGCATGTGTTCACAG (SEQ ID NO: 1005)

1060. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CTNND1. In some embodiments, the sequences from gene CTNND1 comprise or consist of:
TATGTCCTTCAGTCACCCCCAAGATTGTTCTTGAGGAAGGAGGCTCCTGAGTGCCAGCAACTTGT
CAATCACGCTAATCTGATCAGGCCAGAGACTAAGTAGTCTCAGCCACATGGGGCTCGAGGGGTT
CTGCTTTTGTGATTATTACCTCTTACGAGTCTGGGACATGCAGCTGGTGATCTGATTCTCCGTTAT
GTGCTGCTTTCCTTTCTCCAGATTTGCTCAACTTTTTTGGGGGGGGTCTCCTTAATCCCAACCCC
ATTAACATTCTCTCTTTCTCTTTTTTCTCCACAGCAGAAGATTTAGCACCACTATCTCCGTTCCATC
TGGGCTTATATGTACTTTTATTTTTTGGTGGTGAAATTGACTGATGATTTTCCTTTTTCTTCGCTGG
ACTATTGTGCCAACTGCCAGGCTGCCTCCTGCCCTTACAGCCCTAAGTGGCTGCCTTCTTTCCAT
CAACTCCCAACTTCTTCCTGTGAAGTTTAATTGTCTCAAC (SEQ ID NO: 1006)

1061. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MS4A6A. In some embodiments, the sequences from gene MS4A6A comprise or consist of:
GTGAGCAAGGTTGGAGGTGATTCTGCCCCTCTCCCCAGGCTTTCTGTGTGAGTCCATTCCTCCT
CTCAGATTTATTGTTAGAACTTAAGACAAGCCAATTACATTTCATAATGTCTGTGTCATTCAGACG
CTGAGAACTAATCCAGCCTTCTAAATGGTGCTTCTTAACTCCTTTCTTCAACAGGAGAGTTAATGT
GTGGAATTAAGTGCAGAATCCATGGCCCTCTGTGGTGACGGTGATGGTTCAGGTTGTGTTTCTG
GGTTCATTCTGGAAGCTCCCCCAAGGAAAGGAGGAAGGAAGCTTGCAGGGTGGGGCTTTGCCA
TTGCCCTGACTGGCTCTGGTTTCCTTGCCTGATACATTGAAGTCAGCTTCCAAAGAATGCCACCC
AAGGTTTTGAAGGGGCACAGTGCCTCTGTCCTCACAAAACCAGCCTGCATATGAGTTTACTGAAT
TCATTTAGGTCCTGCTGAATCTTTCCCATTTGTTCCTTCTCTGTTT (SEQ ID NO: 1007)

1062. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MS4A6A. In some embodiments, the sequences from gene MS4A6A comprise or consist of:
TTCTGGTTGTTACACATAGGGTGGGATTGTGCTGGCATAGGCCAGGGAGTCTGCTAAGCATCCT
ACAGTGCACAGGATAGCCACCTACTGTAAAGAATTACCCAGTCCAAAGTGGCATTAGTAGCTTTT
TTGAGAAACCTGTCCCAGATCATTAATCAGAACGTGTTATTGATATACCAGTCTTCTCCCTTGTAG
TTAGGTTGGTAGAATTCAGACTCTGGAAAAAACTGGGAATGTAAAAGGCTGAATGAGTGTAAGCT
GAAAGACAAGAGAAAGGAGAATTGTTTTAAGCTTACTAAAGCCAAAATGGAAAAAAAAAGAGGGG
GGAGGATTGGGGGGTGAGGAAGACAGTCAACAGACCGCTTTTAGGCCATCATTCCGAAGGGTTC
TGTGCTAGGAACCTTACACGTGTTGTCTCACATAATCCTTAAAACTCAGAAATGATTTTAAATTAAA
TAGCACAGAGAGGAAAACTGACTGGAGAGGGAGCCTTTGCTTA (SEQ ID NO: 1008)

1063. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLCO2B1. In some embodiments, the sequences from gene SLCO2B1 comprise or consist of:
AAAATGGGGCTAATGTACACCTCGCTCATAGGAGTGATGTGGGGTTGCAGGGCAGAGTTACTGA
GCCCGTAGTAAGCGCTCCATAAATGCCAGCCACTGGTGTTGTCTGGCAGGAGCTGGCGTTACAG
TGGTTGGGGATGCTGGGGAAGTGTCTGACTGTCCCAGCTCCAGGTCTTGCCAACTGTAGGAGTA
AGGGGAGAATTTGATGGGACCAGTGGGTGGAGGAAGAGGAGTGATGTCTGTGACCAGAAACAT
ACAGAGGTCAGCACAGGACCCTGATGGTCAGTGGGTGTGTTGTCTTGTATATGGGACCAGGCTC
TGCAGGTTGAAAAAGGATGGGGTACGTCCCTGAGCCCCCAGCCTAGATCATCAGATGGGAGAGA
GGCTGGCTCTGGGTGGTGGGAGAGAAGGGCATAATAAGAACCCTTCAACGTTGATGCATGGCC
CTTGGGGGCTGGAACCCCTCCAACCTCATGTTGCCCATGTCTCTGCTTGTTAG (SEQ ID NO: 1009)

1064. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLCO2B1. In some embodiments, the sequences from gene SLCO2B1 comprise or consist of:
TAAAGATCTTGCTTGGGACCATTGGTGGTGGTGATGGGGTCCAGATGCCCACTGTGTGCCAGGC
CTGGGGCACAGGCATGAGCGGAATTCAATCCCTGATCTTAGGGCTCACAAGCTCATGGGGTGAC
AGACCTGGCCCAGCTCTCCTAGAGCGGGGTATAGAGGCAGAGTCTAGACAGCCCGTCAGGAAG
CCACCTCGGATGCAGGGGTGGGGCGGGCTTGAGGGCCAGACAGCCAAGAGGCCCCAGTAACC
CAGAGCCCCTGAGGGGTTGTACATGCCAGGGAGGGGGCAGGGTAGGACGGTGGGCCTTCATT
GTCCCCTGAGCACCACCTCCCTCAGCCTGGATGCCCAGCCCCGTGATCCACGGCAGCGCCATC
GACACCACCTGTGTGCACTGGGCCCTGAGCTGTGGGCGTCGAGCTGTCTGTCGCTACTACAATA
ATGACCTGCTCCGAAACCGGTGAGACCTGGTTTGATGGCTTGTGGGAAGGGTGCTGG (SEQ ID NO: 1010)

1065. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PICALM. In some embodiments, the sequences from gene PICALM comprise or consist of:
GTAAGTAAATAAGGAGAGCTTCAATAGTTCCATGGTAGAGAGAGGCCTGCTGGAAGGTTCAGAA
AATAGGCCGTTTGGAACCTTCTCCTTTAAGCCAGGAGGGCGGCTTTGGGAGGCGTCTTGAAATA
CATTCTTGACTCTGCTGGGAAAGCTCGGGGAGCCAGAGGCCTAATACCCCCCACTTCAGGGGAA
GCTGTGAAGGCAGCTGCACCTCCTTTGTCAAGCTGTTGGTTTCAACCACAGACACGAGGACACA
CTTGAGGTGGGGGGATAAGGGGAGAAGCCTGCCGCCCCGCCCCACCCCCGCCAGCACACCGC
CCTCGCCATTCCTCTCCCGCCCCGCCCCGCCCGGCGTCTGTGACCCCGCGGGCCGAGCCTCAG
GCGACCTGTTGGCAGGGAGAGTCACGTGATGCGCCGGCTGTGCACTCCCCTCGGGCGGGCCT
CCTGTTGCGCCCGCCTGGCGAGTTCCATCACGTAACGCGCGGGCGCCGCCCAGCTC (SEQ ID NO: 1011)

1066. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PICALM. In some embodiments, the sequences from gene PICALM comprise or consist of:
TATTTTGGATTTGGCTGGCAGATGGTGTACACAGACTTTCTGAGAATGTTAGCATTTCATTTGAAA

CTAGCAAGATTACATGTGACTATCATGGTAACTTAGCACTCACATATTTTTCAACTTATCCCTAACC
CTGGGTTGAATGTAGAGGCTCTAATAACATATAAAAGGCTTTGTTAATGTATGGTCTGGGTCTCAT
TGAATAGTATTTCAGGATGTAATACTTCTTTTAAAATGTCCACAGGGCAGTGTCAACGTCTTTCCA
TGGAAATCTGGCTCACCCAATAAGAGAAAAGAGGCCAAAGGTAAGAAAGACTAAACCAGGGGAG
ATGGCAGGCAGTGATGTCTGGACTGTTTGAATGGGACTTCTCCATTTACCGCCCCTCTCACTTCC
TTCTATGGTCTGGACCTTTAATCACCACAGCAGTCAGCCATGTAGGGTCAAGCTAATCGCTGTTG
ACATCATCCTACTACTTCCCTTTTCAAATTCCAGTGAAGC (SEQ ID NO: 1012)

1067. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLCO1B3. In some embodiments, the sequences from gene SLCO1B3 comprise or consist of:
TTTAGTATGTGACTTGCAAATTTTTCTTGACAGCCAGACAAAATGTATTGGGTAAAAGGAATTGCT
GTATATAAGCCTTTATTAATGTGGTGTAAGGCGATGAAGACAAAGTAGCATCCTGTAGTTCTATGA
TAAGGCCTCAATCTTTTAGTGAGCCTGTACCTCTGGACTGTGAACTTCAAACTTGCTTCTCAGTTT
CTGTCTCCCACTCCTTAGGTAGAATGAGATGGCTTGAGGGGGCTGGAGTTATGTATTTTCCTCCC
TCCCAAAGGAAGGCTAGAGACAGCTGGGGTTTAGTTTCTGTAGCTTCATATGTTTTTTTAATAATA
GAAAAATATCTTATGCCCCCAATGAAAATAATAAATAGAATTGTTCTCTTAATATTTGTATGTGTAA
CTTGTTTTTCTTTCTTTTAAGATATGCATACTGGGGAGAAAAAAATGTAAGATATTTTACACATTTA
AAATAATAATCGACTCTCTATTTTCTCTTTTCACAG (SEQ ID NO: 1013)

1068. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLCO1B3. In some embodiments, the sequences from gene SLCO1B3 comprise or consist of:
ACCCATTGATAAGATGTGTCTTCATTGCATCTGTCTGTTCTCTGGGAGAAGCAAAATCTGTGTTAC
TTCCTTGCATACTTGTTTGTTTATTCATTGTGCACAAGAAGATATCTTCCACATCTTCACAAGCTGG
ATAAGAAATAGAGAAAATGAGATCAAATATTTAAATATTGCATTTTCTGGTAGTGATGCAGGATATT
TCTTGGCCTCTTCACTGGACTCACAATAGAGGTGCCCTGTTTATTTGGTCTGCCATGCTCAACCC
CTTGTGGGAGGGAGAGTGTGAGTGACGTAGTGCAGGACCATGTGGGCTGTCCTGGTCATCGAC
ACAGAAACAAGCTCTGTGAGTTTCTCATGGCCAGACCAGGTGCGAGTGAGTGAATGCTGGACCT
GGGCAACCGCTCCAGGCACTGAAACGAGTGAGTTACATGCAGGGCTGGCAGCCAGGCAAGGTG
CAAGGGTGCTCAGGATCCTGAAGCCCCAGAGGGGTTGTTATGGT (SEQ ID NO: 1014)

1069. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ANO6. In some embodiments, the sequences from gene ANO6 comprise or consist of:
AATTACTGATGCCTGAGGCCACCTCCAGAGATCTGGTTTAATTATTGGAATGCAGCCTCCACTGG
GATTTCTAAAAGCTCCCAGAAGATGTTATTGTGCACCAGGGGTAGTGAACCACAGACCTGAGATG
TCAGGGTCCTGAGAGCTCATCTCATCCAGTGGTTCTCAGCCCTGGCTGCAGATTAGCATCATCTG
GAGAGCTCATGAAAGAAGCACTGAGGTCCCACCACCTGAAACGACCTTTCAGAGGAAGGAGCCA
TTCTTTTTAGAAGGTGCTCAGGTGATTTTGATGCACAGCAAGAGTTAAGGTTAACTGACATCTTAG
CCATCCCATGTTATAGATAAGGAAAATGAGAGCAAAAATGGTCAAATGGCTTGTACGAGGTCAGG
TCCTTGTTGTTACAGAGGCAGGTCTGATGCCGCCTCCTGCTCTGTCTGCAGCCTAACACCATCCC
TTATATTGGCCTGTTGTATTTATTGATGCCTCCTCATCCTTCAG (SEQ ID NO: 1015)

1070. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ANO6. In some embodiments, the sequences from gene ANO6 comprise or consist of:
TAAGATCCCCTTCCTTTGTATTTGAACAGCATCCTTCCTTCTTTTTCCCCTCCGACTGTCAGTTCC
GGGAGAACAGGCCTGTCTTTCCTGTTATTTCTGTAACAGTAGTGGGGTTTCAGATAATATTTGTTG
AATTGAAGTTCTGTAACTTTTTATTCCTCAGTCCACATGGATTGCTGAAAATAATCCATTCCTATAT
GCATGCTTCAGAAAAGAACTTCAGAAAGCAAAAGTTATTTTTTTTTTGAGACAGTCTCACTCCGTC
ACCCATGCTGGAGTGCAGTGGTGCAATCTCAGCTCACTGCAACCTCTGCTTCCCAAGTAGCTGG
AATTACAGGTGCATGCCACCACACCCAGCTAATTTTTGTATTTTTAGTAGAGACAGGGTTTTGCTA
TGTTGACCTGGCTGGTCTTGAACTCCTGACCTCAAGTGATCCACCCACCTCGGCCTCCCAAAGT
GTGGGGATTACAGGTGTGGGCCACCATGCCCGGCTGCAAA (SEQ ID NO: 1016)

1071. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KRT8. In some embodiments, the sequences from gene KRT8 comprise or consist of:
GTGGGTGTGGGTACCTCTGACCGGACCTGCTTCCCTATCCCTGGGACCTGGGGTGGGGACGGT
GGGAGCCCCCTGAAGCCCCTTGGGACTTGGGGTCCTGTTGTTCTGGGCCAAGAAGGGCTAGGA
GTTGGTCCTGACACCCCATTTGTCTGGGTACAGGCTGGAGTCTGGGATGCAGAACATGAGTATT
CATACGAAGACCACCAGCGGCTATGCAGGTGGGTGTCCCAGGGCCCTGGGATGAGGGCGGGA
GGCAGGGCCCAGGGAGGCCTCAGCTCCAGGGAGGGGGCTGTGCTCAGTCGCTCACAGTGACC
TCAGCCTGAGCACTCATGTTCTTGGGAGAATCCTAGGGTGGGGAGGCACATATTCAGGACCCCA
GTAATAACTTTATTACTTAGTAACTTTACTATTAGAAAGCACCCAAATAAACCATAGCTGTGTGCCA
GGCACTGTGCTAAGTATCCTACAGGTTTTATGTGATTTATTTTATTTATTAATT (SEQ ID NO: 1017)

1072. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene KRT8. In some embodiments, the sequences from gene KRT8 comprise or consist of:
AAGGGTGTGGAGGGGAAGCACCTGGAAACTGCTCATGTCTCCCTGATCTGCTTCCTTAGTCTCG
TTTATTTATTTATTTATTTTTGAGACAGAGTCTTGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGT
GATCTCGGCTCACTGCAAGCTCCGCCTCCTGGGTTCACACTATTCTCCTGACTCAGCCTCCTGA
GTAGCTGGGACTACAGGCGCCCGCCACCAGGCTGGCTAATTTTTTTTGTATTTTTACTAGAGACG
GGGTTTCACTGTGTTAGCCAGGATGGCCTCGATCTCCTGACCTTGTGATCTGCCCGCCTCGGCC
TCCCAAAGTGCTGGGATTACAGGCATGAGCCACTGTGCCCGGCCCTTAGTCTCATTTAATTTGAG
CTGGGGGGAGTCAGCCTAGGTGGTGGTGGGGAGGACCCTGAGGGAGGGTGGGAGCACGGGA
GAAGAGAAGGCATACCCAACCTGACCTACTTACCTGTCCCCTACCCCACA (SEQ ID NO: 1018)

1073. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CSAD. In some embodiments, the sequences from gene CSAD comprise or consist of:
GTGCATACAGTCCCCTTCTTCCCAAATCCCGCCCTTCAAACCATTGGTCCAGAGAATCATCATGG
ACTAGGGAGTTTAACATGGCTGGGGTAGGAGGCTGAGGGGAGGGGGACTGGAGAGAGGATTGA
TTGGAGCTGGGAGGTCAGACATGGCAGTTCTTCCTGATGCTGGGGTGAGGGTGAGACCAAAGC
CCCTTTGCTGGGGACCTGGAAAAGGAGGAAGGGCTCTGGTTGGGCAGCTGGAGGAGGAGCCAC
TGACCTGCCTTTGCTCCACCCCATCCAGGGCTGACTCTGTGGCCTGGAATCCCCACAAGCTCCT
CGCAGCAGGCCTGCAATGCTCTGCACTTCTTCTCCAGGATACCTCGGTGGGTCTGCCCCTGCCC
CTGCACCAGCCCCACCTCTCTCTGGAGCTCTGCCTTCTCTATCCCACCTTAGATAAAGTTCAGGC
CTTTCTCTATTCTCTTTACCATCCCTTCTGAAGCTGCATCTCAGCTACCACC (SEQ ID NO: 1019)

1074. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CSAD. In some embodiments, the sequences from gene CSAD comprise or consist of:
CACTATGCCTGACTCAATTTTTTTTCAATAGCATTGGATCTTCCAGTAAAACATTCAAGTTCTTTGA
GAGTATGAGCTTTGGAAATGAAAACCTAGGTTCGAAGTCCATCTCTGCAGCTTCTGCTTGGATCT
TTGAATCTCAGTGTCCCTGGCTGCACATTAAAAAGGACAGTAACACATTGTTGTGAGGTTGAAAT
GGGCCATTTTAGGCATGCAAAGAGCTTAGAGCTGGGCCCAGCATCAGGCTCTGAGTAGCTTTTG
AGATGACTTTACATCTTTCTCCCTCTACATTTTGGCAACAGGGTGCTGTGCCGTTCCTGGTCAGT
GCCACCTCTGGCACCACTGTGCTAGGGGCCTTTGACCCCCTGGAGGCAATTGCTGATGTGTGCC
AGCGTCATGGGCTATGGCTGCATGTGGATGTGAGTGGGACTTCGGCTTGGGGGTGCGGTGGGG
TGGGCTGAGCCAAGGCCAAGGCCCACGTTGTTCCTCCTGCTCCACA (SEQ ID NO: 1020)

1075. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RDH16. In some embodiments, the sequences from gene RDH16 comprise or consist of:
GTAACCACCCAGGTTTGTCAAGTCTGTCTGTGTCTTCCCTCTGTGTGAAGGGACCACCTCCTGTC

TGCTCCCTGGGAAGATTCCTACAGTGTCTTTCCAGGTTGAAGTAACAGTAGCTTTCTAATATTTCT
CACTTAACAGGCTGCCTGAACCCCATCTCTTTTCAATCCTTAACCTCTCCCGACATTGGAGGTGT
CTAGTCTTGGGGAGAGTTTGCCCTGATGAGATTTTCTCTCCAGAATTCCTCTCTATCCTCTCCCTC
CTGTCTAAGCAGAAGTCATGTGTTGTTTGATGCTAAGAGCCTGGGTTAGAGATCTGGAGACTTGC
TGGAGCATCGTTGAGAAGGGAGCACAGGGCTGCAAGTGTGCACGGAGGCTGTGCCTGTGCTGG
AGCCAGGCTTATGTTCCCAGCACTTTACCTTGTTTTTGCTAGGGCCCATCAGCGTCCACTGAGAG
CTACGATCATCTCCATCTTCAGAGGAGAGTATCAGCTTAAGGAC (SEQ ID NO: 1021)

1076. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene RDH16. In some embodiments, the sequences from gene RDH16 comprise or consist of:
TTCTCATCCTAGACAGCCTGACCGTGCCCTAGTTTTCAGAGGAGTGATTGATTCTGGGGTGCGG
AGCAGGATGAGGAAACTCAGGCTCAGAGAGGGATTTCCACCTAATGTGCCTGGAAACCATGGGT
AGCTACCCAATAAGGCCTTTCTATGTTCAGAAGGTCATGGACCAGGAGTGTTGGTATCGGAGCTT
TGTAGAGACAGTTTTGACCCCTGTACTTAGAGCAGAGGGGTGTGTTTGCCATGGAGAGTGTGTG
TGGGCAGCTGTGTGTAAGCCTGTGTGAGTTCTGTGTATGTTCCTGTGTGAATATATGTGTGTGCT
CCTTCATGGACACAGCATGCATGTAGTGGGCATAGCAAGGCAGAGAGAAATCAGGAGACTAGGG
GCACATTGCCCAGTAGGAAGATAGTATCTTCCTACTGGGCAGGACTTGAGGTGTGCAAAGGTGT
GCATGAGTACTGCAAAAGCAGTTCAAAGAGCAGAGAGGTGGGGCCAGAA (SEQ ID NO: 1022)

1077. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MON2. In some embodiments, the sequences from gene MON2 comprise or consist of:
AAGCAGTCTACCTTACTTTTTTTTTTTTACTATATTGTTCTGAAGTCAGGTTATTGCAAGAATAATC
CATATTTCATATATTTTTAATGTAGAAGATAATTGACTTATTTGGGGACAGGTGGAAAAGGGCTTT
ATCATCTATTCGTACTGATTTACTTTGCAGATACAAACTGTATAAATAACTTTGAATCATTTTTACCA
TTCTTTCTCATTTGTTTGCCCTTTCTGTTGTTCATTCCTGTCCAGTCCATTCTTTACATGATAGCCG
GAAATGATTTTTCCATAGTAGGGCTTTGATCATTTATTTCCTCATCCTCCCAAAGCAAAAAAATATT
TTTCATTTACCGTTTCCTACCAAATTGCAAAGAATACTCCAGTCTGACTCCATTCTAGTCACACTTT
ATTTCCCACAATAGATTTCATTTCCCCTACTCTGCACTAAACTAAAATTCTCAATCTTCCCAAATTT
TTTCAACCTTTTGTTTATTTCATTATCCAG (SEQ ID NO: 1023)

1078. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MON2. In some embodiments, the sequences from gene MON2 comprise or consist of:
TAAATAATTTTTCTTTTCATTGAATGCAAAGCTTTTTTATGTGTACTTGTCTCGAAGCACTCTATTTG
TATTACAATTATGCATGTACATGACTCATCTCCCTTTACATTGTTAAGATTTTTGAGGGGCTTTTCA
GACCATGTTTTGTTCTATTTTGAATCCTCTACAACATTGCTTTTCAAAGTATGGTTTGTTGGACCAG
CCATTGATTGGCTTCAACAGTTTTGTTACTGGTCTGGGACAAGATAGTGAGCTGGCATCAGAATA
TAAATCAGATGTGTCACTAAACACACTGCTTGGTTCAGCTGACTTTTTTTTATACAAGAAGACATT
GGTAAAGAAGAAAACTGTGTGTTGGTTTACATTCTGGCACAAGCTTCTTATTTTGTAGCAGATTGG
CACCTTAAGGAGCATTACTTTTAATATCCAAGAAAAAAGTAGATTCCTAGTAAATTACTAATGAATG
AGTTGTAGGATATTTGTTCCTGTCAACTATTAT (SEQ ID NO: 1024)

1079. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene BTG1. In some embodiments, the sequences from gene BTG1 comprise or consist of:
CTTCTGACTGTTATTTATGAGCCTTTTCATGGTATTTATCATTTTAGTATTGAAGATGCAGTGTTCT
TTTGGGAATTACGTATGCTTAGAAGAGAGTACTGATGCTCAAAGGTGAAATGATTTGAATCTAGA
GTTGGATAAAAAGGGAAAGGATGGGGAAAATGAAAACTGGGAAGCTAAACTGAGAAGGAATTGC
AAGGTTTGGTGATAAAAATTCATTTGCTATGGTCATAGTTGTGTATCGAGAGGTTTGCACAGCACA
GTCTCTTGGCAGAGTTTAGGAATCTCTACTCTGGGGATTCTGCAGTTCATGAATCGTCAGGGAGA
CTCTGCATTCAATTTGTTTCTGTGAACATGCAGGTGAAAGTGGTAGTACAGGTGGAACTTCATGG
GAACTGGTTTTGGGGGAGGTGTGGATGGAAAGCACAAATGTCTCAGTATTTTCTAAAGGGAGACT
ATTTTTAAAGGTGTCTTGTTACAAACCACTTGATTATAGCCT (SEQ ID NO: 1025)

1080. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene BTG1. In some embodiments, the sequences from gene BTG1 comprise or consist of:
CACACCATTCTCGAGAGTTAGAATTCGTAGACCCGCAACACATGGACTACCCTTGCCAATTGTTA
TGGTTTTATTTTTAAACCTATTCTGTGAAAAAGCTCCTCGGTATTTCAAACTTGAATTACAATAAAA
ACACCAGGTAGGGTTGTTTTTAAATGGGTCTCACCCCAGTGCTGACTACTGTTGTTTACCAACTA
CATTTCATCTGGTAACTCCATTGAAACTAAGTACCTCAACCATTTTTTTTTTTTATCATAAAGCCTTT
TTTCAAATGGAAAGTTGTTTTTGAAGATCTTGACATCAGACTTTTTCAATCTTTGAAAATGATGGAA
ACAGTTAATAAAAATGTTTATTTTAGAATTCAGGTGATGTCTGGCTTGTGAGGAGCTGTTTATAAG
TTTGTCTTTGAAAAAGGCTTGCACACATCACTCTGAGACCAGCTGTTTCCTGTGACTTTAACCTTA
CCTTCCCCAGACAATTGAGCTGAACCTGTATCTGC (SEQ ID NO: 1026)

1081. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HAL. In some embodiments, the sequences from gene HAL comprise or consist of:
TTATGGTGTCGCTTTATTCTTAGGTATTTATAGCAAAGTTAAGCGCCTCTAACAGCAGTTAATCAA
GCTTCTGAAGGATTCAGTTGACAGATGTCAACCGTTTTAAGAACAATATGCTTGACTCAGTACACT
CTTTTTCCCATTGGCTAGCAACAAAAGAGTTGGAGGTATCAGGATTTCCTCCCCAGCCCCGCAGG
CTCACCTGGTCTTTGTCACAAGTTGTCTCAGGGCAGCTGGAGGAGGCAAACCCTAAAGAACAAG
GGCTTTTCAAGTCCCTGTTGTGCCACGTTCGCTAATGTCCTGTTGGCTAAAGCGAGTCACGTTCC
AGGCCCAGAGTCAATTTGGGAGGGTAACACTCAAGGGCATGGGCATGTGATTTGACGTGATCCA
TGGGCCTGTATCTGACAATCTACCACATGCATAAAATCCCATCACAGGCTGGGTGCAGTGGCTCA
TGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGTGAGTGGATCA (SEQ ID NO: 1027)

1082. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HAL. In some embodiments, the sequences from gene HAL comprise or consist of:
AGCTACTCAGGAGGCTGAGGCACAAGAATTGCTTGAACCTGGAAGGTGGAGGTTGCAGTGAGCT
GAGATCATGCTACTGCACTCCAGCCTGGGCGACAGAGTGAGACTCTGTCTCACAAAAAAAGAAA
AAAAACAAAAAAACAAGAAAAAAACCACATAGGTACTGTTAAGACCCTGGAGCAACTATCCTTCAC
TCTATCCACACTGAATTCTCTGGGTTTTGTTATTTGCTTGCTTGTTTTGCTTAGGAAAAGTATGCA
GCTTAAAATCTTTATGATGACTTTAGAAAGTTTTGGACTTTGTATATTTACAGTCTTTAATGCAACC
AAAGACTAATTGACACAGGTCATGTGTCAAATGGCTTAAAATAAAAGCAAGCAAACAGCAGCTGT
GTCTGGTCATGTATAGAGTATGTTTTGACTTCGGATGAAGTTGATGTTTAATAGCATGTGGAAACA
ATGTCGTCAATATTTCAACTTTGTTTTGTCCTTGCTTTTCA (SEQ ID NO: 1028)

1083. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NR1H4. In some embodiments, the sequences from gene NR1H4 comprise or consist of:
ATTTGGGTGTCGAATGATGCCATGCTCATGATTTGTAGAGCATAATAACAATGTTAGCCTTAGGC
CATTTTTATACATTATCTTGAGGCAGAAGCTAGTTGTTACTTTGCTTTACCATAAAAATTATGACTT
GTGACTAAAAAACTATTCAGCAGAACCTTCTAAAGTTATGTATGGATATGTCCTATGACCCAGTGA
TTTCACTTCTGAGAATATACTCAACAGAAAGGATGCTCACGTCCACCCTACAGGTTATCTTTAGGG
GTTTTGATTGGAAGGGGAATTGGGAGGCTTCTGGGAAGCATTACATGTGTTGTATCTTGATCTCG
TTATAATTACGTGTGTGTGCATAAAAATTCATCAGGTTGAACACTTAATTTTCACATTTTGTGTACA
ACATTTAACTTACACTTCAAAATAGTTAACGTTGCTATAATTATGCTGAATTAATGCTTTTCCACTTT
TTAATTTTGTCATTTTATTTTAAACTTCAAAACAG (SEQ ID NO: 1029)

1084. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NR1H4. In some embodiments, the sequences from gene NR1H4 comprise or consist of:
TTTCTTTGGGAACAAAATTTGATAAATATACAAACTCATTTCTTTAAATGTTGAAAGACATCCTATT
GAATCTGAGGGGGTAATTTACAGAAAGATACTGTCTCTCGCACTTTTGTCATCTCTGGAAAAGTC
CTGGTGAATAGTCATTCATTTGTAATAGCCCTCTGATCATTTCCTTTTCTTTGAAGTTCAAAGAGAA
TAGCAAACAGAAAAGTTAACAATTTTCACATAAAATATTCCCTCAAGCAATCCTTTCCCCCATAGTT

AGTCTTGAGGCAGGATTCACAAATTCAGAGTATGCAGCTAACTGCAGTGATGGGACCTTCGCTTT
CCTCTCTTAAAAGTGAGGAAATGATTGGCTTCATTGTATCCAATCATCTTTCTGTTTTGTTTTGCTT
TTGAAAACATTCCTACAGCTGGGAGCACAGCTGCTGTATACTTCCCCCAAAGCAGGAATTAGTTC
ATTTCCTTCCTTCATTGTTACACTGTTGCATTCTTC (SEQ ID NO: 1030)

1085. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IGF1. In some embodiments, the sequences from gene IGF1 comprise or consist of:
ACCTTTTAGAGAATCTCGCTAAGAAACATGGAGAAAACGGAAAAGAAAAATGTAATGCCCTAGAA
AGCGCAAAGAAAGACAGTGGCAAAAATGAAAAAAAAAAATAAAAATTATAAAAGAGGCAAAAAAA
GACACACTATTCTCTGCCTCTAAAACACAATTAAATAAAAGAATTTAAATAAAAATTAAGGCTTCTA
TATGCATTTTTAAATTTTGTATGAATCTGTTATGGAAGAATTGCCTATGTCAATATATGTTCAGAGT
TAAATATTAGCCCCAAATGCTCAGCAAGACTGAATTGTGTCATAGAAGTTCCCAGATTCCCTTTTC
CCGCAATGTCATTGGAGGCTGCATTTCTTAGTCAAGTCCAGGGTTTAGGCCAAAGGGCATCCGG
TATTGCCTAAAACCCTGTGAGGTCTGTGAGGTAACTTTTGAGAAGAGGTCACTGCACTCTTCATC
TTTTTTGCACTTTGGAATCAGATATAAAAGATGTATAAGT (SEQ ID NO: 1031)

1086. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene IGF1. In some embodiments, the sequences from gene IGF1 comprise or consist of:
TGGTCTTAAACCTCAGCTGAGGCTGGAAGAGGACCATGGTGGCTTATTGGAGATGTGACCCCAG
GGAGCCCCTCTGAAGGATGGAAGGGGACTGGGCAAGACCCAACACACACAGAACACAGTAGCC
ACTGGCCAGGCAGGAAGCAAGGATCTCAGAAAAGACTTTTAGGTGAATGTGGCAGGAAAGCGTG
CTTGCTGGGGCAAAGGCAGATTCATTCTTTCTCTTCCCAGGTGACCCAGCGCCTCTTGGTTTCTA
ACTGGGGAGGGGGTAGGTGTCAAGAGATGAGTCCCAAAGTTCTGGAATGGTGGGTCTTGTGACT
GAGGTCTAGACCCCTCTCCAGCATGAGTGCTGTCTCCTGCATCATATGGAGCCTGGGCATTCTG
AGCTCATTCAAAGGGACACCATGGGAACCACTTGTTCTCAATGCAATTATTTTTGTGATGTTTACA
GTATCAGCCCCCATCTACCAACAAGAACACGAAGTCTCAGAGAAGGAAA (SEQ ID NO: 1032)

1087. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HPD. In some embodiments, the sequences from gene HPD comprise or consist of:
TACTGTGTCTGTGTTTGTGTTGCGCATAAGGCAGTAGTGCCTTATGGCAGCCAGGGGGAGGCCA
GGGCGGCCGCCAGCGCCGCGGGACCGAGGAGCTGCGGGTGCCAGCGCTTTGCCAGCGGGAC
CACGCGGAGAGGGGAATTCTGGAACCAGGGAAGGAAGGGGACTTGCTCTGGAGGGAAAGACG
GATGACACTGCTTTTGTAGAGAGATAAACGCGATTCAGACAATAAAGCAAGCGATGAGCCGGGC
GTGGTGGCTCACACCTGTAATTTCAGCGCTTTGGGAGGCAGAGGTGGGAGGATCGCTTGAGGC
CAGGAGTTCGAGCCCAGCCCGGTAACATAGCAAGACCCCGACCCCCCTGCGTCTACACAAATAA
CAAATAAAAATTAGCCTGGCGTAGTGGCGCACACCTGTGGTCCCAGCTACTCAGGAGGCTGAGG
TGGGAGGATCGATTGATGGACAGAGGTCTAAGCTGCAGCGAGCCCTGATCCTGACAC (SEQ ID NO: 1033)

1088. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HPD. In some embodiments, the sequences from gene HPD comprise or consist of:
ACAGCGCAAGGCTCCGTCTCAAAAAAGAAAAAGAAAGTGTCCTGATAATGTCTGCGGGGAGGAT
GGATTGTAAGGATACAAGATTAGAAGCGGGCAGCAGTCTTGAATGGTGCCTTAGGAACTGTAGT
AGGGGGATAGTAATAGGACAGTTTGGGGATATATTTGGAGGTGGCTGAACTGCCAGAAAAAGAG
GTCATTTCCAGACTTTTGGGGTGCAGGAGCCCCTGTGGACTTTCCAAGGATCTCACCGTGCCAG
CCTCCCCTAGCAGAGCCCCCTGTCTCCCGCCTAGGAGCTGAAAATCCTGGTGGACTACGACGAG
AAAGGCTACCTCCTGCAGATCTTCACCAAACCGGTGCAGGACCGGCCCACGCTCTTCCTGGAAG
TCATCCAGCGCCACAACCACCAGGTACTGCTTGTCCCCGGCAGGCCCGAGGGGACAGGCAGCT
AGCACACTCGGTTTTCTGGGTCCTTGGCTCATCTCCTCTCTTTCCCGCCACA (SEQ ID NO: 1034)

1089. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PHF11. In some embodiments, the sequences from gene PHF11 comprise or consist of:
CTTCTCCAGTCGTTCCAGTCCTCCCCGGCCCTCTACTTGAGTGGGTGGGTCTTCTGATGGGTTC
CTGCCCTTGCGTGTGTGTATAGCTCCAAACGGTGTGCCAGGCTCAGGGCAAGGTCCTGAGCATA
CAAAGATGAGTTAGGCAGACCCTGCCCTAGAGACTCTACTAGGCAACTTTAATGAGGAGGTCAG
AACCACAGAGGTACAGATGAGAGACTCCTGACTCCCAGTCTTCAGGGAAAGCTTTTTGAGGAGA
GGATGGCTGGGCTTACCCTTTTTTTTTTTTTTTTTTTTTGAGAGGAGTTTCACTCTTGTTGCCCAG
GCTGGAGTGCAAAGGCGCTATCTCGGCCCACTGCAACCTCTGCCTCCCGGGTTCAAGCGATTCT
CCTGCCTCAGCCTCCCGAGTGGATGGGATTACAGGCATGTGCCACCACGCCCAGCTAATTTTGT
ATTTTTAGTAGAGAGGGTTTCTCCATGTTTCATGGGCTTACCTTTAAAG (SEQ ID NO: 1035)

1090. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PHF11. In some embodiments, the sequences from gene PHF11 comprise or consist of:
TAAGTCACGGGAGATGCGCTTCCATCCTGACCTCTTCCTCAAACTCCAGACTGGTATAACCAACT
TCTTCCATTTCTGAAATGATCTCAAACTGAGTATGTCCCAAAGAGAATTCTTGTTTCCTCCACTGT
ATTCAGGTACTCCAAACCTGCTCAACCACCAGCCCATTCCATTCGCCCAGGTGCTCCTTGCAAAA
ACCTTAGTGGCTCCTCAGGGCCTCTCTTTCCTCCGGACACCCCTTCTAATGCATCAGTCGGGCC
AGCCAGTTCTGTGTTCAGCCTGACTGTATCTGGAGCCTGACTGCTTCTCACCACTTCCATTACTG
CCACCCAAGCCTACGCCATCATGATCTTCTGTCTGGACTATTGCTTTCCTGGCTTCTATTCTAGCC
TTTAATACAGGCAGGCCTGCAGAGCGGCCAAAATGCTTTTTGAAAAACAAAAAGCAAATGTGATT
CTCCTACTCAAAACCCACCAATAGTCTCCCATGACTCTCAGAA (SEQ ID NO: 1036)

1091. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CCNB1IP1. In some embodiments, the sequences from gene CCNB1IP1 comprise or consist of:
TTAAGTATCATTTGTTACTATTATTTTCTCTACTGAGCGTGGAAAGCTGGCTGAAAATTCCAGAGT
GTAATTTCTGTGGGTCTGTTTCTCTAAAACTTGCCCCTCACGCAGCTTGTACAGAAGTTAGATTGG
CGCTTACTCCCAGCTGGTGGAAGATTCGGAATTAGCTGCGCCTCTGCTGCGTGAGAGAGGGCTC
AGCTTTAAAGCTTCCCAGCTCCTCTGCTTTCCCGCTGCCCCCTACTCTGCCGGATGTAAAATAGG
CCTCTTAATCTTAACTGTGGCTGCCAGGTGACATACCTGAGGAAACTCACTCAGCGGGGCTATTG
GGATAAAGGTGTGCGAGTGTTCTTTTCTATCGACCTGGAGGGCCAAGGCAACTTTTTTTTTTTCC
TTCTGGGACGGAGTCCGTCGCCGGCTGGAGTGCAATGGCGCGATCCCGGCTCACTGCAAGCTC
CGCCTCCCGGGTTCAAACGAGTCTCCTGCCTCAGCCTCCTGAGT (SEQ ID NO: 1037)

1092. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CCNB1IP1. In some embodiments, the sequences from gene CCNB1IP1 comprise or consist of:
AAAGACGGAGGGTCGCTCTTGTTGCCGTGGCTGGAGTGCAATGGTGCGATCTCGGCTCACTGC
AACCTTTGCCTCGTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTGCAG
GCGTCCACCACCACGCCCAGCTAATTTTTGTATTTTAGTAGAGAGAGGGTTTCACCGTGTTGGCC
ACGCTGGTCGGGAACTCCTGACCTCAGGTGATTTGCCCGCCTCAGCCTCCCAAAGTGTTGGGAT
TACAGGCGTGAGCCACCGCGCCCGGCCCACTATCGCTTAATTTAAAGAGCTGTAATGCATGTTT
GTAATGCAGACTCAAGGAAAATTATAATTTCCTTAAATGTGTATAGAGGATGTGTGAGAGTGGAAA
GATGTCTATTCCAAGGTGGATAAAAAATAAAATGGTGGACTACCTCAACATGGAGGTGCCAGCTG
TCCAATTACAGCTGTCACTCTGTTTCTGGGAATTTCTCCCGATTCTTA (SEQ ID NO: 1038)

1093. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PSMB5. In some embodiments, the sequences from gene PSMB5 comprise or consist of:
AGGACTACTTGCATGACCAAAGCCAAGATGGCAGGTACGTCCTTTTAGAATTTAAGGTTAGTGAA
GCCATCTATTTCCCCGACCCCCTTCAGTGAAAATGGTCTTTCGCATCTGGCCCTTCTTTTTGGAG
GCGTGCTTGCCAGCAGTCAAAATGGCTCCATTCCGGAATAGATTTAATAGGAAGTGAAGCTGTGA
CGGCGAGGCGTTGCCCGGCCTATCTTTGCTAGGCGTTCTCAGAATTAGTTCTTTCTGCCCACACT

AGACATGGCGCTTGCCAGCGTGTTGGAGAGACCGCTACCGGTGAACCAGCGCGGGTTTTTCGG
ACTTGGGGGTCGTGCAGATCTGCTGGATCTAGGTCCAGGGAGTCTCAGTGATGGTCTGAGCCTG
GCCGCGCCAGGCTGGGGTGTCCCAGAAGAGCCAGGAATCGAAATGCTTCATGGAACAACCACC
CTGGCCTTCAAGGTGTGGAGCCAGCCCCCTTGCCAGGCTGAGTACTGAA (SEQ ID NO: 1039)

1094. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PSMB5. In some embodiments, the sequences from gene PSMB5 comprise or consist of:
TCTCAACCGTCCTCCCGTCTCTGAGATGGTAAATTACTACTGACACTTATTCAGGTCTGAACTGA
GAATCTAGTTTGTGGATTAACTGGACCCTTTGCTTTTTCTTCTTCCATCTGCCTTTTAGGCAATTCA
TTACTTATTCGAATTTCCACCAGAAGGTAGGAGTCAAGAGAACGAATATTGGATATTAATAACCGG
TTACTGTTAAAGAAGGGTTGCTGTATGGCGACTGACAACAAGAGGTATAGCACTTTTATTTTGTTG
CGTTGTTTTACCACTAATTGCTGTGGTTTAACTAATATAGGGAAATGGCCTCAGAATGGATCATTA
TTTTACCCAATTTTAGAAGGTGCCCTTAAACAAGATGGCAACCTCAGGCGCGTTAACAAGGTGCT
GAAGCAGCAGCGATGTAACCTGTTGCTTGGACACCAGGCTGGAGTGGGAGGACTCACCGCTAA
GGGTTCAGAACCGATTTTCAACCAGTCACGCCCTTCTCAAA (SEQ ID NO: 1040)

1095. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CTAGE5. In some embodiments, the sequences from gene CTAGE5 comprise or consist of:
AAGTCCGGACGTGGTTGGCAGGGCGCACCGGCGCGTGCCCCGCAGGCCATTTTTCTGACTGGA
ATGACGGCGGCGGCTGGCTTCTCGGGGCTGCCGGGGTCTCCCGGGGTACGCCGCCGTCAGGA
CTTCTGCAGGGCGCAGACAGCAGGCTCCAGCGAGGCTGCGGAAGGAAAGCCTTGGGTGTCGG
GGCTGGGCCTGGCGTCGGCCCCTGGGTCGGGGGGGGTGGGGGTTGCGCCGAGACGCCTCTAG
GAGAAGTCTCGCCGCCGCCGCCACCGCGGCCGCCCGAGGCGGGTGCCCTTGGGACATAGCCC
TGGTCTTTGGGGTTGTGCGGCTCACACGACAGCGCGGAGTATGAGGCCGAATCTCATCCTCTAG
TCCCAAGCCTCTCCACTACCAGGGCTGGGTGGCTTCGCCAGGTAGAGCGCCGGCCCCTTTAAG
AGCAAACGACCCGGACACGTCTGCGAAGCTTGCGCGAAGAAGGGGAAGTTTGCGGCTGTCCG
(SEQ ID NO: 1041)

1096. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene CTAGE5. In some embodiments, the sequences from gene CTAGE5 comprise or consist of:
TGAGCCCAGGCGCGATGAGTGTTACGTGGCCCAGGGGTCGCGGGAGCCGCCGGGGGAAGGAA
GCAGTAGACCGGCTTTGGGGTCTAAGCCGCCGTGGTCAGAGGTCCCGAAGCCAGTCCTCGTCT
GCTGCCCGGCTCCCGCCCGTGTTCGAGGCAGTAGTTAGGCTCGTAGGGCGCTTGAGTGGTTTTT
GTGTGATGGAGGAGGACCTGGGGCTCTGGGAAGGTGAAGAAAGCACTTGCTTAGCTGGACTTT
GCAAAGATGTAAATGTTTCCCGATTCCTAAAACTAATTAGCCTTTCCGCTATGTTGTTTATTTTGAG
CAGAGACACGTGGTTCCTTCGACTGTGAGAAACTTGAGGACTGTTCCTTTAAATTAGTTACATTTA
CTGATGTAACTTCTCGTTGAACCTTGAAAGAACACCTGAGGTTGGGCGGGGAGTTGAAATTTTGA
TTCTGCATTTTTTTTTTTTTTGGTAAAGAATGAATGCCCTTTTGAGATG (SEQ ID NO: 1042)

1097. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERPINA10. In some embodiments, the sequences from gene SERPINA10 comprise or consist of:
GTACTTTGATAATGTTCTGCTCTCCCAAGGCCACAGGGCCCTACGATTGTCTCTCCCTTTCCTTTC
GTTAGGCCAGCATATGATTAACGCTACGTGATTTTCTATGAATGTGTTTTCACGTTTCAAAAACAG
ATTGATACACATATTGAACAGTGCCAGACGCTGTCATTTGAGGCCCTTCCCTGGTATCCTATGTG
CTTGTAGTCCTTATTATTTTCAGAGCACTCTACATAGCTCCCCTCTGACACTTAGAAGCATAGGGT
CTTTCCAAAAAACAGGGGGCTGGGGGATTATCTGGGGGATTTAGGATTGCATCATTGCTCCTTCA
TTTTTACTTTTTGACCAACTCTCTGCCCTTAGATTCCTATTATAGAAAATAGGGACACTCCACCTAC
TACAGTGTTAGAGGCTAAATGAGACAATGAATGTAAAGTGCCCAGATGGGCTTGGCACATAGCA
GACACTGAGTATCTATTGTTTACTTGTTCTTCCAAACTGC (SEQ ID NO: 1043)

1098. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERPINA10. In some embodiments, the sequences from gene SERPINA10 comprise or consist of: TCCCCCTTCCTTGCCTAACGGGCATGCAGGCACTCCAATCCCCAGCCAAACAGGGCACTGGGCA AGGCCGGCCACCCATCTGGATGGGCAGCCTGACGACCAGATGGTCAGGGCAGTGAATGAAGCA GATCAAGGAAAGGTGTGTGAGGACCCCTGATTCCACCTGCTTGGACCCCCACCTTCTGTGCTGC CTCCTGCTCCCAGAGTGGACTCTCTTGCCCTGGCCCTCAGGGAGGAGACGGGATGAATGAAAAC GGGGTCAGGACTGAGAGCTGCCTGCCGGCCTGGCAGGGAATGGGAACTGGAGGAGGTTTTGCT CTGTGAAATAATGTCCCCTCTTTGGGTGAGCAAATGTCACCCACACTTGCTCTAGGTCTCCCTGG GGCAGGGCTAACCTACTTGAGCCACAGGAAGGAGGCAGGGTCCCTGAAGAAGCTTTTACTATCC ACAAAGACATTTTAGGAGGCATTAAAACCATCTCTATCCTCTCCTCTCCACA (SEQ ID NO: 1044)

1099. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERPINA5. In some embodiments, the sequences from gene SERPINA5 comprise or consist of: TCCCCTCATTCTTCTGAGCCCCAATTCAGTGATTGGTGCAATCACAGGCTTGGCTACAGTGACCC ATTCATTGCAGGCATGGTGAGTCTCTCAATCCCTCTCATTTCCACTAGAATCTAACTGTTGGGATC TATGACCCAGTCAGCATAGCAGGCCTGTGGGGAGCTCTCAGGTTCAAGCATATGCCCCCCCTAA TCTACAAGAAATTAGCTGCAGAAAACCAAGGAATAGAACCTGGAAAAAGAGAGGGTTTGCTAGAG CTGTCCCTTTCCCTGTCTCTGGAATGCCAACAATAGGGAGGCTCTTTGGTCTTGTCTCTCAGGAG TGCCCATGCCATTCCAGGAAAATGATGGCCCAGCTGGTGGTGTAAGGCTTGGGGGGCAGCGAG TGGGCATCGTGGTGAAAGCCTCGGGATCAGGGAGCTGCGTCTGCAGGCAGGCCTGCTGGCCG GAAACCTGCCAGGAAAGGAAGGGGCTGTCCCGGGGCGGGGCCAGGGAGG (SEQ ID NO: 1045)

1100. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERPINA5. In some embodiments, the sequences from gene SERPINA5 comprise or consist of: TAAGTACCGATGCCGCAAAGGGAGGTCCCCAGGGCTTGAGGGCATGTGAGGCGAGGAGAGGAT GGACTCTAGAGTTTTGGGGTTTGGGGTCTGCAAAGCTCTGAAGGAGTCTCATCTCTGCAGTTTCA GGTATCCAAGGCAGCAGAGGTGAGTGGGTCCCCCGAGCTCTGTGACCTTATGCTCCACACTAAC TCTGGCAGAGCCTCCGTTTCCTCATAGGTAAGATGGAAATAATTACACCCTCTGGATGGTGTGAC TGAAGATTAAATACAGCGGGTGCTCTCACTCAGCACATCTGGCCATGTCTGCAGACACATTTGGT TGCCACAACTGGAAGGGGGGTGGGGGTTAGTGACATCTAGAGGCCAGCGATGCTGCTGATGAT CCCACAATGCCCAGGACAAGATCACAAAGCATCATCCTGTTCAAAAGGTCAACAGGATCAAGGTT GAGAGACCCTGAAATAAGGCCATGGGGACAAAATGTCGGCTGGATAGGA (SEQ ID NO: 1046)

1101. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PPP2R5C. In some embodiments, the sequences from gene PPP2R5C comprise or consist of: AGCGTGGTGGCGGGTGCCTGTAATCCCAGCTACTAGGGAGGTTGAGGCAGGAGAATCACTTAAA CCTGGAGACGGAGGTTGCAGTGAGCCGAGATCACGCCACTGCACACCAGCCTGGGCAGCAGAG TGAGACTCTGTCTCAAAAAAAAAAAAAAAAAGTGAGCAATATCTGTGGTTAATCTCAAATAGGGTGG CTTTCCGTGTCATTTCCCTTTAGTTGTTTTTAAATGCAGATGTTGCTTTAATTAAATAATATTTGAAA TAAGTGGGGTCCCAACTATAACCTTATATCTTATTGTTTTTAAATGTTGATATTTTGGTGTTTTCAG TAGAATTTGAGCTGTTAACAGTGATTAGGTTTTTTCAGTTTGTCATCGATGTATGTGACCTCGTTAT AATACACATGGATTTTTGTCTGCTGGTTGTGTTACTCATGAGCAATGTGTTCTAATTATGGTATTTT AACTTATAACTTATGAAAAAGTTATGTTTCACTCTAG (SEQ ID NO: 1047)

1102. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PPP2R5C. In some embodiments, the sequences from gene PPP2R5C comprise or consist of: TGGGTGGTGAGGGTGTCTGTATATGTGTGTTTACATTTGTAGACAGTTTCTGTACATGTATAATTA

GGAATGGGTTGTCGGTTTTGGTTTTTTTCCCAGCTTTATGTAATTGGTCAGACTTCTCAAAGGGG
GGTAGCACTTGATAATCGCTCTCTTGGAACTCTGAAGCCTTTGCATGGAGCAGTGTTCACCCTGG
GCAGCCTGTGGCCCCTGGGGTCACAGAGCTGCTTTCCAGGGGGTTTGCAAGGCCGTCACTGCC
TCATAAGATTACCAAGATCTAATTTACCTCTCACTGTGTGGACGTTTGCCCTGGTGGTGCAAAGG
CAATGGTGAGGAATATGGCGCCTTTCTTTCATCGAGCAGGACAGCGGTGTTCAGCTAGCAACAC
ACCAGTCTGACCCAAGAATGTCCTCGATAAAGCATGAAGTTACTGGTTTTTTAAGTCTCAACTCTT
TTGTATACCTTTTTAATTTTGTTTTTGTTTGGGTTTGTTTTTAGT (SEQ ID NO: 1048)

1103. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERF2. In some embodiments, the sequences from gene SERF2 comprise or consist of:
AGGATCCGGCGTCCGGAGCCCGGGATCACCTGCCTAGCGGGCTTCACTTGGAGAGGTGGGGA
GGCCAGAGCTTGCGGAAGCCGCTCCCTCTCCCCTGCACCTTCTCCAGGGTCGCCGGCTGAGGC
CCAAGGTCCCTAGGGGCAGTGACTAGAGAAGAAGGGGGCCGGCCGTACCTGTTGCCGCTGACA
CTCTTGCAGCGCCCGCAGGGCAGCGTCGTTGAGCCTGAGCAGTAAGAGGCTAGTCCGGGCAGC
TTGCGTGAAGCAGAGCCGGAGCTGTCCTCTCAGAGGCTCCTGGAGCTCCTCCATGGCGACGAG
TTCGAGTGCAAGCAGCACGGGGGCCACAGGCGAGGGCCACCACCGCCACCTCCTCTGTTCAGG
GTTTGGTTGGCACACCCGGTAACCCACGTCTGCCCCACCCTCCGCCAGGAACCCGCCCCCGGC
CCCACCTCCCGCCAGCGCCACCCCAAGCTTTCCCAGCCGCGTGGGCGGCGCTTCGCTCT
(SEQ ID NO: 1049)

1104. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERF2. In some embodiments, the sequences from gene SERF2 comprise or consist of:
TAATTGGGGCCCTGCGGTTGTGGTGGCAGCAGTGAAAGTTGGCTGTCACCGACTGGAGCGCCC
CCAGTTGGTGGGCAGGGATACGGGCGCGGGTAGTGGCAGGAAAGTTGCAGGGCAGAGAGCCA
GAACCCAGTCCTAGGTCTCACCTCGTGGCCTAAACACGCGTCAGAGTGGTGAGACCGCTCCCTG
AGGAGGGCCAGGAGCTGCCATGAAGTCGCCAGGCATTCCAGAGGGCCAGATCCTGGTGCACTG
AGACCCCAGCACCAACCTCTGGCCAGCCCTTGGTGTCTCCACTTGTTCCTGTTTGATTATGTTTC
CCAAGAGCCCCGATGTTGTCCTGTTTCCTAAACAGGATCCCTCTGTTAAATCCCTGGACCTGCAC
AATCCCCGGGAACCTTAACGTCCTCTACTACAAATAAAATTACCTATACATTTGTCAAAACTCATA
AAAAAAAAATACATTTTTTTTTTTTTTTTGAGACGAAGTCTTGCTCTGTC (SEQ ID NO: 1050)

1105. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AQP9. In some embodiments, the sequences from gene AQP9 comprise or consist of:
GCCCGCTGCTGTGGCAAGAATGGCCTGGGGTCAGTGCTAGCTGTGGCAGTGGCTGCAATACCC
CTGGCTCTAAGGGCATCTTCAGTATACTGCAACACCCTCAAATTCTGGAGTGGTATTAGGGGTTA
CTGAGAGCCCTCTGGGAATTATAAATTATTCCTAGAGCAAGACCAAGCCCCACTTTGGCTTACAG
TTGACCTCGAAAACTCCAAGAATTCCCCCAAAAGAGAACTCATTCCCAGGACCCTATCGAAGAAT
AATTTGTCCAAGTTTGCAGTGGGCCATTCAGAGAGGCCAAAGGCCTTCTTCCTTTGACCCTCCAT
CCTGGGATTCACCTGGGCATCTCTAAAACTATCATTCCTCGGAAGTAGAGAGAGACAAATGACAT
GGCTATGCCAAGCTCAATCTGAGTGACTGGTTGTTTAGCACAAGGCTTGGCACAGGCCTCCTTC
AACTCTTCCCAGGGAACACTAATGTGCCAGAGCTTTCTCTTTCATAG (SEQ ID NO: 1051)

1106. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AQP9. In some embodiments, the sequences from gene AQP9 comprise or consist of:
TAAGTGTAGATTCAACAAAGACTTAACTTTGGTGAAAAGATATGCTCTCATAAGGGGAATGCATTG
GAGAATTAGAGACCAATCAGAAAGGAGAGATTATATTTCCAAAGGCAGAGGTTGCTGGGCATAAC
CCAAGCTTTCTTGATAATCGTTTTACCTTTACAAGGAGCTGATACCACCAGAAAAGTTTTCTCCTT
CCTCTTTAATACGTACACTTGTTTAACATTAGTTGAGATCCAGAAAAGAGTGAATGACTAAACATTT
CAATCCCTGTAGACACAAATGGACTTCACTTCACTATTGACTCTTTTGAACAAGTGGTCTAAGTGT
GGAGGCCACAAGAGAAGATATTTCTATTTCAAATCAAAGACTGTGAAGGGTGGTAGTTGAGCCTA
GGGGATCATCAATCCTCTCTGTCTCACCATGTGCATAGGTTTATTTATTTAAACTCTCAAGGTGGC
TAGAAGTATCTCTGCTTATTGACCTTTAAACAAGCTTC (SEQ ID NO: 1052)

1107. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ANPEP. In some embodiments, the sequences from gene ANPEP comprise or consist of:
GTAATCCAGCCCTGCCTTATGGGCAGCAGCCCCCACCCCATACTCCTAGCTCCTGGCCCATGTT
CTGAGGGCTGTGATGGGCCATTCCATTCAACAAATGGACTTGACTTCTTTGGTTCCAATCTCCAC
TTTGCTGCTGCTTCGCTGTGTGACTCTGGGCAAGTTACCATCCCGCTCTGGTCTCTAGTTCCTCT
TCTATAAAATGAGGCTAAGAGCAATACTCCATTAGTTATGTGAGGATTAAAGGAGAGAATCCTAG
GCCAGGCATGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGACCTGGGGTC
AGGAGTTCGAGACCAGCCTGACAAACATGGAGAAACCCCATTTCTACTAAAAATACAAAATTAGC
CAGGTGTGGTGGTGCATGCCTGTAATCCCAGCTACTCTGGAGGCTGGGGCAGGAGAATTGCTTG
AACCTGGGAGGCAGAGGTTGCAGTGAGCCAAGATCGCACCATTGCACT (SEQ ID NO: 1053)

1108. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ANPEP. In some embodiments, the sequences from gene ANPEP comprise or consist of:
CGAGAATCTGCAGGAGATGCCCTGGATGGCAGGGACTGGAGGGTCCCACTGATGGCCACGCCC
TCTCGCTCCACCCACAGGCTGTGAACAACCGGTCCATCCAACTCCCCACCACCGTGCGGGACAT
CATGAACCGCTGGACCCTGCAGATGGGCTTCCCGGTCATCACGGTGGATACCAGCACGGGGAC
CCTTTCCCAGGAGCACTTCCTCCTTGACCCCGATTCCAATGTTACCCGCCCCTCAGAATTCAAGT
GAGCAGATGGGGTCACTGAGGCATGGTCAGGTGGGTGGGGTAGAGGGCAGTTACTAAGGGACC
ATAGTAGGACTGGCCTCCTGTGGTCCCAGCCCCAGCCACTGTAGACAGACCCTCCCTCCAGAGC
CAGGAGTTCAGGGGCACTCGGTGCCAGAGCTGGGCAGAAGCTGGGAGCCTGGGCAGCTGCTC
CTCACTGGCAGTGACCACACCGCCATCTCTCACCACCTCTGGATCTTTAATTGCA (SEQ ID NO: 1054)

1109. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PCSK6. In some embodiments, the sequences from gene PCSK6 comprise or consist of:
ATGAAAATGAAAATGACAGATCTGAGGAAGAGGGAGAGCTCTCTTGAAACCCCTTTCCCAGATTT
GCCCTCAGTTTTAGGAATGAGGTACGCTTGGGCATTCCTGTTGCCTGCATGGTTCGGCATTCTG
GCAGCCAGGTTCGCCCCAGAATAGATAAGTGTGTTTGATTTTCGAACATTTGACTTTATTACCTAT
TTCCAGAAACACTTCGTGTTCAAACTACGTCTCTACAGGCATTTCTACTTGGTCTTTTTCTCCCCT
GACATTTCACAGAGTCCTAACTGTGCTGCATGTATAACTTGTTCTTTCTTTTTGTTACTTGCATAGC
AAGCATGTTTCTATGTCATTAAATATCCTTTGTAAGCAGCATTTTATAGATTTTTATAATACTTCACC
AACAGAAGCACCATAATTTATTTAAGCATCTCTCTATTGTTGGACATGTAGATTGCTTTCCATTTTT
TCCTATTATGAGCGGACAGCTTAGTACAAAAAGCCT (SEQ ID NO: 1055)

1110. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PCSK6. In some embodiments, the sequences from gene PCSK6 comprise or consist of:
CACTTCCTTGCCTCGGCTCCCCCAGCCTCCCCCACGGTGAAGCCTGGGCGTTGGAATGGCTGC
TGACGTTCCCACCGGGGAGGAGCAGCGGAGGCGCAGGGGCCGGTCCGACCCAGCGGGACCC
CGGGGGGGCGGGGGTTGTGGCTTTTCCCTCCACTTCCAGGTGAGGCTTGGTATCAGGCCTCCC
CAGCATCTGGCTGCCTGGAGGGGGCAGGTAACACAACCCAGAAGGAAGGTTTACCCAAGGAAA
GACAGGACATAAAGTGTATGCCCTTCCTGTCTGAGGGCACATTGGTCTCACAAGGCCTGTTTGG
AAGACTTCCCCCAGCTAAGCAACCACCCCGTTTCTTTGTGGAGCTGCAGCCAGCTTGAAACACA
GCTCCTTCCATTTGTCAACCCCGGGCGCTTCCTCCTGCTGCCCTCCACTCCTGTTGCCCTGGGA
TTGCACCTCCCAATAAAGCTTCAGCCCATGGGCTTCACTTCAGTCCCTTGTTTTCCA (SEQ ID NO: 1056)

1111. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSM5. In some embodiments, the sequences from gene ACSM5 comprise or consist of:
GTTAACTATGGAAAGAAAAGAAGAAAGACAGGCAAGAAAGAGGGAAGAAAATAGGAAGAAAATG
AAGAAGGAAGGGAGGGAGGAAATAAAGGAAAGAGAAAGGAAAAGAAGGAGGAAAGGAAGGGAA

AAAGATGAATGGAAGGAAGGAAATAGGGAACAAAGAAGAAGGGAGGAGAGAGGAAAATGGAGA
ATGAAATAACGGGGAAAAGAATGAAAAAAAGGAGGAAAGAAAATGAAGGAGGGAAGGAAGAAAA
CAGGAAAGGGGAAAGAAAGGAAAGAAAGAGGAAAGGAAGGAGTGAGCAAGGAAGAAAAAAGAA
AAGAAAGAAGGGAGGAAGAATGGAGAGAAATGGAGAGAGGAGAAGGGAAAGAAAGAAGAAAGT
GAGGGAGGAGAAAAAAGAGGATGAGAGAAAGAGTTATCAGGCAGGGTGAGAGAAAGGCATGGC
CCAGGAAAGAAGCTAAGTGGAAAGGCTCTTCTTTATCTGTACTGCGTTCTCCCCAG (SEQ ID NO: 1057)

1112. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSM5. In some embodiments, the sequences from gene ACSM5 comprise or consist of:
TAGCAGCCTCCCCCAACTTCTGGCAAGGCCTGGCATGGAGAGGAGAAAGACACACAGGCCTGG
TTGGCACGGGCTGCTGGGCTGCTGGGAGAGGCCCAGGGTGTAGACACTCACGTATGCACCTCT
GTGATGATTTCCTTACCAGATTGTGGATGATGAGGGCAACGTCCTGCCTCCTGGAGAAGAGGGG
AATGTTGCCGTCCGTATCAGACCCACTCGGCCCTTCTGTTTCTTCAATTGCTATTTGGTAAGAGA
CGGGGAACAGCCGTTCTCATGACAGTGACTGTGTGCTAAGCATTGTGCACCACACTTTGTAAATA
TCTATTTGTTTAATCCTTACAATGACTGCATGAGGTAGGTTGCTACTATTATTAATAAAGTTCTGTT
ATTGATAAGGAAGACTATTATTGATAAGGAAGCTACTACAAAGGGGAAGTGACTTATCCAGCATC
ATGCAAATAGTACAGGCAGGACATGGGATTTAAATGTGGGTGTGTCT (SEQ ID NO: 1058)

1113. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSM3. In some embodiments, the sequences from gene ACSM3 comprise or consist of:
GCTGTGGATCAGAGGACCCTGTGCCAGATCATACAACTCCTTGCAGTTCATGTAAGGACTCGGA
TTTTACCTGGAGTGGAAAAAGAAGCACTGAAAGATTTGAGCAGGGGAGTAACCTGATAGCGTTTA
TGTTTAGTCCTGCCACTTCGACAGATAAACGCACCAATGGGCTTGATGAGATTTAGGCCAACCCA
TAACCGCCCCTCAACTTCTTTCCTTTCAATTTCAAAACTCCTCTATGGCTTCCTCCATCTGTTCTTC
CTTCTGAGAAGTGCTCTCTCTGCCCCTTTACAGAACTAACCACTTCGGCAACTCCTTGGACACTT
TCCTTCTTGTTAATAATTTGCTTTCTCCGCCCCTCAAAAGCTTGCTGTTTCTGTAAATCATTACCTG
TAAGAGGAACCGCTGGGAGTCCTGTAAACTTTAGCCCAGAGCTTGGCTCCTCCTCCAGAATGTC
TCCACCAATCAAGGAAAGTGTTTTGGGCCAGTCTTGCTCCTC (SEQ ID NO: 1059)

1114. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSM3. In some embodiments, the sequences from gene ACSM3 comprise or consist of:
TGAGTACCTCATCTCCCCTCCTGTGTAAGATTTCCTGAACTGGCACATCTGTTTTTTGAGCAAAGA
TAACAAACAGATGAACAAAACCAACAATCAAAAATGCTGTCATTAAAGTCTTGGGCAGCCAAAGTT
TCTCTCAGAATTTCTCAGTTGTGTGATACTATCTATTAAGTGATGAGGAGTATGCACACACAAAAG
GCTATAAATGTAGCAGCTGAGTTTTCATGTTGAGCCTTTTGGTGCTATTTGATTTTTTGAAAAACTA
TGTACATGTATTAAGTTGATAAATTTTTTTTTTAATTTTAATTGAACCAGATGCGGTGGCTCAAGCC
TGTAATCCCACCACTTTAGGAGGCTATGGTGGGCAGATGCAGATCACTTGAGGCCAGGAGTTCG
AGACCAGCTTGGCCAACATGGTGAAACCCTATCTCTACTGAAAATAAAAAATTAGCCAGGTGTGG
TGGCAGGTGCCTGTAACCCCAGCTACTTGGGAGCCTGA (SEQ ID NO: 1060)

1115. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TMED6. In some embodiments, the sequences from gene TMED6 comprise or consist of:
GTCTGTTTTCATTACCATGGCTATTATAATAATCATAGGGTCCTATGAAATTACAGAAATAATGAG
GAAGTATACAGAGATGTTTTAACAGTAGGAAAAAAATTCAGCCTTTAACACCAAAAACCAGTGTTC
CTGGAGGCTGCTGACCTCCAAGGATGCCAAGTGGCAGTCTACTGACGATTTGGGGGCAACACTC
CAGGTGAGCATTCTAAGTCTAGGGTTCAGCCGCTCAATTTTATCTCATCATCTCCAGTTAATCAGA
TTCTGGGAAAGTGACCAAAAAACAGAGACCCATTTATAATACAGAATTCCAATTAACAAATGGATT
ACAGGGAAGCATGTCTTTCCAGTCATCAGAATATTTGAGTCAGTTACTAAAAGCAGATTCAGAACA
AAAGAAAATGCATGATATCCATGTGAGATATCCACACTCCACAGCAAAGCACTCCTCCAGCCAGG
TCAAGCCTGTCCCACTTTGGAGAGCAGCAGTGTCTTAACT (SEQ ID NO: 1061)

1116. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TMED6. In some embodiments, the sequences from gene TMED6 comprise or consist of:
TATAGGCGCACGCCACCATGCCAGGCTAATTTTTGTATTTTTTAAGTAGAGACAGGGTTTCACCAT
GTTAGCCAGGCTGGTCTCGAACTCCTGACCTTGTAATCTGCCCACCTCGGCCTCCCAAAGTGCT
GGGATTACAGGCGTGAGCCACCGCGCCCGGCCCAGAATCATACATTTTAGTGGATCCACACTAG
CTGTGTGTTCCGAGCAAGGCATGTCTTCTTCACACGGGTGCTGTTGGCATTCTGGGCAGTTCTTT
GTCCTGCTGTACTGTTTCTTACATTGCAGACGTTCAGCAATGCTGTGCTGCCTCCCCTTAACACC
ATCACTGTGATACCTCAGAATCCTCCAATCAACTCCAAACCCCAGCAGGGGGTTGGGCAGTCCC
ACCCCAGACAGAGACCGCTGTGCTGATGACCGTGGGACGTCAATCTTACCACTCAGCTGGCTTC
CTCGTGATGTAGCAGGGGTTCTGCTACCTATTTAATGTGTCTTGGCA (SEQ ID NO: 1062)

1117. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HPR. In some embodiments, the sequences from gene HPR comprise or consist of:
AGGGGGCTGGGCGTGATGGCTCACACCTGTAATCTCAACACTTTGGGAGGCTAAGGCGGGTGG
ATCACTTGAGGGTGGGAGTTTGAGATCAGCCAGAGCAACATGGAGAAACCTCGTCTCTACTAAAA
ATACAAAAAATTAGCCAGGCATGGTGATATATGCCTGTAATCCCAGCTACTCGGGAGGCTGAGG
CAGGAGAATTGCTTGAACCTCGGAGGTAGAAGTTGTGGTGAGCTGAGATCATGCCATTGTACTC
CAGCCTGGGCAACAGGAGTGAAACTCTGTCTCAAAAAAAACAAAAAACAAAAAAGAACACCACGG
GAAAATCAAGTGTGAAGCAAGAGCTCAACTCTTAACAGGGGCAATGTTTGGAGTTTTGTTACTGG
AAAAGATAGAGACCTTACCAGGTCCAAAGTTTGTAGACACAGGAATTACGAAATGGAGAAGGGG
GAGAAGTGAGCTAGTGGCAGCATAAAAAGACCAGCAGATGCCCCACAGC (SEQ ID NO: 1063)

1118. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene HPR. In some embodiments, the sequences from gene HPR comprise or consist of:
TGGGTCCACAGCTTTCCCTCCTGCCTTTCCTCTGGTTCTTTATTTCAGTCTTTTTTGCATACATTG
GTACAGATGCAGAAATAGAACAAAGAAACAGGGCAAATGGGCTAAATTATAGTGAACCAAAGGG
CTTAGTGTGTTAAATCTTCTCCTTTTCTGCATCCATAGAAGACAGTGCTGCTGTCTTTCCCAGGAG
ATAAGATTTACTCTCAGGAGTGTCTTTTTCCTTGAGGTTACGTTTTTGTCTTTGTAGGGTATGTCAT
CAGCTCCCGTGGTAGGCTTCCTGGCATTCGGAATATATTTACTAGCAGATATTTTCCTCTTTAAAA
ATGTATAATAAGAAAGACTAATAGTAACACATTTGAATGACACAATTAATTGACTAGTACTTGGGAT
ACACACTAGTACCTGGGATACATCTAATTAAGACACTTAGATCTTAAAAAATAAAAAGACTTTTTGA
AATGTTGAAATAATAAGACTAGAAACTTTTTTTTTT (SEQ ID NO: 1064)

1119. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERPINF2. In some embodiments, the sequences from gene SERPINF2 comprise or consist of:
TGTCCCCCAGGCTGGAGTGCAGTGGCTTGATCTTGGCTCATGGCAACCTCTGCCTCCCGGGTTC
AAGCAATTCTCCTGCCTCAGCCTCCCGAGTTGCTGCGATTACAAGCGCCCGTCACCACAGAAGC
CCAGCTCATTTTTGTATTTTTAGTAGAGATGAGGTTTTGCCATGTTGGTCAGGCTGGTCTTGAACT
CCTGACCTCAGGTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTAGGATTACAGGCGTGAGCCCC
CATGCCCGGCCACACTGCTAGAAACTTTAAAAGCATCTCATTCGGTTACGTGTCCGCCTGCAGTG
GGACAGGTAGTATGACTCCACCCCACTGTGAGGAAGTGGAGGAGCAGTGGGGTCAGTCACACG
CCTGGCAGGATGGCCAGGAGCCCCATTGTCTGCCTTAGGAGCACCTGCTGGCCCCACCCCCAC
TTAGCTTCGGGGCTTTCTGTCCTCATGCTCTTCCCTTCCCTTTTCTGTAG (SEQ ID NO: 1065)

1120. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SERPINF2. In some embodiments, the sequences from gene SERPINF2 comprise or consist of:
TAAGGAGGAGGGTGCGGGCGAGCCCCCGAGGTCAGGCTGGGCAGGGCGGGTAAGGAGGAAG
CGTCTGGCTGGCAGTGGAGCTGAGTCAGAGCTGTCCTGTGTCCTGCTCTTTTCCAGGGCTTCGG
GAGCGGGGAGAGGGTTGAATATGAGCCCCCAGACCCTCTGTCCTAGAGGAAGTTGGGGTGGCC

CGGGGAATGGGGCTCTGCTTTGCTGCCCAAGACCTCGCATTGCAAGGAGAGTCTGGGTAGAGA
GCCTGGGATGGCATGTGAGCCTCGCTGGCTTCCCTGGAAGGGGAAGGAGGAGAAGCTGGGGT
GTCACACTGTTAAAGAAATGCTGGGTGGAGTGGCTCATGCCTGTAATCCCAGCACGTTGGGAAG
CTGAAGTGGGTGGATTGCTTGAGCCCGGGAGTCCGACACCAGCCTGTGCAACACATTGAAACTC
CGTCCCTACAAAAAATACAAAAATTAGCCAGGTGTGGTGCATGCTACTGGGGAGGTTG (SEQ ID NO: 1066)

1121. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC13A5. In some embodiments, the sequences from gene SLC13A5 comprise or consist of:
CTGTGCTGCTGACTTGTCTCTGGTTTTCTGCAGTGTGGGGAGCCCAGGGAGGTGGATGAATGAA
CAGTTAGTTACGCCCTGCCCACCTGCTGGGTGCCAGGCCTTCCTGTCCCTGTTGAATCCACTAG
TTATCTCGTTCGATCTTTGCAGCAACCCTGTGAGATAGGAAGGTGTTATTATCTTGCTTTGTCTTT
CAAAAAAAAAGCGAGGCTCAGGGAGGCCAAGGGAAGTGTCCAAAGTCACACATCAAGTTACTGG
CAGTTACAGTTCCAACCAAGAGCTTCCAACTCCATACCCCCTGCTCCTTCTGCTAGCCATGAAGG
GCTTTGGCCTTATAGGGCTTGTAGGGAAAGGTGAGTGGCCAAGAGCAAGTCCATGCCAAGGGAA
GATCTCCAAACATGAGTCCCTGTCTGTTGCCTCCCCTGAGATAGGCACAGGACAAGTGATCAATG
AGACAGGGTGGTCCTTGCCCTAAGAAGCAAAGTGTTTGGTTGGGGAG (SEQ ID NO: 1067)

1122. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC13A5. In some embodiments, the sequences from gene SLC13A5 comprise or consist of:
CCATGGACTGCAAACTTGACTCCAATCCCCAGTAAAATATCTACAACAGGGTAGTGAAGCGATGG
TTAGTGACCATGAGGGAAGCTTGCAGAGCAGGCATCAGAAAGAGCCTGAGGAGGTCCACAGGG
AAGCTGGCACGTCCTTGTAGGATAGTTAAGGCACTGGGGTGAGCAATGAACCTGGACTCACGGA
ACACTGGGCTCTGTGACCGTTTCCCTGAATGGCCTAAGCTGTTGCCTCCTGTCACTTCTCTGAGG
TCATTTTCCAAATGCGCACGGGCATAGAGAACCCATCCACTCTGCCTACTTCCCAGGGATGCCTT
GAGCACTGAGGATACCTGGGGGACATGAAGTCGCACTGTCCTGGGGGTCGGGACACCCCAGCC
AGGGACAGAGCATGGCACAGGGACATCGAGGCCCAGTGAGCCGACCCTTTGTCCTCCTCTCTG
AGAGCACTAGTCCCCAGCAGGCCTCAGGGTGCTGACTCTGTCTCTTTTCCA (SEQ ID NO: 1068)

1123. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ASGR2. In some embodiments, the sequences from gene ASGR2 comprise or consist of:
GTGAGGCCACGCTTCCCACAGGCAGGAGGAAGCCCTTGGAAGGCCTGCTCTGGGAGGCTGGAT
CAGGCTTATTTTATCCATTTTTTTTTTTTTTTTGAGATGGAGTCTCGCTCTGTCGCCCAAGCTGGA
GTGCAGTGGCACGATCTCGGCTCACTGCAAGCTCCGCCTTCTGGGTTCACGCCATTCTCCTGCC
TCGGCCTCCCAAAGTGCTGGGATTACAGGCACGTGCCACCATGCCCGGCTAATTTTTTTGTATTT
TTAGTAGAGACGGGGTTTCACCGTCTTAGCCAGGCTGGTCTGGAACTCCTGACCTCATGATCCG
CCCACCTCCGCCTCCCAAAGTGGTGGGATTACAGGCGTGAACCACCGCGTCTGGCTGAACTTCA
AAGTATTTTAATGCCACAGTAGTTAAGCCATATGATACAGGGGCCAGAATATATGTATTGTTTGCA
TTACATCAGGCTCTGTTAGTACTTTACAGCATACTGTGAGTACGAAC (SEQ ID NO: 1069)

1124. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ASGR2. In some embodiments, the sequences from gene ASGR2 comprise or consist of:
TGTGTAGTGTGGTGTATATGTGTGTGTTGTGTGTGTATGCATGTGTGGTGGTGTGTGTGAGATGA
GTCTGTGTGTGTGCGGTATGGTATATGTGTGTGTACGCATGTGATGTGTGTGGTGTGTCTCTTGG
TGTGTTTGTGTGTGTGTGATGGATCTGTGTGTGGTGTGGTCTATGTGTGGTGTACATGTCTGTGG
TGTGTGTGTGGTATGGTGTGTGGTGTGGTCTATGCATGGTGTACGTGTCTGTGGGTGTATATGCT
TCCCCAGCCACAGGCTGGAGCCTAGCAGGTGGGGACCACACCTGCCGGCAGCACTTTCAGCCT
GTCTGTCCTAGATCACGATGCCCTGCTCTTCCATCTGAAGCACTTCCCCGTGGACCTGCGCTTC
GTGGCCTGCCAGATGGAGCTCCTCCACAGCAACGGTAGGGGTGGGGCCGTCTCCAGGCCCAGT
GTGCCTGCCCCTCCGGCTGGATCTCATCTCCCTGCCCCCTGTCCCCTCA (SEQ ID NO: 1070)

1125. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TMEM220. In some embodiments, the sequences from gene TMEM220 comprise or consist of:
GTCAGGCGGCCGCGGTGGGAGGGGGACCCGCCCGGCTCCCAGCTCCGCCCCCTGGCCTAGC
GGGCCGTGTAACTGACTAGCGGGCAGAGTCGCAGGGGCGCACAGTTAGTGGGGAGGACGGGA
CTTGGGCTTTCTGCTTGGGGAGCCCCCACTTTCTCCCCCGTCTAAGAGACGCGGATGTGTTCAT
GGAAGCGAGTCCCATACCAGGGCTCACACCCTGGAAGGGGCTGGTTCCGCGCGTGGAACTTCC
CAGGGGACCTCAGAAGAAGCGGCCCTGGCTCCTGCGTTAACGTCCGGCCCGCGGACGACACTG
AACATATCTCAGGGCCTAGGAGACGAAGCCGACCAAAACCCTTTATAGCATCATTAAACTTTTTA
GTCGGCTTGGGGACCCCCTTCATAATCATTTCCCTCATTTCTTGAGACTGGTGGGGGTGGAGGG
CCCTTAAAATACCCGTTCTGGGTTGGCGAGTCCTCTCCAGAGCTCCCGTGAAGGCTT (SEQ ID NO: 1071)

1126. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TMEM220. In some embodiments, the sequences from gene TMEM220 comprise or consist of:
TGAGCCGTATAAGATGTTAATATAACTGTCGTCACTCTAGAAATTACCATAATGCTTACAGGGATT
TGAAAGTTCCTGAGCTTTGGAAGGAAATGCATAAATACTAAACAGAACACACACACACACACACA
CACACACACACACACACACACACACACATCTCTTTTTCTTTCTCTTTCTTATTTTTGTAAAAACAATTTT
TATCCTTTTTTTTTTGAGGAGTCTCGCTTTGTTGCCCAGGCTGGAGTGCAGTGGCACAATCTGGG
CTCACTGCAACCTCCGCCGCCCGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAGTAGCTGG
GATTACAGGCTCCCGCCACCACGCCCGACTAATTTTTTCGTATTTTTAGTAGAGATACGGGGTTT
CACCATGTTGGCCAGGCTGCTTTCGAACTCCTGACCTCAGGTGATCCGCCCACCTCGGCCTCCC
ACAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCAGCCCT (SEQ ID NO: 1072)

1127. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NCOR1. In some embodiments, the sequences from gene NCOR1 comprise or consist of:
TCTGAATTTTCAGAGTGAGAATTGTTGTCCTGTCCTTGAAGCAAATCACCTTCAAGTATTACAGTG
TAATATTCACATTCTCTGGTAGATGAGAGACACAACTTTGTGTAGTGGATATTTCCAATCAGACGC
TGGCTAAGCCTTCACCTTGGCATTTGCCAGCTGTGTGGCCACAGGCAAGTCACTTAACCTTTCAT
AGCTTTAGTTTTCTCATCTGTAAAATGAAAATAATAGTACACGTCTACCTTGCTGTGGTTGTAAAGT
TAAGGAAGGAGCATTCGGTATTGTTATATAACAGGTGGCTCTGCATTATTTTATGTATAATGTAGC
ACGTTATTACATATTAATTAGTGTATTAGTACTGTATATACACAGTAGATACTATGGAGGTACCTGT
TTTCATTGTTACATCACTGTTTTTATTTCAAGTGATGGATTTGAGTTGGTCCGTTGCTGTTTTAGTT
GGTGTGTGATACACTTTTACTTTCTTTAAAAAAAG (SEQ ID NO: 1073)

1128. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene NCOR1. In some embodiments, the sequences from gene NCOR1 comprise or consist of:
GGCATGCCTCACTGCACCCAGCTAAATTTTTGTATTTTTGGTACAAAGATACAAAATACCAGCCAG
GCTGGTCTTGAACTCCCGACCTCAGGTGATCTGCCTGCCTCGGCCTCCCAAAGTGATGGGATTA
CAGGCATGAGCCACTGCAATGCCTTAAGCATTATTCTTGAAGATAACTTTGATTAAAAAATGATAA
AATCAATTCAACCAATAACATGACAGAAATAAGCATTACATTACTTGTTAAGAGATGGCAATTATTA
CATTGGTTGTTTGCATATTTCGATTTATTTTCTTCCTATAGGTATCCTGCACCCCATGTAACATACC
AATTGGAACCCCAGTGAGCGGCTATGCTCTCTACCAGCGACACATTAAAGCAATGCATGAGTCA
GCACTCCTGGAGGAGCAGCGGCAGAGACAAGAACAGATAGATTTGGAATGTAGAAGTTCTACAA
GTCCATGTGGCACATCCAAGAGTCCAAACAGAGAGTGGGAA (SEQ ID NO: 1074)

1129. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene UBB. In some embodiments, the sequences from gene UBB comprise or consist of:
TAAACTGCCTCTCGGGAGGTTGGGCGCGGCGAACTACTTTCAGCGGCGCACGGAGACGGCGTC
TACGTGAGGGGTGATAAGTGACGCAACACTCGTTGCATAAATTTGCGCTCCGCCAGCCCGGAGC
ATTTAGGGGCGGTTGGCTTTGTTGGGTGAGCTTGTTTGTGTCCCTGTGGGTGGACGTGGTTGGT

GATTGGCAGGATCCTGGTATCCGCTAACAGGTACTGGCCCGCAGCCGTAACGACCTTGGGGGG
GTGTGAGAGGGGGGAATGGGTGAGGTCAAGGTGGAGGCTTCTTGGGGTTGGGTGGGCCGCTG
AGGGGAGGGCGTGGGGGAGGGGAGGGCGAGGTGACGCGGCGCTGGGCCTTTCCGGGACAGT
GGGCCTTGTTGACCTGAGGGGGGCGAGGGCGGTTGGCGCGCGCGCGCGTTGACGGAAACTAA
CGGACGCCTAACCGATCGGCGATTCTGTCGAGTTTACTTCGCGGGGAAGGCGGAAAAGAG
(SEQ ID NO: 1075)

1130. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene UBB. In some embodiments, the sequences from gene UBB comprise or consist of:
GTTTGTGTGGTTTCTGGAAGCCTTTACTTTGGAATCCCAGTGTGAGAAAGGTGCCCCTTCTTGTG
TTTCAATGGGATTTTTATTTCGCGAGTCTTGTGGGTTTGGTTTTGTTTTCAGTTTGCCTAACACCG
TGCTTAGGTTTGAGGCAGATTGGAGTTCGGTCGGGGGAGTTTGAATATCCGGAACAGTTAGTGG
GGAAAGCTGTGGACGCTTGGTAAGAGAGCGCTCTGGATTTTCCGCTGTTGACGTTGAAACCTTG
AATGACGAATTTCGTATTAAGTGACTTAGCCTTGTAAAATTGAGGGGAGGCTTGCGGAATATTAA
CGTATTTAAGGCATTTTGAAGGAATAGTTGCTAATTTTGAAGAATATTAGGTGTAAAAGCAAGAAA
TACAATGATCCTGAGGTGACACGCTTATGTTTTACTTTTAAACTAGGTCAAAATGCAGATCTTCGT
GAAAACCCTTACCGGCAAGACCATCACCCTTGAGGTGGAGCCC (SEQ ID NO: 1076)

1131. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LRRC75A-AS1. In some embodiments, the sequences from gene LRRC75A-AS1 comprise or consist of:
CCTGAGGTCAGGAGTTCAAGACCAGCCTGGCTGGCCGACATGGTGAAACCCCATCTCTACCAAA
AATACAAAAATTAGCCGGGTGTGGTGGCGTGTACTTGTAATCCCAGCTACTTTGGGGGCTGAGC
CAGGAGAATCGCTTGAACCCGGGAGGCGGAGGTTGTAGTGAGTCGAAATCGTGCCACTGCACT
CCAGCCTGGGCAACAGCGAGACTCCATCTCAAAAAAAAAAAAAAAAATTACAACCTACTGAGAAGC
TAATTAAGATTTGTAGTCCTCAATAATTTACAAAAACTTAGAAAAATTACCTCTAATTAGGTCTTAA
GGGGCTTTTGTTAGGATGGACTTAAATTTGTAAAGTCATTAATTGACTGTCATCAGAAATGCCTGT
CCTGCTCTGCATCTGCAGTCTCTAAGGTGTATGCGCCTTCTCCATTCCCCCAGGTTTTGAGAACA
GAGTGCTGTTTTAGAGCTGGCAGCAGCATCTCAGCCCAAGAGAAG (SEQ ID NO: 1077)

1132. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LRRC75A-AS1. In some embodiments, the sequences from gene LRRC75A-AS1 comprise or consist of:
AAAAAAAGATATCAAATGATGAAATCACCCAAAATAGCTGGAATTACCGGCAGATTGTGTAGTGG
TGAACCTATGGTTTTCTGAAGATATCTCTTACCCTGTGATTGACTGTCAGTTGGTGCAGAAAGTGA
GATTGAAATGTAGTTTCTTTGCAGGTTATATTCCCAGAGGATGTCAGTCCCAAGGACCAGTAGCT
GCCATCAGTTTGGATTCTGAAAACTAACTGGCATCAACACTGGGTGTAGAAACATGCTTGCCTTA
TGTATCAGAGGACATGCTCAGCAGATCCAAGAGATATATTTGGCAACTTTTTCTAGAAAAGGCAC
ATTGGGTATCATTCATTACATTCTTGAGTTTTTTTGGGTTTTTTTTTTTTTTTTGAGACAGTCTTGC
TGTATTGCCCAGGCTGGAGTGTGGTGGCACAATCACAGCTCATTGCATCCTCAATCACCCAGGC
CTAAGCAATCCTCCCACCTTGTAGCTGGGACTACAGCTCAC (SEQ ID NO: 1078)

1133. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SKAP1. In some embodiments, the sequences from gene SKAP1 comprise or consist of:
GTAAGGACAGAAAGTGTGGGGCTTAAATAGAAAGTCAATTTTTTCATTCTTGATTTAGTCACCATA
AACAGAATTATTCCATGTCATACACTTCCCATGGCTCCCTCACAATATAAATTCCCATTTATTCATA
ATTGTTAGGAAAAGTTTTAAATGAAAATCCAGATTCAGGAACCATTTTCACATTTAAAAATACAAGG
CTAGGCCGGGCGTGGTGGCTCACGCCTGCAATCCTAGCACTTTGGGAGGCCGAGGCTGGTGAA
CTGCCTCAGCTCAGGAGTTCAAGACCAGCCTGGGCAACATGCTGAAACCCAGTCTCTACTAAAC
TACAGAAAATTAACCAGGTGTGGTAGCACATGCCTGTAGTCCCAGCTACTTGGGAGGCTGAGGC

ATGAGAATTGCTTGAACCCGGGAGGCGGAGCTTGCAGTGAGCTAAGATCACGCCACTGCACTCC
AGCCTGGCGATGGAGCAAGACTCCATCTCAAAAATAAATAAATA (SEQ ID NO: 1079)

1134. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SKAP1. In some embodiments, the sequences from gene SKAP1 comprise or consist of:
CAAAGTTCCTATGGACAAAGAAGGCCGAAAAGTGAGCTGTGATCCAGAAGCCTGCTGGCTGACT
AAGCCTTTCTTGTAAATAGGCAGAAGTCACAGATTTACTCTGATCCTTCAAATGCATAATGAAGAG
AAAAACTAGATAGTTAGTTGCCCTGGATCAGGAAAGTCTGGCGGGAAACCTCTGCACTGCTTACT
TACAAACCAAGTGAAAAATTACCTGCCTGATTTTCTTTTATTAATAAATAAATATATTTATCATATTG
TTGAACGGCATCCTACTAGGAGTGATCTGTAAATATTTAATGTTAGTTAATGATCTCCTTCTCCCA
TAGTCCTTTGCTCATGCTGAGTGTTTGGCTGTATCTCATCTCAACTCCCCTTAATCTGAGGTTTCC
TAGGGGCAATATCAGAACCCTGGTTTCCATTTGCAGCAAAAACATGGGTACCTCGGAAAAAATAG
AGTCCTTTTAACTTTGATTTCTCCTCTCTTTGATCAGTA (SEQ ID NO: 1080)

1135. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TOM1L1. In some embodiments, the sequences from gene TOM1L1 comprise or consist of:
ATTCACCAACAGTTCAGTGATACTTGAATTCTGGTCTTCTTTCCCAATCAGGCTGCTCCTATTATT
CAGAGTCCTCAAATACTTGCTCTATGCATTCCGTCCACCTTTAAGTGACATTCAGTGGAGAGACA
GAGTGCAGTACGTTTGCTCCGCTTTATCCTGGACCGGAGACCTCACAGCTTTCTTCTTAACCTGT
GTTCTATACTACTTCTCATCCTTTAAGAAACGATGGGGTGGTAGCTACACTGATGGAAAGACTAAA
GGCTCTGGTCTTAGTGTTCCGTGCACACTCCACAGTCTCAGGGCTCCCACCACCCATGGCATCA
TAACCTGATGTGCACTAAAACCAATTGTTTTATAAACAGTTATTACAAAATGACACTTTATGCAGTC
TGAAGGTACCTTTTAGGTTTTGTTTTTAGACTAGGAAAATTATCTTACTTTTTGCATTTGTGTTCTC
ACTGTAGGGTAATCATTCTGTGTTATCACACTATCCTAG (SEQ ID NO: 1081)

1136. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TOM1L1. In some embodiments, the sequences from gene TOM1L1 comprise or consist of:
TAAGTAACAAAACTCTTTTCTAGCAGTGCATCTAGTCAGCAGATTATTGTAGCCAGAAAAGAACTC
ATGGTCATTAATTCCCATGTTCTGCTCAGTATTGTGTTGATGCGCAGCCCCTGTTAGCAAGATGG
TAAGGATCAAAATTTTTTTGGAGTTTGTATTTGCTATCTCCACTTCCTTTCCTTGTATTCTCTTTGA
CTTCAGACATGCTCTTCTACCACTCTATGGACATAACTCTTGTCAAGGTCACTGGTGACTTCTGTA
TTGTGAAATTTAGAACTGCAGTTCCATAGTCCCTCATTTTATCAGCAACAAATGACAAAGTTGATC
ACTTCCTCCTTCTTGCACACATGGCTTTCAGACACCAGTCACTTTGGTTCTTCTCCTGCCTCACGT
TCATTTCTTCTCCATCTCTTTTGGTGGCTCTTCCTCCTCTACTGACCTTTTCTTGTTGGAGACCCC
AGGGATCAGGCTTCAGACTTTTCTATCTACATTCATT (SEQ ID NO: 1082)

1137. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ABCA6. In some embodiments, the sequences from gene ABCA6 comprise or consist of:
GTAAGTTGATACATTTATTACCACTTTCTCTGCTTTAGATCTTAGCTATATGTAGCTAATATTAATG
CCCTAGTAGGTTACTGCAATCACTACTTTCATGTCCATTGTGTGTGTGCATGTGTGTGTCCTTGTG
TGTACTTGAAATAGTTTCTATGGAGTGAAAAAGTTATGTAATCCAAATAAAATTTGACTTGCCTTTT
GCATAAAGGTCTGAACTAATGAAATGATGTATCAAAAAGAAAAAACAATGCTGACTCTAAAATATC
AAAGTCTTTTCTGTATAATTATTGAGGTTATTTTTGAGGGGTGGACCCAATTTTTTTTCCCTTAAGG
GTGCTCATCACATGGTAGCTGATCACAATATCTCTTCTCCCTCTAATATTCTGTCTCATACTTACTT
CTCGTTTCACTCCGCTCTGCCTTCTCTGAACAAGAACCTCTAATTTCCATCTTCCAGGTTGTTTTC
TGCAGAAAGTATGTAGATGCTCCTTCTTACATT (SEQ ID NO: 1083)

1138. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ABCA6. In some embodiments, the sequences from gene ABCA6 comprise or consist of:
TCTGCCTTCTAGGTTCAAGCGATTTTTCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCATG
CACCACCATGCCTGGCTAATTTTTTTGCATTTTTAGTAGAGACGGGTTTCACCATGTTGGTCGGG

CTGGTCTGGAACTCTTGACCTCAAATGATCTGCCCACCTCAGCCTCCCAAAGTGCTGAAATTACA
GGCATGAGCCACCGTGCCTGGCCTTGGCATCCTTTCTATTGGTTGGTGCCTATACCAGTGTTCA
GCATCTATCATCTCTGTATGCATATATGGTAAAGGTAACGAAGATGAATGGCAATTATAAAGAAGG
AGAATTGCGATTGAAAAAGGATATGCAATGAGCTTCTGCTGTAGGATTAACAGTATAGTTATTAAT
CTAGAAGGTACAAGGGTAGTCATTACATTGTTCTTTAGATGCTTTTGTATATATTAAATATTTTGTA
AATAAGTTAACATAATTTATATAACTTTTTGTCTTTATTTA (SEQ ID NO: 1084)

1139. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AFMID. In some embodiments, the sequences from gene AFMID comprise or consist of:
GCTTGGGAGGCTGAGGCAGGAGGATCGCTTGAGCCCAGGAGGTCGAGGCTACAGTGATCCATG
ATCGCACCATTGCACTCCAGCCTGGGCGACAGAGCGAGGCCCTATCGCTTAGAAAACAAAAAGT
TACATGAAGTTCCCCCAAGGTCCCGTAGCTAGCATGTGATGTGGCAGGGAGAGAGCCTGTCCGC
TTCACTCTCTCACATGGGACCAGAAAGGGGTGATGCTGTGCGTGGACAGGACATCTGGCAAGTG
GTGTGTCCAGGACACAGGAAGCAGCGTAGTGGCCAAGCTGCCTCCAGCTGTCACATCTGTGTGT
CTCTGCAGTAAGGATGAGTCTGCCTTCATGGTCCACCCGCTGACGGCACAGGGAGTGGCCGTG
GTAATAGTGGCTTACGGCATCGCCCCCAAAGGTAATAGGAGTGGTTGCTGCAGGTCCGAGGGC
CGGTGGGCTTTAGGAGGAAGTGCATCCCTGACCCAGCTCATGCTCTCTGTGCAG (SEQ ID NO: 1085)

1140. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene AFMID. In some embodiments, the sequences from gene AFMID comprise or consist of:
TGGGTGTTGCCAGTAGATTTTCTTCCTGTTGGACCTCAGTGGGTGGGAGGACAGTGCAATCAGT
ACCTAGGATACAGCCAAGCTGCCCCTCTGGCCTGTGGAGCAGAAAGCAAATTGGGACTCTTCGA
AGGGGGCCTGATGTTGTGGGGAAACTGCGTGCAAATCCAGCTCTCTGCTCTGACCCCTCCCAGG
GGAATTTACCTGTGTGGACACTCAGCCGGGGCCCACCTGGCTGCCATGATGCTCCTGGCCGACT
GGACCAAGCATGGGGTCACGCCCAACCTCAGAGGTTTCCATGGGAGCTACAGCCTGGCTGGGC
AACCTTCATCTCCCCATGAGCCTTGGGGTTTGGGCCAACTGCTTGAAATCCTCCCGGCCATGAG
TGGCTTGACCGCAGGGCTTCGAGCCCTCTGAGCAAGGCCTTCTCTGCCTCCTCTGTGCCCCTTC
CCCTGGTCCTGCCCCTCTGGCGGTGGGGGTGGGCTGGCCCTGCCTTGCTCCG (SEQ ID NO: 1086)

1141. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TTC39C. In some embodiments, the sequences from gene TTC39C comprise or consist of:
AAGAACTGTTGATCCCAAAAGGGAAAAATTAGACATAGGGTGTGACGTGTCTAGATACCTCCACC
TGCGCTCATGCACACATTCCTGCGCCATAAAGGATTGATTTTTTTTTTTTTAACCTTGGTGTTTTGT
GTTTGAGCTGTGTGCTAACAGTCAGTGTCAATGTCTGCCTTCTGAGCTGTGGGCGATTCCCATTG
TTGTGAGGTTTCCTCCAACTGGACGTTAAGTTACTGAGAACAGGAATCAGGGATGCGATTGGTGC
GTGTCTTCTGTGGCTACCTGGTCAGCATTCATAAACGGTGATAATGGATTGAATGCTGCAGTTTC
AACCTTCCTGACAACAGAGGAGAGTGTTACTTTGGGGCATGAACAGTTATTGATCCAGCTGGGC
CTTGGTTAATGAGTCATTTGGCTTACAGTGTTCCCGAGTCACAGGCTGTCCTGAAGATCACCTGC
TGACTCATTGGTGCCCTTGTTTCCCCGAGGCCTCCTGCAGTGAC (SEQ ID NO: 1087)

1142. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene TTC39C. In some embodiments, the sequences from gene TTC39C comprise or consist of:
TATGTGACATTTAGCATTTCTCAATGCCTAAGATTAAACTGATGCTTTGAATCCTGATCATGCTTTT
GAGCTGCTCCTCTTGGGTACTTGTGGCATCGTGTTGGCAGACCCTGAGTGACATCTTCAGCGGC
GGGAAAACGAAATGTATTTCACTGGGAGTAAGTAGAGCGGACATTTGAGAGTTTGCTGGGTCCC
AGACAGTGTTATGTGAATGAAAGTGTTGGAAATGTAATCTGGATCCTCAGGGAATTTCTGAAGTG
TCGGGAGAGGAGATTTGATGAGCAGAAGCAATTGGAGAACAGCATTCTAGGGTATAGAAGCAAA
CTATCAACTGTATGGTGAAGAGCTCACTGAGAACTGGGCTAATGGAGCGGCTTCGTGCATTCACT

CAGTAGCGATTGAGAGACTTCTGGGCCAGGGCTGGGCGCACACGGGGATGAAATATGGTCCCT
TCCCTTTCCACACCTGTGTGGTAACAAGGGGCTAGATTAGCAAACAA (SEQ ID NO: 1088)

1143. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MOCOS. In some embodiments, the sequences from gene MOCOS comprise or consist of:
GTTCAGTACTGAAGACCTAAACATTTGTCACAAGGGCAGTACCATCCACTATTTACACACATTTAA
AATTATTAATGTGAGGTCCAGGTTTGCCAGTTATAACAAACTTGTTTTCTTAAAAGTGAGTTAGTG
GTGCCAGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCAGGTGGATT
ACTTGAGCCCAGGAGCTCAAGACAAGCCTGGGCAACATGGTGAAACTCCATCTCTGCAAAAAAT
ACAAAAATTAGTCAGGCATGGTGGTGAATGCCTGTCGTCCCAGCTACTTGGGAGGCTGAGGTGA
GAGGATCACCTGAGCCCAGGAGGTTGAGGCTGCAGTGAGCTGTGATCATACCACTGCACTCCAG
CCTGGGTGACAGAGTGAGTGAGACCGTGTCTCAAAAAAAAAAAAAAAAAAAAGAGTGAATTGAGA
ATTTACATAAAGCTCATGATTCTCTTGTGTTTCATGATTGATTTGAG (SEQ ID NO: 1089)

1144. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene MOCOS. In some embodiments, the sequences from gene MOCOS comprise or consist of:
TGGGTTTTCTTTCCATCCTGCTGACTTTATTACAACTCATCCTAGTTCCAGACGAGAGCAATGTAG
TGTGACAAAGTCCATGCACTGTTGAAGAGGCCACCAGGCCCTCAGCCACATGCCTTTCCACCTT
CATTCACCCTCGTTTTTCAGTCCTCTTTACTCAGCCAAAAGTGGTAACTTTCAAATGGGAAGAAAG
AGGCCAGTTCTTCTGATGGCAGGTGGGAAACTGTTGGGTCTTTGCCATAGTAGAATAAGCTGTTC
ACTTCACTTCCTGGTCCACTAAAATGTCCAGAGTTGCACTGAGCACTCAGGCATGGTGGTAGGTG
GTTATCAGACGGGGTGTCACAGATGGACAACAGGAACCAAATGTTACTCCCAGAGCAGCACTGT
GGGGAATGGATTCAATCGTTGGGTGTTTGGAAGACGGTGCTGGTTTTTCCTTGAAAGCACATCTG
CATCCCCATTTTTATTTATTTTTTTGAGGTGGGGTCTCGCTCTT (SEQ ID NO: 1090)

1145. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PET100. In some embodiments, the sequences from gene PET100 comprise or consist of:
CTAATGTCTGCCTCCCATAAGCCGACCCTGCCCTGATGTGGGGCTCTGGAGGCCTTTGGCTCGT
GTCCCATTTGTGACTTTTCCTTACAGAGGGAGCTGTGGCCACCTGAGAAGGTAAGTGATCTCTTC
TTCCTGCCAGAGGGATGGAGGAGGCTGGATTCTTGTATCCGGGATGGGTTTTAGATGAAAATTTT
AGGCCAGGCGCAGTGGCTCATGCTTGTAATCCCAGGGCATGGGAGGCTGAGGTGGGTAGATCA
CTTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGCGAAACCCCATGTCTACAGAAATAC
AAAACTTAGCCAGGCATGGTGGCAGGCGCCTATAATTCCAGCTGCTTGGGAGGCTGAGGGAGAA
GAATCACTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCCCAAGATCACGCCACTGCACTCCAGC
CTGGGCAATAGAGTGAGACTTTGTCTCAAAAAGAAACATTTTACTCTCAG (SEQ ID NO: 1091)

1146. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PET100. In some embodiments, the sequences from gene PET100 comprise or consist of:
TAATTGGCAGGGGGCTTCCAGTGAAGACACTGAACCCTGAAGCCGTGGTCTGGGGCAGGGTGG
TGGGAGAGGTGGGCGGGGGGGGGGTGGTCCCGGCTCTGAGGTGTGTGCCCCTCCCCCCTTCCT
GTCCCACCCGCTTCTCCACCCCTAGCTTCAAGAGATAGAGGAATTCAAAGAGAGGTTACGGAAG
CGGCGGGAGGAGAAGCTCCTTCGCGACGCCCAGCAGAACTCCTGAGGCCTCCAAGTGGGAGTC
CTAGCCCCTCCCCTGATGAAATATACATATACTCAGTTCCTTGTTATTCATTTAAGTGTTTTATTCT
TTTATCAGTTTTTGGGGGCCGAGTGAGACCCAGGATGCCTCAGGCCCTCAGGGGGCTTGTGTCG
GGGGCTGGGGGCTGCTGTTCCGACGGAAGCCGAGAGCGGTCGGGTCCTGAGGGGTGAGCAGG
GGTTGGGGACTGAGGGTCCCAGCTCGTTTCTGTGCTCCGTCCTGTGGATGAAGA (SEQ ID NO: 1092)

1147. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PRKACA. In some embodiments, the sequences from gene PRKACA comprise or consist of:
GTGAGGCTGAGTCCTGTTACTATAGCAACTTCCTAGGCACACTCTGCCCCTTAAGTCAGGGAGG

GGCTGCAGCGGGGTCTGGGGCACAGGCGAAGAGAAGAAGGATGTGAACCCCTGGCTGGCCCT
GGAAACGCCTCCTGTACAGCCCCGGGCTGTGCGGCCTGGGGAAGAGAGAGGGGATCGGTGGC
CCAGTTCAGACAAGGGAGGATGGTCCACCCGGCAGGGGGCCAGCTCAGAGAGGGGTGGTGGA
GTGGTCCATCCCAGTGTTGGGGTTCAGCTCAGACTGTAGGATGAGCCATCCCAGTGTTGGGGTC
CAGCTCAGAATGGGGGTCGTTCCAGCCAGTGTTGGGGTCCAGCTCAGAGTTGTGTCATTTAGGT
AAGCCCAGAGCAGGGAATCCAGGCTCCACTGGAGGAATCAGCCAGCCTCGAGTAGGGGGCCCA
GCCCAGGCTGGGCATTCCTGCCCCAGAATTCCCAGGACAGCCAGATTTCAAAAGGGCA (SEQ ID NO: 1093)

1148. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PRKACA. In some embodiments, the sequences from gene PRKACA comprise or consist of:
CAGCGGCCCCAGGGGGCAGGCGCCCAGGTCAGACAGCCAAGTGGGGCTCAGGTCGTGGCTGG
CACTGGCTGAAGATACCCCTGGGAGCTGGCCCACAGGGGAAGGGGCAGAGCTAGTAAAAGGGA
GCCCCCGATCCCCAGGACACAAGCAGATCCTGGCAAAGAGAGAAAAGCACCCCCCAAGAAGAC
CCTAGATGGGAAGAACTAGTGCCGTGTAACATCCTATGGATGCCTAAGACGGCCAAACACCTTCT
GTGCCTTGGCAGTTGTATGGGTGCCCAAGAGGTCTTATCAAGGCAGCTCTCCCCTTAGCGCAAC
CGCGTCTACAGAAACTCGGAGGGCCCTATCTGTCCCTCCTCCACACCCAGTGGCCTCTGGGTTG
GGTTTCTCTTCCTGCTCCCACCCCACGGCTCCCTAGCTCCCCCTGCAGGCAGGGTTCTGGGGAC
AGACAGCCGAACAGACACGGCAGGTCTCATGAGCCTTCCCAGCCACCGTAGTGC (SEQ ID NO: 1094)

1149. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC27A5. In some embodiments, the sequences from gene SLC27A5 comprise or consist of:
GTCCGAGGCAGGGTTTCTCGGGGCGGGGCTGGCGCGGGGCCACGGACGCTTTCAGATCCTAG
AGGGAGTCAGGCTGAAGAGGCGGGACTTTCCTGTCGTAAGAGGGCGGAACTTGGAGTCAGGAC
TTCTCACGCGAAGGCGGGGCTTCTCGATTTTCGAGGGGGCGGGGCTGACTGGGCCTCCTGATC
CCCAAAAGGGGCGGGGCGGGGGCAAGAGGCGGGGCCTCTCCTTCCCGGGGGCGTGGTCACAA
GCGCCGGCTCCCTCCTTGCAGATGGAAGGGCGAGAACGTGTCCACGCACGAGGTGGAGGGCG
TGTTGTCGCAGGTGGACTTCTTGCAACAGGTTAACGTGTATGGCGTGTGCGTGCCAGGTGCGGA
GGGTTCTCATTTTAAACTTCCAACAGCTTTGTGGGTGGAGGGGTCGTTATTCTGATTTTACAGGT
GGGGAAGTGCTAGGGCCCAGAGAGGTTTAGAGACTTGCTGGCTCTCACAGCCAGTGAG (SEQ ID NO: 1095)

1150. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene SLC27A5. In some embodiments, the sequences from gene SLC27A5 comprise or consist of:
TTACCACCATCTGGGGCCTCCGCCTCAGCTTCTCGGCTCTGTCCAGCTCCCCTGCCTTGATCTCT
TGCTCTGATTTACTGGGTCTCTGGGTGTCCATCTGATTTGTTCTCTTGAGCTTTCTGTGGAAGAC
GGCATTCCAGCCATTGGTCCCTTGTCCTGTACCTTCTGTTAGTGTCTTCTCCCAGGGCCTTGCAA
GGTCCTGGTCATATCTATTCTCACTGCCATTTGTCTGTCCGTCTTCCATCCCTTGTTATCCTTTTC
CTGTTTCTCATGGGCTCCCCATACCGCCTTCTCTATACTTCTCTCTCATTTTCTGTGTCGCTTGTC
GCAGTCTCTCAAGGTCTCTGAATGTCTCTCTCATCTCTGGATCTCCCTGTCTGTGTCTTTGGGTCT
GTCCTTGGCAGGGTGCTGGGTGATGAAGAGTCCACCGTTGTTGAAAACCTCCAGCAGGGGGCTT
GGCTGGTGGGCTCCAGGGGTTCTTGTTCCTGCTCCTACCCCA (SEQ ID NO: 1096)

1151. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSS2. In some embodiments, the sequences from gene ACSS2 comprise or consist of:
CACTTGATGAGGTCTGCACCTTCTCAGTGATGTCCACTCCCACAGTGTAGTTGGCAGCTCCTCAC
TGGAGTTTGAGTCCTCTGGTAGGGTCCACGTCTCCTTAGTAAAGTCTATATCCTCTGTATCTCTTA
GGGGAAATCCATGTCTCCTCACTAGGGTAAGTGCCCTTCAAAGCCATTCATGTCCTATTAGCAGG
GCCCAGGGCCCTTCAGTCAGATCTGAGAACCCCCAGCAACATCTGTGCTCCCTTAGTGGAGTCC
ATGTACTGTCAGTGAAGTGTGTGTCCCTTCGGTGCAGTGAATATCTCCTTTATGAAAGTATCTGAC

CCCTTGGTGGGGTCTATGTCCACCCCAAGAGGTCTGTACTCCTTCAGTGGGCCCTCAGATTCCC
GCCCTCCTTGGGATTGGGCAGACTCTCGGTCTCCCATAGAGAGATTTTTTTTCAGCTTAGGGTGT
GCAAGGTTTACAGTCAGCTGGGCAAAGTGCAGGGAAGTAGCTGG (SEQ ID NO: 1097)

1152. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene ACSS2. In some embodiments, the sequences from gene ACSS2 comprise or consist of:
TGAGAGATGGAGGAGGGTCCTGCCTGACTTCTTTCTGGGGTGGAGGGGCTAGAGAGAAGCTAG
AGGTAATTAAGCCCAGGTTGTGGTGGTGGTGGTGGGGGTTTCCCTTGGTGGAGTAAAGAGATTG
TGAAGGAAAGAAGAGAATGTGGGCCAGGTGTGGTGGCTCACGCCTGTAATCCTAGCACTTTGGG
AGCCCAAGGCGGGCAGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGACAACATGGTGAA
ATCCCATCTCTACTAAAAATACAAAAATTAGCTGGGTGTGGTGGTGTGCACCTGTAATTCCAGCTA
CTCGGGAGGCTGAGGCAGGAGAATTGCTTGAATCCAGGAGGCAGAGGTTGCAGTCAGCCGAGA
TTGTGCCATTGCACTCCAGCCTGGGCGACAGAGCGAGAGACTCCATCTCAAAACAAAAACAACA
ACAAAAAAAGAGAATGTGAATGATTTTTCCTATTTGCACAGACTTTGATATT (SEQ ID NO: 1098)

1153. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LBP. In some embodiments, the sequences from gene LBP comprise or consist of:
CCAAGGCAGAAAATCGCTTGAGCTCAGGAGTTCAAGACCAGCCTGGGCAACGTGGTAAAACCTG
TCTCCACAAAAAAATACAAAAATTAGCCAGGCATGATGGCACATGCCTGTAGTCTCAGCTACTTC
AGGGGCTGAGTTGGGAGGATGGCTTCAGGCCAGGCGACAGAGGTTGCAGTGAGCTGAGATTGT
GCCACTGCACTCCAGCCTGGGTGACAAGGTGAGATCCTGTCCCCCACCCCCCCGCAAAAGAAAA
GAAAAATGTGGATTCTCAAGCCGCTTCCCCAAATCTGCTGAATGTGATCATGCGATTGGGTGCCG
CAGGCACTGGGAAGCCAGACACACCGAATCAGGCTGGATGTGCTGGGACACAGCAGGGCGCC
GGGAAGGGGTGGAGAGGGCTCCCTTTGTGGACTGGCCTGACCAGGGACCAGGGCCTGGCTTTC
CCAGGCACCCGGCCATCCCCAAGTTCAGTGGCAGACTGTGCTTCTCTCCCCAG (SEQ ID NO: 1099)

1154. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene LBP. In some embodiments, the sequences from gene LBP comprise or consist of:
TAAGAAGGTCCAAGCCTCTGGCCTCCCCCGAGCTTGGCGAGGGCTGAATGGAAGACCTCACTG
ACCAATGGCCCTGGACCAGGCCATGGGGGCTGGTTTAGACGTACTTGGGCCCAAAGCCCAGGG
AGGACAAATCATTTGCCCAGGTCATGGAGCTGTTGTGGGGCACGCTGGGGACAAAGCTCCAAGT
CCGTTCGGTTGGGCAGAAAATGGTCAACTGCTTGACCAAGGGTTAAACAGCAGGGGCTAAACAG
AGACTCCAGCCCCTCCCTCTGCTCCACCTTGCTCAGTGCCCCACACTGCCCTGCATTCCACCAA
GGTCCGAAAGGAAACCATTCCTCAGGCGCCTGCAAGAGACCAGGCAGGAAAGCTCAGCGAGGG
CGTGGGCCAGGTGGGAACTGGGCGAGCTCATGAGCACCAGCCCTGGATGGGGAGGCAGCAAC
ACTGTCAGACTGGCCTGTTAAAAAGGAGTATGTGAAATCTTCAGAGTGTATCATCT (SEQ ID NO: 1100)

1155. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PABPC1L. In some embodiments, the sequences from gene PABPC1L comprise or consist of:
AATCCCTCCATGCCAAGGTAAGCAGGAGCCTGGGCAGCAGGGAGCCCGAGGGGGCAGGAGGA
GAGCTAACGACAAGGGCTCTCCTAGTGGAGCCAGTGGATAGCTGTTTGGCCAGATAAAGTGTTT
CTTCTTGCTAATACCTGAAGGCCTGCTGAATCTTAAGAGTGGAAGGGGCCTTAGGTAAGGGTTTG
CTACTTCAGCCCTTCCGTAGACTAATTCTGTGTTGTTCTGTAGGTAGGTCTTTTGGTACAAGGAAG
TGTGTTGTGACTCAGTGTAAGGGTTAAGATTTTTCCAGCTGTCCAGCAATGTACCTCTGTGTCAAA
GGTGACAGACAGGGCCATGGGATCTTGCAAGCAGTGGTGGATGGGAGGGTTCCACAGAAACCC
TGTGGATGGAGGAGGATCCTGTATCCAGGATGGTGAGCGAGGGGGAGATCAAGGCTCTTCTGT
GACCTGCTAAGATAGCTGCACTAAGCCCCCCCGCCACTCATGTCTCACAG (SEQ ID NO: 1101)

1156. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene PABPC1L. In some embodiments, the sequences from gene PABPC1L comprise or consist of:
TGGGTGGAATGGTGACAGAAGCAGCTGAGCCCGGGAGAAGCTGTAAGGAAATAGGCAGGGACT
GACTTTCACAAACACTGAGAATTGCGCCGTGTTCCTGGCTTTCTCTGAAGCACCAAAGAGTTTGG
AGGAAGTTGTGAGAATCAGAGGAGATGATTAACTGTGATCGGAATGGGGGGTGGTGGAGGGTG
AAGGAGGTGCCCTCTTGCCAGCTGCCCTGCCTGGCTTCATGCAGAATAGTTTGGGCTTTCCCAG
GGCCCTGCCTGGCTCCATTCTGCCTGCCTGAAGGCCTGGCCAGGATGTAACCACCTTCTTTATT
GAAGACTGGGTGTCTGCCATACTTTAAAAACACTTATTTTTACCTTTTTGTCCTCAGAAAAGGAAA
TCCTCGCTTCCATGGCTGCCAAAAGGACAGTGTTTCTGGCTCTCAGCCCTAAGGCCCTGCAAAC
TCTAACTTATTTCCCAATTAGTCTGTATCTATACTTGGGCTCTGTATGTG (SEQ ID NO: 1102)

1157. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene UBE2V1. In some embodiments, the sequences from gene UBE2V1 comprise or consist of:
GTATGCTTGCAGGTTTTGCTGTTTCCTTTCAAATACCATATGTAGTACTATTTAATATTTTTCTTGTA
ATCAACTGACTCTTTTGCTTACATTTATTTTAAAGGAAACTTTTACCATTATTATAAATGGGAAGTTA
GTATATTACTTACCCTAAATAAGTTATTCTTAAACATAAATACGTGACTGTAAAACGAAGTGTTCAA
TCACATACCACCGAAAGTCCTCTAACATACCACTACCAACTCTGTCCTTCAGTTGCTTGGACCAAA
AACCTGGGAGCTGTAGTTGACTCTTGTCTCTCACACCTCACAGGCAACCTGATAGCAAATCTCCA
CAGCTCAGACCTCTGAAATGCCTAGAATTACGCCACTCCTCACTACTTTCCTGCTATCACCCTGG
TCCAAACGGGTATTATCTTTTGCTAGGATTATTGCAGTAGCCTCCTAGCTGCTTCTGCCCTTGCTC
CCTTCACTCTCATCCTCACACAGCAGTCTGAGGG (SEQ ID NO: 1103)

1158. In some embodiments, the intronic domain that promotes trans-splicing primarily in the heart comprises or consists of sequences from the gene UBE2V1. In some embodiments, the sequences from gene UBE2V1 comprise or consist of:
AACAGCTGTTAACATCTTGTTCTGTATCCTTACCAACTCTATAAAGCTCCTTAAGATGTCACTTATC
ATCTATATGAGTTTGCTAGTGCTGTCATAACAAAATACCATAGACTGGGTGGGGCTTAAACAACAA
ATTTCTCACAGCTCTAGAGACCAGAAGCCCAAGATCAAGGTGTCAGCAGGTTTTGTCACATTCTG
AGGTACTGGGAGTTAGGACTTAAGTATATAAATTTGAGGGGAACACAGTTCAGCCCAGCCCATAG
CACGATCTGTGAACAAGTACCTCAGTCATCAGCCTTCCTATCAATATGATTCTTTTGATGTTCATTT
TTATTAGTGCAGGCTTGTAAATTAACCAGTAGTAATGTAGTGACTTTTCCCCCGCTAGCCTAATTA
GGATTATTAAAGATTTAGATTGAACCCTTTCTGAACAATAGTTGTGTTGTCTGGCTTTTTGCCTATA
ATGTCACCACTATCTTTCAGTTTTATGTTTGCTACA (SEQ ID NO: 1104)

Intronic domains that promote trans-splicing primarily in muscle tissue

1159. In some embodiments of the compositions of the disclosure, there may be an intronic domain that promotes trans-splicing primarily in muscle tissue.

1160. In some embodiments of the compositions of the disclosure, the intronic domain is derived or isolated from human genes that feature exons that are primarily included in muscle tissue during the process of RNA splicing.

1161. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CDK11B. In some embodiments, the sequences from gene CDK11B comprise or consist of:
GTAAGAACCTCCCTGGAGACAGAGCCCCCTCCTTGTCTGTCTCCGAGTGCAGCAGCCCTCTCCT
AAGACAGCCGGTCCTGCGCAGCGTGGGGCACGCCAGGGTCTGGGAGGCCGCCTGATTCGTTG
GCCGCTCCAGGCTGTGCCGGTGGGGCCCGCATTCCTCAGCGAGGCACAGTGCTGACCAAGGG
CGTCCTGAGTGCCCAGCAGGGCCGAGGAGCTGGGAAGCCCAGGACCAGTTCCCCACAGGGGA
GGCCCGTCAGATGGTGGCTCCGGGCCTGTCCCTGCAGAGCAGAGGCCTGGCCCAGCCTCCGA
CAGGCAGTGAGGTTATGTCCTCAGCCTGGTGGACGTGGATGTGGGCTTGTCCCCCACATGACAC
CCGACGCCTCCTCCCAGCTCAGCATCCGGGCTCTGTCTCAGCCGAGCCTGCCAGCACTCTTAG

GCCTCGGTGCCCTGTGTCCAGGGGACGAGAGCCCAGCGCCAGCACCTCCCAGCGGGACAC (SEQ ID NO: 1105)

1162. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CDK11B. In some embodiments, the sequences from gene CDK11B comprise or consist of: TTAGAAACCGCAGAGAAGTAGCTGGCGGGCGGGGGAGTTGAAACTCCCTTCTATCTAGGACTCT CTCGGGACACCTCCACATCGATTCTTTTTGTTTGTTTTTTTGAGATGGAATCTTGATCTGTTGCCC AGGCTGGAGTGCAGTGGCATGATCTCGGCTCACTGCAACCTCTGCCTCCCGGGTTCAAGTGATC CTCCCGCCTCAGCCTCCCAAGTAGCTGGGAGTACAGGTGTGCGCCAGCACGCCCGGATAATTTT TTTATTTTTAGTCGAGACGGGGTTTCACCACGTTGGCCAGGATGGTCTCGAACTCCTGACCTCAG GTGATCCACCCGCCTCGGCCTCCCAAAGCGCTGGGATTACAGGCGTGAGCCACCGCGCCCGGC CTGCATATCCATTCTTGGGAACACTTGTTGCTTAGCTGAAGCGGAGCCCGCATCCTGCCTGTGG CAGCACTCGCCCCGGTGCTGGTCTGAGCAGACGCCTCCTTTCTCTTGCA (SEQ ID NO: 1106)

1163. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene HP1BP3. In some embodiments, the sequences from gene HP1BP3 comprise or consist of: GTGAGTGTGCGGAGCGCCGAGGCTCGCGTTCCGCCGCTGCTTCCGTCGCCGGGGCGGGCGCC GCGGTGTCCCTGCCGAGCGTGAGCCCCGAACTGTCACCGCGCCGAGCCCCAGCCTCATCCGTC GGTGTCCGCGGTCCGAGCTTTCCCCGCCTCGCTGGCGGCCCGCGCTCTCCCCCGCCGTGCGC GTTCGCCGCTGTGGCCTGTAGCTACCTCGCCTCGCTGCTTTGTCTCCGCTGCTCTTGCCGTCCT TCCCGCGGCCTTCTGCGGGCGGGGCTGTCGGCTGTCGCTTTGCTGCTCCGCGACGGCGGCCTT GAGTCTCGCTCCCCCGGTGGGAAACGTAGAACTGGTTACTCGCCACCTTAGGCGGTGGGGTTT GAATGAGAGCGGTGCCTCGGTAGGTCGTCAGAAAGTTACAGTCGCCCATCTGAGCGTTTGTAAG AGATGGAGGCAGGAGTGGTGAGGTGAGAGCCCCAGATCTGAGGGTTGGTACTGCATTA (SEQ ID NO: 1107)

1164. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene HP1BP3. In some embodiments, the sequences from gene HP1BP3 comprise or consist of: CAGGACCGAACAGGCGGCCGGGGAGTGGGCGCGGGCTCGCTGGGCCCCGAAGGCGAGTGGC GGAGGCCGCTCGCCCGGGGCGCCGACGCCGCTCCCAGAGAGGAGGGGGCGGGGCGCCCGG GTCCCCGGAGGTGGCGCCTTTTGTCTGCCTTACCCGGCCGCTCCGCCCCGCTCCCTTCCTCTCT CCTGCGACCTAGCCCCCTGCCCTTTTGGTGGACTCCTCCTCAGGGGCCCTCCGGCGCGCGCGC TCCCGCCCTTGTTTTGTTTGGATTTGGGGGAGGAGGGGGAGCTCTTCTCTGGCCGTGCGACCCT GCGTCCCAGCGCGCCTGCGTCGGCGTCCTCTGCCCGCCCCGATTGGCTGAGGGCTGCGCATG CTCCGAGGCCCGCCGCGGTCCGGCGTCCGCCCGCGCCCTCCCCTCACCCCACTCCCTCAGCG GTTTTCGGAGCCGGTTCGAAAGATGCCGGCGGCGGTGACTGGCTGCGGCGGGCCCGCCCCCC G (SEQ ID NO: 1108)

1165. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene FNDC5. In some embodiments, the sequences from gene FNDC5 comprise or consist of: TCCCTCAGCCCCAGTGAACGTCACCGTCAGGCACCTCAAGGCCAACTCTGCAGTGGTGAGCTG GGATGTTCTGGAGGATGAGGTTGTCATCGGATTTGCCATCTCCCAGCAGGTAATGCTCCACTGT CCTTAGGAGGGAAGGACACATCAAGACAGTAGTGGCAGATGGGGGTAGGAGTGTGGCAGTGGT GGTGATGGAGAAATAGAAAGGAAATAGGAACTTGGGGCAAGGGAGATGAACAGCAATTTGGACA TATGTCTGAAAATTGGGGCCCCATTCAGACATATGTCTGAAAATTCTCTAGAAGAGAATCAGTCA GTGAGGGAGGGTTTGGGAACTTTCAAGTGGAACACAGAAATTAAGGTTTTGATCTCAGAGACATC TGCATTTAGGACCTAGCTCCAGTGCTTACTAGATGTGTGGCCTTGGGCAACTTCCCCAACCTCTC TGAACCTGTTTCCTTCCCTGTAAAATGGAGATATTGATAGCGGAGGTGAT (SEQ ID NO: 1109)

1166. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene FNDC5. In some embodiments, the sequences from gene FNDC5 comprise or consist of:

TCCCAGTCCAGGGCTCACCCCAGCCTGACACTTCTCGATCTCTGGGTCTTTCTCCTTCGCGCAA
GGTCACTCATTGGACAGGGCAGTATTGTCAAAAGAGCACTGGACTGGGGAGTCCTTTTGTCTGC
TTTTCATCAGCTAACCTTCAGTTTCTGTCCACCTATGTCCCCTACATAACTCTCTCCACAACTCTAA
CCACCCATCCCTTAGATAGGGCCCCGGCCCAGGCCCATCACTTTGAGCCTTGGACCCCTCATGG
GGCCGGCCTGTGGCCAGCAGGGGCTTCCGTCCCAGTCATGAGGAGCCTGGGGCCTCTTGGGC
TTGGTTCTTCAACCCACTGAAGAGCTGAGAGCCATGTCACTGGACCCCACTTGAGGCCTTAGTTT
CTTCCTTCCCCTCCTGCATGGCCTTCCCCAGGTTTCCCCTTCTTACTTATGAGACAGTGGGTCTG
GGCCTCACAATAGGGGATGCTCAGGCTTAGGTGCCTCCCCGTCCCCCA (SEQ ID NO: 1110)

1167. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene RAP1A. In some embodiments, the sequences from gene RAP1A comprise or consist of:
TGCGCGGCTCCTTTAAGCGGACTCCGGAACGCCGTGGGGAAGGCGGGGCCGAAGCCCAGCCA
TCGCCAACTTGGAGGGGCGGGGCAGAACCAGGGGGCGGGGCCTGCGTGGTGCGTGCGTGCG
CGTTCTGGAGGAGGCGCCGCCGCCGCTCCCGAGGCCCCTGCCGCCGCCGCTCCCGCTGCTGT
CGCCGCGCAGAGCCGGAGCAGGAGCCACGGCCGAGAGGAGGGAGGAGGAGGAGGAGGAGGT
GGAGGAGGTGGAGGAGGTGGAGGAGGCGCCGGACCGGGGGGGGTGAGTAAGGGGCGGGGAGC
TCCAGACGGCCCCAGAGGGAGCGGGGGGCGCGGGTCGGCCGAGCCGAGGGTGAGGCGGCTC
ATGTCGCCGGTCAGTCGCCTGGCTCCCCCTTCCTCCTCCGCGTTCCATCGGTGTCGGGGCGGC
GGCCCGGGGGCCTGGCCGGCGGGAGGGGCCGGAGATCTGGGAGGCCCGGCCGCCGCCAGG
GCCAGAGC (SEQ ID NO: 1111)

1168. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene RAP1A. In some embodiments, the sequences from gene RAP1A comprise or consist of:
TTGGACATCGCTGCCTTCCTCCTCTTGCATGTCCCCTGTCTAGGGTCAGAGCTTCCTTCAAACCC
AGCTCTCCCTTTTGGGCCCGCGGGGGCGGGGGGGAGGGACACACGGGGAACGGGGTTGGAG
GGTTGGGTGAATTCTCTGTCCTCTGCTGTAGGAGTGCGGGTAGACTGGAGCATTGCTGTCTCCG
GGCTCACTTCTGTCAGGGTTCAGGGTCTCCCTTTCCTTCCTTTATTCCCCCAGTTAATAGGGCTG
ACATCTACATCCCACTCCACCTTCCAGCCCCTTTCCCGCCTTCTTTACCCTCATGTCTTCCGTAGC
TTACCATGTGTTCGCCTTTTCAGTGTTACTTTTCATGGGTCTCTGCTTCTTCCCTGAATTTTGTTAG
GGAAGAGGTCACGGTGTGATTCTTGTTATCCTTCAAACTAGCGGCTTGGTAAGAGTATCTCTTGC
CCCCTTAATCAGGAAGTTAAGGACGGTGTCTTCAGCCGAGTTGTGT (SEQ ID NO: 1112)

1169. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TMOD4. In some embodiments, the sequences from gene TMOD4 comprise or consist of:
GTGAGTGTGTTTGGGGAGCATGGTCCCCAGGGCTCTGGGCAGGCAGTCCTAGTGTCTGGGAGA
AGGTAGAAAAGGGTGAAATTGATGATTCTGGGAGAGGACATGCTGCATGAGTGATAAGAAAACC
TGTGGAGTGCCAGGTGAGGTGGCTCATGCCTGTAATCCCAGCATTTAGGGAGGCCGAGGCAGG
TGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAACATAGTGAAACCTTGTCTCTACTA
AAACTACAAAAATTAGCTGGTTGCATGCCTGTAATCCCAGATATTATACTTGGGAAGCAGAGGCA
CAAGAATTTCTTGAACCCGGGAGGTCAAGGCTGCTGTGAGTTGAGATTGTGCCACTGCATTCCA
GCCTAGGTGGATAGAGCGAGACTCCATCTCAAAAAAAAAAAAAAAGAAAAGAAAAGAAAACCAAT
GGGGAGGAGATTATGGGGAACATGTTGGGGTTCCCTTCCTGCCCTCATTC (SEQ ID NO: 1113)

1170. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TMOD4. In some embodiments, the sequences from gene TMOD4 comprise or consist of:
AGAGCGAGACTCCGTCTCAAAAAACAAAAAACAAAAACAAAAACAACAACAAAAAAAATTAGCCA
GGCATGGCAGCATGCACCTGTAATCCCAGTTACTTGGGAGGCTGAGGCAGAAGAATTGCTTGAA
CCCGGGAGGTGGAGGTGGCAGTGAGCCAAGATCGCACCACTGCACTCCAGCCTGGGGGACAG
AGTGAGACTCCGTCTCGGGGGGAAAAAAAGTGGAACCATTCTGGCTGAAAGAGGAGAGTCTCTA
CAGACTCCTTTATCCTCTAGTGGCTCATAAGGGACCTTCCCTTAGCCCTTTCTCAATGTTTTAGAA
ACTACTGCCTTAAGAAGTTTATGGAAAGGACCCCTGGGGCTGAAAGAGGGTGGGAAACTTCTTT

GGCAAAGTGTAAGTGGTCAGGCTTTACAAATGCAACAGATTCAGAAATAGGTAGGAGGGAGGCT
TGGAACAGGTTCCTTCTCATTCCCTGTGACTCCTCTTCTTACCCTCTCCA (SEQ ID NO: 1114)

1171. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene DAP3. In some embodiments, the sequences from gene DAP3 comprise or consist of:
GTTTTTGTTTTTTTTTTTTTTTTTTTTGAGACAGAGTCTCACTCTGTCACCTGGGCTAGCGTACAGTG
GTGTGATATCAGCTCACTGCAACCTCTGGATGCAAGCAATCCTCCTGCCTTAGCCTCCAGAGTAG
CTGGGACTACAGGTGCATATCACCACTCCTGACTAATTTTTTTTTTTTTTTTTTTTGAGACACAGT
CTTGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCATGATCTCAGCTCACTGTAAGCTCCGCCTCC
CAGTTTCATGCCATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGACTACAGGCGCCCACCACCA
CACCTAGCTATTTTTTTGCATTTTTAGTAGAGACGGGTTTTCACCGTGTTAGCCAGGACCGTCTCG
ATCTGACCTCGTGATCTGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACT
GCGCGTGGCCTCCGACTAATTTTTTAAAATATTTTTTGGTAG (SEQ ID NO: 1115)

1172. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene DAP3. In some embodiments, the sequences from gene DAP3 comprise or consist of:
TATGAGCCATTACACCTGGCCTATTTTCTTTTTTTTTTTTGAGGTGGTCTCACTCTGTCATCCATGC
TGGAATGTAGTGCATCTCAGCTCACTGTGACCTCCACCTCCTCCCAAGCTCAAGTGATCCTCCTG
CCTCGGCCTTCCGAGGAGCTGGGACTACAGGCATGCACTACCATGCCCTGCTAATTTTTATATTT
TTTGTAAAGACAGGGTCTCACTTTGTTGCTGAGGCCAGTCTTGAACTCCTGGGCTCAAGCAATCC
ACCCACCTCAGCCCCGAGAAGTGTTCCTCCCAAAGTGTGGGGATTGTACATGTGAGCCACTGTG
TCCCGCCTGACTTTTTTATTTTCCCAGTATGATGATTGTGAATGGTATCTGGTTTTCATCATTTTAA
TTAGCATTTCCCTGATTTGTAATGAGGTTCAAAAATCTTTTCATGGGTTCACTAGCCTTTTGTGTTT
CGTTTTCTGTGAAATGCCTGTTCATGCCTTTTGCTCATT (SEQ ID NO: 1116)

1173. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TNNI1. In some embodiments, the sequences from gene TNNI1 comprise or consist of:
GTAAGCGTCTGCAGCCCAGAACTTCAGATGTAGGTTGATCCCAGGCAGAGAACCTGGGGCTTTT
GTTTAAGGAGAAAGCGAGGTCTTGGAGCTGGAGAAAACCATTTCTTGCCTGTGCAGTTGGTTTGT
TGGTAGAACATTCCTAAAATACTCCCACAGCATTTTGTCCCACAGAATGGCATCTCTCCTGCAAAA
CTGTTGTGAGAGGTGAAACTTTTTCCTGGCCATTTGGAGGCTGTGAGCAAGGAGCAGAATCTTCC
GTGAGGTTCCTTAGGAGCCCCAGGGCAGAGCCTAAGGGATGATGTTTTCACACAGGATGCCCAG
CAGAGTGTGGGAGGGAGAGCGCACCCAGGGGAAGGGGTGGCCCTGGGATCAGAGAGCCAGGG
TGAGTGCTCAAAGTCAGCAATGCCTGCAGCGGAAGAGAAGGAGGGTGCCTGACGCGCAGGACT
CCCAGGGAGCCTAGAAGGCAGGGCCAGAGCTCCCTGCTGGCCAAGGAAAC (SEQ ID NO: 1117)

1174. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TNNI1. In some embodiments, the sequences from gene TNNI1 comprise or consist of:
CTCTTGGGCTTTTGGGGCATGGGTTCAGGGGCCTCATTTCCATATTGCCTTATAAGAGATGCAGG
GTTAGCCCAATGGTCCTCTTCCCCCAGCTGCTACTTGCCCCTCTGGGCCTTCACTGTGGCCCTTT
GCTCTCCCTCATTCCCCCTCCCAGTCCCATCTCTGCTCAGTCCCCACACCTGGTCTGGCTGCTCA
TTCTTTCCCTTTCTGCAGCTCGAGTCTCCCCAGGTGGGTGCTGGTTTCACTCAGTTGGTGGCACC
TATGTGCACAGAATTTGCCTCTGCTCCTGAGCCACAAATTCACATGGCTTTCCGCCTATGTGCCT
GTTGTGTGCATTGCAGCACGCATCTGCCCTGTGAGGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGAAGGGTGGGAGGGAGGAGGGGCAGCAGGAGGGGGCAGTGGGTCTGT
TCTATTTTTACCAGCCAGTTGCTGCTGGACACAGTTTTCATAGCCTCC (SEQ ID NO: 1118)

1175. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene OBSCN. In some embodiments, the sequences from gene OBSCN comprise or consist of:
TCCCAAGGGCCCACCTCTTCATCCATAGGGGGTTAGTATTTCAGCATATGGTCTTTGGGGGGCAT

CTCAACATTTAGTCCATAAGAGAGGGTAAGTCCAGCCTCAGTCACTCCATCTTGACTAGAAACAC
TAGTCCTAGCTTCTGGTTTTGAGGCCTGTATCTTTTCATCCCATTATTCCCTAGTAGGATGGAACT
GGAAGGTTCTACCACTATCACTGTTTCTTCTGAGGCCCCTGGATCATTCGGTATTAGTTTGTTGTG
TCAAAGAGGCTTGTAGTTAGTTATAGGCCTTGAAGAATGGGGCTAGTAATAGCCTGAGGTGGAG
AGGCTACAATGTTGCTGTTTCCCCTGTGACTTCCTAGCTCCCAAGTCTAAGTGGCTCCCGGGCAA
GGCTCTGTAGTCAGGACCTCTGAGGGCCGAGGCCATCCTGGTGCGGTAGCTTATGCTGGGGCA
GATGGGATGGCAGACCTTGCTCCAGCTCCCCTCTTCCTTCCCCAG (SEQ ID NO: 1119)

1176. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene OBSCN. In some embodiments, the sequences from gene OBSCN comprise or consist of:
TAGGGGCTGCCAGAGGTGGGCTGTGCCCCATGGACTGACGTCGCAGGGCCTCTCGGGGAGTG
ATGCTGCTGGGTGAGGGCAGGGCTTGGTCTGACAGCATCCAATCCTGGAGCCTTCCTCCAGGC
CCTGGCGGTCTCTGTCCACTCAGTCAGCAAACAGGGGCTTCCAGCGTCATCCATGCCCAAGCCC
CTCAGCACCCCTCCCGCCCTGCTCCCCTCGATGCCCTGCTTTATGGCTGACCCCTTTTCTGTTCT
GCCAGCCGGGAGCAGGAGGGAACAGAGTCCACCACTGATGAGGGCCAGCTGCCCCAGGTGGT
GGAGGAGCTGAGAGACCTCCAGGTGGCCCCTGGCACACGCCTGGCCAAGTTCCAGCTCAAGGT
GAAAGGTGAGAAGGAGAGGGAGTGGGGACACAGCCATGGCAGGATGGAGGCCAAGGAGCCAT
ACCCCATCAGCCACAATTGAAAGGAGACCCCAGCAGCGGGGTCAGGCAGTCACTCATC (SEQ ID NO: 1120)

1177. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene KANSL3. In some embodiments, the sequences from gene KANSL3 comprise or consist of:
GTGAGAGCAGCGTTGGCTTCGAGGGGAGTGGCGGGCCGTGGGGATCGCGGCCGTGGTTGGGA
CGGCCGGGGGTCTCGGCGAGGGCTTCAGGGCTCCCGGGGCATGCGGGGGCCCGGGCTAGGG
CCGGCTGCCGGTGCTGGTCGGGCGGGGCGGGTCGGGCCGGGGGCGGGCTGGCAGGGGCCG
CGTCTGGGCCTCCGTGACGCGGACGCCGAGCCCTGCCCCAGGGAGCGGGAGGCGGGAGGCG
GGGGCCAGGCGGCTCCTCCTCGTCGCGAACTCTGGATGACCTTGGCCAAATCGCTTCAGTTCCC
CGAGCTGGCGACTTCGTCTGTAAAATGCGAGTCATAGCCCTGTCTCCTAGATGGGCCGTGTGGA
GGCTCAGTGGCGGGAACGCCTGCGGGGCAGCCGGGGTCCTGGGCGGTTTGCTAGGGACGCCT
CACTGGGGGTGAGGGTGAAAGGGCTTCCACGGGGATCATTTTGTCACAGGCTTTGTTGGGGGG
GC (SEQ ID NO: 1121)

1178. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene KANSL3. In some embodiments, the sequences from gene KANSL3 comprise or consist of:
CCTCCCGGGTAGCTGGGACTACAGGCATACACCACTATCACACACACCTAATTTCTAAAATTTTTT
GTAGATACGGGGGTCTCATCATATTGGCCAGGCTCATCTCAAACTCCTGAGCTCAAGAGGTCCT
CCCGCCTAGGCCTCCCAAAGCGCTGGGATTACAGGCGTGAGCCACATTAGGTAAATTCTTAATG
AGTAAATTCAGGTGGCTGCCCTGGTGGAGGTGGACCGTTGGGTGCTCGACCGCCCAGAGGGCA
CAAAGGACCAACACGGTGGGGGTGGCGAGAACTGGGGCCGTAGAAGCCAGCCTAGTCCTCCGC
CCTCGCTTTCCCTACTGAATATGCGCGAGGGGGAAACTCCAGCCTAGTTGTTGACTTTCTGCTTC
GGACATGCTCGCGTGTTCTTGGCTCTCCTCTTCCGGACAGAGGCGCCGGAGCTTCATCCGTTCC
GGGCTTTGCCGCTCACCGCCTCTCCCTTCCCAGGCCGTAACCCGCTTCCG (SEQ ID NO: 1122)

1179. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NEB. In some embodiments, the sequences from gene NEB comprise or consist of:
GTAGTGCCCACTTGGTCTTTTCTTTCCCTCTTAATCCAAATAATTGCACTAGTGACACTCATTAAT
GTGTTCCTCCTACCATTTACATCACCACCTAACTGTGGGTTTCAAATTGGGTTCTCATGTGCTTGG
TACTACCACCTAATCTATTACCCATGTTAATTCTTCTAATTTTTTATTTGAATATTACCTTAGCATTC
TATTAACTTCAAGCTTTCATTTGATATTTAATGTTAACTGATCATGCTTATACCCTGCCTGTATTCAT
ATTTTTACTTACTAAACTGTGAACCCTTTAAAAATTGGAATTGTTTTTTATTTTCTTCTTTGCCTGAG
AGAATCAATCTGGGCTTTCTTGTCAATGTTGTTGCTTTTCTTTCATGATATAGAAAGAGTACAGGA

AAGATCTAGAGGAAAGCATCCGTGGGAAGGGCCTCACTGAAATGGAAGATACACCTGACATGCT
AAGAGCAAAGAATGCCACTCAAATCCTCAATGA (SEQ ID NO: 1123)

1180. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NEB. In some embodiments, the sequences from gene NEB comprise or consist of:
CCAGCCTGGGCATCATAGCAAGACCCCATATTAAAAAAACAGGTCATGATTAGGAAAAAAAGCAA
GTTAGCATTTGGTAGCCTTAGGCTCTCCTTCCACTGCGATTTTTTTCCCCTTGCCTCACTGACTTG
TAATTCTGAAATAAAGTCTTTTGTCACCTTAAGAAAGGTGTGGGAAAGTTCAGAAGAGACAACAGA
GGATTCAGAGTCCTGATGGTGCATCCATCCTTCCACTCTGTGAAGGGCCTGCCCCAGTCACAAC
ATTAGACTGATGAGTGAGGGGCCCATCAAAGTGTCTCAGCCTGAATTTCCTTGTGGCCATTTGCT
CCAGACAAAGTATTTCAAGTACAATCATACATGTTTCAAATGTGTGACCATTAGCAGAACTATGAT
TAAGAGCCCATACATAGAAAATGCTGTTTTTTTTTTCTTCCTGAGATGGAGAGATATATTGTAATAA
AGATTTTTTTTTAACTTGTCTTTCCTTCCTACTTACATTA (SEQ ID NO: 1124)

1181. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SEPT2. In some embodiments, the sequences from gene SEPT2 comprise or consist of:
GGGGGACGCGCCGCTCGTCCCATACTCTCGGGCGGTGGTCGGCTGGCTCTGGGGTGCCGGCG
GGGCGGTGTGGGGGAGGGGCGGCCGAGCCCAGGCTCTTCGGCACTTATCGTGGGCTCCCCCG
TCCCGGGCGGTCCTAGTGCCGGCGACAGTGGCTCCGACACGGGCAGGCCCGGGCGCGGGAGT
GGGGATTCCGGTGACCCCTTGTTGACCCTGCGGGAATTCCTCTGCACTGTCGTCGGTGCTGGG
CCTCGGGGCGTCGAGTGCGGTCGAGGTCGGGAGGTTTGGTGCTTGGAGGGAGGATACAGGTTT
AGGCCCGACAAACACTTAGAGCTTGTGTGGCCATCTTGTCTTTCTAACGGTGCCATTTCCTCCCT
GAGGCGTGGAGGACTGGCCAGCCCCCAAACCTCCAAGCCCATCGGCTGGATGCCGTGGATAAG
CGAGGGGAGAGCGACTAGGCCCTGTCTGCGGGTACCTTCGGCGAGGAGAGGCGACGAAG
(SEQ ID NO: 1125)

1182. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SEPT2. In some embodiments, the sequences from gene SEPT2 comprise or consist of:
CACGGACAGGCAGCAGGGGGTAGGGTATAGGGTTGGAGGCCGCCGAGTTGGCCCGGGGATGA
GGAGCAAACCTGTGGCTTCCGTGGTCTCAGTGGAGTCCCAACTGTGACCTGGCCTACTGGCCCA
GACAAACCTGGCTTGCTTTTTTACCTTTTCGGTCTAATTCTTGTCAGTGCCACCAGACCTTGTCCT
CTCTCCACGGAAACACACGAACCAACTACACTGAACTTCTTGTAGTTCAAACTTCTGCACCTTTG
GCCATTGCCCAAACTCTTAAATCTGGCTACTTCCCACCTTAACTGCCTTCTCCTTACCTAGTCTGT
GCTTGTGGGATTCCGCCCAAATTAGATTTCCTCCAGACAGGCTTAGGTGTTTACCTGATGTTCCA
GATGGTATTTGTCCAGTGGACTATTGGTGCTGTGAGGGCAGGGCACATGTTGTCACCCATACTC
ATTGCCTCGGTTGGTGTCTAGCACCTAGTAGGTTCTCAAATACTTTT (SEQ ID NO: 1126)

1183. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SLC6A6. In some embodiments, the sequences from gene SLC6A6 comprise or consist of:
GTTCCTTGGGACCTCCTTCTGCATTCTAACTCGGGGGTCTGCAAACAGTAACAACAATGGTGGTG
ACAGCAGCCTTGACTTACGGGCTTGCCATGTAACTGGCACTGGGCTGAATCGCCACTCTTTGAA
CCTGGGAAATAGCTCTATGGGGTAGGGCAAAGGAGCCCATTTTATAGATGTGAAAACTATCTATA
AACTGCAGGAGTGATATTTACTTGCCCACTGTCATTCCAGGGTTGGAATCCAGATCCATCTGCTT
CTGAATCCTCTTAACCCTGATGCTAGGTCGCTGGGAGGTGGGGTGTTTGATTTCTGGGGCTCCT
TGCAGCTCAGTACTGCCTTGAAAGGCACCTTGGATTCGAGCATAAATGTTCCATTTGCATGTGCA
AGGTCCCGTCCCCAGGCCATCGCCAGGTGGACATAACCCTCGCTGCCTCCTCCAGGAAGCCAG
CTCTGACAGCCCTCCTCTCTTTCCTTGCCACCTCCCTCCCCCTCATAG (SEQ ID NO: 1127)

1184. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SLC6A6. In some embodiments, the sequences from gene SLC6A6 comprise or consist of:
CAAGTGTTGCGCCGGCGGGCCTGGTGGACTTTAGAAATGATGATGATGATGTTTAAAGAAAAAG

AGAAGTAGGGAGCGTGGCTTCCTTGTGTTGTGAATTAACTTGCTCCCTGACATATGTGTAACTTA
GGGACTGTATGCTGCTGGGATGCCTGAACAGTGGTACCAGTTTTGTGTCTGGCTTCGCAATTTTT
TCCATCCTGGGCTTCATGGCACAAGAGCAAGGGGTGGACATTGCTGATGTGGCTGAGTCAGGTA
CGGTGGTATCGGTGGCAGTGGTGGTGGGCACTGCCACCTAGTGTGTAAGCCAAGTACTGCAGG
CATGAAGCCAGACCCCAGGGGGCTTTGAGGGGGGACGAGCCTGGTTTCTAAAATGGACCCCCC
CCCCGCCACCAAGATATCCCCCAAATTTCAAAGAGTACAAAGCCAAATTTTAAACATTTGTATTGC
AATTTGGCCCTGATGGGTGGCAAAAGCATGGGGGGTGGTTAAGTTGGGG (SEQ ID NO: 1128)

1185. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene THOC7. In some embodiments, the sequences from gene THOC7 comprise or consist of:
GTGTGCCGGGAGCGTGGTCGGTGGGCTGGGAACACACGTGGGTGGCCGAGACGGCTAGAAGC
GGTGCAAGGGCGGGTGGGACCAGAGGGAGTCCGGGTTTGTCTAGGGGCGCGGTGAGGACCCA
GGAGCCGCGAAGGGTGGACAGTGGTGCCGGGCTTAGGGCTGGGGGCCTGGAAGGTTTGTGGA
GGTCTGGGAGGGAGTGGGAGCTCCAGGGACGGGGCGGGAATTTCGGGACTCGTCTACAAGGG
GTGTCAGGATACAGAGCGTGACACCAGGAGGGGTCCTGGGGCATATTGGGAAGCACTCACAGA
CAGTGGAGTCGATGGCAATGAGGCCTTGAACTGCGAGTGGATTGTGGGTGAGAAGGAGGAGCA
GGGAATTATTTATAAAAGGAATAGATAGGGATGAGGTATCCGGAGGGTGATCAGGAAGTGTACCT
GGGAGATTTACGGGGGTAAGGAGGAGCCAGTATAGTGATGAGACCGTCTAGGGTAGATCA (SEQ ID NO: 1129)

1186. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene THOC7. In some embodiments, the sequences from gene THOC7 comprise or consist of:
GGGGCGGCGGGGCCGCAGTCACCTTCCCGGGGAAGAAGCCGGGACCCCGACTGCGGGCGGC
CCGCAGCTCCCGCCGCACCCCCGCAGCCCTGGCGGCGTCCGGGCGAGCTCACCTGGCGGCTG
GCTGCGGCCTCCGGGGCGGCCTCTGGGCGTGGGCCGGGCGGGGGCTGCAAGGGGGGCGGC
GGGAGCCCGGGCTGCAGCCGGGGCCGCCGCCGGCCGCCAAGCCTCGCCCCAACTCGCGCCG
GCCGCGGCCGCCCCCGGGGAGTACCGGGAGCGCGGGGAGCGCGGGTCCCGCGGCGGCGGC
GGCGGCGGCGGCGGCGCGGCGCGGCGCGGCTCAGGCGTCGGAGCAGGCGGCCGCGGGCGC
CGCCGCCTCCTCCTCCATGGCTGTTTACCCGGCTGCATTGTGGGAGTTTGACCTCCGCCGCCGC
CAACCGCCGCCTCAGCTTGCGCCGCCGCCGCCGCCGCCGCCGCGCACGCCATGGGAGCC
GTGACTGAC (SEQ ID NO: 1130)

1187. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MBNL1. In some embodiments, the sequences from gene MBNL1 comprise or consist of:
AACACGTCAGACTCATTTACAAGAATGCTAGATTGTGCATATGTGGCATGTTAATAAGTAACCTTT
GGTAGAACTATTATGATGGATTCAATACAATCCATCTATGGTGCAAATCAATGATAAAGAACTCTC
ATGCGTCTACCATGTATGACTGTAGAATTGCTGGTGTAAGCAGAACTATAGCAGAGCAAATTTCA
ACATGCCCTTGGCCACCTGGGTTGTAGGGGACACTTTACTTTTTGCATTGTGCTGTGACCATTTC
ATGCATAATCTTGGATCTTCATACTATTTGACAACCAAAAGAAAGAAAAGGGAATGGATATATATA
TACACACATATATTATATCTACATATACATACATATGTATATGCCTACAGTACATTAGCAATGCTGG
AAATAGCTGATGCCACAAAATGCAGCCTGCATGCATGCAGAAGTTTATAGCTGGCCCTTCATCTG
CATCGATTGGTGTTGAAGGTCCTTGGTATGTTTCGACAG (SEQ ID NO: 1131)

1188. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MBNL1. In some embodiments, the sequences from gene MBNL1 comprise or consist of:
TATGAGAAGCTTCATTATGCTTGGAGCACATTTTCGTGCCATTTGCCAATGCTGTAAAATTGTGTA
AAAATGTCAGCTGAGAACTGGAAATAAAACAGGGACATATTAATATACACGCCAGACTGTGGATT
GTAGTATGTTGAATTAGCCTAAGATGTCTAAATTGAAAGAACAGCAACAAAATGCCTTTGTGTATC
TGATTTCATTATTCTCCCAACAACATTGCTGAAATGGGATTAGTATCATTTTATAGAAGAGACTTAA
GCATAGAGTAATGAGTTGCTTTGCTCAGGGTCACACAGCCAGTAAATGGATCTCTGGGGCTAGC
ACCCGTGTCATCAGTCCTCTGACAGTCTCAATCCATTGTGCTGCCTCTCTCAGGTTAGCAGGCAT

TAATTTCAGGTTGAAGAATCAAGCTACAAATCCGAAGTTCTTAACTTTGGGAACTATTGAAATAAG
TCAACTCTATATTGGTTTCTTATTGTATTTTCTCTCAAGT (SEQ ID NO: 1132)

1189. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SPARCL1. In some embodiments, the sequences from gene SPARCL1 comprise or consist of:
GTACGTACCATCTTACTCCTTAAAATGTTTGGAACTTTTTGTTTAAAAACTCAAACTCAAAGTGAAA
TCTCAATTTGTCACAATGGTGGTTTTTTTGTTTGTTTTGGGATTTTTTTAGTTTTTGTCCCCCTTCCT
TACACCTTTGTGTAAGAGGTAAAATGGAGAATTTGCAAAATAACTAGAAAAAAGCTGGAGTGGGA
GCCAGGAAATCTAGCTTCAATCCCAGCTCCCCTTCTACAGAGCTCAGTGATCTCCAGCATGTCAC
ACTGTAGGCTTTCTAGGCCTGTTCTTCATCTGCCACATCCTGGGGTTGTTGTAAAGATCAAATAA
GGTAATATCCCATTTGTAAATTTATTTGGTAAACCCAAAGCACTATGGCAATAGAAATGTCAAGTA
TATTTTATATGCCATTACCCGTTCTAAATAAAGTAAACACCCATTCCATTGTTAATATTCTAAATTTC
TCCTTGTTATATGTAGTCATTTTCAGAAGGATCAC (SEQ ID NO: 1133)

1190. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SPARCL1. In some embodiments, the sequences from gene SPARCL1 comprise or consist of:
GCATTCACTAGGAGGATAGAATGTTTTAAATTATCATCGCTAATAGAGTCCACAT
ATTTACTTTAAGCATGAATTACCATATATAAAATATTTTATTTTAATACAATAAAAA
TCATGGAATATATTTTAGTGGGTTTAGTAGTTTAAGGGGAAAAGATAGCAGCAAT
TTAGGATTCATACAATTAATGGAATTATTTTCAATTTTAGAATCCTAAAATATTAG
GGTTAGAGGATCATCTAGGTCTCACTCTTCATTGTTCATCACTTGAGAAAACTGT
ATCTAAGAAAGGGCAAGTGACTTTCCCAAGGTCTCCTGGCAGTCAGGGACACT
GCTAGAGCCAGAATCCAGCTCTCCTGACAGTTTAATGCTTTTCTTGTTTTAAGGT
GTTTTTCAATGTATTAGAGTTTTGGGGCAGCGGGGGGAGGTTGCTCCATGTTTT
TACTTAAATACATTTTTCTTTCATGGAAAATTGAATTCCTATGCTTTTTGCCTTGTT
TA (SEQ ID NO: 1134)

1191. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene PALLD. In some embodiments, the sequences from gene PALLD comprise or consist of:
AAAAGAAATATACTGCATGATGATTTGTGCTTTTCGATTTAATGTCACACAATCGTTTTTACACTGT
ATGTGCTTTCCCTCCCCACAGCCCCAGTCCCAGCCCCAGTCTCGCAGTTCCATTCCTTCAGGGC
AGCTTCCATTCTACCGTGAGTTTTTATTGCTTTCCCCTAAAACGCTGCCCTGGAGTCGCGTTTATT
GGACACTCTTTAGTCTGTAAAGGAAAAAAACACAAACACCGGAGGAGAATCATCCTAACAAGCCG
ACAACATATCTATGGGCCTAAAAAACTTAAATTCTTTCCCGTTATTAGCACTTCTCGATCGTTCCA
GGAAAGCCCGATTTGTAGCTTGGCTGCCCCAGGAAGGGGCCTGCGACCAGAAAGATGCAAAGG
GCGGGACAAGGTTACGAGTGGGTGCGGGGAAGCCTCCCTAACCTGGGGGCCGCGTCCCAGAG
CTGCGAGCCACGCCTCCTCTCTCCCGCCCGCCGCGCCGCCGGACTC (SEQ ID NO: 1135)

1192. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene PALLD. In some embodiments, the sequences from gene PALLD comprise or consist of:
TAGGCGCGGGGAATCGGCCCTGAGGCTGGTGGAAGAAATGTGTGAATTAAAGGGAGTGCAGCG
TGCAGGGTGGGCCGCGAGTCGGGAGTGCAGGGCTCGGGACAGGGTGGGGGCGGGGAGGACA
AGAGACTCGTCAGCGCACTTTCCACCCGGCCGGTTCCTTCCCGAGCCCTCTCCCTCCCCCGGC
CCGCGGGAGCACAGATCCCTGAAAGCGGAGCTCCAGATAGGAATGTCTGCATCATCTTGGCAG
GGCCCAGACGGGAGAAGATGCTCTGCTGCCACGGACGATCCCTCCCGCTCTCCTAACTCTTCTC
TGAACACCTCGCACCCCCACGGCCCCCCGCCCCTCTCTTAATCTTGGCCACGCTCCCTGAGGG
GTCAGACCTGGGGTGGGAGAGCAGAGAAAGCGGGGCTGGCAGAGACAGGGGTGAGGGCCGG
GAGAGGCGATGACATCATTCCCTGGCAGCTGGCGGGGAGAGGGTGGGGACGGAGGGGTCCC
(SEQ ID NO: 1136)

1193. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ASB5. In some embodiments, the sequences from gene ASB5 comprise or consist of:
GTATGTTTATGATAATCCTCTCTTGTTTCAAGTGGAGTTTAACTTTCATCTGATCCACAATTACATG
TTTTCTTTTTAGACTGCTTCAAGGTAAATATTTTATAAACTTTTGTTAAGGGAAATACTTGTAACTCA
CTTCGTGGCTTTATAAAAAGGAAAATTACTTTTTTAATGTAAATGTTTGGGTTAAAATCAAGGTATC
ATTGCAAAAGAGATTAAGGAAGGCATACTATATATATAATAGGAATATATATATGTAATAGAAATAT
ATCTATTCCTATTAAGAAACATTTTAAAAAGTTAAACATTTGATCTGCCAAGTCATAGTATTAGAGA
TTAGTTTTAGAAGTAATTGATTGCACTTCAGTCGTCCTCTAATGTGTACCTGGATTGTATAATTTTA
AATTAAATCTTTAGTTATGTGTAAAATAATTGTTATTAAAAAGAGGGGATTTCAAGATTTGGTTTCT
CACAACTTTAATAAGATAACCATTTGACT (SEQ ID NO: 1137)

1194. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ASB5. In some embodiments, the sequences from gene ASB5 comprise or consist of:
CCATTGGATGAAGGAACCGTGTTAAGTTATTAATCTGTGATGTTCCAGTGTAATGACTTGTAAGAA
AAATGTTTTTTTAAATCAGTAAAAATAACATAATTGGTTAATTTGATGAGTAGTCATTAAAATACAAG
CCATGGACTGTGTACTGATTTAGCTCATGGTCTACAAATAGTACAGTGCCATTTTAAAGCCTTAAA
TGATAGACAACTTTACTCGATATGAATATCATTTACATTAACAATGGGAACCCCATACACTGTCTT
CAAATTGTTCTTGATAACTAAATATATAAAATGGAAAGGATATGCATATATATTTCAATATCTGGAT
TTTGAAATTTGGAGCACAGAGGTGGAGTGTCATTTTATATTGAGAATGGAAAGTCAGGAGACTTG
TGACACGTGATGCAATTGCTTCCATGGAATATTTTCAGACCAATAGGAGTTTGCGAAGAACTTTTA
TGGAGTGTATAAATATTTTGAGCTGTAGGCATCAC (SEQ ID NO: 1138)

1195. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CMYA5. In some embodiments, the sequences from gene CMYA5 comprise or consist of:
AATATTACTCATTTTTTAAAATTGGAAAATATAGAAAAGCACACAAAATATCACTCAGATAAATACT
GATTACAGTTTTGATCTCTATCCTTCATTGAAAACATTTAAGTCATTTTTCCTGCTTTAGAGAATTC
TATTCTGGAAGCTAAGCCATTGGTTGATGAATAGAGAGAAGCAGAGCATAAGCAACTCATTGCCA
GTCCCGCTGATCACAGAGACAGAGCCAACTGCAAATGAAACCATCCTCCATCCCTGTCCTGACA
CTGCCCATCCCACCCATTCCCCCTCCCCTGCACCCCGCCTTGTGAGCACTTATGTCCTTGCTGC
CCAGACTGAGACAAAAACAACCTCAGGGAAGCTGAGGGGTTATGATTTTCAAACGTGGGTAATCT
TAATGCTCCTGGTTGTTTTTTCTTTCTGTTGTTAATTAGCTTCTCTCTCTCTTTCTCTCTCTTTTT
CTCTCTTCTCCTCCTCCTTCCTCTCTCTTTCTCCCTAAG (SEQ ID NO: 1139)

1196. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CMYA5. In some embodiments, the sequences from gene CMYA5 comprise or consist of:
TATATAAAACATGATACAATGTAGTGGCAAACAGCATGACTGGATGCTTGCTTTTTAATATTTTGG
TGCTTTATGGAAAATGAGCTGCCAATTAAAAAATGCATTTAGTGGGCTACAGTATTTTCACTTTTA
GACACAGTGCTTTTAAAAGCTAAATGACAGCTTTGAAAGAAAACTGCATGTGCTTTAGTTAAATAA
CAATTATCATAATGTAGATTTTTAACTGCTTCCTCAAGATGTATTCTGCATTTTCAGCCTAATCTAG
GCCATCTTTCCTGTCACTGCATATAGAACATTTTGTAGATGCTTAGATGCATTGGTTAAACATGAG
TATTTGAAAGAATCATTCATATCTGCCTTGAGTAATTTTATGATTTATGTAATTTTAATGAACTGTTC
TATCATTTTCTCTTCAAAAGATAGTCATGCATTTATCTTCTCTTTCTGCTCAGCTAACCTAAATGAA
TCTCCCTCCTTTGATTTTGTTTTGTTTTGTTGG (SEQ ID NO: 1140)

1197. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MEF2C. In some embodiments, the sequences from gene MEF2C comprise or consist of:
GTGAGTGCTCACATTTGTTTTTATCATTTACCACAGAGTTACCATAAAGGTAAAACTGCCAAACTC
CTTGGCCTTAGGTATTTACAGAATAGACGTGTATAACAATAATAAAGAGTTAAATGACCACCATAC
ACTTTATATTATAAGCAATGACATATCATTTTGCTTAAAGATCATGTCATCTTTCAGGGCCTACTTT
TGCAAGTACTGTATCTTATAAAATTAATCTATTTCATGGGAAGTCCTGTGTATCATCAATACTATAA

TTAGACAAAGATTAAAATATGTAATGCTATTGGAATTTGTGTTTCACTGCTTTTTAGATTTTTCTAAA
CCACCATGTTCACTTATCATGTTTGTGTTAAAAGTATTCTGGCTGAGGAACAAATACTATACAGTT
GAATAATCTTAAGGGGTACATTAATCTATAGCCTTTCTTCATCTCAGGGTGGGTTGCTGTGGCAA
CCGCCCCAGTTCACTTTAAAATAATTTTTAAAGC (SEQ ID NO: 1141)

1198. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MEF2C. In some embodiments, the sequences from gene MEF2C comprise or consist of:
GGCCTTTAGGCAATGCATAAAATAAGCCCTTTCAGTAACCTCAACTGCATTGCAAACATTTCCCGA
TTTGACAAATTGTGTTAGCTTCGGATATAATGGATTTGACATTCTTCTGTAATTCTCTATCAGATAT
AAAACTGAAGGTACAGAAATACAGATAAACATAGAATCCTTAGATATGTGTAAACCTTGTCTTGAA
ATAACAAATCCTTTGTATATTGCAAATTCTCAATCACAGACATTCCACATGCTGTATATTCTTCTTG
GGTTAATGCTGCACCTAGTGAATTTTTGAAATTTAGATATTTGGCACTATTTATGTTAAAGATTATT
ATCACAATGCATGACAATTTCAGTTGTCTTATATTCAAAACACTTTGGTTTAAAATCAGAATATTGT
TACTTCAGATTAGAAGTTTTAGAAATAAATCTATTTGAAAGTATTTTCATATCAGCATTAACAAAATA
CTATATACTGTTTTGCACTTCCACATTTGAA (SEQ ID NO: 1142)

1199. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CSNK1A1. In some embodiments, the sequences from gene CSNK1A1 comprise or consist of:
GAAGTGGCAGTGAAGCTAGAATCTCAGAAGGCCAGGCATCCCCAGTTGCTGTACGAGAGCAAGC
TCTATAAGATTCTTCAAGGTGGGGTTGGCATCCCCCACATACGGTAAGAACCCGGTGCATATAGG
CGATCCGCTGAGGGAAGCACGGAATGGGGAAGTGGGTAGAGGCAGGTAATGAGACCAGCTGAA
TCCGGGTCTTGGTGTTTTAGTTACCTGGGTTCCCTATAGCTGGTGGTTTCCTGTAAGTCAGTCAT
CTCAATTACTGAGTAAATTTCAGTTTGCCAACTTATTTCATTGTATTACACTGCTCCATTTCGCTTC
CGTCATTCTCACTCTTCCCGAGGCTTTCATTTGCAGTTATGCGTGCAGGTCATCTTTGATCCCTAC
GCGGAAGGGTTGGCTGCTGCCTTTTTTACGGCGGCACTTCTGATGTACTTAGGTTTGTCCAGTGA
AGTGGATTTGAAGGTGCCGAAGCGACCCGGCAGTGTCAGTTCGA (SEQ ID NO: 1143)

1200. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CSNK1A1. In some embodiments, the sequences from gene CSNK1A1 comprise or consist of:
GGGGTGGGGTTCACGATAACGCTGCGCTTTTACTCATTCCCCCCACCACCACCGTGCACCCCCA
AAGTGCTCGGGCCTCTCCTCATCGCACGCACTCGCCAGGGAGTCCAGGGAGCTAGTTTTCCTGG
CTTACGAACCTCGTCCGCTGTCTCCCTAAAAGGGTCAAGAACCCGATAGAAAGGTTGGGGGAAC
TAGTTTCCCACCTTGTTAAACACGTCCCATAAATGTCCCTTAGTCGAGCTTTTTTTTTTTTTAACCG
TCTTTTAAGGTGGAAACGGCAAAATCCTCTTTCAGTGATTCCCATGTTTTTTTTTTTTTAATTCTTAA
TTCTACTGGGCCTCTTGTTCCAATTAGAACAGTTTCCGATCGCCTAGTTCCTTAAAAACCTCTCAC
TACGTTCAGAGGTTGCCTCTTTTTTCTGGATGAATCATTTTCCTGCACTTTAGAGGACGTACGGAT
TTCGTCACTACCCCCTGAAGAGGCCTTTGAGGCTGGTTGC (SEQ ID NO: 1144)

1201. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TRDN. In some embodiments, the sequences from gene TRDN comprise or consist of:
GTAACAGAGTTAATTTAATATAATATTACAAATTTATTAGGAAATATATATTATTGAGAACACAGTAC
ATTAGCTGCATCCCCTTTGCAAATATGTAAACCAGAACTGCAGAGGTCACACACATATTTTTAAAA
ACTTGTGTTTATTTGTTTGTCTCTAAAATTATTTCTTCTCATTATTACCAAGAAAGTGCTCTGATTAC
AATTCCCAAAAATCCCAAAGAGAAAAGAAAGAAAAATGAAAAAAGGTTTTTTTAATGAAAAAGATA
AAAAATATAGAAGGGAAGTAAAGAATATTAAGAAGCACTTGTCCCCAAATTCTCTGATTCTCTCCT
TTCTATTCCTAAAATATATATTTAGTGCATAATATATCCCAAGCACTTGGTAAACATTGGAGATGAT
GATGACAACAAAAATGGCAAAGCTACAAATAGGAAGTAATATTTGGTAATTAGAACTCTGCATTCT
GATATTTTCAAATGCTCTGAGGCATATTCTGC (SEQ ID NO: 1145)

1202. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TRDN. In some embodiments, the sequences from gene TRDN comprise or consist of:

TACTGGAGCCAGTACTTATGTGCTTGAGAGCATAGATATAGTGGTTCAAATCCAAGGTCTCCTATT
TAAAGATCTTGGAAAGTTATTTAATCAATTTATGTGAAAAGTAGAAATAATAACAGAACCTATATAC
CTCATGGAGTTGTGAGCACTGAATGAGAAAATGGTAGAGAATATTGCCTGACACGTAGTAAGTAG
ACAATGTTAGCTATCATTCTTATATCTTTCTTCTTCAAAGCCCATGTTAGTTTACATGTACCTTTTTT
TGTATATATGGCATAGTCTGTACTAGTGATAGAAATTCATGGGCTTATTTTCTATTGTTTACATATT
TAGTCCAATGTCTTATAGACAACATATGCCTGGAGACATTTGTATTGTGAATATCAACTCAGATGC
CCTGTGATCTTAAGCCTCAGTATACAAAACACATGAAGAGACTTGCATTTTTTTCCTCTCTTATTCC
TTGTAACTTTTTCTTCCCATGATCTCTCTTGCA (SEQ ID NO: 1146)

1203. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CCZ1. In some embodiments, the sequences from gene CCZ1 comprise or consist of:
TTGCTATAATAAAGTGAGACAGGATGATATCCATTTGCTGTCTTTGTAAACGTGTGTCAATGGAAA
TCGTCACAGAATAATGGACAGTTTCTGCCAATTCTCTATTCTCTCTGGACTATACACAGAGAGACT
AGAACAGTGAACCCCTAAGTCCCCATCACACAAGTGAATAAGATTCTGGTCTTCGTTGCTTCTCC
ATGTTGTGTTGTCGGGTTTGCAAGAGCATTTTAAGTCATCACGTCAGTCACGAACACTTCCCTGT
GCCTCTCTGATGAGGACATCCGTGGTAACCTCCCCACTGGCGCTGTCACACCTGACAAGGTCAA
CAGCACTCCCCTCGCATCATGGAATGGGCAGTCTGTGTCCAGATGGCTCTAGTTGACCAAAAAG
CAGCTTCTTACAGTTGACTTCTCCCCATTGACTTTGAACAGATTGTTATTATACGAAAGTCTCCTTT
TTTCCACCATTTCATAACCTCTGGTTTGTTCTGTCTTCCCAG (SEQ ID NO: 1147)

1204. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CCZ1. In some embodiments, the sequences from gene CCZ1 comprise or consist of:
TGGGTACGCGCCTTTGTCTGATTTCAGCCTAAGCTTTTTGTACTTTGCTGCATCCTATTCTTAAGT
GATAAATATGTTTTGGGGGTTTCGGTTGTTTGGGCTTTTTTTGTTGGAGACGGGGTTTCACTCTTG
GAGTGCAGTGGCATGATCATAGCTCACTGTAGCCTCGACCTCCTGGGTTCAAGTGATCTTCCCA
CCTTGGCCTCCTAAGTCGCTGGGACTGCCAGTACACACCGCCGGACCCAGCTAATGTTTTTGTG
GTTGTTTGTTTAGACAGGGTCTCACTATGTTGCCCGGGCTAGTGTCAAACTCCTGGGCTCAAGCG
ATCCACCCATCTTAGCCTCCCAAAGTGCTGGGATTTCGGGCGTGAGCCCCCACACCCAGCCCAT
TAAATGATAAATGTGTTGTCATAAGCAATATAGAGGCATAGAGAGGAGCCCTGTTCCCCATCTGG
GACCCCCCTGTCTCCTTAACTAGCCAGTGCTCATATTTTTTAAGT (SEQ ID NO: 1148)

1205. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene GTF2I. In some embodiments, the sequences from gene GTF2I comprise or consist of:
TATGATAAAAAATAAATAAATTAATTAATTTAAAAAAAAAGACCCCAAATGTTTGCTTTTAACAAAAC
TGAATTAAGAGAATCACTGCAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGG
AGGCCGAGGCGGGCAGATCACGAGGTCAGGAGATCAAGACCTTCCTGGCTAACACCGTGAAAC
CCCATCTCTACTAAAAATACAAAAAGAAATTAGCTGGGCATGGTGGCGGGTGCCTGTAGTCCCAG
CTACTCAGGAGGCTGAGGCAGGAGAATGGCGTGAACCTGGGAGGCGAAGCTTGCAGTGAGCCG
AGATCGCGCCACTGCGCTCCAGCCTGGGCGACAGAGCAAGACTCTGTCTCAAAAAAATAAAACA
AAACAAACAAAAAAGAATCACTGCAAACAAGAGTACTTTCTAGCAAAATCCATTCTGATTTGCAAC
AGCACTGATAAATAACATGGTTATTGGGTTTCTTTTTGTTTTCCAG (SEQ ID NO: 1149)

1206. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene GTF2I. In some embodiments, the sequences from gene GTF2I comprise or consist of:
TAAGTAAAAGCCAGTATTTATGTCTTTAATAACATATCAACAAAGGGCCATGTCTGAATGAAGTAT
AGAAGTTCGGGACCAGCCGGGTGCAGTGGCTCACGCCTGTAATCGCAGCACTTTGGGAGGCCA
AGGCGGGCGGATCAGGAGGTCAGGAGATCGAGACCATCCTGGCTAACACGATGAAACCCCATC
TCTACTAAAAATACAGGAAAATTAGCCGGGCGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTCG
GGAGGCTGAGGCAGGGGAATGGCTTGAACCCCAGAGGCGGAGCTTGCAGTGAGCCAAAATCGC
ACCACTGCACTCCAGCCTGGGCGACAGAGTGAGACTCTGTCTCAAAAAAAAAAAAAAAAGAAGG
AAAAAAAGTTCAGGACCTAAAGAAGGAAGGTCCCAGAAACTGGGTTTCTGTTTCTTTCTACCACT

ACACTTGCTACTGAAACCAAGCAGATGACTTCATTTCTCTTGGATTCCACT (SEQ ID NO: 1150)

1207. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene POLR2J3. In some embodiments, the sequences from gene POLR2J3 comprise or consist of:
GTGAGTCAATTAAACCTCTTTTCTTCATAAATTACCCAGTTTCTCATAGTTCTTTATAGCAGTGTGA
AAACAGACTAATGGACCCTTCTGGTTGAAGGAATGCAGCCATTCTGCTTGTTTGACTATGTCCTTT
CTATTCATCTCTATTTCCTGGGAGGTGTTTATCCAAGTGCAATAGGAGGTATTGGTGACCGCACA
GTCCCCTCAGTGTTCTGCTAGTAAATAGTTGAAGGTTGATCATTGATCTTCTGCGTTTTCAGTCTG
GCATGGAAAAGCCCCTGTGCAACTGGTAAAGATATCAATAAGCACCAGGAGGTATCTAAATCCAC
CAGGAGCCATAGGCATCACGTTGACATCCATTTACCAGTCTTCCCTGGCAAGATTCTTCTGAATT
GTGCTGCCTTGGCCAAAAGAGGTATGGGAGGGGCTGGGCGCAGTGGCTTGTGCCTGTAATCCC
AACATTTTGGGAAACCAATTCAGGTGGATCGTTAGAGGTCAG (SEQ ID NO: 1151)

1208. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene POLR2J3. In some embodiments, the sequences from gene POLR2J3 comprise or consist of:
GAAAAGCCGAGGCAGGGTGATCACGAGGTCAGGAGTTCAAGACCAGCCTGGCAAACATGGTGA
AGCCCTGTTTCTACTAAAAATACAAAAATTAGCTAGGCATGGTGGCATGTGCTGTAGTCCCAGCT
ACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCGGAGGTTGCAGTGAGCCGA
GATTGTGCCACTGCACTCCAGCCTAGGTAACAGAGCAGGACTCCATCTCAGTCAATCAATCAATC
AATCAATCTCAGCGGTTGAACTACCCTTGACATGGTTCAGCTCTGTATCCACACCCAAATGTCAT
GTCAAATTGTAATTCCCAGTGTTGTGGGAGGGACCTGGTGGGAGGTGATTGGCTCATGGGGGCC
GACTTCCCCCTTGCTGTTCTCGTGATATTGAGTGAGCGCTTGTGGGATCTGGTTGTTTAAAAGCG
TGCAGCCCTCCCACTTCACTCTCTCTGTCTCTCCTGCTCCAACATGGCCA (SEQ ID NO: 1152)

1209. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ATP6V1F. In some embodiments, the sequences from gene ATP6V1F comprise or consist of:
ACAGGGTCTCACTCCTGTCACCCAGGCTGGATTGCAGTGGCGTGATCGCAGCTCACTGCGGCCT
CGACTTCCCAGGCTCAAGTGATTCTCCCACCTCAGCTTCCTAAATAGCTAGGACTACAGCTTCCC
AAGTAGCTGGCACATGCCGCCACATCCAGCCATTTTTTTTTTGTGTGTATATATATAGATAGATAG
ATAGATCCGCCACATCCAGCCATTTTTTTGTGTGTGTATATATAGATAGAGAGAGAGAGAGAGAG
AGAGGGAGATGGGGGTCTCACTATGTGGCCCATTCTGGTCTCAAACTCCTGGGTTCAAGCAATC
CACCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCATCACAGCTGGCCTTCAGT
ATCTGCACATAAAAAGGGATCTGCATACATATAATCTTATCCTTCCCCTTTCTGACACATCACTGC
ATATTGAATACACCAGTGTGCACCCTAATCAATCTTCATTACCAG (SEQ ID NO: 1153)

1210. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ATP6V1F. In some embodiments, the sequences from gene ATP6V1F comprise or consist of:
TAGGGTTGACAGAGGGTTGAGCGTGGCAGCCTTTCCCCTTGTCCTCTGTGCCCTCTGGGTCATG
CTCATTCCCCTCCACAGCCCAGCCCAACAACTCGGAGAGGGCTGCCTGGGTAGGAGAGACGGC
AGCCCCCAGAGCTGTCCTGGACTCCCTTCTCATCTCTCCCCACAGGCAATTTCTAAACCGGGAT
GACATTGGCATCATCCTCATCAACCAGTACATCGCAGAGATGGTGCGGCATGCCCTGGACGCCC
ACCAGCAGTCCATCCCCGCTGTCCTGGAGATCCCCTCCAAGGAGCACCCATATGACGCCGCCAA
GGACTCCATCCTGCGCAGGGCCAGGGGCATGTTCACTGCCGAAGACCTGCGCTAGGGGACTCC
TCATAGCCCTCAGCCCTTCCCTCGTTTCCAGGCCTCTCCCCAGGCTTGCCATCAGCCTTCTTTAC
TTTTTGAGCCTCTGATTTCCAATTCCCTGCTCCTTCCCACTCCATTAAGAGG (SEQ ID NO: 1154)

1211. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ASAH1. In some embodiments, the sequences from gene ASAH1 comprise or consist of:
GTGGATACTCTTTTATTCTTATGGGGAAATGGAGGCGCACAAGTTAAATACTGAAATGTTTTAGAA

AACTGTTTAACGAGAGGTAAAATGTGCAATTATGGCTAAGCTTTAGTCATTAAAATAATTTGGTTTA
TTAGATTAACCAGTTCTCTCAAATTCTAATTAGTGCAGGTTTGATGGTAGAGAGGTTTGTGGGGTC
TCATCATCCCCACTTCATTGTAATCCCTTCATTGTCCGTTGTGTTGTGTTCATCCCCTCTCATCGC
GTCTCTGAGATCCATGAACCTACCCAGGACTCTAGGCTGAAAAAGAATCAGGAATTTATGGCGG
GTATAGAGGCATGATTTGGGATTGGTTGGATGTTATGAGGTGAGGAGCAGCTGATTGGAGTTCAT
AGGGATGAGATGCATATCTCCAACAGGCCACTGAGTTATCTTTGCTACTAGACATAGAAATCTAA
ATGCACAGTTGAAGGGAGAGGGGAGACTAGTAATACCTGC (SEQ ID NO: 1155)

1212. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ASAH1. In some embodiments, the sequences from gene ASAH1 comprise or consist of:
ACTGTGGTATTTATGTACCTTTGAATGACAAACAGACGTTCTGTTCCTTTGAGATCATCCTTTTCAA
TTAAGTGCGTAGATTTGGGCAGCATCCATGGGCAGATATGAGGGAAGAAAAAGATAACCTGTTTG
GCCAGCATGACTAGTCAAATCAATGCTGAAGATAAAGGAACTGATAGCCAGATCACCCCTGAGTC
CATCTGAGTCCCATTCAGCATTTCTTTCCCACTGCTCACGGGATGCCTAGCACTTGCTCTCTTATT
TGTATATGTGTGTGTTGTGTCACTTGGACTAGTTTCCATGCCACCTAGGTAGCCATGTGGGTTCA
GGTGATGTTGCTGATATTATGAATGGCATGGACATTGCAAACACTAAGTCTCAAAAATGATGAAAT
GATATTTCTTGTTTGCAGTGAAGTAGGAAAATAAATTGTGATGACTACTGTTGATTGAATACCAAT
GCTGCTAAGTGTTTTTTTTATTTTTGCATTTTTCATATA (SEQ ID NO: 1156)

1213. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CA3. In some embodiments, the sequences from gene CA3 comprise or consist of:
GGCAAGATAAATTAAGTATTGAGAATGCCTTCTAGACATCTTCCCCAACCAAATGGGGAAAGTTG
AGTATATTTCTTACAGATGCAGGCAAGGCTTTCAGTTTGACCTTTGCACATGGGATTATTTCATAC
TTTTGGTCTTGAATAAAACATTTTTTAACTGCTGCAAATGATTGTATCCTCTTGCCATTCTCTGTAA
CTCAGCATAGAAAGTTTGATTAACCTAACTGGTGCTCATGTTCTAAATTAAGGTCAGGTTGCCACC
AGGTTTCAGAGCTCTGGTTGATAAAAGGAGATAAATAAATAATTTTATATGCTTTTTATTTGAGCCA
CTAGAAATGTTACCAAAATGTTACATGCTACTCTTTCAAATTTTCTCAGCTTTTATGAGAGTGCTCA
GCAACCTTAGCCTGTACAATGATTGGGTTTATTGTGGATAATGTTGTACTTATTTCCATATTCCAG
GAATTTACCTTCTAATCTGTCTTCTATGGTTTCAG (SEQ ID NO: 1157)

1214. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CA3. In some embodiments, the sequences from gene CA3 comprise or consist of:
TAAAGTAAAAATTGACTATATATTTTCTTCCAAAATGTATTTCCCTGCCAATGGTTAGCATAGTTTG
AGTTTCATTTCCTCATTTTTACCTTCCTCCTTTCATATGCATTTTATTATTCATTCAACTAATCAAGA
TATTTCTGCAAAGATCAGCTCAAAATGTCTTACTTTTCTCTAAAAGTGTATCTTTTACCACACTCCA
GGACCCCTAGCACTTCTAAATTTTCCCCAGATGTGGGAGGTGTGTGTGTGTGTGTAGGTGTTGG
GGACAGAGCCTTAGAGTGAGCTTATTACGGTGGTGGTAAGGGCAAAGGTGGCATATATTTATTTT
CCTTTCTCACTGCTCAACTTCAATTGCACTGGAAACCAGAAAAGTCAGTGTTGGGAACCATATGA
TTCCAAGTCCCTGGCTGGACATCCCCTCGGCTTGAGGTGGTCACCACTCACGTGATCCCAGGCT
AAGATAGCACATGGAATGTGTGTGTTGTTGAGCCAACCT (SEQ ID NO: 1158)

1215. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene YWHAZ. In some embodiments, the sequences from gene YWHAZ comprise or consist of:
GTAGACCGGGGCGAGGCTGCGCGCCGGCGGGAGGGGAGTCCACTGCGGGGTGAGGTTTTGG
GGTGGGGCTCGCCTGGGACCTAGAGCTGAATTTCCTGGGCTCCGCGGTGGGAGGAAGGACTTG
AATTTTCCTGGTGGGGGTGGGGGATGGGTCTGACTTTTTTTGCTCCTTGTGAACGGGCGGGGGA
GGTGTGGACGGGGGCTGCAAGTCCAGGTCGGGGTAGAGAACAGGGTGGTGAGCCCGCAGTCG
GCTCCCGTGCTTGATGGACTAGAACTGGAGGGTCCCTGCGCTCGGTTTGGGGACGCATATCCTG
CTTTGGGGGCGGGTGAGCCTGAGCATAGCCGCTGGTGGCCCGCTCGGCTGGGTGTGGCTCTC
GTCCCCTCCCCCACCTGCAGCTGTCGGTCCCTTAGAGACGCTGTACACGGTCACCGGCGCTGAT
CGGTGGCGGGGAAGGCGCTGGGTGGGAGAGCGGGGTGTGTCCGCGGCGGGGCTGGTAGT
(SEQ ID NO: 1159)

1216. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene YWHAZ. In some embodiments, the sequences from gene YWHAZ comprise or consist of:
CGCCCCGCGGTGGCGGCGCCGGGCTGAGGCGGAGTCTCCTCAGCGGACACGGGCGGCGGCT
CCTCTTCCGCTGGGCTCGGGAGGGCGGCTAGCGGCCGCCTCCGGCTCCTTGCTTCCGCATCGA
CGCCCCGGCGCCGATCGGTGCTCGCTCCCCCGTCCTGCCCCCGGGGGTGGGTAGGGCGCCCA
CACGCGAGATCCCTGGGGATCTCCCTGTCGCCGGCTCCCGAAGGTGGACGAGGCATGGCCGG
GGCGCCGCCGGCCGCGATCCATCCCCACCCTTGTCTCTGCGGGCTTCCACCCCCTCCCTCGCC
GCCCTTCTCGCTTCCGCCCGAGATAATGACTCGGCGGCGGCGGCGGCGGGCATCGCAGTGGC
GCAGGTGAGGCCGCCCCCTCCCCTCTCCCTCGGCCGCCCCCTCCTTTCCCTCCCCCTCGCGCA
GCCTCCGCGCTGGGCGCTGCGGCGGCGGGACCCGGCCCTCCCCCACCCCGGGAGGCGGTGG
CG (SEQ ID NO: 1160)

1217. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SMARCA2. In some embodiments, the sequences from gene SMARCA2 comprise or consist of:
TAATTGAAGAGGGAGCTAGTTTGCATCTCGTTCTTGCACACCCTGAGTCATGAAAAACATTTTCTT
TTAAGCAAAATTGAAAGAAAGAAAAGAGAGAAAGAGGGCCAAAAAAAAAAAAAAAAAAAAAAAG
GTTGCCATCCAGTGGAGGAAGGAGTAATTCCCAGCTTCATTCAGGAAAAACGCAGGCTGAAATAT
GCTTAACTGTTTTAACTTGACTGGGGATTTTTACCACCATATGGGTTTTTTTTCGTGACATCCGGA
GCCAAACGGGTGCAGTGTGCCTTTAAGAAAAGAGGTGCCTCACTAAACTTCGCTGTAGTTGTGTT
TCACCGTCTCGGTAGGGAAGGAAAGTGTTAATTTCTTATTTGTACACTTTTTTTCCCCGACTTCCT
TCCTATTCACTTCATTAAATCTAGAGGCAGTTGAGCATGGGAGCCGTCTGTATGTTGAATTAGGG
CTCGCACTCTTGCGCAACACGTCACCAGTCGGAAACTGGGG (SEQ ID NO: 1161)

1218. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SMARCA2. In some embodiments, the sequences from gene SMARCA2 comprise or consist of:
TCAGTACTTTGTGTGTTTCCTTGTAATTCCAAAACCTAAATTTAATAAGAATCTGCACGTATTAGCA
GTTGTAATAAAAATTGTTTCAGTTGTTCTGTTTGCAATTTAATTTGTTTTCGCTTCTTAGCTACTCAC
AGATTTAGAGATTTAAAAGTCCAAATATCACAAGCTTATGCTTTTTCCCTCTTTTCAAAATTAAGGC
GGGGTGAGAGTAGAAATATCCTTTTTACAACTCCCCCCAACTTCATTTATCTCAGTGAGAAGAAAA
ACAATGAAAAATTTTACAGCATGAAACTGAAAGTGAAGTGTTACAGTTGTTCTGAATTTTCTTTAAA
GAGCAGAATAACATATTATGTTAAAATATTTGAATCTTAGAACATGTACATTGCTTTTATTTACATG
CATTTAATTTTCTTAAAAAATTGTCTTCTGTTTTAAAAATCATTTAGACTGCTCCAAACCATGCTGCT
ATTTTTTAAAAAATAAGGTACAAAATACC (SEQ ID NO: 1162)

1219. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene PLIN2. In some embodiments, the sequences from gene PLIN2 comprise or consist of:
AGTGTGGTGACTCGGGTGGTCAACCTGCCCTTGGTGAGCTCCACGTATGACCTCATGTCCTCAG
CCTATCTCAGTACAAAGGACCAGTATCCCTACCTGAAGTCTGTGTGTGAGATGGCAGAGAACGG
TGTGAAGACCATCACCTCCGTGGCCATGACCAGTGCTCTGCCCATCATCCAGAAGCTAGAGCCG
CAAAGTGAGTTCTGATTTTTCAAGATGCAAGTCAAGGGACTGGTCAGTGGCGAGCCCCTGAGCT
CACAGCAGTAACATCTGGAACTCCTCAGCCCTTCCTGGGGCATACACTGCCTTTACCTAGAAACT
TTCAGGTGACCCTCATTACCGTAAGAGGACTGTTTCTTTTCTTTTCTTTCCTTTTTTTTTTTTTTTGA
GATGGAGTCTCACTCTATCACTCAGGCTGGAGTTCAGTGGCGCAGTCTTGGCTCACTGCAACCT
CTGCCTGCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTA (SEQ ID NO: 1163)

1220. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene PLIN2. In some embodiments, the sequences from gene PLIN2 comprise or consist of:
CTAATTTTTGTATTTTTAGAAGAGACGGGGTTTCACCACGTTGGTCAGGCTGGTCTTGAACTCCT
GACATCAAGCAGTCCACCCCCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCG
CGTCCGGCTTGGCTAGCATTTTTGTTAACAGATACTCGGAGAAACAAGAGAAGTATGTCAACAAC

TTTACTTCTCCCTCCTGAGTATTGCAAGTTTACACATAAGCTCTGAAACTTTGCCTCAAAAGAGGG
AGTGGGGTTGTGTGGGTGTGGGTCTTTCAGGAGGGGGACCTGGAGAGCTGGAGAGAGGAAAGA
AGTGCAGAAGACTACAGGGAGCTCACCCTGCATTTTTCTCTACTTGTAATCAGCATTTGCTTGGG
TTGGGGAATGAATTTGGGAGAGTCTTATCCCGGTGTTCTGAAATAAGTCTCTTTTCTGCAGATTTC
TTTCTCCAGGAAGAAAAATGGCATCCGTTGCAGTTGATCCACAACC (SEQ ID NO: 1164)

1221. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SURF4. In some embodiments, the sequences from gene SURF4 comprise or consist of:
GTGGCATTCTGAGCAACAGGGAAGCCTTTGAAACAGGCGGTTGGGTAACTGTTGAGAGCATTCG
GGAACTGGGTGGACAGGATCCGATCCTACAAAGTGAAGGGACACAACTCCCTTCCCTCTTTCTT
GATTAAGCTTGACAGAACAAAAAAACAAAAACAAAAGGTGGTGGTGGTTACGCAGATTTATGCCT
TTTACTTCTAAAAGAATCCCGTTATGTCGACAAATTAACAGCCTTATCCCCGCAGGGAGAGCCTT
GTGTGGCCCACTTGCCGTTTTTTCCTCGGTTTACTTAATGTGTTCGTGTGGCTTTGCTAGAGTTTT
AAGTAGTGATGGTTAAATTTTTAAATTTTTCTGGAGGTGGTAGTGAGTCATCAAACTCTGAGGCCT
AGACTTATCGGAAGGCTTGTATATGTGTGGTTTAAAAAAAAAAGAAAAGAGTAAGTGACCGTTTTC
TGATCAGCTATTGAGCTCTTCCGTTCCTCCTGGGGGGTGATCT (SEQ ID NO: 1165)

1222. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SURF4. In some embodiments, the sequences from gene SURF4 comprise or consist of:
CCCGACCCAGGCCGCCCGGGCCGCTCCGGAGTCGGCCTCCCAGCGCAGGGCGCCAGGCCCG
GGCCGCCCCCTGACTCCTTGTTCCCACAGAGGGACCCCCCCGCCCGGGCCCTCTGTCCCGGCT
GGACAGCCCCAAACCCGGCCTCCGGGCCCAGTCTCCCCTGCCCGCTGGGCCGCTCCCGGAGC
CCGGGCCTCGGCGCCCTGCCTGGCTAGCCGCCCCCACCCTCCAGCCAGCCCGGGGCGCGGGC
TGTGGGGGTTTCTTCCCGGGCCGGCGGCGCGAGTCCTGGCGTTGGGTCGGGTCTGAGGCTCG
CGGGGAGCGCCTCGGCGTTTGGAGCTGCTGGGGGGTCCCCGCACGTTTTTCCTCTCACTGGGG
CTCCCGGAGGCGGGCTGGGAGCTCGGGGACGAACGGGGGCCGGGGGTCCTCCCAGAGGAAA
GGGGGCGCGCTGGCGTGCGCCCCAGCTACAGGAAGCCACAGCACCTTTTCCTTTTCTCTTTCCC
A (SEQ ID NO: 1166)

1223. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene DNASE1L1. In some embodiments, the sequences from gene DNASE1L1 comprise or consist of:
CCCTATTCAGGCAGGAGCTGCTCTTCTGGGGTATCGCGATCCACTTAAGGATGAGGCAGACTTG
GTGACAAGCTGGTCTGAGCAGGTATGGGAGCCCCCTGGGGAGACGGAAGAAGGGAGGAAGTTG
CCTTCTGCCTGGGGAGGGTTTGAGAGGGAGAGGGAAGCCTAGGGCTCCCACCAAGGCTGATAT
TGACAGCCAGGGTTTGGGGCTGAAGCCAGGAACCGTCACTCTCTCTGGTTCTTACTGGTAGCCC
TCATGGGGGTCCCTGACGCCAGAGCCTCCAAGGCTGCATGTGCCAGCCCAGGGCTGCCCACAT
ACCCATGTATATCCCAGAATAGGCACCAGGGTAGGGAACCCAAACTAGCATGAGTGACAGAGCA
GGTGGTCAGGGAGAAACAGACATCAAACCCAGCCAGGAGAGAGACACCGCAACAGAGAGACAG
AGAAGGGAAACCAGAGACGAGAGGGAAAGTGAGACAGAGACGGACAGAGCCTCAG (SEQ ID NO: 1167)

1224. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene DNASE1L1. In some embodiments, the sequences from gene DNASE1L1 comprise or consist of:
CCTCCCTTGACTTCACGACTGTGGCCAGATCATGTGTGGACTGTCCCTCTCTTTGGGTCTCCAGA
GCGCTTGCATCAAACACCCCTAACTCAGAAGTGTGCAGCCACACTGGGACTCAGAACCCAACAA
CAGGGACAGAAGACTCACGCCCTTGGGGTGCCCGGTCTCGTGGCATCAGGCATGACTTCCAGC
TCCTGCGCCTTCCCCAGCAACTGCTGACTGGGGACCCAGACCGGGAGCTGAGCGACGGGCCTG
GCGAGCGAAGCTCGGGGTCTCACTCAGGCACCAGCCCCTCCTTGCCCCAGGCTTGAGTGACTC
ACAGGTCTGTCATGTCCCGCTGGCCCGGGAAGGCGGGGTCTGGGTGGGAAGGTGGGCGGGCA
GGTCAGCAGTTCCCAGGCCTGGTGCTGGTCCTCCTTGTTGGCGGCGAGGCGGAGACGGGGCG

GGCCTGCCTGTTGGCAAGGGTGGGGCGTCCGGCCCAGCCAGGCCCTTCCTGGCCGGG (SEQ ID NO: 1168)

1225. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene IDI2. In some embodiments, the sequences from gene IDI2 comprise or consist of:
GTACACACAGCATCCAGTCTCAGCTGTGTCCACGGGAGTCCAGGTTGGCAGCGGGCAGACGGT
GAACAAAGTCCAGGCTGGATCTACACCATTGACCTCATGAAGCACCATGAGGATGAAGGATGGG
GCTGTGGATGGGGCTGTGAATGAGCTGTGAATGGGGCTGTGAATGGGGCTGTGAATGTAGCTG
TGGATGGGGCAGTGTGAGTCCCTATGTGTCCCAGGCAGGGTTGAGACTGTGCAGGAATCTGTC
GACCACACACCGAAGAGGAAATTCAAGCCGGGCGTGGTGGCTCACGCCTGTAATCCCATCACTT
TGGGAGGCCGAGGCGGGCGGATCACAAGGTCAAGAAATCAAGACCATCCTGGCCAACATGGTG
AAACCCCGTCTCTATTAAAAGTACAAAAATTAGCTGGGCGTAGTGGCACACGCCTGTAATCCCAG
CTACTTGGGAGTCAGAGGTTGCAGTGAGCCGGGATTGTGCCACTGCACTCCAGC (SEQ ID NO: 1169)

1226. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene IDI2. In some embodiments, the sequences from gene IDI2 comprise or consist of:
TCTCAGTAAGGAAACTTGGTCAAAGGTATTCCAGCAGTCTTCCTGTGAAACCATGCTCACTGATC
ACCACCCTCAAAGTGCAGCCCAGCTTCCTCAGCCCAGCTGGTGCAGCCACCCAGCCCACAGCC
CCACCACCTCCTCCCGCCACCCCATGGCATCTCAGGTCCTCTGTGGGTACAAAACTGAGTAGGA
ACCAGTCCCTCTCCTAAGACATACTGGGATAGTGCCACGGGACATGTGTGTGCACATCTGCAGG
AAGGGCCGCAGGAGCGGTCAGGGCCAGCCCCGCCAGGTGGTCATGTGGAAGACCCTCACCAA
GCCCACAGCCGTGGAGGCTGGAGGCGAGTGCTGCTCTGAGAGCCCATGACAAACCCACTCCCC
CCGCCAGGCTGTCTTCTGCTGATGACGGATGATGGTTTTACATGAAGCATCTGCATTTGTATTTA
ATATATTCACTTTTCAGGAATAAAGAGGGATGTTCCCACATGCATTTTTTCCA (SEQ ID NO: 1170)

1227. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene AKR1C3. In some embodiments, the sequences from gene AKR1C3 comprise or consist of:
ATGTTGCTTTAGTTTCTAAGCAACATAAATAGCTATTCTTAAGCATTGGGTTGAATGGATAGAAGA
ATTAGACTGTTAAAATGAGTTGTAAACTCTACTGAAGATAATTCAGGTAACATCATAGTTATTACTT
AATACTAATCTTTACATTTTAAGAATTTACTCCTATCATTCAGTAGATGTACAAACTATACATCCAA
CGTATAATAAAGTTTATAAGGATAGGTCAGAGCCAAAGGAATCATGAGAAGGAAGAGAATATGTT
TGCCAGTGGTCATAAATTTTGAAGCAGTAGGAAAATATCTAAATACTAGATGGCACAAAGTAATAA
GATTTGCTCAAGCATTCATTCAAAATCACCTCCATTCTTTAACCTCTGCAGCTTTGGTCCACTTTTC
ATCGACCAGAGTTGGTCCGACCAGCCTTGGAAAACTCACTGAAGAAAGCTCAATTGGACTATGTT
GACCTCTATCTTATTCATTCTCCAATGTCTCTAAAG (SEQ ID NO: 1171)

1228. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene AKR1C3. In some embodiments, the sequences from gene AKR1C3 comprise or consist of:
AAGACATGGCTACATTTAAGGATATGAAATAGTCTACAAAAATGTATCATTTGTCTATTCTTATCTC
TAAACTCCAACACTTTTTTTTATTATTGTTGACCCAAACTTTTTCATTGGTGGCGATTATGGCTTTG
GAGCAGCTCAAGGCTCATGGTCATCACCATAAGACAACTCCTCTGGGTCTCCCAACTTCTGCTGA
CCCTATGTGATTCACAGTCCTGCCCAAAGACTATCAACTCTTCAGGTGGTCTGATAATCCTACCG
TGTACAAGAGTACAATCCATTATTTTTGGATATCAAGGTATTTCCAAATCAAAGAGAGGTACTTCA
ATAGAGGAAATTATAAGGGCGGAATAAAGTGACATAAGTCAACTGTGAAACTTGATTAAGACCTA
GAAAATGGTCCTTTTCCATGCATATAATATTTGTAAGAGATTAGAGGAAGCCTGTCTCCTGAATAC
ATTCCTTATACCTTCATATGTAAAACACTTAGCACATA (SEQ ID NO: 1172)

1229. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TIMM23. In some embodiments, the sequences from gene TIMM23 comprise or consist of:

GTAAGTCTCTTGTAACCATCTGATGTAGTGATACTTGAATATTAAGCTCTGTTGTATTGGTTTGAT
GAGTACAACCTTGAGATTACAGATGGTTAGCATAGTTATGTGCTTTTTTGTCTTTGTTTTTTAATCT
TAATCAAAATAAAAGCAACTAAGGAATCAGATTACTGACTCTAAGCTTTTAAAAAGGAGTGATTTTT
TTAATCAGTGTCCCTCAGTCAGCTAGTGCTATGCCAGCCTGACTTCTCAGCTGCACCTGTTACAT
TCTCCAACCCTATGTGACTTGCTTTTCAAATTGTTGAGTTGCTAATGGGAATTTTGGATTGTTTGG
GGGCATGCAGATCCATAGGAAATGGTAATGAAGAATAAGCAGCTCATGAGAGTGATGGCTCAAG
CTGCCATCATTTAACTTGAACTTCTTACTGTCTTGACTTTATGTTTCCGAAATGATGAGCCAGATA
CATTTTAAATAAAATTTTTAGAATTAGAGTTAATTCCA (SEQ ID NO: 1173)

1230. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TIMM23. In some embodiments, the sequences from gene TIMM23 comprise or consist of:
TTTCACTTTGATTTAGGTGTTACTGCTGCAGAAAGTTTTATTTTTGTTTAAGTATAGGTTTGAGTTA
ATTTAAGGTTTATTTTCTGTGAAAAACTACTTTGAAATGTTAAAAAGGCAACTTTACAAGATTTGTG
TCTTGAGGGACACTCAGCTTGGTTTTCATTATTATCCTTTTAGGATACAGATGAGTTTATTTTACCT
ACCGGAGCTAATAAAACCCGGGGCAGATTTGAGCTGGCCTTCTTTACGATTGGAGGATGTTGCA
TGACAGGTGAGTGTTACATACTTTTTTCTCAAGAGTGCTCAGTTCAAGTAGTTGAGGGTGCGTAA
AATCAAAAGCAATTAGAATGTTGGTTTCAGGGTTTTTTTTTTAATATTTACATTTGTCTTTTTCTATT
AAATAAAAATGAAAAAGAATCAGAAGTGTAGTTATGCAGATTTGAGTTTGTTTTTTTAATATAAAGC
TGTCTTTATCTGGGTGAATTGTTATGATTTACCA (SEQ ID NO: 1174)

1231. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYPN. In some embodiments, the sequences from gene MYPN comprise or consist of:
AGTAAAGGAAGCTTTGTTGTGTTTTAATGCAAACCACACAGTAAAGCTTTAATTTAATCACCTTAAA
ATTAGGGGAACAAACAGGAAGTGTTGTAATAATTGATTGTTTTTTCGTATTTACCTTAATAAATGCC
TTGACCATAGTCCCAGTTTGGTACCAGATAAAGATATTTATACATGTAATATGCATCCTGTGTATA
GATATCTTATGTATTCCATATGCTTTATTCTTGAGAATTTCTTCACTCTTATTTTCATTTAGACTAAG
GAGAAATCAAGAAAGCCTATTTCCTTAGTCATCTTAGTCATTATCCACCCCCACCAGCCCTGCAG
GCTAAGAACATCGTGCAGACTGAGTTATTAAAGTTGATCTGAAAGAGCAATCTGTTCTAAATGACT
GTCCCTGGATCTGCAACGGAACCCTGTAAATACCCTTCATTACTCTGGCGGGGCAGTATCACATT
TCCTTCATGGCACTTTTGTGTCTGACACAAGTTAG (SEQ ID NO: 1175)

1232. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYPN. In some embodiments, the sequences from gene MYPN comprise or consist of:
TAACCACAAATTTACTTCTCAGGATAATGTTTTAAAGTGGGTGTTCTGTTTAGTTTTTAAAAATGTT
TTTAGTTTTTAAAACTAAGTGGGTTTTGAACTTTTAGTTTTTTTTTTTTAATGTTTTTAGTTTTCCCAG
GCAAGCATTTTCAGTAGTTTAGATGAAAAAGAAATTTCTTAGTGATTTCATTGTCTTTTTCAATTAT
ATTGTTGTCATGCCTTTTATATAAGATCTTTTATAATCCACCACCCATCTATTGTTTTGGATAGTCA
AGAACTTGTCTTTGCTGTGAAAATTTTTCTCATTAAAAATGGCTAAAAAATACATACTTTCTCTGTT
TTTCAAAAATACGGCATAGAGGTTTTGTTTAGTTTTTTCATCTGATACTGGATATGTCAAGATGAAT
CTATGAACTTCAAGCAAAACTTATTGAAGCTTTGGTATATGTGAGTAATTTGTTTTAGAGAACTGG
AGCCTATAGCGATATAAAAAAATAGCAAAT (SEQ ID NO: 1176)

1233. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TNNT3. In some embodiments, the sequences from gene TNNT3 comprise or consist of:
CCACCCTCCAGCACCGCCAGAGGCCCCAGGGGAGGGCGGCTGTGCCCACGGGGCTTGTGCTC
TACCCAGGTGCAGCAGGTGTGGGGCGACCAGTCCAAGCCAGCCGGGCAAATCCGAGCTCCTTC
TCGGGGGTTCTGGGCAGGCCACCTGTTCCACCTGAGCTTCCACGAGCTCCCCTCCGACAGAGG
CAGGGCGATTACACTCCCTCCCAGAGCTGTCCCCAGGGGGTCCAGGCATGAGGGACAGCCCTG
ACCTCACCCTTGGGGCTCTCCCAGAGGGGCTGGCCCTGAGACGGGCTTCACGGCACAGGACCC
AGGTCCTTCCCATGCTGTGTTCCCAGAGCTGAATCAGGGACCCACTGGCTTTGGATAGATGCGG
CCACAGCGGGCCCCCAGGGGCTCCAGAGCCTGGAGGGCCATCACCAGGCCAAGCTAGCCCAC

AGCCGGGCCTCGATGCCCCAGCCGCCCATCCAGCCTTGTAACCATCTTGGTCTTTCTAG (SEQ ID NO: 1177)

1234. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene TNNT3. In some embodiments, the sequences from gene TNNT3 comprise or consist of:
TAAGTAGCCGGGTCCGCCCTGGGCCAGGCCCGTGGGTGTGCGTTGCACGGTGAGGTGAACCTC
TCGCATGGCAAAAACCTGGATCGCTCAGGATGCTGGCGGCAGGGGGCCTGGAGCCTTCCTCCT
GCCCCCGCTCTCCCCTCGTGCCTGCAGCCGGGGGCTTCCCAGTGGCCGCTGCCCTGTTGGCAA
GCGAGGAAGGGCCCCCACCTTCCCAGGAGCTCCGCCTCAAGCCAGCAGCGGCCACAGAGTGC
CCCTGGGCACAGGCACGAGGGCGGGAGCGGCTGGCCCAGGAGCAGCAGGGCCGTTCGGAGC
TCTGAGCTCAGCGGCTGAAGGGAGCTGGAGCTGAGAAGGAGGGGTCCGCAGGCCTCACCTGCA
ACCCCTCCCCAGCCCCATCCGTGCTCCGTACCCCCCGCCCCACATCCTGCCGCAGGCTGAAGG
TAAGTGGCCAGCTACGGGCTGCTGTGTGTGGCAGTCCAGGCCAGTACAGGCTGGCGAGAGT
(SEQ ID NO: 1178)

1235. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ZBTB16. In some embodiments, the sequences from gene ZBTB16 comprise or consist of:
GCTAGAAGGGGGAGCCCCGGCTGTCAGCCTGGGCGCAGCTGCCTCCCCAGCCCTTCCTCTTCA
GGGCACGGTCGGGGTGAGAGGTGGGGGGCGTAGCGGTGTGCGGGGGCTGAGGGCGTGAGCA
GAGGGGTCGGGGATCCGGAGGCTTTGTACCGCCAGGGGCTGGCGGAGCAACAGAGCCCGTGG
GTGCTCTTATGTATGCGGACCGGTGCGCGGGCGCAAGATAAGGTTGTGGTTTATTTATTTGTGTG
TTTATTCGCCGGCCGGCTGGGAAGCTAGAATCGGAGGAGCTGACGAGTAGATCTGGGGGCGGA
GGGGAGCAGGACTGGGACTGCTTACGTTTTGTTTCTCTTTGAGAAAACGTGGTGGGCTTTTTCTT
GATTGGACTTGATCCCCACCCCCCTTTTGCAGGGGAGGGAGGGAAGCTCCAGAGGGTCTGCAG
CGCTGCGGGCCCTCCTCGGCTCTCGGCGGGACCGGCGGTGACACCGGAGCTCGCCGT (SEQ ID NO: 1179)

1236. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ZBTB16. In some embodiments, the sequences from gene ZBTB16 comprise or consist of:
TGGGTGCCGGTCTCTGCACCTGATGCGTTCGGGATGCCTTTCCCACCCTGGCGCGCCCGCCGC
TAGCTCGCACAGCGCCTCGCACACTCCCGCACGCGCTTGAAATGCGCACGGTCCCGCCGGCCC
GCGGAACCACCCGGACGCACGGAGCGCTCCGCACCGACTCGCTCGCCGCCTCCCCGAGACGC
TCGCACCGTGCTTGGGCCGGGCGCGCTGGCCGCTGGCGCCGCTGGCCAGAGGCCTGGGACCC
AGCCGGTCGCTCCCAGGGGGTCACGGCCCTGGGTCGGAGAGGGAGGGCGGGCAGACCCCTTC
TCGCCTTTCCTCCCACAACTCGCTGCGGGGCTTTTGTGCTTCCCCTTCGCCGCGGGGCGGGTCC
GCCTCCCCTGCCGCTCTCGCCGCGGAGTCCAGCCCGCCCGGACTGTCGCCGTTCCTCCCCGTC
TCTTTCGCTTTCCCTCGTCCCTAGCTCAGCTCTCCTTCTTTCAGGAGTCTAGCTCCTCGG (SEQ ID NO: 1180)

1237. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene STAC3. In some embodiments, the sequences from gene STAC3 comprise or consist of:
GTGAGTCTGGGCCTCTGACCACTGGGTGTGGGGGGCTGGGAAGCCATTACAGCTGAAGAAGAG
TGCTTAAATTGATCTCATTTGTGTGTGACTCATTTTTTGCTGGCCAGCACCTGCAGTCCCCAATAC
CAATACCCCCCTAATCCTGGGGTACATTCCTTGCCTGAAACTAGAAAACTGTCTAGTTTGCTCTA
GCGCCCCCCTACTCTAGAGAGGGTGACAAGTCCTTTTAACATTGGGTTTTCTTCACTCCCTCCCT
CAGCTACAGCGGCTAAAGCAGTTACTCAGGAAGGGTTCTACAGGGACAAAGGAGATGGAACTTC
CCCCAGAGCCCCAGGCCAATGGGGAGGCAGTGGGAGCTGGGGGTGGGCCCATCTACTACATCT
ATGAGGAAGAGGAAGAGGAAGAAGAGGAGGAGGAGGAGCCACCCCCAGAACCTCCTAAGCTGG
TCAACGATAAGCCCCACAAATTCAAAGATCACTTCTTCAAGAAGCCAAAG (SEQ ID NO: 1181)

1238. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene STAC3. In some

embodiments, the sequences from gene STAC3 comprise or consist of:
GATTACAGGCATGCACCACCACACCCGGCCATGTTAAGCTTTTTTCTAGACCTCCATGAAATCTG
TTAATAAAACCTGCCAAAGGATCTGTATTTGGCCCAGTGCAGTGGCTCACGCCTGTCTCAACAAT
TTGGGAGGTTGAAACAGGAAGATTGCTTGAGCTAGTTCGGGACCAGCCTAGGCAACAAAGCAAG
ACCATGTCTCTACAAAAAATAAAAAAGTAGCCAGGTAGTGTGCACCTTGTGTTCCAGCTACTCAG
GAAGCTGAGGTAGGGGGATCGCTTCAGGCTGGGAGGTCGAGGCTGCAGTGAGCCATGATCACG
CCACTGCACTCCAGCCTGGGTGACAGAGTGAGACCCCATCTCAACAGTAACAACAGCAAAATCT
CTCATCACATTTCTCCGAAAGCCTCCCCTTTGAGGACCACCCTACTGCAAGGGACAGAAAGGGA
GAGAAGAATGAAAGGGATTAGATTTCATAGTGGGGTCCAACCTCTTGCA (SEQ ID NO: 1182)

1239. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene BEST3. In some embodiments, the sequences from gene BEST3 comprise or consist of:
GTAAGTGCATTTTTAAAAAATCTCTAATATTTTCCAGCCTGAGCAACATAGTGAGACCTTGTCTCT
ATAAAAAAAAAAAAAGAAATAAAATAATTTAAAGTAGCCAACTGTGATGTCACCTGTAGTCCTAGC
TACTTGGGGAGGCTGCAGTTGGAGGATTGCTTGAGCCCAGGGGTTCAAGGCTGCAGTGAGCTG
TGATTGTGCCATTGCACTCCAGCCTGGGTGACAAAGTGAAGCCCTGTCTCAAGAAAAATAATTAA
TTAATTCACGAAAATTAAAATAAATATCTCCAATATCTAGGAAATGAACAGATAGATCACTGTTCTA
ATCTTTTTACCTTTTTTGGCATTTTTTTCTACCTAGGCTTAGTATGTAAGTCAGTCTCTGTTCAGTG
GTTTTAACACAGCAATCACCCCTAAGTATAATGAGCTTTAAATAAATGAGTTGAGGCCTGAAGTAA
ATCAGGTACAGTTCTATAATAATTTCATTAAGTCTGAGC (SEQ ID NO: 1183)

1240. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene BEST3. In some embodiments, the sequences from gene BEST3 comprise or consist of:
TGAGCAGTATAGACTTCTTGTTATGTTTTTCCAAACAAAGAAATGAACAAGAAACCAGGGCATATA
AGAAGTGATGTCAAGTAAAAATGTGTTTACAGGGTTAACAGAATGAAAAGCGGAATCTTCACCTT
CCTGTAATATTTGGGGTTAAGTAGGTGCTATCAGGTAAAACAACACCACAATTGTGAGCAAAGAA
TAAAAAGATGGCTCCCCTCCCTCCAGCTAAGAGGCAACTCCACTCTAGAGTGTGTGGTTTGATCC
CGGAGTGTGGGAGGCTTCAAGCCCCACTTATCCTCATCGCCAAGTGCTCTCGAGTAGTAAACAA
CAGATACAACTCTCTGTGGCAGCTGTGGTCATGGCAAGTATGAACTACAGACATTTGTATATTCA
CTCATTTAGACTGTGTCCTAGCCCAATCTAACTCTCATCTGCCCAAAAAAACTTCTCCTTTTTATTT
AATTTACATCTGAGTTATTCTAACAATATAACAATGATTTTA (SEQ ID NO: 1184)

1241. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYBPC1. In some embodiments, the sequences from gene MYBPC1 comprise or consist of:
ATCTTGACTTTTGTTTCTTAAATACTGAGAGCAATTAATCATGAGGTTTTCTGGGTAGAAATGAGTT
CTCAGATAGTACATATATAGGCTTTTATGTCTGTGTCCAAACGAATGTGATATATGAATAAGGTCT
GCCATTCACTTTAGTTACAAAATCAGGACTTGAAAACCACTTCCATTATTGATTTCATCAAGGTTTG
ATTTTTAGCATTCATTTTTTCCTAACCTACAGTCACATAAAAAATTTGCAGTGTTCCATTTTTAAATC
TGTGCTTCCATTTGGATTACCCTACTCTGTCAACTTTTTATTTATTATTTTTTCTTTCTTTGCCTGAA
AAACTCAGGTTTCACTTTTCAGGTACCAAGTTTTCTAAGGCTTGCTCAGCAGTTGAAAGTGTATTG
TGTGGTTTCTCATCTTCTTTTTCAGATTTCTCTTTTCTCAGGTTACTTGGGATGAAGTCTTTTCTCC
TTGACTTTTTACTCCTATTTCTTGTTTCAG (SEQ ID NO: 1185)

1242. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYBPC1. In some embodiments, the sequences from gene MYBPC1 comprise or consist of:
TTGGGATAATTTCTACCCTTTTCCCTGCTTTTAAATATATTATTCATTGACGGTAGAGGAAAAGAAA
AGGCAGTGAGCCTCCTTGCTGAGTCAGTGCACAGAGCAGGGGCAACAGTTTTCGCCTGTGCTG
GCACCAAGAAGGAAATGTTGGCTTTAATGACAATTTTTTGTTTTACGTGAGAAACTTCTTAGAAAG
AGGCATTCTTTGAGAAATAAATAAGATTGGTAAATCTTGGGTATAAATGTTAGGGGTCAACATATC
TGTCTTCCATTTCTCACTATATATCCACCCTTTTCCCTGTTCTTTAAATTTAGATATTTGGATTTTAA
AATTTTTCTTTTCTTTTTTGAGACTGAGTCTCTCTCTATTGCCCAGGCTGGAGTGCAGTGGTGCTA

TCTCGGCTCACTGCAACCTGTGCCTCCCAGGTTCAAGTGATTCTCGTGCCTCAGCCTCCTGAGTA
GCTGGGATTACAGGTGTGTGCCACCAAGCTGGGCTAAT (SEQ ID NO: 1186)

1243. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene COMMD6. In some embodiments, the sequences from gene COMMD6 comprise or consist of:
GTAGCCGTTGCCATTGTAATGAAAGCTCCTCTTCCCCACCCTGCACTAGCCCGAAGAATGCAGAT
CAAGGATTGTTGGGCTTTGATTAGGCGACAGTTATTCGAAGCCAGGAACACGGTATTTTAAAGTG
TTGGATAAAGAAGTTAGGAAAATTTGCAGAGATAGCACCGCAAACATTTTCTTAGTCTCTAAGTTA
TTTTTGAAGATGGAGTATAGCATTTTAGCCTTTTAGAGTATGCATTTATAATGCTAGGAATATGAAT
TTGACTTTTAAAGTATATCTTAGCCCCATTTCTGTTTCAAGTGCTGCTGTGCTGTTGTAGCCAATA
AACTATTTGTAGGCAAATAATTTATAACACACTTCCCAGAATAGGAGTACTAAAACTAGAGTATTTT
TAGGCCAGGAGTTACCCAAGTCCATACAAAATGTAAGAAAGGGATGAGGTAAGAAATAATTAGAA
TACAGGGGCTGAAAGAGGTGTCCATTGACTGCTGTCTG (SEQ ID NO: 1187)

1244. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene COMMD6. In some embodiments, the sequences from gene COMMD6 comprise or consist of:
GGTTGGGATTGAGGAGCCGCGCAGCGGGATGCTGTGCCCCGCCCCGCTCCAGTCTGGAAGAG
CCCACGTGTCACTGTTAGATGGGGGAAGCGGCATCCTAAATTTAATTAGCGCTTCTCTTCTCAAA
GTATCTCCCAAATCTTTGGCCTTTTTCCATAAAATAATTTTCTTTTAGCTCAATGTCTCCTAAGATA
TATGTTGAATTAAGAAAAAATATGAGTCACATAAAGATGCTTTTTTCAGCTTCCCCTGCTACGTCC
GCCCCATGCGCCAGGCCGCTAGGGGCAGGACGTGGAAGCGGAAGCGCTGGTCTGGGGGCGTT
CTCTCGAGTCCGGGCCGCAAGTCCCAGACGCTGCCCATGGAGGCGTCCAGCGAGCCGCCGCT
GGATGCTAAGTCCGATGTGAGTTCCAACCTGGAAGGAGAGTGGGCAGCGAGGCTCTGGAGCAA
GAAAGATGTTTCTCTAAATTGTGTTTCTGCTTCCGTTTCAGGTCACCAACCA (SEQ ID NO:
1188)

1245. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SLC7A8. In some embodiments, the sequences from gene SLC7A8 comprise or consist of:
ATCAACCTGCTGTTCCCCATCATCTACTTGCTGTTCTGGGCCTTCCTGCTGGTCTTCAGCCTGTG
GTCAGAGCCGGTGGTGTGTGGCATTGGCCTGGCCATCATGCTGACAGGAGTGCCTGTCTATTTC
CTGGGTGTTTACTGGCAACACAAGCCCAAGTGTTTCAGTGACTTCATTGGTGAGTTGTTGGAGGC
TCTGGCTGGCTTCAGGGCCTCCTGGGCTGGAATGCAGTGGTCAGTGATGGGGTTGGGGAGCCA
CCAGGGCCAGGAGATCTAGGCTCACCTTCTCCTCAGTCCACAGAGCCCTGGAAGAGTCCAGAG
CAGGGGAAGCAGATGCCTTTTCCCAGAGACCTCTGAGGGTAGAGAACAGCTGGCATTTCCACAC
AGACCTTAGACCCGCAAGAATAGGCAACCTGGGCTGGGCACAGTGGCTCACGCCTGTAATCCCA
GCACTTTGGGAGGCTGAGACAGAGGATCACTTGAGCCCAGGAGGTTGAGAC (SEQ ID NO:
1189)

1246. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SLC7A8. In some embodiments, the sequences from gene SLC7A8 comprise or consist of:
AAAATCTGCTAGAGGGAAGAGGAGGTAGAATAACCCCATGTCCCCACCACACACATCCCTTCTG
AGCGAGGAAGACAAGGAAGAGAAAGGCAGCCGAATCAGGACTGCCCCTGGAGCCCTGAAGAGG
ATACTCTCAGGAACTCCCCACATGTGGCCCATAAGGAGCTGACATTTGCCATATTGTGCCCACAT
AAGGGCCCTGCACAGAAGTGGGCAAGGACCAGGGAGCCTGAGTGACTCGAATCGTCTCCTGCC
TGCACCTTGTGCATTGCCACACCTCCCCTCCACCCTAGGACCTCAGCAGACACACCCATGTGCC
AGCAAGCTTCTCCATCCCTGTGGGCTTCTCTGGCTGCCACGGGCACATGGCATGCATGATGAGG
CCTTGTCTAACCACACCCAAGAGCGAGGACATGGGCAAGGAGGATCGTTTCCTCCCTAACTCCT
CCCCATCCTCTTCCTGTCTGACCGACCATGTTCATCAACATTTGTTTATATA (SEQ ID NO:
1190)

1247. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYH7. In some

embodiments, the sequences from gene MYH7 comprise or consist of:
TCCTGACTCCAGACTCTTCTTCACTGCCCTGAGGACCCGGGGATGGGGTCTGGACTAGGGGAG
GTGGAAATGCAGGGGAGTGGGGGCAAATTCAAAGGCCTGGCCTAGGAGGCCTTCGTGGAGCAG
CACTGAAAACCCCTTTCACTTCCCCCAAACCAGCCAAATGCAGCAGAGGCGACACCTCTCCTCC
CAGCCTTCTCCCTGGTCCAGCCAGGATTTAAAGGAGATTTAGGGAGACCCCTAAAGTTCACCTAG
AGCACCCTGAGCCCATCTACTGTGGACCTGCACCCCAGCTTCCGTCAACCCTGCCCCACCCACC
ACCATGGATACTGCCCAGGGCTGGGCAAAGGGCAGCGGTTCGGGGTGTGGGTGCTGGCCAGT
GCCCTTTCTGAGCCCGCAGAAGTGTGAACCACTGGGCCAGGTGAGGCAATGGCTGCCTAAGTG
CCAGTCCCAGGCGAGTCTCTGAGAGTACACAAGGATTCACAGCTGTAGCCTGCAT (SEQ ID NO: 1191)

1248. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYH7. In some embodiments, the sequences from gene MYH7 comprise or consist of:
CTCCTGACCTTGTGATCCACTCGCCTCAGCCTCCCAAAGTACGGGATTACAGGCGTGAGCCACC
ACTCCCAGCTCAGCTCTAAGTTTCAGTGGTTCTGGGAATTTCAGCCTTAGGGAGGGGTGCCACC
CTAGAAGACCCTAATTTATATACAACCAGTATATCCCAGTTTCCCCCCAACTGCTAGTTTCCAGTT
CCCTTCCACCTAATTTTGTCCTGCAATCTTGTAACTCAAACCTAAAATGGACATCCCAGAGAACCC
GGGCCTGGCTTTGTTCTCGCCCAGGCAACTTCCCTCTGACCAACCCCAGAACCCTACCCTCCAG
AACTTGCCCCCCGAACATCGATCCCTGGAAACACATGTGCTGCTGCCACAGGGGCTTCCACCTG
CCCACAAAGCAGGCCCCCCACCATCAGACCCCTCTCACCTTTGTTCCCATGCCCTGTCCCTGCC
CAATACCATCTCTCCAAGGACTGATTGGACTTTGTTTCCTTTCAAAA (SEQ ID NO: 1192)

1249. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CCPG1. In some embodiments, the sequences from gene CCPG1 comprise or consist of:
ACGGCATGCACTGCGGCGCCCAGCCGGTCACCGCCTGCCGGCTGCAGACGCCTGCGAGCAGG
TTGTTTTTATAAGAGGCGTCATTGGCGCCCGAGCTGTGACCGCCGCCACTGGGGCAGCCAGCAC
AATCGGGCGGAGGTGGCGCTGCCCCTTCAGGTACTGTACTAGGCGGGCTTAGACCCCGGGAGG
GGGTTTGTGCCGACTGTCTGAGTCCCTGGCCGACACGCTCGGCTCAGTAGAGGAGCAGTGGCG
GGGTCCGCCTCCTAGGCTGGGGCTGCTCGGGCGGGGACTTGACGCCTGGTGTCAGCGGCCGC
ACGGGCGACCTCCTCGGGCCGTGCGCGAGTGCACAGCTCCGGAGGCCCGAGCCGACCCTGGG
GCGTCCGGTCCGGTGGTCTTGCAGCCTCCAAACCCCGAGTGCTATACCGAACTGCGCGCCAAG
GGTGGGAGAGCTGACGGCCTGGGCCACCCTTCTTCCTTCACTGGGCAGGCTTTGAGGTGC
(SEQ ID NO: 1193)

1250. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CCPG1. In some embodiments, the sequences from gene CCPG1 comprise or consist of:
CAGTAGGGTATGAATGCATACAATCTCGATGGTCTTTACACCTTCAGAGGCTATTCGGACTTAAG
GAAACGTGCATTTACAAGTGTAAATGTAAAAGCTCAGTAGTTGCCTTGTAAAGTGCTTTTCGGGG
TTGTGGGGTTGGGGGTGGTAGGAGTAGGTGGTGCCTCAAATTATACTAGCGAATACCAACATTC
CCAAACATCTAGCCCTCTGCCTAAACTCACCCGGTTGCGGTCTGTCATTTTCGCTCTTCTTTGTTA
ATTTTTTCGGCAAAGTCAGTTTTCATGCAGCAGATGGCAAGAAAGCCGGTGAACGCCTAGGGAC
GTGGCCTTTTAACCGCACCCAATTAAAGCAGCAAACAGAAGATGAATAGCTGGGTGGATCAGTAT
GTGTAAACCTATCCGTTTAATCCGGGGAGCTGTTTTCCCGGGTGAAACCACGAATTCTTTCTGGA
GGTTGCAACTCGTAACCATAGCAACTGGAAGTGGTCGCCGGCTCC (SEQ ID NO: 1194)

1251. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NOMO1. In some embodiments, the sequences from gene NOMO1 comprise or consist of:
GATTTCATAAGGACCTGTGTTCAGGTCGTGGTGGAAAGACAGGAGGGGGCACGTGAGACCTTGC
AGAGGTGGAATCCACAGGACTGATCGATGCTGGAGGAGCGGGGCGGGGCATCCAAAGTGATGC
CGGGGTGTGCATGGGAGACTGGAGGAAGACGTGGTTCACCAAAATGGGGGCATCTGGAGGGGA
GGAGATGGCACCGGGGTAAGGGTGGGGGGCTTCTAGAAGCTTGAGTCAGTGACCTTTTAACGA
GGGAAGTAAGTCTCTAGACTTTTCTGTTGTTTGACACTCAGCAGTGTGTTGGGAACACAACAGAG

AAGACAGATGTGGGTAAAGTGAGAGGGAGCCTGGCTGGCACACAGGACCGGGGCACTGAGTGT
TGGGAGGTGGGCGGCAGGAGCAGACATGGTAGGTGGTGGCCGGCGCAGCAGAAGGAGTCTTT
GTGGCTCTGGCACAGGAGCACCTTCGAGCACCTTCTTCTTGTTCTTTGTTTTCTAG (SEQ ID NO: 1195)

1252. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NOMO1. In some embodiments, the sequences from gene NOMO1 comprise or consist of:
TGGGCTGACACAGCAGCCCCAGGCTGATGGCCAGCGCTCTTTTTGGATCACAGAGAGAAATGGA
GAGGAACTGATGACTATATGAGAACATGGCAGCTTTTGGTCCAAGTATTCTGGTGTACATGTAAG
GATACACTGTTGTTTTTGGCTTATCTTCTGTTTGTGTGTTTTTGTTTTACAGTTAAAACAAAAGCTG
ATGGCTCATTCCGCCTTGAGAACATAACCACAGGGACATACACCATCCATGCTCAGAAAGAGCAC
CTCTACTTTGAAACGGTCACCATCAAAATTGCACCGAACACACCTCAGCTGGCTGACATTATTGC
AACAGGGTAAGCTTATCGTGTGGATTTGGAAGCGCCAGTAAATATGCTGGCAGCCAGTGTAGAA
CCGAATGACCTGTGATCTGTGTGTCTTTGCCGAGCTTAAGAACTTAAGAAAGATTAGTACTTTTTT
TTTTTTTTTTTTGAGAGACAGAGTCTTGCCCTGTTGCCCAGGC (SEQ ID NO: 1196)

1253. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NOMO2. In some embodiments, the sequences from gene NOMO2 comprise or consist of:
GTGAGACTTGGAATGTGTTTTCTTTGGGGACTTTTTTTTCATCCTGTGTCCAGAAGTATCTTGTGG
TGGCCCCAAGACTGCTAGGAGTGGGTTGGGCGAGAGGGCTGGGGGTGGGGCTCTGGAGCCCT
CCCAGTTCTTACCTTTAATTGGTAGAGTTTGCCTTTTTTCTAGCCAACAGGTCAGATCAAGGATCT
GTGGCACAATGGAGTTGGAAAACCATGGGTTTGGTAGGGCTTTTCCCTAGCAGTATGTGGCCAT
GGCTTACGCCAGGGCTCAAGCCAAACGCCTATGGAGCCAGAAGAGCAGTATGAACGGGGGAGA
GGAGGCTGTGCGAAATGATAGGGAGTGGTGAGGGCTGTGGAGTGGGCACGGCCTGTGGAAAG
GGACAGCCTGTCACTTGGTTCCAGCTTATTGTAGCCATGGGGGAAGACAGAGTCAGGGTTGCCA
GATCCTTGAAATTTTAAAAAGAGAAGTCAGAAATTCCCACTTCCCAGAAATA (SEQ ID NO: 1197)

1254. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NOMO2. In some embodiments, the sequences from gene NOMO2 comprise or consist of:
AAAAAAGATACACATCTATAGATAGAGAGATGCATACATATATACATGTATACACACAGATACACA
CATATGTGTATTTTTTGTAGACTTATACAGAATCACTTTAGAGGAAGAGTAATTGGAAAGATTGGG
TTTAGAAAAATGGACCATTTTCTACTGAATATATGGAATGAAAGAGGAAGTGAGTTATTTCCATGT
TATTGAAAGCTCCATTATTTCAAATAAAGCCTAGAAAGAATAAAATAAAGCTTTAGCCTTCTTAAAT
TACAATTTTCCAGAGCATCCCTCAAAATGTATGAGAAAAGAAATTGATGGCAGCTTATCCCTCCG
GCAGGAAGGTGTGGTTTGAAAGTGGGCCGGCCACACCGAGTTGCCTGGGTCATTGAGGCACAG
TTCTCCCCTGAACTATTTTGCCCCATAATTGTTGGTAAACGGGAAACACTTGGGTCCTTCAGATAA
CCATGAGAATATCTCATTCGTGCCTGTTCTTGCCATACTA (SEQ ID NO: 1198)

1255. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ATP2A1. In some embodiments, the sequences from gene ATP2A1 comprise or consist of:
CTCCCAAAGTGCTGGGGTTACAGGTGTGAGCCACCACGCCTGGCCCAAAGACCCCTTTTCCAAG
TAAGGTAACATTTACAGGCTCCAGGGATTAGGATCTGGTATCTTTGCGGACCATTATTGTTTGTTT
GTTTAATAGAGACAGAGTCTCACTCTTGTTGCCCAGGCTGGAGTGTGGTAGCACAATCATAACTC
ACTGTAATCTCGAACTCCTGGATTCAAACAATCCTCTTGTCCCAGCCTCCTGGGTAACTGGTACC
ACAGGCAATCACCACCACACCCAGCTAATTTTTAAATATTTTCAGAGGAGTCTCACTGTGTTTTCC
AGGCTGGTCTCAAACTCCTGGCCTCAAGTGATCCTCCCGCCTCAGCCTCCCAAAGTGCTAGGAT
TATAGGTGTGCACCAACGTGCCCAGCTGGGGGCTACTATTTAGCCCCTTGCAGGTTCCCTCACA
CCCTCCCCTTGCAGGTTCCCTCACACCCTCCCTCCCTCCCCACAG (SEQ ID NO: 1199)

1256. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ATP2A1. In some

embodiments, the sequences from gene ATP2A1 comprise or consist of:
TCAGGAGCAGTGTGGGCAGCGCGCTCAGTCAGAAGGCTGCCTGTGGGGGTTAAATGGGCCCTC
CAAAGATAGAGGTCTCCCTTCATCACTGCTGGCTTCTCATCTGGGCCTGCAAAATGCTCAAAGGG
CAGTAGAACGCCATCCTGTCTGCCATGAACGGGATCAGAGAGGACCCTTGTGCCCCAGCCAGAC
AGCTCACTCTGACCACCATCCACGCACCAGGCACTGCCACACATCGTCTCTCATCCCTCACAATA
GCCCATTCAGAGGATGGTCTCATTATCTTCATTTTTTTAATTAAAAAAAATTATTATTATTTTGAGAC
AGAGTCTCACTCTGTCGCCCAGGCTGGAGTGCAGTGGTGTGATCTTGGCTCACTGCAACCTCTG
CCTCCCGGGTTCAAGCGATTCATCTGCCTCAGCCTCCCTAGTAGCTGGGACTACAGGTGCCTGC
CACCACGCCTGGCTAATTTTTTTGCATTTGTAATAGAGACAGGGTT (SEQ ID NO: 1200)

1257. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ALDOA. In some embodiments, the sequences from gene ALDOA comprise or consist of:
GGACTCTTGGCCGGCTGGACGGCAGCTCCTCTGGAGGGCCAGAAAAGAGAGGGGCTAGTGCTC
GGGCAGGTGCCCTGGCTTCCCTTCCCCTCCACACGTCAACGATTCTATTTGAAGTTGGGCAGGG
GGGTGGCGCTGCTCACCACACACAAGTGTTATAGGAGGAGTCTGGCCCTTGAGTACCGGGTAC
GCAGGGGTGCCTCAACCACACTCCGTCCACGGACTCTCCGTTATTTTAGGAGGTGAGTGTAGTG
CCAGTATCTACTCTCCTTCTTAAAAAAAACCAGGGCTCCAGAGAATCAGAACAGCCACCATCACC
GCAGGGAGTCAAGGGAGGAGGGAGATTAGAGAAGGAGCCAGGGAGGGTGGCAGGGAGGCCAC
GTGATCCGAGTCCCCTCACCCCTTTCCTTCCCACAGGTCCCTGGCCAAAGATTTATTTCTCTTGA
CAACCAAGGGCCTCCGTCTGGATTTCCAAGGAAGAATTTCCTCTGAAGCACCG (SEQ ID NO: 1201)

1258. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene ALDOA. In some embodiments, the sequences from gene ALDOA comprise or consist of:
TGGGCCCCTTGCAGGACCGGGCCGGGGTGGGGATGGGGTTGGGGTTGGGCCAACAGGGTCCA
GATGGGGTCCAGGTGAGGAGGGGAGATTTGGACGATAGGAGCAGGGGGCTCAGCATCTGGGA
GGCAGATCAGTTCGGGGACGGATTTTCTTTTGGAGAAGGAAGTCAGGCTCAAGGAAGACGTTTG
GCAGGAACTGTGACCCCGCATGCCAGAGGCCGAGCAGCGGCCGGTGCATAGCCGCGCATTCTG
GTTTTCTGTGGCGCAGAGGACTACCAGCCTGGCTGCGGCGGCCCGGCGGAGAGCGCGCACGC
ATGCGCGACCCAGCCCGGCCTGCCAGCCTGGAACTCGGATGGGGAGGTCTCGCCTCCGCGCG
CCGCTAGTTCCGCCGCCTTCTCGCGCTCCCTGCGTGTCCTCTCGATGCCCTTTCCTCCGCCTCC
CTTACGCCTGGGCCAGTGACAGGGTGTCGGCTCCGCGCCGATTCAGCCCGCGGGCGAGGC
(SEQ ID NO: 1202)

1259. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CHRNB1. In some embodiments, the sequences from gene CHRNB1 comprise or consist of:
TCAGCTGGGTTTTAGGTACCCAAAAAGGGCCTGTCTAGATTTTTTCAGAAAAACGTGGAGTGCTA
GGGGCAGCCTGGAAAAGATGGGGAACCTGCTAGTGAACTAGGAGGGAGACTTCCATAGCCTCA
GACTTGGATAGGGTAGGCTGAGGGGGCCCTAAGGGAGGGACTAAGGCTCCAAGGCAGGTCACT
TTTCCTTAGGCTGTTCTACTTCTGGCTTGTTGCAAGAGGAGTAGATGCCCCCTCACCCACACAAA
CCCCACTCAGTCTCCACCCAACTCCTGGCACTGCTCCCAGGGGATCGGGTCTCCACTCCAGCTT
TCTCAATTAAAGACGATTTATACAACTGAAGTGCTGTCTGTCATCTGTCGGTGGCGGGCTTGGCA
GTTGCTCGAGGCAGGATCAAGTCCCGGGGGCGGGGCGGGTGGGCTGGCGGCTGTCCTCCAGC
AACAGGTGCACATTCCCGGGCTCCTCGTCACTTCCCCTGTGCTGGCGGTCCC (SEQ ID NO: 1203)

1260. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CHRNB1. In some embodiments, the sequences from gene CHRNB1 comprise or consist of:
TAAGTGTAGGCCCCGAAGGGGCAGTGACGGGGCCAGCGGTCGTGGCCAGGCACCAGGGCTGC
ACTTATTCTCTCCTCCCCCAGGCGTCCGCGGCTCGGAGGCGGAGGGTCGACTCCGGGAGAAAC
TTTTCTCTGGCTATGATAGCTCCGTGCGGCCAGCGCGGGAGGTGGGAGACCGTGTCAGGGTCA

GCGTTGGTCTCATCCTGGCGCAACTCATCAGCCTGGTGAGGGCGCGCGGGGGGTGGAGGTCA
GGCCAGCCGACCGGCCGGGGGCGTGGCTTTAGGCAAGGCCGGACCAGGGACAGGCTGGGGG
CGGGGCCTGGGACGAGACCAGGCTGAGATGGACCAGCCTTTGGTGAAGATTGGATCGAAATCA
GACCAATGGACAAGCTCTGGCCGTGGGTGGTGGACGGGCCTGGAGTAGAACTGGGTAGGGTGA
AGGACGGACCTGTGATCGGACCTTAAAGTGGGGCTGGGGACGAGGCAGGGGCTGGGGGACGG
(SEQ ID NO: 1204)

1261. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene DHRS7C. In some embodiments, the sequences from gene DHRS7C comprise or consist of:
GTAAGCTGGCTTTGCTCCCACCTGTGCCCATTTCTGCCCCCAGGGACTGGCAGGATGGCAGGGT
GGCAGGGCGGCAGGGCGCTGTGTGGGCAAACCTGCTCGGTGGGAGGGGATCGATCCTGTGTT
CTCTCCCAGCTTCTATCATTAACCAGCAAGTTTCCCATCTTTTGGAGGCTGCAGATTCCTGATAAA
TGAGGGTGGTGGAATATCTAGGGTTGCAAACTCACAGCCTAAGGGCTAAAACTGGTCTGCAGAT
GTGATTTGTTTTGGCTTCATGGGGTTTCCAGAAATTTTGAAAATTCAAAGCCTTTAGCTGGGGCAA
TGTACTGGTTGTGAGCCCAGACTCAGGAGCTGGGTTCAGTTCCTGGCTCCAGCAATGACTAGCT
GGTTACTTCACTTCTCTGCCTTAAACTTCTCATCTGTAAGGCGAGGATAACAGCAGTCTCTACCTC
ATGCTGCCATTGTGAGGAATAAACGAGTTCATAGATGGATAGCACTT (SEQ ID NO: 1205)

1262. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene DHRS7C. In some embodiments, the sequences from gene DHRS7C comprise or consist of:
AGGATGTTTGTGCTGAAAATCCCAGGTTTGGATCCCTCGTGCTCAGTCCCAAACTGCAGAGGAAA
CCTCTAATACTCAGGCAAGCCAGGAGAGCTTTGGCAAGAGCCCTGAAATCAGACCCGGCCAGCA
TGTGTTCCTGAATATCAGAATAGACACTATATTTACCCTGACAGCCTTTTAGTGCAACTGAAAGCT
ATAAATAACCATTAGGGCCCAAGCAAGTGGCCTTAACACATGGATTTTCTTCCAAAAATGCAGAC
CCATTTTAATTAAGTTTGTAATTAACCACTGGGGAGGGCAGGCCCCCTGGATTCGGTCTGCTTTC
GGAGACACTGTGAGTAACTTCCTATTTGTTGAACATTTGGGGATTAGCACGCCCACTGGGTGTTC
AGCTTGGAGGCTTGCACAGAGCTGAGCTCCCTGCAGCCTTGGGCCTCCCCCTGCCCTGGGAGT
CCTGATCAGCGTCTCTTTGCAAAGCCAATCCCCTTTTACTCCGTTG (SEQ ID NO: 1206)

1263. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NPEPPS. In some embodiments, the sequences from gene NPEPPS comprise or consist of:
GTGCTGGGATTACAGGCGTGAGCCACCACGCCTGGCCACAACAAAGAATTTTACCAGAAGTGGG
TATGATTTATATCTTAGTTTGAATTGCTACTTACCTTTGGGGGAACAGACCTTTCCTTGATGTATCT
TTAACACTGAAATCTTGGCAAGTTGCCAAGTCTCAAATGTTCATGAGTAAGACTGCAATATCACAA
TATCATAGTCACACAGGAATCTGATAGAAAAGCATCACATTTATAAAGCCTTCTTTCCTGTACATC
ACTGACGTTTTGTGAATTTTAAAGAATTTGTAATTATTTTTAAGGAGCATATTTAATGTAGATAATGT
AGCCTAGAATAGGCTCATTTGAAATGAAACTCTTGCTAATAGGAACTTAATTCACCAAATTAAGAA
TATTTTGCTTTTGTAGAGATTTTGCTCTTGAAAATGTTGCAGTCTTGATTTCGTCTTGTCAGTCCAG
TCAGAATTGTAAAGTAATTTTTTTTTCTCATTCCAG (SEQ ID NO: 1207)

1264. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene NPEPPS. In some embodiments, the sequences from gene NPEPPS comprise or consist of:
TAAGAGACATAGCTTTTGTAAAATCTCGTGATGAATATAGTGACATCTGACTTCCTCCAGAGAAAT
TTATTGTATGCCATTTTTCCCCTCATTGTTATTAGCAGATTAAGTATTAAGAGCTTTTTTTTTTTTTT
TCCTTTGAGACGGAGTCTTACTCTATTGCCCAGGCTGGAGAGTAGTGGCATGATCTTGGCTCACT
ACAACCTCCACCTTCCAGGTTCAAGCGATTCTCCTGCGTCGGCCTCCCGAGTAGCTGGGATTAC
AGGTGCCTACCACCACACCGGCTAATTTTTTTGTATTTTTAGTAGAGACAAGGTTTCGCCATGTTG
GCCAGGCTGGTCTTGAACTCCTGATCTCAAGCGATCTGCCCACCCTGGCCTCCCAAAGTGGTAG
GATTACAGGCAGGAGCCACCGCGCCCAGCCGTATTAAGAGCTTTTTAAAGAGGTTTGTTGCAACT
TTTGGGCCACCAGCATTTCCTTCTGCGGAAGTTGGGCTACG (SEQ ID NO: 1208)

1265. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene KPNB1. In some embodiments, the sequences from gene KPNB1 comprise or consist of:
GGCCTGAGGGCGGCGGTGCAGCGGGAGGGAGAAAGAGGGAGGGAAGGGAAGTTAGGTTGCG
CGGCGCTGCGTGTTCAGCAGGGGTGGGGGCGGGGGAGTCGGGCCTAGGGGCCATGTGGAAG
CTCCGGGCCCGGCCGCCCGCCCTGTCTGACCCCGGCCGGCTTCTCCTTCCTATCCCGTGGCCC
CTGTGGCTCTCCCCACCTATTTCCTAGAGCTCTGCCCTTTCCTAGCTACCTTGGTCTGTACTCAT
GGCCAGGCCTGGCACCCGACTGCCTCTTAACCCATTTCCACTGATATTTTTCCCTCTTTGCTCGG
TTATTCCTCTCTTGGGGTTTTTTCTTTTTCTTTCTTTCTTTTTTTTTTTTTCTTCTGACCTGGATGAATA
GAGACCTAATCACTAGGGATCTGCACCCAGAAAACAGACTGAGGCTCATCTTTGAGATGGGGCC
TGTTTGCTGATGAAATCACAGGGGAAAGTTCCTCGTTTTTCATATTTTAAA (SEQ ID NO: 1209)

1266. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene KPNB1. In some embodiments, the sequences from gene KPNB1 comprise or consist of:
TAATAGGAATTAAGTCTGAGTAACACTAACCATATGTGTTCCTTTGTGTTATATAGGCAAAATGTC
AACATCAACAAAGTGACAAGGCTTATTTTATACAGACTGCCTTTGAATGATTTTTTTGTTGTTTTTC
ATATGTGCCAATTTTTTACAACTAACCTGTTTATCCTTTCCTAGAAGAGATTTTTCCACTAGTATAGG
CTGATAATTCCATTTAGGGTATTATTCCTGTTTCTGCTTTTGCAAATTTTGCAAAAAGCTTTTTATCT
TATTCCTAACATTCTTAACATTCTTTAGTGGTACATAATTAATAAAACTTTTAAGAATTATCTTCTGC
TGTGATTGCAGAGCTTGTTAGCAGTAAGAAAAATGTGTCTGCTTTTGACTTTTCCTGCTAACTTTG
CTGTTTGGGCACGGTTTTTGGTGGAGAGGTGTGTGTGTGCTAAATTTTTAAACAAAGGGAGTAGT
TTTTGAGGCCTGTGGATTACAAAAGGTTACAA (SEQ ID NO: 1210)

1267. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SPAG9. In some embodiments, the sequences from gene SPAG9 comprise or consist of:
GTAAGGCTCTTCTCAAGGACAAAAAATATGATATCGTAAGCTGCATCATGTTGACTGTGCATTTGT
TGCAATCCTCTGCCAAATTTAAATAATGGGGAATTATTTAGAGACTTGAAAATGACCTGGATCCCC
ATTAAATAAGTTTCTGATTGGCTGGTTTTGTGATTGTAAGAAACTTTACAAAGTGAAGATGAGAAA
TTTAGTGCTTGTAGGGTTTGAGTAATATTGTGTATGTATTGAGCTTGAGTTATGTTTGTGCTAGAA
GTACTATGTGTTTACTGTGATTAAAACTTACCCTTTTTTGGTGAATCTGCTATTTAATGGAAGTGTC
AATTAAAAAAGAAATAGACCCGAAAGTAGTTGTTTAAATTGAGCTTAATCAGAAAATGTATAAAATG
TGTGTTAACATGGTAATATGTGTTCCAGTACTTGATTATAATAAGCTGTTTTTAGAACTGGCATACT
AAGCTTCCATTCACATCACACAGCCATAACCTTG (SEQ ID NO: 1211)

1268. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene SPAG9. In some embodiments, the sequences from gene SPAG9 comprise or consist of:
TGTTGGCTGTCTAGCACATATTACAGTCCTCTGTCGGTAGACTAAGCTCTTTGAGGGAGGGATGA
TATTTTATTTTTCTTAGTAGAATTAAAGTCAATCTTTAGCAGATTGACTGACACATGGTAGGTCAAA
GTAACTACAGTATTTATTGAACTTAATTGTTGACTCCCCTCTGTGTATCCCATGAACTTCTTGGGT
CTCTTGTTCTTCAGAAAGAAAGGTAGAATACCTCACTGATAAATGTTTCTTTTCTTTTCTTTTTGAA
TGTAGGGCATCACGAGAAAATCCAGCCATGCAGGAAAAAAAAAAGGTCAAGCATTTGGCAGTTGTA
AGTATTGAAAAACAAAGATGTTAGACAGCACATGAGACAAGAAAATTACAGTCAAAATTTATTTCC
AAGAATGATTTTATGTCCATTTTCTTTCCTTCATTTTTTTTTTTTAAACTAGGGGTAATGGTTAAGTA
GCTAAACTGAACTTTTTTTTTTTTTTTAATATATA (SEQ ID NO: 1212)

1269. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MAFG. In some embodiments, the sequences from gene MAFG comprise or consist of:
GTATTGGGGGCTGGGCACCTGGACAGCAGGCTGGGGCGGGCTGTGCGGCAAGGGCTCTTGTG
AACTGGGCCGGGGGCGGGGGGGGGGGGGTGCGGCGAGGGTGGTCTCCAGGGTACTGACCTG
CTCCGTGTCTTGCAGAGAGCGCCTGCTCGCTGTGCCCCCGGGTTATGACGACCCCCAATAAAGG
AAACAAGGCCTTGAAGGTGAGTGGGCAGGGACAGGAGCCTGTGGGCTGGGGTCGGGGGGCAC

AGTGGGCGTGCCCGCTTGGCCTGTGACCACCTGCACTGTGCCCCAGGTGAAGCGGGAGCCGG
GTGAGAATGGCACCAGCCTGACGGATGAGGAGCTGGTGACCATGTCGGTGCGGGAGCTGAACC
AGCACCTGCGGGGCCTGTCCAAGGAGGAGATCGTCCAGCTGAAGCAGCGCCGGCGCACGCTC
AAGAACCGCGGCTACGCTGCCAGCTGCCGCGTGAAGCGGGTGACGCAGAAGGAGGAGCTGGA
G (SEQ ID NO: 1213)

1270. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MAFG. In some embodiments, the sequences from gene MAFG comprise or consist of:
AAGCCACAGGATGGTTACTCCATCAGTGGAGGAGGCCGACTGGGAGGTCTAGAGGGGCCTCGG
GCCAGGCTCCTCCCAGCTGATGGCCTGCCACCTGGAAGGTGGGGGAACTCCCTGGTCAGTCCT
GCCAACAGACCAGAGCTAGATGGACGGCCCACCCCCAGCTTTTCAAAGTTAGGAGGCTGGGAG
ACTCGGGGTTCCCTGTAGCCTCCTCTCTGGCCAGGTCCCCCGTGGGGCCCCTGTGCACCCAGG
GAGCAGGGGGCTTTGTCCGAGGCCGGCTCAGGGGAGGTGGCTGTAGAAGGTAGGACCCTGGA
AGATGCACACACAGGGTCACTGGCTGGCCCTCACCTGCTATTGGCCAGGCTGGGGGCTGCGGC
TCTCGTGGGGCGCTGTTGGCTGGCGGGCCAGGGAGTGCGGGCGCGGCGGGGAGGCAGAGGC
AATGTGCTGAGTCAGCGTGACTCGCCAGGAACAGCCGCGCTCTGGGCAGTGCCGGGGTTAT
(SEQ ID NO: 1214)

1271. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene RYR1. In some embodiments, the sequences from gene RYR1 comprise or consist of:
GTCTGTGAAGCAGAGGTCAGAGGTGTTTGAAGGAAAAGGCAGGAGCGAGGACTGTGTGATGGT
GGAGGCAGGAGGTGGGGCTTCCTTTGGGGTTGGAGGGATGTGGGGTCATCTGCAGAGGAGGA
CACAGAACAGGAGATTCCTGTCCTTGGAGCAGGGTCAGTGTGTCTCAGGGGAGAGGCATGGGG
GTGAGGCTTCCTATGAGATTAGGTGGAACACGGGTTAGTGGGGAGGGTTAGGGTTAGGGAAGTT
TCTATGGAGTCTGGGTGGGTCTGAGGTGTTTGAGGGAGGAGGCACAGAAGAGGTGTTTTCGTGA
TGTTGGTCTAGATTCAGTGTGTCTGAGGGGGATGGCAGAGGGCAGGGCCTTCCTGTGGGGTGG
GGGTGGGGTCTGGCGTCTCAAGAGTGTGGGCATCCAGACTAGGGGAGGGAGTGTGGCAGGGA
ATGTTGCTGGGGTGGGGGGGTCTTCTGACCCCTCACTTACATCCCCCTCCCACCCCAG (SEQ
ID NO: 1215)

1272. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene RYR1. In some embodiments, the sequences from gene RYR1 comprise or consist of:
TGAGGACCCCACCTGGGGGTGGGCGGGGTGGCAGAGATGGGCGAGAGGACCCAGGGGTCGTT
TAGGGCACGGTGGCAAGGATGGGTGAGAGGACCCGGGGGTCGCTTACCATCTGCTCTTCTTCC
TCTCTCTGCCCTGCCCCCCACAGGCCCTCAATTTGGATAAGTGGGTAGGTCCGGCCTTGGATGT
CACCTGTCCTTCCACCCCTCCTGACCCCAGGCAGGCCCGTCTCTCAGGCCCACGCCCTGCACA
CAGGGGCTGGAGGGTCCTCCCCCACCCCAGTTGTCAGGGGCTGTGGAGCCCAGAACAGGCCA
GGCAGGAAGGAAGGAAGGGGATGGGGGCTTCTGAGCCCCTGTCCCCGACGCCTGCTCCTTTCT
CCTCTTTCCAGTCCTTTCCCCCAACCCTGATCCCAGCTCCTCTCCGCATGGGACCTCTCCCACCT
CCCCCATCCCAAGCGTGAGTCCCTCTGGTCCAGGAGTGGGTCCACCATGTGATCACC (SEQ ID
NO: 1216)

1273. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYLK2. In some embodiments, the sequences from gene MYLK2 comprise or consist of:
TGAATATCCCCTCCTGGGAGTGGGGAGGGGTCCTGTGGTTCTGTCCCTAGGGGTCCTGCTTAAT
TCCCTTGTCTTAGGCATGGTTATCATCACATTCAGTGCTGGGGAGTGTAGTTCTGACATTCAGTTT
CCTCTGTCCTGTGAATTGCCTCTACCGCCTTGTCCCCTGCAGAAACCAGAACCCTGCCACAATTC
ATACAAGACTGGAGTAAGAGAGACCCTCAAAGACTGCCTAGGTTGAACATATCTTCTCTAGGCTT
CTGGGGTCCGAAGTTCCCCTTACTCCATGGGCTTGGGTCTAGCCAAGGGCAGGGTTGAGATGG
CAGGCAGAAAGGCTAAAGGTGTCAGGCAAAAGGCTGTGTATTTCCTAGGACATCCAGTATTTTCC

TGTTCTTCTTAATATAATTATTGGTAAGATATGAAAAGATGACTAATAACCAGATTGGAGGATCATT
GATAATATTTTCATAACCATAATATAGCACATGTGTGATGCCAT (SEQ ID NO: 1217)

1274. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene MYLK2. In some embodiments, the sequences from gene MYLK2 comprise or consist of:
CAACAGGTGCCAAGCTGGGGCAGGAGATGGAGGGAGGAGCTTGGGAAGGGGGGTTTTGAATCC
AGGACTGGGCAGGTTCCTCAGTGGGAGTTCTGTGCCCCAGCCTTGTTTGCATGGTGCACGGGG
GACCCAGAAATCAGAGGAATCTCTGGCTAGGGTTGGGCTGGGTCCAGGGCCTGTATGAAGCCC
TTCCTGGAGAGACCAGGAAAATGTGAAGCCACCAGGGATGGCTGCTGGGGATGCACCTAAACA
GTCAGGGCAAGGATGATGGGGGCCACCAAGGCCCACCCAAAGGGCTGGAAGCCTCCCACAGA
GGCCCTCCAAGGTCGTGGCAGCTCATCTCTAGGGGCCATCAAGTGGCCCCAGAGACTCAGTGG
GACAAGCATTTGCAAGTTGTTGCCTGGGTGGGAACCTGGGCCCAGAGCTGGTCTCTGCCCAGC
CTGGGTGAGAGGGAAGGAAAGGAGGGTGGATCCTGATGGGTGTCTCACCTCCTCTGCAG
(SEQ ID NO: 1218)

1275. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CLTCL1. In some embodiments, the sequences from gene CLTCL1 comprise or consist of:
GTAAACCCGATGGGATTGTTAGAAAGGAATCTTACCTCATTTTAACTGCTTTGTTACCTTAAATATT
GAACAAGTGTCACTAAGCTCATGGCGAAGTGCTCCTCAATAGTATTCCACTTAATTCCAAAAGTTT
TAGCAAAAGTTATGTTTAGTGTGCCCTAGTAAGAGGCCCCTGAGCACCAGAGCTTCTTGGTAACA
TCACCCACAGCGCCAGACACACCGAGAGGAAGAAAATGCCCAGGCCTTTGTCTTCATGCGACTA
GGAACGCACAACAGCACTGTGCATGTTTCCCAGGAAGGCTGTGTGGCCCCCTTGCCTGAGGGC
CTGCTGCAGTGGTGCTTCCGGTCATCCGACGACACAGGCTCGGGGGTTTTCCTCCTGTGAAACA
CATCAATGATAGAGGAGCTGATAATTAATAGAATTTTACTTCCTTGAAATCAGGGAGTCTTGGGTG
CTTAAAGCCTTCTAGTTATCTTGAAAAATATAGAATCTTCTTAT (SEQ ID NO: 1219)

1276. In some embodiments, the intronic domain that promotes trans-splicing primarily in the muscle comprises or consists of sequences from the gene CLTCL1. In some embodiments, the sequences from gene CLTCL1 comprise or consist of:
TTGATGATATCTAGGGAAATGTTTAAGCAAAAACTTTTGGCCAGTTCTTTTTTCTTGCCTTTTGGAG
AAATCAGGTTTTGTGTTTCCTCCCTTTTTCCCTTCCACTTCCCTCGCCTTCACCTCTCCAAGACCT
CCTTCCTCCCAAAGCTCTCCTCGGTGGTGGGCTTATCTGTGACACCTTATCTGATGGTGTTCTTT
GGGAGTTCACCCCCAACTCATCTCCTCCTGTCTGTATCACTTGTGGCGTCCTTGACACTGCCTAG
TGTCATCCTGCACATGTCTTATCTCCACTGTGGGCTGGTAATCTCTCAAGGAGAGTTGATTCACA
GGCTTGGGTGGATCTATTACAGGCGTAGAAAAGCAAGCTAATGTTTCCTTCAAGTGTTTACCTAA
TGTTAACTTTTTTCTAAATTTTATTTAACTTCTCCTCTTTTGCCTTTGGCTACAGTCAGTCCATTTCA
GAGGAAAAAAATTTAATCAAATGCTTTTTTTCTGTTTA (SEQ ID NO: 1220)

Replacement domains

1277. Compositions comprising replacement domains disclosed herein include any strategies where replacement or insertion of RNA sequences could be an effective therapy. Exemplary replacement domains include without limitation sequences derived or isolated from the following genes (with gene accession IDs in brackets and associated diseases in parentheses) such as TNFRSF13B [ENSG00000240505] (common variable immune deficiency); ADA, CECR1 [ENSG00000196839, ENSG00000093072] (Adenosine deaminase deficiency); IL2RG [ENSG00000147168] (X-linked severe combined immunodeficiency); HBB [ENSG00000244734] (Beta-thassalemia); HBA1, HBA2 [ENSG00000206172, ENSG00000188536] (alpha-thassalemia); U2AF1 [ENSG00000160201] (myelodysplastic syndrome); SOD1, TARDBP, FUS, MATR3, SOD1, C9ORF72

[ENSG00000142168, ENSG00000120948, ENSG00000089280, ENSG00000015479, ENSG00000142168, ENSG00000147894] (Amyotrophic lateral sclerosis); MAPT, PGRN [ENSG00000186868, ENSG00000030582] (Frontotemporal dementia with parkinsonism); CDH23, MYO7A, USH2A [ENSG00000107736, ENSG00000137474, ENSG00000042781] (Usher's syndrome); GALC [ENSG00000054983] (Krabbe disease); SMPD1, NPC1, NPC2 [ENSG00000166311, ENSG00000141458, ENSG00000119655] (Niemann Pick disease); PRNP [ENSG00000171867] (prion disease); SCN1A [ENSG00000144285] (Dravet syndrome); PINK1, ATPGAP2 [ENSG00000158828] (early-onset Parkinson's disease); ATXN1, ATXN2, ATXN3, PLEKHG4, SPTBN2, CACNA1A, ATXN7, TTBK2, PPP2R2B, KCNC3, PRKCG, ITPR1, TBP, KCND1, FGF14 [ENSG00000124788, ENSG00000204842, ENSG00000066427, ENSG00000196155, ENSG00000173898, ENSG00000141837, ENSG00000163635, ENSG00000128881, ENSG00000156475, ENSG00000131398, ENSG00000126583, ENSG00000150995, ENSG00000112592, ENSG00000102057, ENSG00000102466] (spinocerebellar ataxias); SCN1A, SCN2A, CACNA1A, GRIN2B, GRIN2A, MECP2, FOXG1, SLC6A1, PRRT2, PTEN, KCNQ2, KCNQ3, STARD7, CLRN1 [ENSG00000144285, ENSG00000136531, ENSG00000141837, ENSG00000273079, ENSG00000183454, ENSG00000169057, ENSG00000176165, ENSG00000157103, ENSG00000167371, ENSG00000171862, ENSG00000075043, ENSG00000184156, ENSG00000084090, ENSG00000163646] (genetic epilepsy disorders); ATM [ENSG00000149311] (Ataxia-telangiectasia); GLB1 [ENSG00000170266] (GM1 gangliosidosis); GBA [ENSG00000177628] (Gaucher disease); GM2A [ENSG00000196743] (GM2 gangliosidosis); UBE3A [ENSG00000114062] (Angelman syndrome); SLC2A1 [ENSG00000117394] (glucose transporter deficiency type 1); LAMP2 [ENSG00000005893] (Danon disease); GLA [ENSG00000102393] (Fabry disease); PKD1, PKD2 [ENSG00000008710, ENSG00000118762] (Autosomal dominant polycystic kidney disease); GAA [ENSG00000171298] (Pompe disease); PCSK9, LDLR, APOB, APOE [ENSG00000169174, ENSG00000130164, ENSG00000084674, ENSG00000130203] (Familial hypercholesterolemia); MYOC, OPTN, TBK1, WDR36, CYPIB1 [ENSG00000034971, ENSG00000123240, ENSG00000183735, ENSG00000134987, ENSG00000138061] (Open Angle Glaucoma); IDUA [ENSG00000127415] (Hurler syndrome or Mucopolysaccharidosis 1); IDS [ENSG00000010404] (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 [ENSG00000188603] (Batten disease); DMD [ENSG00000198947] (Duchenne muscular dystrophy); LMNA [ENSG00000160789] (Limb-girdle muscular dystrophy type 1B); DYSF [ENSG00000135636] (Limb-girdle muscular dystrophy type 2B); SGCA [ENSG00000108823] (Limb-girdle muscular dystrophy type 2D); SGCB [ENSG00000163069] (Limb-girdle muscular dystrophy type 2E); SGCG [ENSG00000102683] (Limb-girdle muscular dystrophy type 2C); SGCD [ENSG00000170624] (Limb-girdle muscular dystrophy type 2F); DUX4 [ENSG00000260596] (Facioscapulohumeral muscular dystrophy); F9 [ENSG00000101981] (Hemophilia B); F8 [ENSG00000185010] (Hemophilia A); USHA2A, RPGR, RP2, RHO, PRPF31, USH1F, PRPF3, PRPF6

[ENSG00000156313, ENSG00000102218, ENSG00000163914, ENSG00000105618, ENSG00000150275, ENSG00000117360, ENSG00000101161] (Retinitis pigmentosa); CFTR [ENSG00000001626] (cystic fibrosis); GJB2, GJB6, STRC, DFNA1, WFS1 [ENSG00000165474, ENSG00000121742, ENSG00000242866, ENSG00000131504, ENSG00000109501] (autosomal dominant hearing impairment); POU3F3 [ENSG00000198914] (nonsyndromic hearing loss).

1278. In some embodiments, the replacement domain is codon optimized.

1279. In addition to sequences derived from human genes, Replacement Domains can comprise sequences derived from other organisms in order to alter the stability, translation, processing, or localization of a target RNA. Exemplary replacement domains derived from non-human sources include without limitation sequences that increase protein production such as those derived or isolated from Woodchuck Hepatitis Virus (WHV) Post-transcriptional Regulatory Element (WPRE), triplex from MALAT1, the PRE of Hepatitis B virus (HPRE), and an iron response element of the form CAGYCX (Y = U or A; X = U, C, or A).

Antisense domains

1280. In some embodiments of the compositions of the disclosure, a pathogenic RNA molecule is a target RNA. In some embodiments, the target RNA comprises a target sequence that is complementary to an antisense domain of the trans-splicing RNA of the disclosure.

1281. In some embodiments of the compositions and methods of the disclosure, the target sequence comprises or consists of between 5 and 500 nucleotides. In some embodiments, the target sequence comprises or consists of between 50 and 250 nucleotides. In some embodiments, the target sequence comprises or consists of between 5 and 50 nucleotides.

1282. In some embodiments of the compositions and methods of the disclosure, a target sequence is contained within a single contiguous stretch of the target RNA. In some embodiments, the target sequence may consist of comprise of one or more nucleotides that are not spread among a single contiguous stretch of the target RNA.

1283. In some embodiments of the disclosure, a antisense domain of the disclosure binds to a target sequence. In some embodiments of the disclosure, a antisense domain of the disclosure binds to a target RNA.

Vectors

1284. In some embodiments of the compositions and methods of the disclosure, a vector comprises a trans-splicing nucleic acid of the disclosure. In some embodiments, the vector comprises at least one trans-splicing nucleic acid of the disclosure. In some embodiments, the vector comprises one or more trans-splicing nucleic acid(s) of the disclosure. In some embodiments, the vector comprises two or more trans-splicing nucleic acids of the disclosure.

1285. In some embodiments of the compositions and methods of the disclosure, a vector of the disclosure is a viral vector. In some embodiments, the viral vector comprises a sequence isolated or derived from a retrovirus. In some embodiments, the viral vector comprises a sequence isolated or derived from a lentivirus. In some embodiments, the viral vector comprises a sequence isolated or derived from an adenovirus. In some embodiments, the viral vector comprises a sequence isolated or derived from an adeno-associated virus (AAV). In some embodiments, the viral vector is replication incompetent. In some embodiments, the viral vector is isolated or recombinant. In some embodiments, the viral vector is self-complementary.

1286. In some embodiments of the compositions and methods of the disclosure, the viral vector comprises a sequence isolated or derived from an adeno-associated virus (AAV). In some embodiments, the viral vector comprises an inverted terminal repeat sequence or a capsid sequence that is isolated or derived from an AAV of serotype AAV1, AAV2, AAV3, AAV4, AAV5, AAV6, AAV7, AAV8, AAV9, AAV10, AAV11 or AAV12. In some embodiments, the viral vector is replication incompetent. In some embodiments, the viral vector is isolated or recombinant (rAAV). In some embodiments, the viral vector is self-complementary (scAAV).

1287. In some embodiments of the compositions and methods of the disclosure, a vector of the disclosure is a non-viral vector. In some embodiments, the vector comprises or consists of a nanoparticle, a micelle, a liposome or lipoplex, a polymersome, a polyplex or a dendrimer. In some embodiments, the vector is an expression vector or recombinant expression system. As used herein, the term“recombinant expression system” refers to a genetic construct for the expression of certain genetic material formed by recombination.

1288. In some embodiments, the liposome, lipoplex, or nanoparticle can further comprise a non-cationic lipid, a PEG conjugated lipid, a sterol, or any combination thereof.

1289. In some embodiments, the the liposome, lipoplex, or nanoparticle further comprises a non-cationic lipid, wherein the non-ionic lipid is selected from the group consisting of distearoyl-sn-glycero- phosphoethanolamine, distearoylphosphatidylcholine (DSPC), dioleoylphosphatidylcholine (DOPC), dipalmitoylphosphatidylcholine (DPPC), dioleoylphosphatidylglycerol (DOPG), dipalmitoylphosphatidylglycerol (DPPG), dioleoyl-phosphatidylethanolamine (DOPE), palmitoyloleoylphosphatidylcholine (POPC), palmitoyloleoylphosphatidylethanolamine (POPE), dioleoyl-phosphatidylethanolamine 4-(N-maleimidomethyl)-cyclohexane- 1 - carboxylate (DOPE-mal), dipalmitoyl phosphatidyl ethanolamine (DPPE), dimyristoylphosphoethanolamine (DMPE), distearoyl-phosphatidyl-ethanolamine (DSPE), monomethyl-phosphatidylethanolamine (such as 16-O-monomethyl PE), dimethyl- phosphatidylethanolamine (such as 16-O-dimethyl PE), 18-1 -trans PE, l-stearoyl-2-oleoyl- phosphatidyethanolamine (SOPE), hydrogenated soy phosphatidylcholine (HSPC), egg phosphatidylcholine (EPC), dioleoylphosphatidylserine (DOPS), sphingomyelin (SM), dimyristoyl phosphatidylcholine (DMPC), dimyristoyl phosphatidylglycerol (DMPG), distearoylphosphatidylglycerol (DSPG), dierucoylphosphatidylcholine (DEPC), palmitoyloleyolphosphatidylglycerol (POPG), dielaidoyl-phosphatidylethanolamine

(DEPE), lecithin, phosphatidylethanolamine, lysolecithin, lysophosphatidylethanolamine, phosphatidylserine, phosphatidylinositol, sphingomyelin, egg sphingomyelin (ESM), cephalin, cardiolipin, phosphatidicacid,cerebrosides, dicetylphosphate, lysophosphatidylcholine, dilinoleoylphosphatidylcholine and non-cationic lipids described, for example, in WO2017/099823 or US2018/0028664.

1290. In some embodiments, the liposome, lipoplex, or nanoparticle further comprises a conjugated lipid, wherein the conjugated lipid, wherein the conjugated-lipid is selected from the group consisting of PEG-diacylglycerol (DAG) (such as l-(monomethoxy-polyethyleneglycol)-2,3- dimyristoylglycerol (PEG-DMG)), PEG-dialkyloxypropyl (DAA), PEG-phospholipid, PEG- ceramide (Cer), a pegylated phosphatidylethanoloamine (PEG-PE), PEG succinate diacylglycerol (PEGS-DAG) (such as 4-0-(2',3'-di(tetradecanoyloxy)propyl-l-0-(w- methoxy(polyethoxy)ethyl) butanedioate (PEG-S-DMG)), PEG dialkoxypropylcarbam, N- (carbonyl-methoxypoly ethylene glycol 2000)- 1 ,2-distearoyl-sn-glycero-3 - phosphoethanolamine sodium salt.

1291. In some embodiments, the liposome, lipoplex, or nanoparticle further comprises cholesterol or a cholesterol derivative.

1292. In some embodiments, the liposome, lipoplex, or nanoparticle further comprises an ionizable lipid, a non-cationic lipid, a conjugated lipid that inhibits aggregation of particles, and a sterol. The amount of the ionizable lipid, the non-cationic lipid, the conjugated lipid that inhibits aggregation of particles, and the sterol can be varied independently. In some embodiments, the lipid nanoparticle comprises an ionizable lipid in an amount from about 20 mol % to about 90 mol % of the total lipid present in the particle, a non-cationic lipid in an amount from about 5 mol % to about 30 mol % of the total lipid present in the particle, a conjugated lipid that inhibits aggregation of particles in an amount from about 0.5 mol % to about 20 mol % of the total lipid present in the particle, and a sterol in an amount from about 20 mol % to about 50 mol % of the total lipid present in the particle.

1293. The ratio of total lipid to DNA vector can be varied as desired. For example, the total lipid to DNA vector (mass or weight) ratio can be from about 10: 1 to about 30: 1.

1294. In some embodiments of the compositions and methods of the disclosure, an expression vector, viral vector or non-viral vector provided herein, includes without limitation, an expression control element. An“expression control element” as used herein refers to any sequence that regulates the expression of a coding sequence, such as a gene. Exemplary expression control elements include but are not limited to promoters, enhancers, microRNAs, post-transcriptional regulatory elements, polyadenylation signal sequences, and introns. Expression control elements may be constitutive, inducible, repressible, or tissue-specific, for example. A“promoter” is a control sequence that is a region of a polynucleotide sequence at which initiation and rate of transcription are controlled. It may contain genetic elements at which regulatory proteins and molecules may bind such as RNA polymerase and other transcription factors. In some embodiments, expression control by a promoter is tissue-specific. Non-limiting exemplary promoters include CMV, CBA, CAG, Cbh, EF-1a, PGK, UBC, GUSB, UCOE, hAAT, TBG, Desmin, MCK, C5-12, NSE, Synapsin,

PDGF, MecP2, CaMKII, mGluR2, NFL, NFH, nβ2, PPE, ENK, EAAT2, GFAP, MBP, and U6 promoters. An“enhancer” is a region of DNA that can be bound by activating proteins to increase the likelihood or frequency of transcription. Non-limiting exemplary enhancers and posttranscriptional regulatory elements include the CMV enhancer and WPRE.

Nucleic acids

1295. Provided herein are the nucleic acid sequences encoding the trans-splicing nucleic acids disclosed herein for use in gene transfer and expression techniques described herein. It should be understood, although not always explicitly stated that the sequences provided herein can be used to provide the expression product as well as substantially identical sequences that produce a protein that has the same biological properties. These“biologically equivalent” or“biologically active” or“equivalent” polypeptides are encoded by equivalent polynucleotides as described herein. They may possess at least 60%, or alternatively, at least 65%, or alternatively, at least 70%, or alternatively, at least 75%, or alternatively, at least 80%, or alternatively at least 85%, or alternatively at least 90%, or alternatively at least 95% or alternatively at least 98%, identical nucleic acid sequence to the reference nucleic acid sequence when compared using sequence identity methods run under default conditions. Specific sequences are provided as examples of particular embodiments. Additionally, an equivalent polynucleotide is one that hybridizes under stringent conditions to the reference polynucleotide or its complement.

1296. The nucleic acid sequences (e.g., polynucleotide sequences) disclosed herein may be codon-optimized which is a technique well known in the art. Codon optimization refers to the fact that different cells differ in their usage of particular codons. This codon bias corresponds to a bias in the relative abundance of particular tRNAs in the cell type. By altering the codons in the sequence to match with the relative abundance of corresponding tRNAs, it is possible to increase expression. It is also possible to decrease expression by deliberately choosing codons for which the corresponding tRNAs are known to be rare in a particular cell type. Codon usage tables are known in the art for mammalian cells, as well as for a variety of other organisms. Based on the genetic code, nucleic acid sequences coding for various replacement domains can be generated. In some embodiments, such a sequence is optimized for expression in a host or target cell, such as a host cell used to express the trans-splicing RNA containing a replacement domain in which the disclosed methods are practiced (such as in a mammalian cell, e.g., a human cell). Codon preferences and codon usage tables for a particular species can be used to engineer isolated nucleic acid molecules encoding a replacement domain (such as one encoding a protein having at least 80%, at least 85%, at least 90%, at least 92%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or 100% sequence identity to its corresponding wild-type protein) that takes advantage of the codon usage preferences of that particular species. For example, the replacement domains disclosed herein can be designed to have codons that are preferentially used by a

particular organism of interest. In one example, a replacement domain nucleic acid sequence is optimized for expression in human cells, such as one having at least 70%, at least 80%, at least 85%, at least 90%, at least 92%, at least 95%, at least 98%, or at least 99% sequence identity to its corresponding wild-type or originating nucleic acid sequence. In some embodiments, an isolated trans-splicing nucleic acid molecule encoding at least one replacement domain (which can be part of a vector) includes at least one replacement domain coding sequence that is codon optimized for expression in a eukaryotic cell, or at least one replacement domain coding sequence codon optimized for expression in a human cell. In one embodiment, such a codon optimized replacement domain coding sequence has at least 80%, at least 85%, at least 90%, at least 92%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or 100% sequence identity to its corresponding wild-type or originating sequence. In another embodiment, a eukaryotic cell codon optimized nucleic acid sequence encodes a replacement domain having at least 85%, at least 90%, at least 92%, at least 95%, at least 96%, at least 97%, at least 98%, at least 99%, or 100% sequence identity to its corresponding wild-type or originating protein. In another embodiment, a variety of clones containing functionally equivalent nucleic acids may be routinely generated, such as nucleic acids which differ in sequence but which encode the same replacement domain protein sequence. Silent mutations in the coding sequence result from the degeneracy (i.e., redundancy) of the genetic code, whereby more than one codon can encode the same amino acid residue. Thus, for example, leucine can be encoded by CTT, CTC, CTA, CTG, TTA, or TTG; serine can be encoded by TCT, TCC, TCA, TCG, AGT, or AGC; asparagine can be encoded by AAT or AAC; aspartic acid can be encoded by GAT or GAC; cysteine can be encoded by TGT or TGC; alanine can be encoded by GCT, GCC, GCA, or GCG; glutamine can be encoded by CAA or CAG; tyrosine can be encoded by TAT or TAC; and isoleucine can be encoded by ATT, ATC, or ATA. Tables showing the standard genetic code can be found in various sources (see, for example, Stryer, 1988, Biochemistry, 3.sup.rd Edition, W.H.5 Freeman and Co., NY).

1297. “Hybridization” refers to a reaction in which one or more polynucleotides react to form a complex that is stabilized via hydrogen bonding between the bases of the nucleotide residues. The hydrogen bonding may occur by Watson-Crick base pairing, Hoogstein binding, or in any other sequence-specific manner. The complex may comprise two strands forming a duplex structure, three or more strands forming a multi-stranded complex, a single self-hybridizing strand, or any combination of these. A hybridization reaction may constitute a step in a more extensive process, such as the initiation of a PC reaction, or the enzymatic cleavage of a polynucleotide by a ribozyme.

1298. Examples of stringent hybridization conditions include: incubation temperatures of about 25°C to about 37°C; hybridization buffer concentrations of about 6x SSC to about 10x SSC; formamide concentrations of about 0% to about 25%; and wash solutions from about 4x SSC to about 8x SSC. Examples of moderate hybridization conditions include: incubation temperatures of about 40°C to about 50°C; buffer concentrations of about 9x SSC to about 2x SSC; formamide concentrations of about 30% to about 50%; and wash solutions of about 5x SSC to about 2x SSC. Examples

of high stringency conditions include: incubation temperatures of about 55°C to about 68°C; buffer concentrations of about lx SSC to about 0.1x SSC;

1299. "Homology" or "identity" or "similarity" refers to sequence similarity between two peptides or between two nucleic acid molecules. Homology can be determined by comparing a position in each sequence which may be aligned for purposes of comparison. When a position in the compared sequence is occupied by the same base or amino acid, then the molecules are homologous at that position. A degree of homology between sequences is a function of the number of matching or homologous positions shared by the sequences. An "unrelated" or "non-homologous" sequence shares less than 40% identity, or alternatively less than 25% identity, with one of the sequences of the present invention.

Methods of use

1300. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in a specific tissue comprising contacting the composition and the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1301. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in a specific tissue comprising contacting the composition and a cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1302. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in a specific tissue comprising contacting the composition and the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1303. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in a specific tissue comprising contacting the composition and a cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1304. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in liver tissue comprising contacting the composition and a liver cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1305. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in liver tissue comprising contacting the composition and a liver cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1306. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in muscle tissue comprising contacting the composition and a muscle cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1307. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in muscle tissue comprising contacting the composition and a muscle cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1308. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in brain tissue comprising contacting the composition and a brain cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.
1309. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in brain tissue comprising contacting the composition and a brain cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.
1310. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in heart tissue comprising contacting the composition and a heart cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.
1311. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in heart tissue comprising contacting the composition and a heart cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.
1312. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in retina tissue comprising contacting the composition and a retina cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.
1313. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in retina tissue comprising contacting the composition and a retina cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA.

1314. The disclosure provides a method of modifying the composition of a target RNA of the disclosure primarily in a specific tissue comprising contacting the composition and a cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA. In some embodiments, the cell is in vivo, in vitro, ex vivo or in situ. In some embodiments, the composition comprises a vector comprising composition comprising a guide RNA of the disclosure and a fusion protein of the disclosure. In some embodiments, the vector is an AAV.
1315. The disclosure provides a method of modifying the composition of a protein encoded by a target RNA of the disclosure primarily in a specific tissue comprising contacting the composition and a cell comprising the target RNA under conditions suitable for trans-splicing among the composition and the target RNA. In some embodiments, the cell is in vivo, in vitro, ex vivo or in situ. In some embodiments, the composition comprises a vector comprising composition comprising a guide RNA of the disclosure and a fusion protein of the disclosure. In some embodiments, the vector is an AAV.

1316. The disclosure provides a method of treating a disease or disorder comprising administering to a subject a therapeutically effective amount of a composition of the disclosure.
1317. The disclosure provides a method of treating a disease or disorder comprising administering to a subject a therapeutically effective amount of a composition of the

disclosure, wherein the composition comprises a vector comprising composition comprising a guide RNA of the disclosure and a fusion protein of the disclosure and wherein the composition modifies a level of expression of an RNA molecule of the disclosure or a protein encoded by the RNA molecule.

1318. The disclosure provides a method of treating a disease or disorder comprising administering to a subject a therapeutically effective amount of a composition of the disclosure, wherein the composition comprises a vector comprising composition comprising a guide RNA of the disclosure and a fusion protein of the disclosure and wherein the composition modifies an activity of a protein encoded by an RNA molecule.

1319. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a genetic disease or disorder. In some embodiments, the genetic disease or disorder is a single-gene disease or disorder. In some embodiments, the single-gene disease or disorder is an autosomal dominant disease or disorder, an autosomal recessive disease or disorder, an X-chromosome linked (X-linked) disease or disorder, an X-linked dominant disease or disorder, an X-linked recessive disease or disorder, a Y-linked disease or disorder or a mitochondrial disease or disorder. In some embodiments, the singe-gene disease or disorder is, but not limited to, common variable immune deficiency, Adenosine deaminase deficiency, X-linked severe combined immunodeficiency, Beta-thassalemia, alpha-thassalemia, myelodysplastic syndrome, Amyotrophic lateral sclerosis, Frontotemporal dementia with parkinsonism, Usher's syndrome, Krabbe disease, Niemann Pick disease, prion disease, Dravet syndrome, early-onset Parkinson's disease, spinocerebellar ataxias, genetic epilepsy disorders, Ataxia-telangiectasia, GM1 gangliosidosis, Gaucher disease, GM2 gangliosidosis, Angelman syndrome, glucose transporter deficiency type 1, Danon disease, Fabry disease, Autosomal dominant polycystic kidney disease, Pompe disease, Familial hypercholesterolemia, Open Angle Glaucoma, Hurler syndrome or Mucopolysaccharidosis 1, Hunter syndrome or Mucopolysaccharidosis 2, Batten disease, Duchenne muscular dystrophy, Limb-girdle muscular dystrophy type 1B, Limb-girdle muscular dystrophy type 2B, Limb-girdle muscular dystrophy type 2D, Limb-girdle muscular dystrophy type 2E, Limb-girdle muscular dystrophy type 2C, Limb-girdle muscular dystrophy type 2F, Facioscapulohumeral muscular dystrophy, Hemophilia B, Hemophilia A , Retinitis pigmentosa, cystic fibrosis, autosomal dominant hearing impairment, and non-syndromic hearing loss. In some embodiments, the genetic disease or disorder is a multiple-gene disease or disorder. In some embodiments, the genetic disease or disorder is a multiple-gene disease or disorder. In some embodiments, the single-gene disease or disorder is an autosomal dominant disease or disorder including, but not limited to, Huntington's disease, neurofibromatosis type 1, neurofibromatosis type 2, Marfan syndrome, hereditary nonpolyposis colorectal cancer, hereditary multiple exostoses, Von Willebrand disease, and acute intermittent porphyria. In some embodiments, the single-gene disease or disorder is an autosomal recessive disease or disorder including, but not limited to, Albinism, Medium-chain acyl-CoA dehydrogenase deficiency, cystic fibrosis, sickle-cell disease, Tay-Sachs disease, Niemann-Pick disease, spinal muscular atrophy, and

Roberts syndrome. In some embodiments, the single-gene disease or disorder is X-linked disease or disorder including, but not limited to, muscular dystrophy, Duchenne muscular dystrophy, Hemophilia, Adrenoleukodystrophy (ALD), Rett syndrome, and Hemophilia A. In some embodiments, the single-gene disease or disorder is a mitochondrial disorder including, but not limited to, Leber's hereditary optic neuropathy.

1320. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, an immune disease or disorder. In some embodiments, the immune disease or disorder is an immunodeficiency disease or disorder including, but not limited to, B-cell deficiency, T-cell deficiency, neutropenia, asplenia, complement deficiency, acquired immunodeficiency syndrome (AIDS) and immunodeficiency due to medical intervention (immunosuppression as an intended or adverse effect of a medical therapy). In some embodiments, the immune disease or disorder is an autoimmune disease or disorder including, but not limited to, Achalasia, Addison's disease, Adult Still's disease, Agammaglobulinemia, Alopecia areata, Amyloidosis, Anti-GBM/Anti-TBM nephritis, Antiphospholipid syndrome, Autoimmune angioedema, Autoimmune dysautonomia, Autoimmune encephalomyelitis, Autoimmune hepatitis, Autoimmune inner ear disease (AIED), Autoimmune myocarditis, Autoimmune oophoritis, Autoimmune orchitis, Autoimmune pancreatitis, Autoimmune retinopathy, Autoimmune urticaria, Axonal & neuronal neuropathy (AMAN), Baló disease, Behcet's disease, Benign mucosal pemphigoid, Bullous pemphigoid, Castleman disease (CD), Celiac disease, Chagas disease, Chronic inflammatory demyelinating polyneuropathy (CIDP), Chronic recurrent multifocal osteomyelitis (CRMO), Churg-Strauss Syndrome (CSS) or Eosinophilic Granulomatosis (EGPA), Cicatricial pemphigoid, Cogan's syndrome, Cold agglutinin disease, Congenital heart block, Coxsackie myocarditis, CREST syndrome, Crohn's disease, Dermatitis herpetiformis, Dermatomyositis, Devic's disease (neuromyelitis optica), Discoid lupus, Dressler's syndrome, Endometriosis, Eosinophilic esophagitis (EoE), Eosinophilic fasciitis, Erythema nodosum, Essential mixed cryoglobulinemia, Evans syndrome, Fibromyalgia, Fibrosing alveolitis, Giant cell arteritis (temporal arteritis), Giant cell myocarditis, Glomerulonephritis, Goodpasture's syndrome, Granulomatosis with Polyangiitis, Graves' disease, Guillain-Barre syndrome, Hashimoto's thyroiditis, Hemolytic anemia, Henoch-Schonlein purpura (HSP), Herpes gestationis or pemphigoid gestationis (PG), Hidradenitis Suppurativa (HS) (Acne Inversa), Hypogammalglobulinemia, IgA Nephropathy, IgG4-related sclerosing disease, Immune thrombocytopenic purpura (ITP), Inclusion body myositis (IBM), Interstitial cystitis (IC), Juvenile arthritis, Juvenile diabetes (Type 1 diabetes), Juvenile myositis (JM), Kawasaki disease, Lambert-Eaton syndrome, Leukocytoclastic vasculitis, Lichen planus, Lichen sclerosus, Ligneous conjunctivitis, Linear IgA disease (LAD), Lupus, Lyme disease chronic, Meniere's disease, Microscopic polyangiitis (MPA), Mixed connective tissue disease (MCTD), Mooren's ulcer, Mucha-Habermann disease, Multifocal Motor Neuropathy (MMN) or MMNCB, Multiple sclerosis, Myasthenia gravis, Myositis, Narcolepsy, Neonatal Lupus, Neuromyelitis optica, Neutropenia, Ocular cicatricial pemphigoid, Optic neuritis, Palindromic rheumatism (PR), PANDAS, Paraneoplastic cerebellar

degeneration (PCD), Paroxysmal nocturnal hemoglobinuria (PNH), Parry Romberg syndrome, Pars planitis (peripheral uveitis), Parsonnage-Turner syndrome, Pemphigus, Peripheral neuropathy, Perivenous encephalomyelitis, Pernicious anemia (PA), POEMS syndrome, Polyarteritis nodosa, Polyglandular syndromes type I, II, III, Polymyalgia rheumatica, Polymyositis, Postmyocardial infarction syndrome, Postpericardiotomy syndrome, Primary biliary cirrhosis, Primary sclerosing cholangitis, Progesterone dermatitis, Psoriasis, Psoriatic arthritis, Pure red cell aplasia (PRCA), Pyoderma gangrenosum, Raynaud's phenomenon, Reactive Arthritis, Reflex sympathetic dystrophy, Relapsing polychondritis, Restless legs syndrome (RLS), Retroperitoneal fibrosis, Rheumatic fever, Rheumatoid arthritis, Sarcoidosis, Schmidt syndrome, Scleritis, Scleroderma, Sjögren's syndrome, Sperm & testicular autoimmunity, Stiff person syndrome (SPS), Subacute bacterial endocarditis (SBE), Susac's syndrome, Sympathetic ophthalmia (SO), Takayasu's arteritis, Temporal arteritis/Giant cell arteritis, Thrombocytopenic purpura (TTP), Tolosa-Hunt syndrome (THS), Transverse myelitis, Type 1 diabetes, Ulcerative colitis (UC), Undifferentiated connective tissue disease (UCTD), Uveitis, Vasculitis, Vitiligo, Vogt-Koyanagi-Harada Disease, or Wegener's granulomatosis.

1321. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, an inflammatory disease or disorder.

1322. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a metabolic disease or disorder.

1323. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a degenerative or a progressive disease or disorder. In some embodiments, the degenerative or a progressive disease or disorder includes, but is not limited to, amyotrophic lateral sclerosis (ALS), Huntington's disease, Alzheimer's disease, and aging.

1324. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, an infectious disease or disorder.

1325. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a pediatric or a developmental disease or disorder.

1326. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a cardiovascular disease or disorder.

1327. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a proliferative disease or disorder. In some embodiments, the proliferative disease or disorder is a cancer. In some embodiments, the cancer includes, but is not limited to, Acute Lymphoblastic Leukemia (ALL), Acute Myeloid Leukemia (AML), Adrenocortical Carcinoma, AIDS-Related Cancers, Kaposi Sarcoma (Soft Tissue Sarcoma), AIDS-Related Lymphoma (Lymphoma), Primary CNS Lymphoma (Lymphoma), Anal Cancer, Appendix Cancer, Gastrointestinal Carcinoid Tumors, Astrocytomas,

Atypical Teratoid/Rhabdoid Tumor, Central Nervous System (Brain Cancer), Basal Cell Carcinoma, Bile Duct Cancer, Bladder Cancer, Bone Cancer, Ewing Sarcoma, Osteosarcoma, Malignant Fibrous Histiocytoma, Brain Tumors, Breast Cancer, Burkitt Lymphoma, Carcinoid Tumor, Carcinoma, Cardiac (Heart) Tumors, Embryonal Tumors, Germ Cell Tumor, Primary CNS Lymphoma, Cervical Cancer, Cholangiocarcinoma, Chordoma, Chronic Lymphocytic Leukemia (CLL), Chronic Myelogenous Leukemia (CML), Chronic Myeloproliferative Neoplasms, Colorectal Cancer , Craniopharyngioma, Cutaneous T-Cell Lymphoma, Ductal Carcinoma In Situ, Embryonal Tumors, Endometrial Cancer (Uterine Cancer), Ependymoma, Esophageal Cancer, Esthesioneuroblastoma (Head and Neck Cancer), Ewing Sarcoma (Bone Cancer), Extracranial Germ Cell Tumor, Extragonadal Germ Cell Tumor, Eye Cancer, Childhood Intraocular Melanoma, Intraocular Melanoma, Retinoblastoma, Fallopian Tube Cancer, Fibrous Histiocytoma of Bone, Malignant, and Osteosarcoma, Gallbladder Cancer, Gastric (Stomach) Cancer, Gastrointestinal Carcinoid Tumor, Gastrointestinal Stromal Tumors (GIST) (Soft Tissue Sarcoma), Childhood Gastrointestinal Stromal Tumors, Germ Cell Tumors, Childhood Extracranial Germ Cell Tumors, Extragonadal Germ Cell Tumors, Ovarian Germ Cell Tumors, Testicular Cancer, Gestational Trophoblastic Disease, Hairy Cell Leukemia, Head and Neck Cancer, Heart Tumors, Hepatocellular (Liver) Cancer, Histiocytosis, Hodgkin Lymphoma, Hypopharyngeal Cancer (Head and Neck Cancer), Intraocular Melanoma, Islet Cell Tumors, Pancreatic Neuroendocrine Tumors, Kaposi Sarcoma (Soft Tissue Sarcoma), Kidney (Renal Cell) Cancer, Langerhans Cell Histiocytosis, Laryngeal Cancer (Head and Neck Cancer), Leukemia, Lip and Oral Cavity Cancer (Head and Neck Cancer), Liver Cancer, Lung Cancer (Non-Small Cell and Small Cell), Childhood Lung Cancer, Lymphoma, Male Breast Cancer, Malignant Fibrous Histiocytoma of Bone and Osteosarcoma, Melanoma, Merkel Cell Carcinoma (Skin Cancer), Mesothelioma, Metastatic Squamous Neck Cancer with Occult Primary (Head and Neck Cancer), Midline Tract Carcinoma With NUT Gene Changes, Mouth Cancer (Head and Neck Cancer), Multiple Endocrine Neoplasia Syndromes, Multiple Myeloma/Plasma Cell Neoplasms, Mycosis Fungoides (Lymphoma), Myelodysplastic Syndromes, Myelodysplastic/Myeloproliferative Neoplasms, Nasal Cavity and Paranasal Sinus Cancer (Head and Neck Cancer), Nasopharyngeal Cancer (Head and Neck Cancer), Neuroblastoma, Non-Hodgkin Lymphoma, Non-Small Cell Lung Cancer, Oral Cancer, Lip and Oral Cavity Cancer and Oropharyngeal Cancer, Osteosarcoma and Malignant Fibrous Histiocytoma of Bone, Ovarian Cancer, Pancreatic Cancer, Pancreatic Neuroendocrine Tumors (Islet Cell Tumors), Papillomatosis, Paraganglioma, Parathyroid Cancer, Penile Cancer, Pharyngeal Cancer (Head and Neck Cancer), Pheochromocytoma , Plasma Cell Neoplasm/Multiple Myeloma, Pleuropulmonary Blastoma, Pregnancy and Breast Cancer, Primary Central Nervous System (CNS) Lymphoma, Primary Peritoneal Cancer, Prostate Cancer, Rectal Cancer, Recurrent Cancer, Renal Cell (Kidney) Cancer, Retinoblastoma, Rhabdomyosarcoma, Childhood (Soft Tissue Sarcoma), Salivary Gland Cancer (Head and Neck Cancer), Sarcoma, Childhood Rhabdomyosarcoma (Soft Tissue Sarcoma), Childhood Vascular Tumors (Soft Tissue Sarcoma), Ewing Sarcoma (Bone Cancer), Kaposi Sarcoma (Soft Tissue

Sarcoma), Osteosarcoma (Bone Cancer), Uterine Sarcoma, S√©zary Syndrome, Lymphoma, Skin Cancer, Small Cell Lung Cancer, Small Intestine Cancer, Soft Tissue Sarcoma, Squamous Cell Carcinoma of the Skin, Squamous Neck Cancer, Stomach (Gastric) Cancer, T-Cell Lymphoma, Testicular Cancer, Throat Cancer (Head and Neck Cancer), Nasopharyngeal Cancer, Oropharyngeal Cancer, Hypopharyngeal Cancer, Thymoma and Thymic Carcinoma , Thyroid Cancer, Transitional Cell Cancer of the Renal Pelvis and Ureter, Renal Cell Cancer, Urethral Cancer, Uterine Sarcoma, Vaginal Cancer, Vascular Tumors (Soft Tissue Sarcoma), Vulvar Cancer, Wilms Tumor and Other Childhood Kidney Tumors.

1328. In some embodiments of the compositions and methods of the disclosure, a disease or disorder of the disclosure includes, but is not limited to, a proliferative disease or disorder. In some embodiments, the proliferative disease or disorder is a cancer. In some embodiments, the cancer involves the present of a gene fusion that produces a chimeric RNA with sequences derived from two genes due to a deletion or translocation of DNA. Gene fusions pairs include but are not limited to: MAN2A1 and FER, DNAJB1 and PRKACA, BCR-ABL1, TMPRSS2 and ERG , EWSR1 and FLI1, PML and RARA, EML4 and ALK, KIAA1549 and BRAF, CCDC6 and RET, SS18 and SSX1, RUNX1 and RUNX1T1, PAX3 and FOXO1, NCOA4 and RET, ETV6 and RUNX1, FUS and DDIT3, SS18 and SSX2, NPM1 and ALK, KMT2A and AFF1, TCF3 and PBX1, STIL and TAL1, COL1A1 and PDGFB, CRTC1 and MAML2, NAB2 and STAT6, EWSR1 and ATF1, ETV6 and NTRK3, EWSR1 and ERG, EWSR1 and WT1, DNAJB1 and PRKACA, PAX7 and FOXO1, FUS and CREB3L2, CBFA2T3 and GLIS2, PAX8 and PPARG, KMT2A and MLLT1, EWSR1 and NR4A3, KMT2A and MLLT3, ASPSCR1 and TFE3, HMGA2 and LPP, JAZF1 and SUZ12, KIF5B and RET, FUS and ERG, SLC45A3 and ERG, NUP214 and ABL1, SET and NUP214, CD74 and ROS1, ETV6 and ABL1, TPM3 and NTRK1, PRKAR1A and RET, EWSR1 and CREB1, KMT2A and AFDN, EWSR1 and DDIT3, CLTC and ALK, ETV6 and PDGFRB, TPM3 and ALK, KMT2A and MLLT10, TMPRSS2 and ETV1, BRD4 and NUTM1, NUP98 and KDM5A, RANBP2 and ALK, CTNNB1 and PLAG1, KMT2A and ELL, TAF15 and NR4A3, FGFR3 and TACC3, PCM1 and JAK2, YWHAE and NUTM2B, STRN and ALK, CRTC3 and MAML2, CDH11 and USP6, CDKN2D and WDFY2, CIC and DUX4, SLC34A2 and ROS1, ATIC and ALK, CD74 and NRG1, MYB and NFIB, PRCC and TFE3, KIF5B and ALK, TMPRSS2 and ETV4, KMT2A and SEPT9, EWSR1 and POU5F1, FGFR1 and PLAG1, MN1 and ETV6, TBL1XR1 and TP63, KMT2A and EPS15, SLC45A3 and ELK4, DHH and RHEBL1, HEY1 and NCOA2, EZR and ROS1, GOPC and ROS1, HMGA2 and WIF1, KMT2A and CREBBP, SS18 and SSX4B, FAM131B and BRAF, EWSR1 and FEV, EWSR1 and PBX1, TPM4 and ALK, SND1 and BRAF, ACTB and GLI1, KMT2A and KNL1, KMT2A and SEPT6, SDC4 and ROS1, TFG and ALK, HNRNPA2B1 and ETV1, PTPRK and RSPO3, JAZF1 and PHF1, HMGA2 and RAD51B, KMT2A and MLLT11, TPR and NTRK1, AKAP9 and BRAF, FUS and CREB3L1, ETV6 and JAK2, HMGA2 and NFIB, KMT2A and AFF3, CHCHD7 and PLAG1, VTI1A and TCF7L2, LIFR and PLAG1, EWSR1 and ETV1, SRGAP3 and RAF1, KMT2A and AFF4, MEAF6 and PHF1, PAX3 and NCOA1, HAS2 and PLAG1, EWSR1 and NFATC2, HIP1 and ALK, GOLGA5 and RET, BCR and JAK2, EWSR1 and ETV4,

DCTN1 and ALK, MBTD1 and CXorf67, NDRG1 and ERG, CARS and ALK, SFPQ and TFE3, KMT2A and ARHGAP26, KMT2A and EP300, KMT2A and TET1, PAX5 and JAK2, PPFIBP1 and ALK, YWHAE and NUTM2A, LRIG3 and ROS1, TFG and NTRK1, TPM3 and ROS1, SLC45A3 and ETV1, ERC1 and RET, SEC16A and NOTCH1, KTN1 and RET, SEC31A and JAK2, TCEA1 and PLAG1, QKI and NTRK2, RNF130 and BRAF, EIF3E and RSPO2, EWSR1 and ZNF444, LMNA and NTRK1, PPFIBP1 and ROS1, PWWP2A and ROS1, EWSR1 and YY1, FUS and ATF1, PAX3 and NCOA2, ZC3H7B and BCOR, BRD3 and NUTM1, CANT1 and ETV4, CIC and FOXO4, COL1A1 and USP6, EWSR1 and ZNF384, KMT2A and ABI1, KMT2A and ACTN4, KMT2A and CEP170B, KMT2A and FOXO3, KMT2A and GAS7, KMT2A and MLLT6, KMT2A and SEPT2, KMT2A and SEPT5, MSN and ALK, VCL and ALK, EZR and ERBB4, RELCH and RET, SLC3A2 and NRG1, TRIM24 and BRAF, KLC1 and ALK, ARID1A and MAST2, GPBP1L1 and MAST2, NFIX and MAST1, NOTCH1 and GABBR2, TADA2A and MAST1, ZNF700 and MAST1, TRIM24 and RET, TRIM33 and RET, SSBP2 and JAK2, KMT2A and EEFSEC, CLCN6 and BRAF, GNAI1 and BRAF, MKRN1 and BRAF, NACC2 and NTRK2, FGFR1 and TACC1, TRIM27 and RET, HMGA2 and FHIT, HOOK3 and RET, PCM1 and RET, CEP89 and BRAF, CLIP1 and ROS1, ERC1 and ROS1, HLA and A and ROS1, LSM14A and BRAF, MYO5A and ROS1, SHTN1 and ROS1, TP53 and NTRK1, TPM3 and ROS1, ZCCHC8 and ROS1, FGFR3 and BAIAP2L1, KLK2 and ETV1, ACSL3 and ETV1, NUP107 and LGR5, HMGA2 and CCNB1IP1, HMGA2 and COX6C, GATM and BRAF, HACL1 and RAF1, HERPUD1 and BRAF, ZSCAN30 and BRAF, SLC45A3 and BRAF, HMGA2 and LHFPL6, COL1A2 and PLAG1, ESRP1 and RAF1, IRF2BP2 and CDX1, TFG and NR4A3, CLTC and TFE3, EWSR1 and MYB, NONO and TFE3, FCHSD1 and BRAF, HMGA2 and EBF1, ACBD6 and RRP15, AGPAT5 and MCPH1, AGTRAP and BRAF, ARFIP1 and FHDC1, ATG4C and FBXO38, BBS9 and PKD1L1, CENPK and KMT2A, CNBP and USP6, DDX5 and ETV4, EIF3K and CYP39A1, EPC1 and PHF1, ERO1A and FERMT2, ETV6 and ITPR2, EWSR1 and NFATC1, EWSR1 and PATZ1, EWSR1 and SMARCA5, EWSR1 and SP3, FBXL18 and RNF216, FGFR1 and ZNF703, FN1 and ALK, FUS and FEV, GMDS and PDE8B, HMGA2 and ALDH2, IL6R and ATP8B2, INTS4 and GAB2, JPT1 and USH1G, KLK2 and ETV4, KMT2A and ABI2, KMT2A and ARHGEF12, KMT2A and BTBD18, KMT2A and CASP8AP2, KMT2A and CBL, KMT2A and CIP2A, KMT2A and CT45A2, KMT2A and DAB2IP, KMT2A and FOXO4, KMT2A and FRYL, KMT2A and GMPS, KMT2A and GPHN, KMT2A and LASP1, KMT2A and LPP, KMT2A and MAPRE1, KMT2A and MYO1F, KMT2A and NCKIPSD, KMT2A and NRIP3, KMT2A and PDS5A, KMT2A and PICALM, KMT2A and PRRC1, KMT2A and SARNP, KMT2A and SH3GL1, KMT2A and SORBS2, KMT2A and TOP3A, KMT2A and ZFYVE19, MBOAT2 and PRKCE, MIA2 and GEMIN2, NF1 and ASIC2, NFIA and EHF, NTN1 and ACLY, OMD and USP6, PLA2R1 and RBMS1, PLXND1 and TMCC1, RAF1 and DAZL, RBM14 and PACS1, RGS22 and SYCP1, SEC31A and ALK, SEPT8 and AFF4, SLC22A1 and CUTA, SLC26A6 and PRKAR2A, SLC45A3 and ETV5, SQSTM1 and ALK, SS18L1 and SSX1, SSH2 and SUZ12, SUSD1 and PTBP3, TCF12 and NR4A3, TECTA and TBCEL,

THRAP3 and USP6, TMPRSS2 and ETV5, TPR and ALK, UBE2L3 and KRAS, WDCP and ALK, SS18 and USP6

1329. In some embodiments of the methods of the disclosure, a subject of the disclosure has been diagnosed with the disease or disorder. In some embodiments, the subject of the disclosure presents at least one sign or symptom of the disease or disorder. In some embodiments, the subject has a biomarker predictive of a risk of developing the disease or disorder. In some embodiments, the biomarker is a genetic mutation.

1330. In some embodiments of the methods of the disclosure, a subject of the disclosure is female. In some embodiments of the methods of the disclosure, a subject of the disclosure is male. In some embodiments, a subject of the disclosure has two XX or XY chromosomes. In some embodiments, a subject of the disclosure has two XX or XY chromosomes and a third chromosome, either an X or a Y.

1331. In some embodiments of the methods of the disclosure, a subject of the disclosure is a neonate, an infant, a child, an adult, a senior adult, or an elderly adult. In some embodiments of the methods of the disclosure, a subject of the disclosure is at least 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 or 31 days old. In some embodiments of the methods of the disclosure, a subject of the disclosure is at least 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12 months old. In some embodiments of the methods of the disclosure, a subject of the disclosure is at least 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 or any number of years or partial years in between of age.

1332. In some embodiments of the methods of the disclosure, a subject of the disclosure is a mammal. In some embodiments, a subject of the disclosure is a non-human mammal.

1333. In some embodiments of the methods of the disclosure, a subject of the disclosure is a human.

1334. In some embodiments of the methods of the disclosure, a therapeutically effective amount comprises a single dose of a composition of the disclosure. In some embodiments, a therapeutically effective amount comprises a therapeutically effective amount comprises at least one dose of a composition of the disclosure. In some embodiments, a therapeutically effective amount comprises a therapeutically effective amount comprises one or more dose(s) of a composition of the disclosure.

1335. In some embodiments of the methods of the disclosure, a therapeutically effective amount eliminates a sign or symptom of the disease or disorder. In some embodiments, a therapeutically effective amount reduces a severity of a sign or symptom of the disease or disorder.

1336. In some embodiments of the methods of the disclosure, a therapeutically effective amount eliminates the disease or disorder.

1337. In some embodiments of the methods of the disclosure, a therapeutically effective amount prevents an onset of a disease or disorder. In some embodiments, a therapeutically effective amount delays the onset of a disease or disorder. In some embodiments, a therapeutically effective amount reduces the severity of a sign or symptom of the disease or disorder. In some embodiments, a therapeutically effective amount improves a prognosis for the subject.

1338. In some embodiments of the methods of the disclosure, a composition of the disclosure is administered to the subject systemically. In some embodiments, the composition of the disclosure is administered to the subject by an intravenous route. In some embodiments, the composition of the disclosure is administered to the subject by an injection or an infusion.

1339. In some embodiments of the methods of the disclosure, a composition of the disclosure is administered to the subject locally. In some embodiments, the composition of the disclosure is administered to the subject by an intraosseous, intraocular, intracerebrospinal or intraspinal route. In some embodiments, the composition of the disclosure is administered directly to the cerebral spinal fluid of the central nervous system. In some embodiments, the composition of the disclosure is administered directly to a tissue or fluid of the eye and does not have bioavailability outside of ocular structures. In some embodiments, the composition of the disclosure is administered to the subject by an injection or an infusion.

1340. In some embodiments, the compositions comprising the trans-splicing RNAs disclosed herein are formulated as pharmaceutical compositions. Briefly, pharmaceutical compositions for use as disclosed herein may comprise a fusion protein(s) or a polynucleotide encoding the fusion protein(s), optionally comprised in an AAV, which is optionally also immune orthogonal, in combination with one or more pharmaceutically or physiologically acceptable carriers, diluents or excipients. Such compositions may comprise buffers such as neutral buffered saline, phosphate buffered saline and the like; carbohydrates such as glucose, mannose, sucrose or dextrans, mannitol; proteins; polypeptides or amino acids such as glycine; antioxidants; chelating agents such as EDTA or glutathione; adjuvants (e.g., aluminum hydroxide); and preservatives. Compositions of the disclosure may be formulated for oral, intravenous, topical, enteral, intraocular, and/or parenteral administration. In certain embodiments, the compositions of the present disclosure are formulated for intravenous administration.

EXAMPLE EMBODIMENTS

1341. Embodiment 1: A trans-splicing nucleic acid, comprising: (a) one or more replacement domains that encode a therapeutic sequence operably linked to; (b) one or more intronic domains that promote RNA splicing of the replacement domain primarily in a specific tissue or cell type; and (c) one or more antisense domains that promote binding to a target RNA molecule.

1342. Embodiment 2: The composition of embodiment 1, wherein the intronic domains promote trans-splicing primarily in brain tissue and are derived or isolated from genes selected from the group consisting of: UBB, GFAP, STMN1, RPL13A, UCHL1, TUBB2B, ALDOA, LRRC75A-AS1, DYNLRB1, TPI1, PKM, NDRG2, MT3, RTN3, SKP1, RTN1, NRGN, DBNDD2, BSCL2, ALDOC, S100B, GNG3, FXYD6, PRDX1, HSP90AA1, SRP14, ATF4, NDUFB8, CAPZB, ATF5, ADD1, ERGIC3, GUK1, DCTN1, GSN, MORF4L1, GNAI2, SPP1, CRIP2, RNASE1, EIF4G2, PAQR6, DCTN3, CALB2, COMMD6, MEST, STXBP1, CLDND1, SH3GLB2, NREP, ABCA2, SUN2, UBXN6, DBI, CDK2AP1, NFIX, SF1, HNRNPF, GPM6B, SQSTM1,

MOBP, ANAPC11, POLD2, SAMD4B, IST1, TPD52, SHD, STK25, ABR, PQBP1, PHB, SEPT9, S100A13, APBB1, RANBP1, ARHGEF2, DLGAP4, GNAO1, SEZ6L2, FDFT1, CBX1, EIF4G1, FAM213A, MAPK8IP1, PSME1, CCAR2, TKT, SYN1, OGDH, OCIAD1, SLC3A2, SLC1A5, PTTG1, DNM1, MAP6, KDM1A, PTN, FN1, CSNK1E, TMEM9, MATR3, AHCYL1, ATP6V0A1, CDIP1, CYFIP2, SLIRP, SCG5, TPX2, DMTN, SSBP1, PFKL, KIAA0930, CAMTA1, PRC1, CHTF8, TMPRSS3, BIN1, CCT8, AMZ2, TM7SF2, SEC11A, CLPTM1, AMPD2, DHX9, GAB2, CLTC, PSME3, RPP21, DYNC1I2, CDC20, NOSIP, ATP13A2, AIF1L, SURF4, PTPRN2, STK24, SDR39U1, HMOX2, UBAP2L, NRCAM, CCDC3, GPT2, TNPO2, NRXN2, PPP1R7, CAMK2A, UBE2L6, DBNL, ADAR, RNF220, MCM2, DTNA, PDIA6, PSMG2, URM1, SNX17, SV2A, SPG21, REEP2, HSD17B4, GSTO1, TRAPPC3, ZNF385A, SHISA5, FAM107B, MID1IP1, SERPINE2, CDK5RAP3, COMMD4, ANAPC15, CABP1, PTPRA, NPTN, RERE, VPS29, SPTBN2, MT1G, DTX3, GOLGA7, TPD52L2, EPB41L3, SPIN1, FARP1, NUP62, CNOT1, TMEM108, DUT, MAPRE2, PSD, NEBL, UBE2L3, KIF5C, TCF19, WDR54, CPSF7, GIT1, L1CAM, ITPR3, RHPN2, HMGA1, KCNAB2, HID1, SHF, CD99L2, C19ORF25, PAF1, B4GALT2, PTGES2, CAPG, SEMA4D, TTYH2, EXOC7, CNDP1, TACC2, BACE1, GABBR1, LMNB1, SLAIN1, GLG1, APBA2, CADM3, PC, PHLDB1, HHATL, SOGA1, CNTNAP2, RFC2, MAPK8IP3, CD200, REC8, TACC3, SYT13, SRP68, KLC4, CORO1C, ATPAF1, NARF, AP3B2, NUP93, FAM102A, SCN1B, NDUFS2, CBFA2T2, PSMA5, EPB41, and BCAR1.

1343. Embodiment 3: The composition of embodiment 2, wherein the intronic domains promote trans-splicing primarily in brain tissue and are selected from the group consisting of SEQ ID NO 1 - SEQ ID NO 492.

1344. Embodiment 4: The composition of embodiments 2 or 3, wherein the replacement domain is derived or isolated from a human gene a selected from the group consisting of: SOD1, TARDBP, FUS, MATR3, SOD1, C9ORF72 (Amyotrophic lateral sclerosis); MAPT, PGRN (Frontotemporal dementia with parkinsonism); CDH23, MYO7A, USH2A (Usher's syndrome); GALC (Krabbe disease); SMPD1, NPC1, NPC2 (Niemann Pick disease); PRNP (prion disease); SCN1A (Dravet syndrome); PINK1, ATPGAP2 (early-onset Parkinson's disease); ATXN1, ATXN2, ATXN3, PLEKHG4, SPTBN2, CACNA1A, ATXN7, TTBK2, PPP2R2B, KCNC3, PRKCG, ITRP1, TBP, KCND1, FGF14 (spinocerebellar ataxias); SCN1A, SCN2A, CACNA1A, GRIN2B, GRIN2A, MECP2, FOXG1, SLC6A1, PRRT2, PTEN, KCNQ2, KCNQ3, STARD7, CLRN1 (genetic epilepsy disorders); ATM (Ataxia-telangiectasia); GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); UBE3A (Angelman syndrome); SLC2A1 (glucose transporter deficiency type 1); GLA (Fabry disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); and CLN3 (Batten disease).

1345. Embodiment 5: The composition of any one of embodiments 2-4, wherein the antisense domain is complementary to sequences derived or isolated from a human gene selected from the group consisting of: OD1, TARDBP, FUS, MATR3, SOD1, C9ORF72 (Amyotrophic lateral sclerosis); MAPT, PGRN (Frontotemporal dementia with parkinsonism); CDH23, MYO7A, USH2A (Usher's syndrome); GALC (Krabbe disease); SMPD1, NPC1, NPC2 (Niemann Pick disease); PRNP (prion

disease); SCN1A (Dravet syndrome); PINK1, ATPGAP2 (early-onset Parkinson's disease); ATXN1, ATXN2, ATXN3, PLEKHG4, SPTBN2, CACNA1A, ATXN7, TTBK2, PPP2R2B, KCNC3, PRKCG, ITRP1, TBP, KCND1, FGF14 (spinocerebellar ataxias); SCN1A, SCN2A, CACNA1A, GRIN2B, GRIN2A, MECP2, FOXG1, SLC6A1, PRRT2, PTEN, KCNQ2, KCNQ3, STARD7, CLRN1 (genetic epilepsy disorders); ATM (Ataxia-telangiectasia); GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); UBE3A (Angelman syndrome); SLC2A1 (glucose transporter deficiency type 1); GLA (Fabry disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); and CLN3 (Batten disease).

1346. Embodiment 6: The composition of embodiment 1, wherein the intronic domains promote trans-splicing primarily in liver tissue and are derived or isolated from genes selected from the group consisting of: ORM1, ORM2, PLG, ALDOB, CYP2C8, CPS1, ADH4, PON1, CFHR3, C6, DBI, ITIH3, ITIH4, C4BPB, PTGR1, C5, LBP, PRDX1, HPD, UBB, HPR, ADH6, RPL15, CXCL2, DPYS, HAL, SLC39A14, AQP9, SERPINA10, ADH1A, HABP2, SERPINF2, ECI2, APOM, KLKB1, ACSM5, SLCO1B3, ASGR2, IL1RAP, PSMA1, GRB14, LRRC75A-AS1, BCHE, EPHX1, DMGDH, MST1, ACSM3, SEPT2, TFR2, NDUFC1, NR1H4, AFMID, HNMT, TTC39C, RDH16, GPAM, SLC13A5, SERF2, PICALM, PCSK6, TOM1L1, ANPEP, EBNA1BP2, RCL1, DEPDC7, BTG1, KRT8, ABCA6, GJB1, KMO, HSD17B13, LEAP2, PECR, LEPR, CTNND1, ENSA, MASP2, KYNU, ABCB4, DNASE1L3, ACSL5, UBE2V1, SPTBN1, RBPMS, RAB13, IL1R1, SERPINA5, FGGY, TMEM220, ACSS2, VNN1, CTAGE5, MS4A6A, MFSD2A, SKAP1, VDAC2, SLC22A7, PPP2R5C, SORBS2, CDV3, CSAD, TRPM8, TOMM5, SLCO2B1, MICU1, NCOR1, GSAP, CBWD5, ENPP1, SPATS2L, FKBP5, NR3C1, IGF2, IGF1, PLSCR4, MYLK, SLC27A5, ALDH5A1, TXLNGY, PSMB5, MOCOS, PET100, SGK1, AZI2, TJP2, FMO4, STEAP1, DMD, RNF14, RBM34, PABPC1L, ZCCHC9, ANO6, AGMAT, MASP1, IL17RB, MRPS27, MLIP, MON2, ETF1, SULT1B1, GBP7, PRKACA, PI4K2B, SP100, TMED6, NFU1, RMDN2, IP6K2, CCNB1IP1, PCBP1-AS1, SLC39A1, and PHF11

1347. Embodiment 7: The composition of embodiment 6, wherein the intronic domains promote trans-splicing primarily in liver tissue and are selected from the group consisting of SEQ ID NO 493 - SEQ ID NO 798.

1348. Embodiment 8: The composition of any one of embodiments 6-7, wherein the replacement domain is derived or isolated from a human gene a selected from the group consisting of: GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); PCSK9, LDLR, APOB, APOE (Familial hypercholesterolemia); GAA (Pompe disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDS (Hunter syndrome or Mucopolysaccharidosis 2); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); CLN3 (Batten disease); F9 (Hemophilia B); and F8 (Hemophilia A).

1349. Embodiment 9: The composition of any one of embodiments 6-8, wherein the antisense domain is complementary to sequences derived or isolated from a human gene selected from the group consisting of: GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); PCSK9, LDLR, APOB,

APOE (Familial hypercholesterolemia); GAA (Pompe disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDS (Hunter syndrome or Mucopolysaccharidosis 2); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); CLN3 (Batten disease); F9 (Hemophilia B); and F8 (Hemophilia A).

1350. Embodiment 10: The composition of embodiment 1, wherein the intronic domains promote trans-splicing primarily in heart tissue and are derived or isolated from genes selected from the group consisting of: TNNI3, TNNT2, MB, FHL2, CSRP3, FHL1, UBB, MYOM2, CD36, GSN, PDHA1, CRIP2, POPDC2, SORBS2, CPT1B, RYR2, ANXA11, ITGA7, SORBS1, NDUFC1, NEXN, MYH7B, ABLIM1, NEBL, CAST, NME2, CYB5R3, TRDN, TACC2, NDUFA5, MYL12B, FHOD3, CALCOCO2, NCAM1, GPD1L, SGCA, AQP1, AKAP1, ARL6IP4, LRRC39, TTN, TSC22D1, PPP1R12B, OBSL1, MYO15B, PKIG, HMOX2, CDK18, BTNL9, ITGB1BP2, SEPT2, CAV2, DTNA, C15orf41, ATP1A1, BCO2, MYL4, ADCY5, CLIC5, SLC8A1, RRAD, AKAP13, AK3, MYO1C, FGF12, LAMA5, ADAM15, WNK2, SUN1, KLHL7, RNF207, HIF3A, HSPG2, LPCAT4, ADH1B, ENY2, RGS3, FRMD3, CCNB1IP1, PHC2, STAB1, HAND2-AS1, PTPN3, PARVB, PKD1, SPEG, SYNE2, ZNF638, SEPT4, DAG1, SLC12A7, FBXO18, FAM107A, RBM17, MYPN, GRIP2, SCN5A, WFS1, RABGAP1L, SYNE1, HLA-DRB5, SNRPN, MEG3, RAPGEF3, SEC13, C1QTNF1, UCKL1, FRY, IP6K2, CUX1, ANK3, MYH14, ADCY4, C3orf18, MYLK3, PXN, TSPAN18, PDE1C, C6orf48, BCS1L, ATG4D, HRAS, TENM2, PLXNB1, N4BP2L2, TNXB, LTBP1, MAPK8IP3, COL1A1, GCAT, ACOT11, MTUS2, VPS45, and KCNIP2.

1351. Embodiment 11: The composition of embodiment 10, wherein the intronic domains promote trans-splicing primarily in heart tissue and are selected from the group consisting of SEQ ID NO 799 - SEQ ID NO 1104.

1352. Embodiment 12: The composition of embodiments 10 or 11, wherein the replacement domain is derived or isolated from a human gene a selected from the group consisting of: LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); F8 (Hemophilia A).

1353. Embodiment 13: The composition of any one of embodiments 10-12, wherein the antisense domain is complementary to sequences derived or isolated from a human gene selected from the group consisting of: LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type

2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); F8 (Hemophilia A).

1354. Embodiment 14: The composition of embodiment 1, wherein the intronic domains promote trans-splicing primarily in retinal tissue and are derived or isolated from genes selected from the group consisting of: ADGRV1, AMPH, ATP1B2, BSG, CASK, CC2D2A, CEP290, CLTC, DMD, DOC2B, EFR3A, ERP44, FARP2, FN3KRP, GRAMD1B, GSS, HCN1, IFT140, IMPDH1, INTS13, KCTD5, KIF1B, KIF1B, KMT2D, MADD, MAN2A2, MARCH1, MSI2, NAP1L4, PPP3CC, PROM1, PTPRF, PTPRF, RIMS2, SLC17A7, SLC4A7, STXBP5, TTC8, UNC13B, UNC13B, WDR47, and YKT6.

1355. Embodiment 15: The composition of embodiment 14, wherein the replacement domain is derived or isolated from a human gene a selected from the group consisting of: USHA2A, RPGR, RP2, RHO, PRPF31, USH1F, PRPF3, PRPF6 (Retinitis pigmentosa)

1356. Embodiment 16: The composition of embodiments 14 or 15, wherein the antisense domain is complementary to sequences derived or isolated from a human gene selected from the group consisting of: USHA2A, RPGR, RP2, RHO, PRPF31, USH1F, PRPF3, PRPF6 (Retinitis pigmentosa)

1357. Embodiment 17: The composition of embodiment 1, wherein the intronic domains promote trans-splicing primarily in muscle tissue and are derived or isolated from genes selected from the group consisting of: ALDOA, TNNT3, MYBPC1, ATP2A1, NEB, STAC3, CMYA5, MYH7, TNNI1, CA3, ASB5, PLIN2, TRDN, OBSCN, RYR1, RAP1A, SPARCL1, CSNK1A1, NPEPPS, AKR1C3, IDI2, MBNL1, FNDC5, TMOD4, ATP6V1F, DAP3, KPNB1, NOMO2, BEST3, HP1BP3, SEPT2, TIMM23, MYPN, DHRS7C, PALLD, POLR2J3, KANSL3, THOC7, MEF2C, NOMO1, YWHAZ, ZBTB16, SPAG9, CCZ1, MYLK2, ASAH1, GTF2I, CCPG1, SURF4, SMARCA2, CLTCL1, SLC6A6, CHRNB1, MAFG, COMMD6, SLC7A8, CDK11B, and DNASE1L1

1358. Embodiment 18: The composition of embodiment 17, wherein the intronic domains promote trans-splicing primarily in muscle tissue and are selected from the group consisting of SEQ ID NO 1105 - SEQ ID NO 1220.

1359. Embodiment 19: The composition of embodiments 17 or 18, wherein the replacement domain is derived or isolated from a human gene a selected from the group consisting of: LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); and F8 (Hemophilia A)

1360. Embodiment 20: The composition of any one of embodiments 17-19, wherein the antisense domain is complementary to sequences derived or isolated from a

human gene selected from the group consisting of: LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); and F8 (Hemophilia A)

1361. Embodiment 21: The composition of embodiment 1, wherein the the intronic domains carry binding sites that are preferentially-targeted by RNA-binding proteins with disease-causing mutations.

1362. Embodiment 22: The composition of any one of embodiments 1-21, wherein the intronic domains carry binding sites for RNA-binding proteins selected from the group consisting of: DDX39, DDX3X, DDX3Y, DDX41, DDX5, DHX16, DHX8, DHX9, INTS6, DDX48, HNRNPA0, HNRNPA1, HNRNPA2B1, HNRPA3, HNRPAB, HNRPC, HNRPDL, HNRPF, HNRPH1, HNRPH2, HNRPLL, HNRPM, HNRPUL1, PTBP1, PTBP2, RBMXL2, SYNCRIP, CLK3, CLK4, SRPK1, SRPK2, SRPK3, ARS2, BUB3, C7ORF30, CIRBP, CRNKL1, CSDA, DNAJC8, EEF1A1, EIF3S10, FMR1, GRSF1, GTL3, IGF2BP3, IK, ILF2, ILF3, MATR3, MBNL1, MBNL2, MBNL3, MOV10, MSI1, MSI2, MYEF2, NHP2L1, PABPC1, PCBP1, PCBP2, PCBP4, PPIE, PPIL2, PPIL2, PPM1G, PPWD1, PRPF6, PSEN1, RALY, RBM15, RBM9, RBMS1, RBMX, RDBP, ROD1, SSB, THOC3, THOC4, TNPO1, TOP1MT, ZFP207, EFTUD2, LSM1, LSM2, LSM3, LSM4, LSM7, LSM8, NA, SART1, SF3A1, SF3A2, SF3A3, SF3B1, SF3B2, SNRPA, SNRPA1, SNRPB, SNRPC, SNRPD1, SNRPD2, SNRPG, SNRPN, TXNL4, U2AF1L1, U2AF1L2, USP39, WDR57, PRPF31, PRPF4, PRPF40A, RBM17, NA, A2BP1, ACIN1, ASCC3L1, BCAS2, BRUNOL4, BUD13, BUD31, CD2BP2, CDC40, CDC5L, CRKRS, CUGBP2, ELAVL1, ELAVL1, ELAVL1, ELAVL2, ELAVL3, ELAVL4, FUSIP1, HSPA1B, HSPA5, HSPA8, NCBP2, NONO, NOVA1, NUDT21, PLRG1, PRPF19, PSIP1, RBM8A, RBMS1, SMU1, SNW1, TCERG1, TIA1, TIAL1, TNRC4, WBP11, WTAP, XAB2, YBX1, SFRS1, SFRS10, SFRS16, SFRS3, SFRS4, and SFRS6

1363. Embodiment 23: The composition of any one of embodiments 1-22, wherein the trans-splicing RNA comprises an untranslated region that increases that alters the processing of the trans-splicing nucleic acid.

1364. Embodiment 24: the composition of any one of embodiments 1-23, wherein the sequence comprising the trans-splicing nucleic acid comprises a sequence that is bound by an RNA-binding protein that increases the trans-splicing efficiency.

1365. Embodiment 25: the composition of any of one embodiments 1-24, wherein the trans-splicing nucleic acid is RNA, DNA, a DNA/RNA hybrid, nucleic acid analog, a chemically-modified nucleic acid, or a chimera composed of two or more nucleic acids or nucleic acid analogs.

1366. Embodiment 26: the composition of any of one embodiments 1-25, wherein the wherein the trans-splicing nucleic acid molecule further comprises a heterologous promoter.
1367. Embodiment 27: the composition of any of one embodiments 1-26, wherein the promoter is isolated or derived from a promoter capable of driving expression of a transfer RNA (tRNA).

EXAMPLES

Example 1: Methods for Identification of Intronic Domains that Promote Trans-Splicing in Muscle

1368. In order to identify Intronic Domains that will promote trans-splicing in muscle but not other tissues, the following experimental strategy is conducted: 1) analysis of unbiased RNA sequencing data from muscle, brain, liver, and kidney, and 2) identification of exons that are included primarily in muscle ("muscle-specific exons"), then 3) extraction of intronic sequences that are adjacent to the muscle-specific exons ("muscle-specific introns"). These muscle-specific introns promote inclusion of adjacent exons during RNA splicing, but RNA trans-splicing is less-efficient and most intronic sequences do not function efficiently in the context of trans-splicing . In order to identify muscle-specific introns that function in the context of RNA trans-splicing ("muscle-specific trans-splicing introns" or MSTI's), candidate MSTI's are selected from the group of muscle-specific introns and compared in a trans-splicing tissue culture experiment. The readout for the trans-splicing tissue culture experiment relies on a reporter that carries a GFP coding sequence interrupted by an exon carrying a stop codon and flanked by two introns (Figure 4A). When transfected into a mammalian cell line, this reporter does not produce active GFP protein (Figure 4B). The candidate MSTI's are placed in a trans-splicing RNA vector carrying antisense sequences that target the reporter and an exon that contains no stop codon (Figure 4A). Successful trans-splicing among the trans-splicing vector and the reporter results in production of active GFP protein (Figure 4B). In this manner, GFP expression serves as a proxy for the efficiency associated with RNA trans-splicing afforded by the MSTI. GFP expression among experiments conducted in muscle cell lines compared to brain, liver, and kidney cell lines or primary cells is assessed. MSTI's will be identified based on the following criteria: both 1) high GFP expression in muscle cell lines or primary cells, and 2) low GFP expression in brain, liver, and kidney cell lines or primary cells. These MSTI's serve as Intronic Domains that promote tissue-specific trans-splicing in muscle but not other tissues.

Example 2: Identification of Intronic Domains that Promote Trans-Splicing in Brain, Liver, or Kidney tissue

1369. In order to identify Intronic Domains that will promote trans-splicing in other tissues such as brain, liver, or kidney, a similar experiment as above is conducted. Here, introns that promote tissue-specific exon inclusion in the respective tissue will be compared in a similar assay. The candidate tissue-specific intronic sequences are similarly placed in a trans-splicing RNA vector and successful tissue-specific intronic sequences are identified based upon the following criteria: both 1) high GFP

expression in cells derived from the chosen cell lines or primary cells, and 2) low GFP expression in cell lines or primary cells derived from other tissues. Intronic sequences that fit these criteria will serve as Intronic Domains that promote tissue-specific trans-splicing in a chosen tissue but not other tissues.

Example 3: Identification of a therapeutic trans-splicing system to treat Limb-Girdle Muscular Dystrophy (LGMD) that is active exclusively in muscle tissue

1370. LGMD1B is a devastating muscle disease that causes progressive muscle wasting and death. The disease is caused by mutations in the gene LMNA that cause dysfunctional behavior of the gene (specifically, inappropriate inclusion of exon 9 which carries a stop codon). In order to identify trans-splicing systems that address this dysfunctional inclusion of exon 9 in LMNA in order to treat LGMD1B, we compare tens of systems that replace exon 9 with a short exon that carries no stop codons. We constructs 50+ trans-splicing RNA constructs that carry introns that are effectively spliced in muscle but not other tissues (SEQ ID NO 1105 - SEQ ID NO 1220) and carry a replacement a reporter that carries a replacement for exon 9 from LMNA gene (Figure 5A). Next, we Then, we co-transfect this reporter and individual trans-splicing RNA constructs in human cells lines derived from muscle or another non-muscle cell-type such as HEK cells. Next, we conduct RT-PCR measurements in both cell types primers flanking exon 9 to identify degree of replacement of exon 9 by the trans-splicing RNA replacement sequence. Finally, high-quality trans-splicing RNA systems are identified by the following metric: 1) high levels of replacement sequence inclusion in the LMNA reporter in muscle cells (>50%), with 2) low levels of replacement sequence inclusion in the LMNA reporter in HEK cells (<20%).

CELLS AND TISSUES

1371. In some embodiments of the compositions and methods of the disclosure, a cell of the disclosure is a eukaryotic cell. In some embodiments, the cell is a mammalian cell. In some embodiments, the cell is a bovine, murine, feline, equine, porcine, canine, simian, or human cell. In some embodiments, the cell is a non-human mammalian cell such as a non-human primate cell. In some embodiments, a cell of the disclosure is a somatic cell. In some embodiments, a cell of the disclosure is a germline cell. In some embodiments, a germline cell of the disclosure is not a human cell.

1372. In some embodiments of the compositions and methods of the disclosure, a cell of the disclosure is a stem cell. In some embodiments, a cell of the disclosure is an embryonic stem cell. In some embodiments, an embryonic stem cell of the disclosure is not a human cell. In some embodiments, a cell of the disclosure is a multipotent stem cell or a pluripotent stem cell. In some embodiments, a cell of the disclosure is an adult stem cell. In some embodiments, a cell of the disclosure is an induced pluripotent stem cell (iPSC). In some embodiments, a cell of the disclosure is a hematopoietic stem cell (HSC).

1373. In some embodiments of the compositions and methods of the disclosure, an immune cell of the disclosure is a lymphocyte. In some embodiments, an immune cell of the disclosure is a T lymphocyte (also referred to herein as a T-cell). Exemplary T-cells of the disclosure include, but are not limited to, naïve T cells, effector T cells, helper T cells, memory T cells, regulatory T cells (Tregs) and Gamma delta T cells. In some embodiments, an immune cell of the disclosure is a B lymphocyte. In some embodiments, an immune cell of the disclosure is a natural killer cell. In some embodiments, an immune cell of the disclosure is an antigen-presenting cell.

1374. In some embodiments of the compositions and methods of the disclosure, a muscle cell of the disclosure is a myoblast or a myocyte. In some embodiments, a muscle cell of the disclosure is a cardiac muscle cell, skeletal muscle cell or smooth muscle cell. In some embodiments, a muscle cell of the disclosure is a striated cell.

1375. In some embodiments of the compositions and methods of the disclosure, a somatic cell of the disclosure is an epithelial cell. In some embodiments, an epithelial cell of the disclosure forms a squamous cell epithelium, a cuboidal cell epithelium, a columnar cell epithelium, a stratified cell epithelium, a pseudostratified columnar cell epithelium or a transitional cell epithelium. In some embodiments, an epithelial cell of the disclosure forms a gland including, but not limited to, a pineal gland, a thymus gland, a pituitary gland, a thyroid gland, an adrenal gland, an apocrine gland, a holocrine gland, a merocrine gland, a serous gland, a mucous gland and a sebaceous gland. In some embodiments, an epithelial cell of the disclosure contacts an outer surface of an organ including, but not limited to, a lung, a spleen, a stomach, a pancreas, a bladder, an intestine, a kidney, a gallbladder, a liver, a larynx or a pharynx. In some embodiments, an epithelial cell of the disclosure contacts an outer surface of a blood vessel or a vein.

1376. In some embodiments of the compositions and methods of the disclosure, a brain cell of the disclosure is a neuronal cell. In some embodiments, a neuron cell of the disclosure is a neuron of the central nervous system. In some embodiments, a neuron cell of the disclosure is a neuron of the brain or the spinal cord. In some embodiments, a neuron cell of the disclosure is a neuron of a cranial nerve or an optic nerve. In some embodiments, a neuron cell of the disclosure is a neuron of the peripheral nervous system. In some embodiments, a neuron cell of the disclosure is a neuroglial or a glial cell. In some embodiments, a glial of the disclosure is a glial cell of the central nervous system including, but not limited to, oligodendrocytes, astrocytes, ependymal cells, and microglia. In some embodiments, a glial of the disclosure is a glial cell of the peripheral nervous system including, but not limited to, Schwann cells and satellite cells.

1377. In some embodiments of the compositions and methods of the disclosure, a liver cell of the disclosure is a hepatocytes. In some embodiments, a liver cell of the disclosure is a hepatic stellate cell. In some embodiments, a liver cell of the

disclosure is Kupffer cell. In some embodiments, a liver cell of the disclosure is a sinusoidal endothelial cells.

1378. In some embodiments of the compositions and methods of the disclosure, a retinal cell of the disclosure is a photoreceptor. In some embodiments, a photoreceptor cell of the disclosure is a rod. In some embodiments, a retinal cell of the disclosure is cone. In some embodiments, a retinal cell of the disclosure is a bipolar cell. In some embodiments, a retinal cell of the disclosure is a ganglion cell. In some embodiments, a retinal cell of the disclosure is a horizontal cell. In some embodiments, a retinal cell of the disclosure is an amacrine cell.

1379. In some embodiments of the compositions and methods of the disclosure, a heart cell of the disclosure is a cardiomyocyte. In some embodiments, a heart cell of the disclosure is a cardiac pacemaker cell.

1380. In some embodiments of the compositions and methods of the disclosure, a somatic cell of the disclosure is a primary cell.

1381. In some embodiments of the compositions and methods of the disclosure, a somatic cell of the disclosure is a cultured cell.

1382. In some embodiments of the compositions and methods of the disclosure, a somatic cell of the disclosure is in vivo, in vitro, ex vivo or in situ.

1383. In some embodiments of the compositions and methods of the disclosure, a somatic cell of the disclosure is autologous or allogeneic.

INCORPORATION BY REFERENCE

1384. Every document cited herein, including any cross referenced or related patent or application is hereby incorporated herein by reference in its entirety unless expressly excluded or otherwise limited. The citation of any document is not an admission that it is prior art with respect to any invention disclosed or embodimented herein or that it alone, or in any combination with any other reference or references, teaches, suggests or discloses any such invention. Further, to the extent that any meaning or definition of a term in this document conflicts with any meaning or definition of the same term in a document incorporated by reference, the meaning or definition assigned to that term in this document shall govern.

OTHER EMBODIMENTS

1385. While particular embodiments of the disclosure have been illustrated and described, various other changes and modifications can be made without departing from the spirit and scope of the disclosure. The scope of the appended claims includes all such changes and modifications that are within the scope of this disclosure.

WHAT IS CLAIMED

1. A trans-splicing nucleic acid, comprising: (a) one or more replacement domains that encode a therapeutic sequence operably linked to; (b) one or more intronic domains that promote RNA splicing of the replacement domain primarily in a specific tissue or cell type; and (c) one or more antisense domains that promote binding to a target RNA molecule.
2. A composition of claim 1, wherein the intronic domains are derived or isolated from one or more human genes that experience inclusion of one or more exons primarily in one tissue or cell type but not others.
3. The composition of claim 2, wherein the intronic domains promote trans-splicing of the trans-splicing nucleic acid primarily in muscle tissue.
4. The composition of claim 3, wherein the intronic domains are derived or isolated from human genes selected from the group consisting of: ALDOA, TNNT3, MYBPC1, ATP2A1, NEB, STAC3, CMYA5, MYH7, TNNI1, CA3, ASB5, PLIN2, TRDN, OBSCN, RYR1, RAP1A, SPARCL1, CSNK1A1, NPEPPS, AKR1C3, IDI2, MBNL1, FNDC5, TMOD4, ATP6V1F, DAP3, KPNB1, NOMO2, BEST3, HP1BP3, SEPT2, TIMM23, MYPN, DHRS7C, PALLD, POLR2J3, KANSL3, THOC7, MEF2C, NOMO1, YWHAZ, ZBTB16, SPAG9, CCZ1, MYLK2, ASAH1, GTF2I, CCPG1, SURF4, SMARCA2, CLTCL1, SLC6A6, CHRNB1, MAFG, COMMD6, SLC7A8, CDK11B, and DNASE1L1
5. The composition of claim 2, wherein the intronic domains promote trans-splicing of the trans-splicing nucleic acid primarily in brain tissue.
6. The composition of claim 5, wherein the intronic domains are derived or isolated from human genes selected from the group consisting of: UBB, GFAP, STMN1, RPL13A, UCHL1, TUBB2B, ALDOA, LRRC75A-AS1, DYNLRB1, TPI1, PKM, NDRG2, MT3, RTN3, SKP1, RTN1, NRGN, DBNDD2, BSCL2, ALDOC, S100B, GNG3, FXYD6, PRDX1, HSP90AA1, SRP14, ATF4, NDUFB8, CAPZB, ATF5, ADD1, ERGIC3, GUK1, DCTN1, GSN, MORF4L1, GNAI2, SPP1, CRIP2, RNASE1, EIF4G2, PAQR6, DCTN3, CALB2, COMMD6, MEST, STXBP1, CLDND1, SH3GLB2, NREP, ABCA2, SUN2, UBXN6, DBI, CDK2AP1, NFIX, SF1, HNRNPF, GPM6B, SQSTM1, MOBP, ANAPC11, POLD2, SAMD4B, IST1, TPD52, SHD, STK25, ABR, PQBP1, PHB, SEPT9, S100A13, APBB1, RANBP1, ARHGEF2, DLGAP4, GNAO1, SEZ6L2, FDFT1, CBX1, EIF4G1, FAM213A, MAPK8IP1, PSME1, CCAR2, TKT, SYN1, OGDH, OCIAD1, SLC3A2, SLC1A5, PTTG1, DNM1, MAP6, KDM1A, PTN, FN1, CSNK1E, TMEM9, MATR3, AHCYL1, ATP6V0A1, CDIP1, CYFIP2, SLIRP, SCG5, TPX2, DMTN, SSBP1, PFKL, KIAA0930, CAMTA1, PRC1, CHTF8, TMPRSS3, BIN1, CCT8, AMZ2, TM7SF2, SEC11A, CLPTM1, AMPD2, DHX9, GAB2, CLTC, PSME3, RPP21, DYNC1I2, CDC20, NOSIP, ATP13A2, AIF1L, SURF4, PTPRN2, STK24, SDR39U1, HMOX2, UBAP2L, NRCAM, CCDC3, GPT2, TNPO2, NRXN2, PPP1R7, CAMK2A, UBE2L6, DBNL, ADAR, RNF220, MCM2, DTNA, PDIA6, PSMG2, URM1, SNX17, SV2A, SPG21, REEP2, HSD17B4, GSTO1, TRAPPC3, ZNF385A, SHISA5, FAM107B, MID1IP1, SERPINE2, CDK5RAP3, COMMD4, ANAPC15, CABP1, PTPRA, NPTN, RERE, VPS29, SPTBN2, MT1G, DTX3, GOLGA7, TPD52L2, EPB41L3, SPIN1, FARP1, NUP62, CNOT1, TMEM108, DUT, MAPRE2, PSD, NEBL, UBE2L3, KIF5C, TCF19, WDR54, CPSF7, GIT1, L1CAM, ITPR3, RHPN2, HMGA1,

KCNAB2, HID1, SHF, CD99L2, C19ORF25, PAF1, B4GALT2, PTGES2, CAPG, SEMA4D, TTYH2, EXOC7, CNDP1, TACC2, BACE1, GABBR1, LMNB1, SLAIN1, GLG1, APBA2, CADM3, PC, PHLDB1, HHATL, SOGA1, CNTNAP2, RFC2, MAPK8IP3, CD200, REC8, TACC3, SYT13, SRP68, KLC4, CORO1C, ATPAF1, NARF, AP3B2, NUP93, FAM102A, SCN1B, NDUFS2, CBFA2T2, PSMA5, EPB41, and BCAR1

7. The composition of claim 2, wherein the intronic domains promote trans-splicing of the trans-splicing nucleic acid primarily in liver tissue.
8. The composition of claim 7, wherein the intronic domains are derived or isolated from human genes selected from the group consisting of: ORM1, ORM2, PLG, ALDOB, CYP2C8, CPS1, ADH4, PON1, CFHR3, C6, DBI, ITIH3, ITIH4, C4BPB, PTGR1, C5, LBP, PRDX1, HPD, UBB, HPR, ADH6, RPL15, CXCL2, DPYS, HAL, SLC39A14, AQP9, SERPINA10, ADH1A, HABP2, SERPINF2, ECI2, APOM, KLKB1, ACSM5, SLCO1B3, ASGR2, IL1RAP, PSMA1, GRB14, LRRC75A-AS1, BCHE, EPHX1, DMGDH, MST1, ACSM3, SEPT2, TFR2, NDUFC1, NR1H4, AFMID, HNMT, TTC39C, RDH16, GPAM, SLC13A5, SERF2, PICALM, PCSK6, TOM1L1, ANPEP, EBNA1BP2, RCL1, DEPDC7, BTG1, KRT8, ABCA6, GJB1, KMO, HSD17B13, LEAP2, PECR, LEPR, CTNND1, ENSA, MASP2, KYNU, ABCB4, DNASE1L3, ACSL5, UBE2V1, SPTBN1, RBPMS, RAB13, IL1R1, SERPINA5, FGGY, TMEM220, ACSS2, VNN1, CTAGE5, MS4A6A, MFSD2A, SKAP1, VDAC2, SLC22A7, PPP2R5C, SORBS2, CDV3, CSAD, TRPM8, TOMM5, SLCO2B1, MICU1, NCOR1, GSAP, CBWD5, ENPP1, SPATS2L, FKBP5, NR3C1, IGF2, IGF1, PLSCR4, MYLK, SLC27A5, ALDH5A1, TXLNGY, PSMB5, MOCOS, PET100, SGK1, AZI2, TJP2, FMO4, STEAP1, DMD, RNF14, RBM34, PABPC1L, ZCCHC9, ANO6, AGMAT, MASP1, IL17RB, MRPS27, MLIP, MON2, ETF1, SULT1B1, GBP7, PRKACA, PI4K2B, SP100, TMED6, NFU1, RMDN2, IP6K2, CCNB1IP1, PCBP1-AS1, SLC39A1, and PHF11
9. The composition of claim 2, wherein the intronic domains promote trans-splicing of the trans-splicing nucleic acid primarily in heart tissue.
10. The composition of claim 9, wherein the intronic domains are derived or isolated from human genes selected from the group consisting of: TNNI3, TNNT2, MB, FHL2, CSRP3, FHL1, UBB, MYOM2, CD36, GSN, PDHA1, CRIP2, POPDC2, SORBS2, CPT1B, RYR2, ANXA11, ITGA7, SORBS1, NDUFC1, NEXN, MYH7B, ABLIM1, NEBL, CAST, NME2, CYB5R3, TRDN, TACC2, NDUFA5, MYL12B, FHOD3, CALCOCO2, NCAM1, GPD1L, SGCA, AQP1, AKAP1, ARL6IP4, LRRC39, TTN, TSC22D1, PPP1R12B, OBSL1, MYO15B, PKIG, HMOX2, CDK18, BTNL9, ITGB1BP2, SEPT2, CAV2, DTNA, C15ORF41, ATP1A1, BCO2, MYL4, ADCY5, CLIC5, SLC8A1, RRAD, AKAP13, AK3, MYO1C, FGF12, LAMA5, ADAM15, WNK2, SUN1, KLHL7, RNF207, HIF3A, HSPG2, LPCAT4, ADH1B, ENY2, RGS3, FRMD3, CCNB1IP1, PHC2, STAB1, HAND2-AS1, PTPN3, PARVB, PKD1, SPEG, SYNE2, ZNF638, SEPT4, DAG1, SLC12A7, FBXO18, FAM107A, RBM17, MYPN, GRIP2, SCN5A, WFS1, RABGAP1L, SYNE1, HLA-DRB5, SNRPN, MEG3, RAPGEF3, SEC13, C1QTNF1, UCKL1, FRY, IP6K2, CUX1, ANK3, MYH14, ADCY4, C3ORF18, MYLK3, PXN, TSPAN18, PDE1C, C6ORF48, BCS1L, ATG4D, HRAS, TENM2, PLXNB1, N4BP2L2, TNXB, LTBP1, MAPK8IP3, COL1A1, GCAT, ACOT11, MTUS2, VPS45, and KCNIP2.

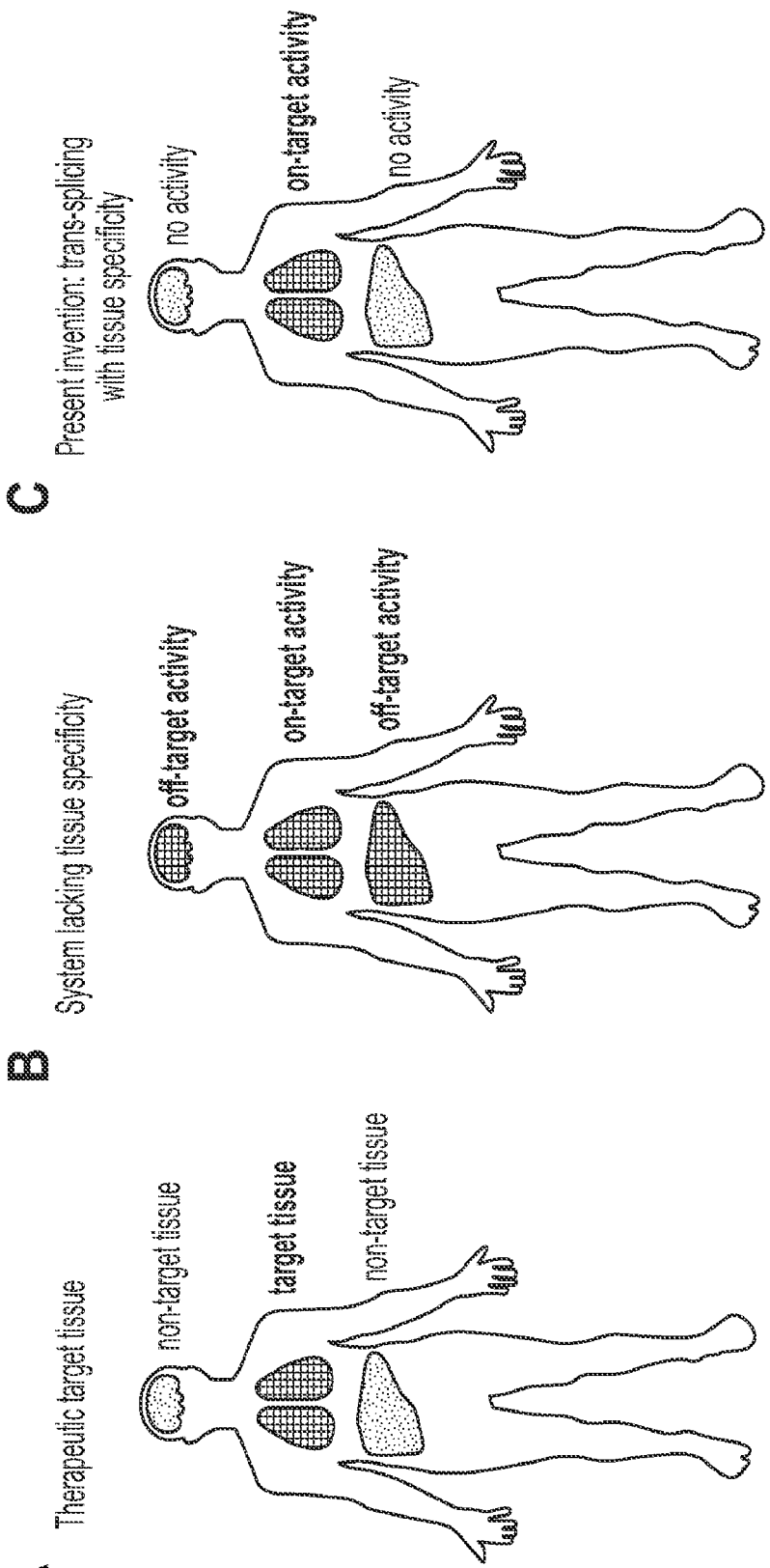
11. The composition of claim 2, wherein the intronic domains promote trans-splicing of the trans-splicing nucleic acid primarily in retinal tissue.
12. The composition of claim 11, wherein the intronic domains are derived or isolated from human genes selected from the group consisting of: ADGRV1, AMPH, ATP1B2, BSG, CASK, CC2D2A, CEP290, CLTC, DMD, DOC2B, EFR3A, ERP44, FARP2, FN3KRP, GRAMD1B, GSS, HCN1, IFT140, IMPDH1, INTS13, KCTD5, KIF1B, KIF1B, KMT2D, MADD, MAN2A2, MARCH1, MSI2, NAP1L4, PPP3CC, PROM1, PTPRF, PTPRF, RIMS2, SLC17A7, SLC4A7, STXBP5, TTC8, UNC13B, UNC13B, WDR47, and YKT6.
13. The composition of claim 4, wherein the replacement domains are derived or isolated from human genes selected from the group consisting of LAMP2 (Danon disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); and F8 (Hemophilia A)
14. The composition of claim 6, wherein the replacement domains are derived or isolated from human genes selected from the group consisting of SOD1, TARDBP, FUS, MATR3, SOD1, C9ORF72 (Amyotrophic lateral sclerosis); MAPT, PGRN (Frontotemporal dementia with parkinsonism); CDH23, MYO7A, USH2A (Usher's syndrome); GALC (Krabbe disease); SMPD1, NPC1, NPC2 (Niemann Pick disease); PRNP (prion disease); SCN1A (Dravet syndrome); PINK1, ATPGAP2 (early-onset Parkinson's disease); ATXN1, ATXN2, ATXN3, PLEKHG4, SPTBN2, CACNA1A, ATXN7, TTBK2, PPP2R2B, KCNC3, PRKCG, ITRP1, TBP, KCND1, FGF14 (spinocerebellar ataxias); SCN1A, SCN2A, CACNA1A, GRIN2B, GRIN2A, MECP2, FOXG1, SLC6A1, PRRT2, PTEN, KCNQ2, KCNQ3, STARD7, CLRN1 (genetic epilepsy disorders); ATM (Ataxia-telangiectasia); GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); UBE3A (Angelman syndrome); SLC2A1 (glucose transporter deficiency type 1); GLA (Fabry disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); and CLN3 (Batten disease).
15. The composition of claim 8, wherein the replacement domains are derived or isolated from human genes selected from the group consisting of GLB1 (GM1 gangliosidosis); GBA (Gaucher disease); GM2A (GM2 gangliosidosis); PCSK9, LDLR, APOB, APOE (Familial hypercholesterolemia); GAA (Pompe disease); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDS (Hunter syndrome or Mucopolysaccharidosis 2); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); CLN3 (Batten disease); F9 (Hemophilia B); and F8 (Hemophilia A).
16. The composition of claim 10, wherein the replacement domains are derived or isolated from human genes selected from the group consisting of LAMP2 (Danon

disease); GLA (Fabry disease); SLC2A1 (glucose transporter deficiency type 1); UBE3A (Angelman syndrome); MYOC, OPTN, TBK1, WDR36, CYPIB1 (Open Angle Glaucoma); IDUA (Hurler syndrome or Mucopolysaccharidosis 1); IDS (Hunter syndrome or Mucopolysaccharidosis 2); CLN3 (Batten disease); LMNA (Limb-girdle muscular dystrophy type 1B); DMD (Duchenne muscular dystrophy); DYSF (Limb-girdle muscular dystrophy type 2B); SGCB (Limb-girdle muscular dystrophy type 2E); SGCG (Limb-girdle muscular dystrophy type 2C); SGCA (Limb-girdle muscular dystrophy type 2D); SGCD (Limb-girdle muscular dystrophy type 2F); DUX4, D4Z4 (Facioscapulohumeral muscular dystrophy); F9 (Hemophilia B); F8 (Hemophilia A).

17. The composition of claim 12, wherein the replacement domains are derived or isolated from human genes selected from the group consisting of USHA2A, RPGR, RP2, RHO, PRPF31, USH1F, PRPF3, PRPF6 (Retinitis pigmentosa)
18. The composition of claim 1, wherein the intronic domains comprise binding sites for RNA-binding proteins that induce tissue-specific RNA splicing selected from the group consisting of: DDX39, DDX3X, DDX3Y, DDX41, DDX5, DHX16, DHX8, DHX9, INTS6, DDX48, HNRNPA0, HNRNPA1, HNRNPA2B1, HNRPA3, HNRPAB, HNRPC, HNRPDL, HNRPF, HNRPH1, HNRPH2, HNRPLL, HNRPM, HNRPUL1, PTBP1, PTBP2, RBMXL2, SYNCRIP, CLK3, CLK4, SRPK1, SRPK2, SRPK3, ARS2, BUB3, C7ORF30, CIRBP, CRNKL1, CSDA, DNAJC8, EEF1A1, EIF3S10, FMR1, GRSF1, GTL3, IGF2BP3, IK, ILF2, ILF3, MATR3, MBNL1, MBNL2, MBNL3, MOV10, MSI1, MSI2, MYEF2, NHP2L1, PABPC1, PCBP1, PCBP2, PCBP4, PPIE, PPIL2, PPIL2, PPM1G, PPWD1, PRPF6, PSEN1, RALY, RBM15, RBM9, RBMS1, RBMX, RDBP, ROD1, SSB, THOC3, THOC4, TNPO1, TOP1MT, ZFP207, EFTUD2, LSM1, LSM2, LSM3, LSM4, LSM7, LSM8, NA, SART1, SF3A1, SF3A2, SF3A3, SF3B1, SF3B2, SNRPA, SNRPA1, SNRPB, SNRPC, SNRPD1, SNRPD2, SNRPG, SNRPN, TXNL4, U2AF1L1, U2AF1L2, USP39, WDR57, PRPF31, PRPF4, PRPF40A, RBM17, NA, A2BP1, ACIN1, ASCC3L1, BCAS2, BRUNOL4, BUD13, BUD31, CD2BP2, CDC40, CDC5L, CRKRS, CUGBP2, ELAVL1, ELAVL1, ELAVL1, ELAVL2, ELAVL3, ELAVL4, FUSIP1, HSPA1B, HSPA5, HSPA8, NCBP2, NONO, NOVA1, NUDT21, PLRG1, PRPF19, PSIP1, RBM8A, RBMS1, SMU1, SNW1, TCERG1, TIA1, TIAL1, TNRC4, WBP11, WTAP, XAB2, YBX1, SFRS1, SFRS10, SFRS16, SFRS3, SFRS4, and SFRS6
19. The composition of claims 1,2,3,5,7,9,11, wherein the intronic domains comprise sequences that are preferentially targeted by RNA-binding proteins carrying disease-associated mutations.
20. The composition of claims 1,2,3,5,7,9,11, further comprising a 3' untranslated region that improves the trans-splicing efficiency
21. The composition of claims 1,2,3,5,7,9,11, further comprising a 5' untranslated region that improves the trans-splicing efficiency
22. The composition of claims 1,2,3,5,7,9,11, further comprising an RNA-binding protein that strengthens the interaction among the trans-splicing nucleic acid molecule and the target RNA molecule and increases trans-splicing efficiency
23. The composition of claim 1,2,3,5,7,9,11, wherein the trans-splicing nucleic acid is RNA, DNA, a DNA/RNA hybrid, a nucleic acid analog, a chemically-modified nucleic acid, or a chimera composed of two or more nucleic acids or nucleic acid analogs.

24. The composition of claim 1,2,3,5,7,9,11, wherein the nucleic acid molecule further comprises a heterologous promoter.
25. A vector comprising the composition of claims 1,2,3,5,7,9,11.
26. The vector of claim 26, wherein the vector is selected from the group consisting of: adeno-associated virus, retrovirus, lentivirus, adenovirus, nanoparticle, micelle, liposome, lipoplex, polymersome, polyplex, and dendrimer.
27. A cell comprising the vector of claim 26.
28. A method for treating a disease comprising administering to a patient in need of a therapeutically effective amount of a treatment comprising a trans-splicing nucleic acid molecule according to claim 1 or 2.
29. A method for correcting a genetic defect in a subject comprising administering to said subject a trans-splicing nucleic acid molecule according to claim 1 or 2.
30. A method for treating a disease comprising administering to a patient in need of a therapeutically effective amount of a treatment comprising a trans-splicing nucleic acid molecule according to claims 1,2,3,5,7,9,11.
31. A method for correcting a genetic defect in a subject comprising administering to said subject a trans-splicing nucleic acid molecule according to claims 1,2,3,5,7,9,11.

Figure 1


A
Therapeutic target tissue
non-target tissue
target tissue
non-target tissue
B
System lacking tissue specificity
off-target activity
on-target activity
off-target activity
C
Present invention: trans-splicing with tissue specificity
no activity
on-target activity
no activity

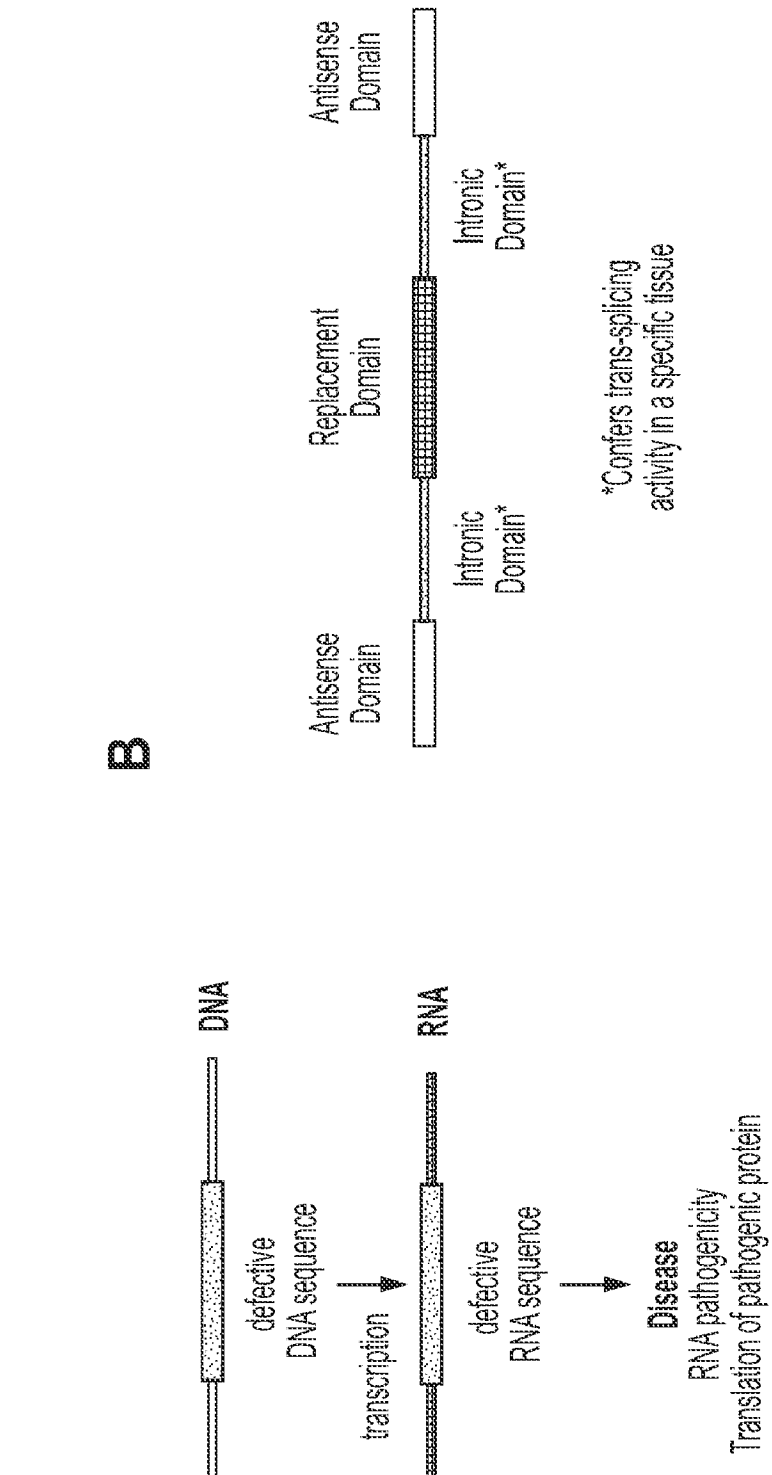

A
DNA
defective
DNA sequence
transcription
RNA
defective
RNA sequence
Disease
RNA pathogenicity
Translation of pathogenic protein
B
Antisense
Domain
Intronic
Domain*
Replacement
Domain
Intronic
Domain*
Antisense
Domain
*Confers trans-splicing
activity in a specific tissue

Figure 2

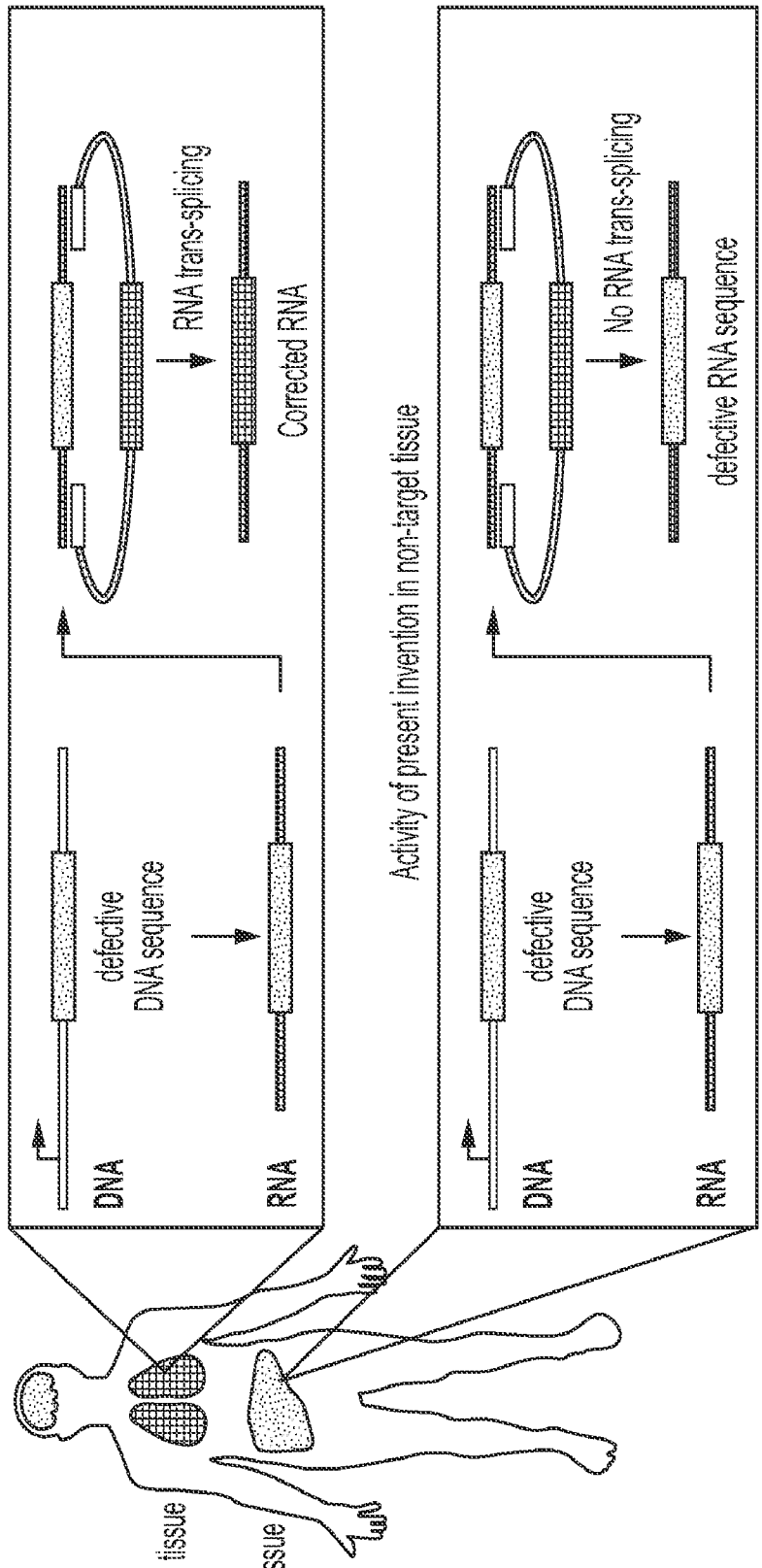
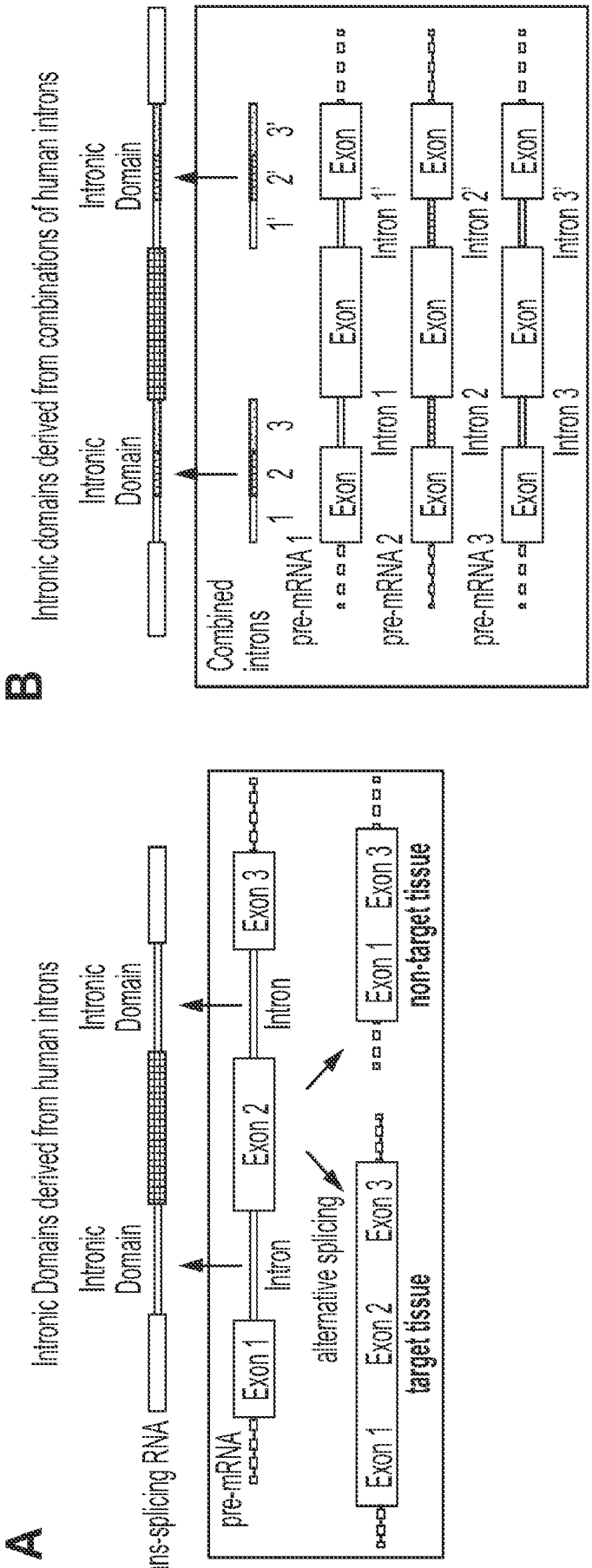

Activity of present invention in target tissue
DNA
defective
DNA sequence
RNA
RNA trans-splicing
Corrected RNA
Activity of present invention in non-target tissue
DNA
defective
DNA sequence
RNA
No RNA trans-splicing
defective RNA sequence
target tissue
non-target tissue

Figure 2 C

Figure 3


A
Intronic Domains derived from human introns
trans-splicing RNA
Intronic Domain
Intronic Domain
pre-mRNA
Exon 1
Exon 2
Exon 3
Intron
alternative splicing
Exon 1
Exon 2
Exon 3
target tissue
Exon 1
Exon 3
non-target tissue
B
Intronic domains derived from combinations of human introns
Intronic Domain
Intronic Domain
Combined introns
1 2 3
1' 2' 3'
pre-mRNA 1
Exon
Exon
Exon
Intron 1
Intron 1'
pre-mRNA 2
Exon
Exon
Exon
Intron 2
Intron 2'
pre-mRNA 3
Exon
Exon
Exon
Intron 3
Intron 3'

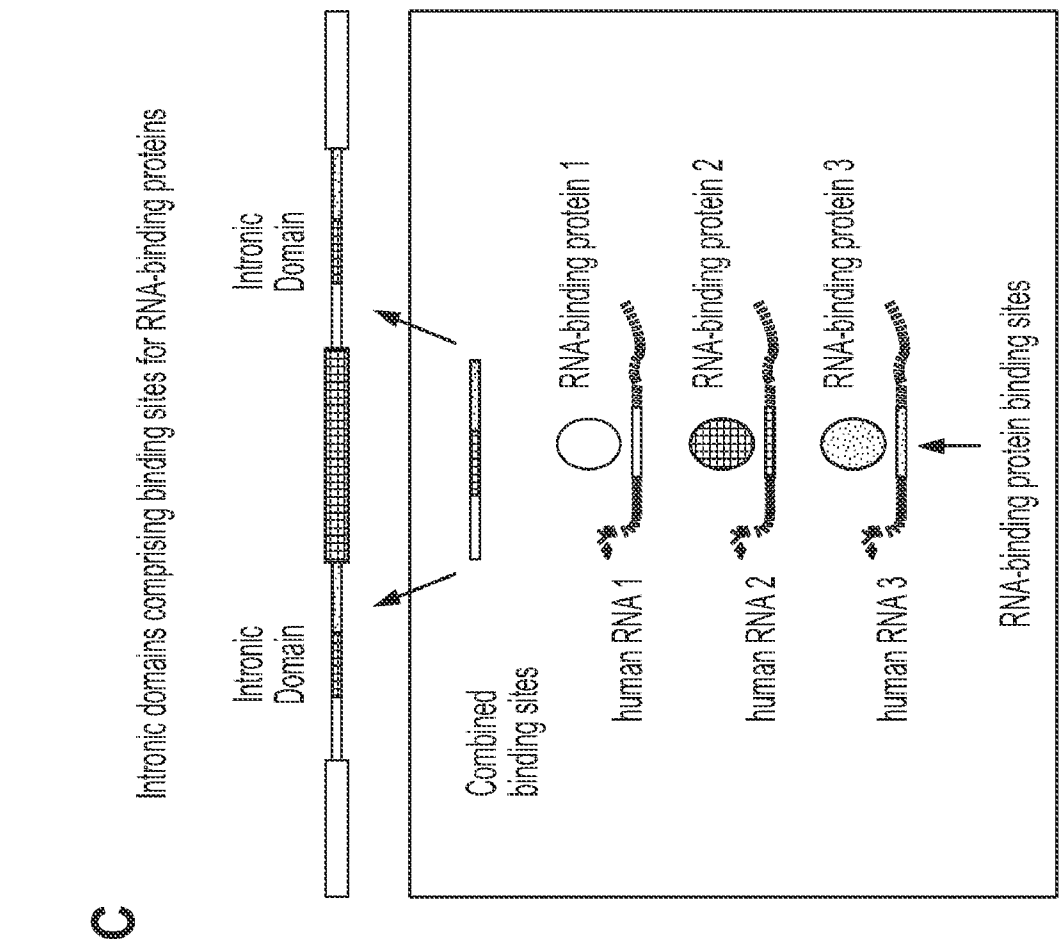

C
Intronic domains comprising binding sites for RNA-binding proteins
Intronic Domain
Intronic Domain
Combined binding sites
RNA-binding protein 1
human RNA 1
RNA-binding protein 2
human RNA 2
RNA-binding protein 3
human RNA 3
RNA-binding protein binding sites

Figure 3

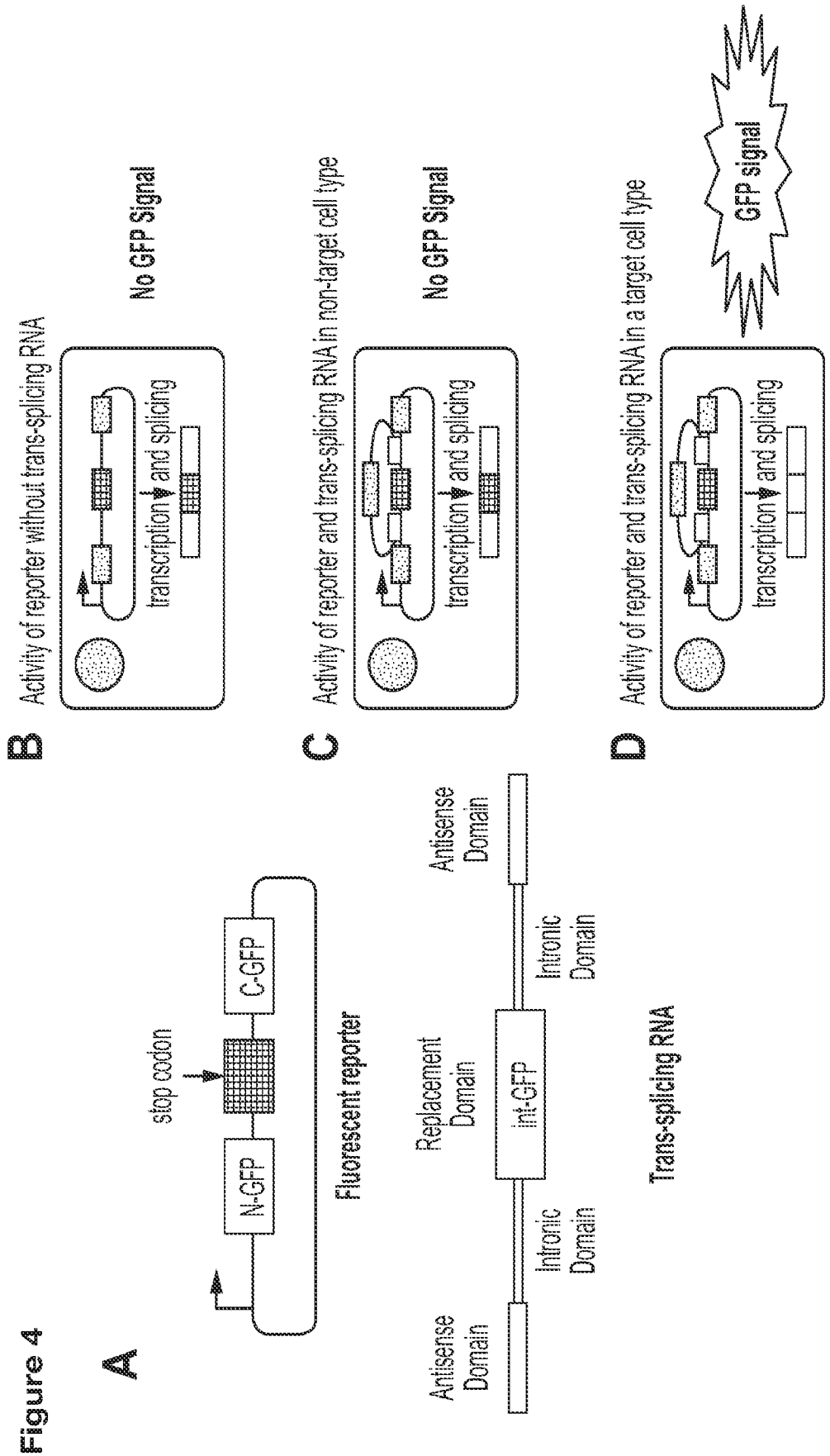
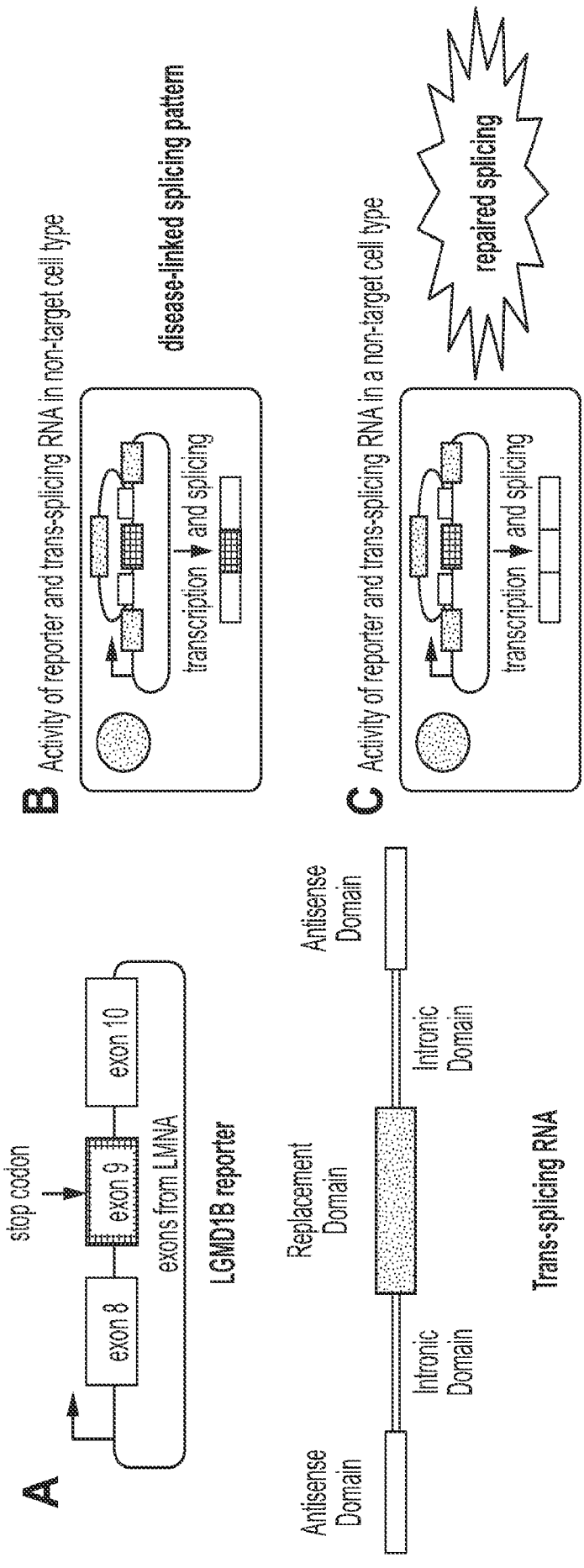

A
stop codon
N-GFP
C-GFP
Fluorescent reporter
Antisense Domain
Intronic Domain
Replacement Domain
int-GFP
Intronic Domain
Antisense Domain
Trans-splicing RNA
B
Activity of reporter without trans-splicing RNA
transcription and splicing
No GFP Signal
C
Activity of reporter and trans-splicing RNA in non-target cell type
transcription and splicing
No GFP Signal
D
Activity of reporter and trans-splicing RNA in a target cell type
transcription and splicing
GFP signal

Figure 4

Figure 5


A
stop codon
exon 8
exon 9
exon 10
exons from LMNA
LGMD1B reporter
Antisense Domain
Intronic Domain
Replacement Domain
Intronic Domain
Antisense Domain
Trans-splicing RNA
B
Activity of reporter and trans-splicing RNA in non-target cell type
transcription and splicing
disease-linked splicing pattern
C
Activity of reporter and trans-splicing RNA in a non-target cell type
transcription and splicing
repaired splicing

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US21/52315

A. CLASSIFICATION OF SUBJECT MATTER

IPC - A61K 48/00; A61K 31/7105; C12N 15/11; C12N 15/63 (2021.01)

CPC - A61K 48/0058; A61K 48/0008; A61K 31/7105; C12N 15/11; C12N 15/113; C12N 15/63; C12N 2310/11; C12N 2310/124; C12N 2320/33; C12N 2320/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	(KWON, BS et al.) Specific Regression of Human Cancer Cells by Ribozyme-Mediated Targeted Replacement of Tumor-Specific Transcript. Molecular Therapy. November 2005, Epub 25 July 2005, Vol. 12, No. 5; pages 824-834; abstract; page 824, 1st column, 1st paragraph and 2nd column, 2nd paragraph; page 825, 1st column, 2nd paragraph and 2nd column, 2nd paragraph; page 829, 1st column, 2nd paragraph and 2nd column, 1st paragraph; page 831, 1st column, 1st paragraph; figs. 1 and 6; DOI: 10.1016/j.ymthe.2005.06.096	1, 28/1, 29/1 --- 2-4, 13, 18, 28/2, 29/2
Y	(LAI, Y et al.) Efficient in vivo gene expression by trans-splicing adeno-associated viral vectors. Nature Biotechnology. November 2005, Epub 9 October 2005, Vol. 23, No. 11; pages 1-5; abstract; page 2, 2nd, 3rd, and 6th paragraphs; page 3, 1st paragraph; page 4, 3rd and 4th paragraphs; figs. 2a, 2c; DOI: 10.1038/nbt1153	2-4, 13, 28/2, 29/2
Y	(SHI, P et al.) SUMOylation of DDX39A Alters Binding and Export of Antiviral Transcripts to Control Innate Immunity. Journal of Immunology. 1 July 2020, Epub 11 May 2020, Vol. 205, No. 1; pages 1-2; page 2, 1st column, 1st paragraph; DOI: 10.4049/jimmunol.2000053	18
Y	US 2014/0350089 A1 (SELDEN, RE et al.) 27 November 2014; paragraph [0260]; fig. 13	4, 13
Y	US 2020/0148745 A1 (ROCKET PHARMACEUTICALS, LTD.) 14 May 2020; abstract; paragraph [0188]	13
A	(PRONDZYNSKI, M et al.) Evaluation of MYBPC3 trans-Splicing and Gene Replacement as Therapeutic Options in Human iPSC-Derived Cardiomyocytes. Molecular Therapy Nucleic Acids. 16 June 2017, Epub 17 May 2017, Vol. 7; pages 475-486; entire document; DOI: 10.1016/j.omtn.2017.05.008	1-4, 13, 18, 28-29

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"D" document cited by the applicant in the international application
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 February 2022 (11.02.2022)	MAR 04 2022
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer Shane Thomas Telephone No. PCT Helpdesk: 571-272-4300

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US21/52315

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:

   a. ☐ forming part of the international application as filed:

      ☐ in the form of an Annex C/ST.25 text file.

      ☐ on paper or in the form of an image file.

   b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.

   c. ☒ furnished subsequent to the international filing date for the purposes of international search only:

      ☒ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).

      ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).

2. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US21/52315

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☒ Claims Nos.: 19-27, 30-31
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
-***-Please See Supplemental Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Groups I+, Claims 1-18, 28-29, and muscle tissue (tissue or cell type), ALDOA (human gene), LAMP2 (replacement domain), DDX39 (RNA-binding protein)

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

-***-Continued From Box No. III: Observations where unity of invention is lacking-***-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Groups I+, Claims 1-18, 28-29, and muscle tissue (tissue or cell type), ALDOA (human gene), LAMP2 (replacement domain), DDX39 (RNA-binding protein) are directed towards trans-splicing nucleic acids and methods associated therewith.

The trans-splicing nucleic acids and methods of Claims 1-3, 4 (in-part), 13 (in-part), 18 (in-part), 28-29 are believed to encompass the first named invention of Groups I+ and are the claims that will be searched without fee to the extent that they encompass muscle tissue (first exemplary tissue or cell type), ALDOA (first exemplary human gene), LAMP2 (first exemplary replacement domain), DDX39 (first exemplary RNA-binding protein).

Applicant is invited to elect additional tissue or cell type(s), human gene(s), replacement domain(s), RNA-binding protein(s) to be searched. Additional tissue or cell type(s), human gene(s), replacement domain(s), RNA-binding protein(s) will be searched upon the payment of additional fees. Applicants must specify the searchable claims that encompass any additionally elected tissue or cell type(s), human gene(s), replacement domain(s), RNA-binding protein(s). Applicants must further indicate, if applicable, the claims which encompass the first named invention, if different than what was indicated above for this group. Failure to clearly identify how any paid additional invention fees are to be applied to the "+" group(s) will result in only the first claimed invention to be searched/examined. Exemplary elections would be brain tissue (tissue or cell type), UBB (human gene), SOD1 (replacement domain); or DDX3X (RNA-binding protein).

Groups I+ were considered to share the technical features including: a trans-splicing nucleic acid, comprising: a. one or more replacement domains that encode a therapeutic sequence operably linked to; b. one or more intronic domains that promote RNA splicing of the replacement domain primarily in a specific tissue or cell type; and c. one or more antisense domains that promote binding to a target RNA molecule; a method for treating a disease comprising administering to a patient in need of a therapeutically effective amount of a treatment comprising the trans-splicing nucleic acid molecule; a method for correcting a genetic defect in a subject comprising administering to said subject the trans-splicing nucleic acid molecule; these shared technical features are previously disclosed by the publication entitled "Specific Regression of Human Cancer Cells by Ribozyme-Mediated Targeted Replacement of Tumor-Specific Transcript" by Kwon, et al. (hereinafter 'Kwon').

Kwon discloses a trans-splicing nucleic acid (trans-splicing ribozymes (nucleic acid); page 824, 2nd column, 2nd paragraph; fig. 1), comprising: a. one or more replacement domains that encode a therapeutic sequence (trans-splicing ribozymes comprising a thymidine kinase or a cytotoxin gene that replaces a portion of the hTERT gene sequence (replacement domain), and induces cell death in cancer cells (therapeutic sequence); page 824, 1st column, 1st paragraph; page 825, 1st column, 2nd paragraph; page 829, 1st column, 2nd paragraph and 2nd column, 1st paragraph; page 831, 1st column, 1st paragraph; figs. 1 and 6) operably linked to; b. one or more intronic domains that promote RNA splicing of the replacement domain primarily in a specific tissue or cell type (Tetrahymena group I intron-based trans-splicing ribozymes (intronic domain) comprising cytotoxin or TK gene cDNA as a 3' exon (operably linked to), wherein the group I intron-based ribozymes promote RNA splicing of the replacement domain specifically in hTERT-positive cancer cells; page 824, 1st column, 1st paragraph and 2nd column, 2nd paragraph; page 825, 1st column, 2nd paragraph; page 829, 1st column, 2nd paragraph and 2nd column, 1st paragraph; page 831, 1st column, 1st paragraph; figs. 1 and 6); and c. one or more antisense domains that promote binding to a target RNA molecule (trans-splicing ribozymes modified to contain a 325-nt-long antisense sequence that was complementary to the downstream region of the targeted uridine of the hTERT RNA; page 825, 2nd column, 2nd paragraph; fig. 1); a method for treating a disease comprising administering to a patient in need of a therapeutically effective amount of a treatment comprising the trans-splicing nucleic acid molecule (a novel approach to human cancer therapy based on trans-splicing ribozyme-mediated replacement of cancer-specific RNAs with new transcripts that exert therapeutic activities, which would intrinsically involve administering to a cancer patient a therapeutically effective amount of a treatment comprising the trans-splicing nucleic acid molecule; abstract; page 824, 1st column, 1st paragraph and 2nd column, 2nd paragraph; page 825, 1st column, 2nd paragraph); a method for correcting a genetic defect in a subject comprising administering to said subject the trans-splicing nucleic acid molecule (trans-splicing ribozymes developed to revise defective transcripts that cause human genetic diseases (method for correcting a genetic defect in a subject), which would intrinsically involve administering to said subject the trans-splicing nucleic acid molecule; page 824, 2nd column, 2nd paragraph).

Since none of the special technical features of the Groups I+ inventions is found in more than one of the inventions, and since all of the shared technical features are previously disclosed by the Kwon reference, unity of invention is lacking.