

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau



(10) International Publication Number  
**WO 2024/006414 A8**

(43) International Publication Date  
04 January 2024 (04.01.2024)

(51) International Patent Classification:

A61K 9/14 (2006.01) A61P 37/00 (2006.01)  
A61K 48/00 (2006.01) C12N 15/88 (2006.01)  
A61P 35/00 (2006.01)

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(21) International Application Number:

PCT/US2023/026541

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(22) International Filing Date:

29 June 2023 (29.06.2023)

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

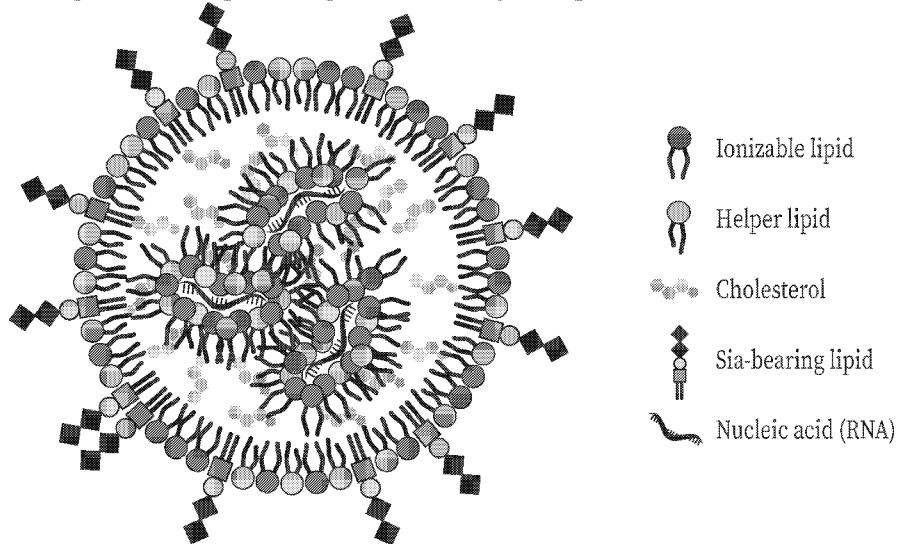
63/356,557 29 June 2022 (29.06.2022) US

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(54) Title: HAVE BEEN NOVEL LIPID NANOPARTICLE COMPOSITIONS AND USES THEREOF

Composition of Lipid Nanoparticle Bearing Sia Lipid



Targeted cell binding and receptor-mediated endocytosis

FIG. 1A

(57) Abstract: The present invention provides a lipid nanoparticle (LNP) formulation comprising at least one sialic acid (SA) - containing lipid. The LNP formulation is capable of effectively binding cell surface Siglecs, transfecting certain cells in vitro and targeting certain cells in vivo. The present invention also provides methods of using the LNP compositions described herein for pharmaceutical applications. For example, the LNPs provided herein are useful for the intracellular delivery of a nucleic acid therapeutic to a subject.



WO 2024/006414 A8

**(84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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))*

**(48) Date of publication of this corrected version:**

27 February 2025 (27.02.2025)

**(15) Information about Correction:**

see Notice of 27 February 2025 (27.02.2025)