

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
20 January 2022 (20.01.2022)(10) International Publication Number
WO 2022/015902 A8

(51) International Patent Classification:

C08B 37/02 (2006.01) *A61L 27/20* (2006.01)
C08L 5/02 (2006.01) *A61L 27/52* (2006.01)
A61K 31/721 (2006.01) *A61K 31/737* (2006.01)

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
 KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/US2021/041705

(22) International Filing Date:

14 July 2021 (14.07.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/051,857 14 July 2020 (14.07.2020) US

(71) Applicants: **MASSACHUSETTS INSTITUTE OF TECHNOLOGY** [US/US]; 77 Massachusetts Avenue, Cambridge, MA 02139 (US). **TRUSTEES OF BOSTON UNIVERSITY** [US/US]; One Silber Way, Boston, MA 02215 (US).

(72) Inventors: **CHEN, Christopher, S.**; 49 Elmhurst Road, Newton, MA 02458 (US). **BHATIA, Sangeeta, N.**; 32 Inglese Road, Lexington, MA 02420 (US). **LI, Linqing**; 610 Commonwealth Avenue, Boston, MA 02215 (US). **YANG, Jinling**; 610 Commonwealth Avenue, Boston, MA 02215 (US). **EYCKMANS, Jeroen**; 610 Commonwealth Avenue, Boston, MA 02215 (US).

(74) Agent: **MELLO, Jill, Ann** et al.; McCarter & English, LLP, 265 Franklin Street, Boston, MA 02110 (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,

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(48) Date of publication of this corrected version:

03 March 2022 (03.03.2022)

(15) Information about Correction:

see Notice of 03 March 2022 (03.03.2022)

(54) Title: SYNTHETIC HEPARIN MIMETICS AND USES THEREOF

(57) Abstract: Synthetic polymers, e.g., synthetic heparin mimetics, are provided, including hydrogel compositions incorporating the synthetic polymers. Methods of making and using the synthetic polymers are also provided.