

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

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2022/026631 A1

(43) International Publication Date
03 February 2022 (03.02.2022)

(51) International Patent Classification:

A61K 38/04 (2006.01) *A61K 38/10* (2006.01)
A61K 38/08 (2019.01) *A61P 7/06* (2006.01)

(21) International Application Number:

PCT/US2021/043581

(22) International Filing Date:

28 July 2021 (28.07.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/057,574	28 July 2020 (28.07.2020)	US
63/057,577	28 July 2020 (28.07.2020)	US
63/057,582	28 July 2020 (28.07.2020)	US
63/057,583	28 July 2020 (28.07.2020)	US
63/169,515	01 April 2021 (01.04.2021)	US
63/169,527	01 April 2021 (01.04.2021)	US
63/169,533	01 April 2021 (01.04.2021)	US

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))
- with sequence listing part of description (Rule 5.2(a))

(71) Applicant: **PROTAGONIST THERAPEUTICS, INC.**
[US/US]; 7707 Gateway Boulevard, Suite 140, Newark, California 94560-1160 (US).

(72) Inventors; and

(71) Applicants: **BOURNE, Gregory Thomas** [AU/AU]; 19 Greenwood Close, Moggill, Brisbane, Queensland 4070 (AU). **BHANDARI, Ashok** [US/US]; 2808 Esnaab Court, Pleasanton, California 94588 (US). **ZHANG, Jie** [AU/AU]; c/o Protagonist Therapeutics, Inc., 7707 Gateway Boulevard, Suite 140, Newark, California 94560-1160 (US). **FREDERICK, Brian Troy** [US/US]; 8470 Glen Arbor Road, Ben Lomond, California 95005 (US). **SMYTHE, Mark Leslie** [AU/AU]; 8 Morgan Terrace, Bardon, Queensland 4065 (AU).

(74) Agent: **LAHERTY, Carol** et al.; Cooley LLP, 1299 Pennsylvania Ave., Suite 700, Washington, District of Columbia 20004 (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,

(54) Title: CONJUGATED HEPcidIN MIMETICS

(57) Abstract: The present invention provides hepcidin analogues with improved in vivo half lives, and related pharmaceutical compositions and methods of use thereof.

WO 2022/026631 A1