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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 March 2010 (18.03.2010)

PCT

(10) International Publication Number
WO 2010/030241 A1

(51) International Patent Classification:
A61K 31/727 (2006.01) *A61K 31/726* (2006.01)
A61F 2/28 (2006.01) *A61P 19/00* (2006.01)
A61F 5/00 (2006.01) *A61P 19/10* (2006.01)
A61P 19/02 (2006.01)

(21) International Application Number:
PCT/SG2009/000317

(22) International Filing Date:
7 September 2009 (07.09.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/096,272 11 September 2008 (11.09.2008) US
0816650.6 11 September 2008 (11.09.2008) GB

(71) Applicant *(for all designated States except US)*: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10, Connexis, Singapore 138632 (SG).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **COOL, Simon McKenzie** [AU/SG]; 29 Kismis Green, Singapore 596261 (SG). **NURCOMBE, Victor** [AU/SG]; 960 Dunearn Road #07-25, Gardenvista Condo Tower 6, Singapore 589486 (SG).

(74) Agent: **YU SARN AUDREY & PARTNERS**; 17 Upper Circular Road, #03-00 Juta Building, Singapore 058415 (SG).

(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, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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))*

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

(54) Title: THERAPEUTIC BONE GROWTH AND REGENERATION

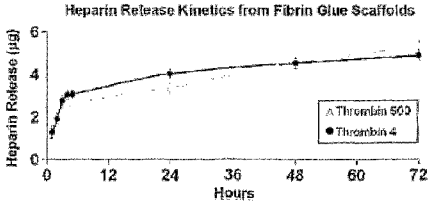


Figure 2

(57) Abstract: The use of Herapan Sulphate 2 (HS-2) in therapeutic bone growth and regeneration is described. Herapan Sulphate 2 was identified as a variant of Heparan Sulphate purified from embryonic day (E10) of murine neuroepithelia.

WO 2010/030241 A1