



(51) International Patent Classification:

A61K 31/192 (2006.01) C07C 57/32 (2006.01)
 A61K 8/36 (2006.01) C07C 57/58 (2006.01)
 A61P 17/02 (2006.01) C07C 59/52 (2006.01)
 A61Q 19/08 (2006.01) C07C 59/84 (2006.01)
 C07C 57/30 (2006.01)

(21) International Application Number:

PCT/CA2015/000572

(22) International Filing Date:

12 November 2015 (12.11.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/078,704 12 November 2014 (12.11.2014) US

(71) Applicant: PROMETIC BIOSCIENCES INC. [CA/CA];
 440, Armand-Frappier boulevard, Suite 300, Laval, Que-
 bec, Canada H7V 4B4 (CA).

(72) Inventors: GAGNON, Lyne; 1973, De la Victoire street,
 Laval (Quebec), H7M 3E5 (CA). LAURIN, Pierre; 2250
 Chemin Sunset, Ville Mont-Royal (Quebec), H3R 2Y6
 (CA).

(74) Agent: LECLAIRE, France; PROMETIC LIFE SCI-
 ENCES INC., 440, Armand-Frappier boulevard, Suite 300,
 Laval, Quebec, Canada H7V 4B4 (CA).

(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, DK, DM,
 DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
 HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
 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, SM, ST, SV, SY, TH, 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, 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).

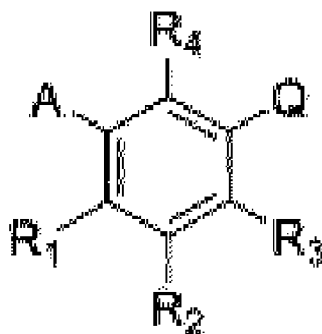
Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

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

(54) Title: SUBSTITUTED AROMATIC COMPOUNDS AND PHARMACEUTICAL COMPOSITIONS FOR TISSUE SELF-REPAIR AND REGENERATION



Formula I

(57) Abstract: Described herein are compounds of Formula I, or pharmaceutically acceptable salts thereof, or combinations thereof, as well as uses thereof. Such uses include promoting tissue self-repair or tissue regeneration of an organ, stimulating the generation of tissue growth, modulating (e.g. increasing) the level of a tissue-repair marker, treating physical injury in an organ, tissue, or cell, promoting wound healing as well as anti-aging applications. Corresponding compositions, methods and uses are also described. Formula I wherein A is C₅ alkyl, C₆ alkyl, C₅ alkenyl, C₆ alkenyl, C(0)-(CH₂)_n-CH₃ or CH(OH)-(CH₂)_n-CH₃ wherein n is 3 or 4; R₁ is H, F or OH; R₂ is H, F, OH, C₅ alkyl, C₆ alkyl, C₅ alkenyl, C₆ alkenyl, C(0)-(CH₂)_n-CH₃ or CH(OH)-(CH₂)_n-CH₃ wherein n is 3 or 4; R₃ is H, F, OH, or CH₂Ph; R₄ is H, F or OH; Q is 1) (CH₂)_mC(0)OH wherein m is 1 or 2 2) CH(CH₃)C(0)OH, 3) C(CH₃)₂C(0)OH, 4) CH(F)-C(0)OH, 5) CF₂-C(0)OH or 6) C(0)-C(0)OH.

