

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
15 November 2007 (15.11.2007)

PCT

(10) International Publication Number
WO 2007/131201 A3

(51) International Patent Classification:

C07D 213/75 (2006.01) C07D 295/26 (2006.01)
 C07D 401/04 (2006.01) C07D 239/49 (2006.01)
 C07D 401/14 (2006.01) A61K 31/4433 (2006.01)
 C07D 405/12 (2006.01) C07C 233/65 (2006.01)
 C07D 409/12 (2006.01) C07C 233/75 (2006.01)
 C07D 413/04 (2006.01) A61P 35/00 (2006.01)
 C07D 295/135 (2006.01)

[CN/US]; 13880 Kerry Lane, San Diego, California 92130 (US).

(74) Agents: REID, Scott W. et al.; Genomics Institute of the Novartis Research Foundation, 10675 John Jay Hopkins Drive, San Diego, California 92121 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(21) International Application Number:

PCT/US2007/068292

(22) International Filing Date: 4 May 2007 (04.05.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/797,949 5 May 2006 (05.05.2006) US

(71) Applicant (for all designated States except US): IRM LLC [US/US]; Hurst Holme, 12 Trott Road, Hamilton, HM 11 (BM).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GAO, Wenqi [CN/US]; 17011 New Rochelle Way, San Diego, California 92127 (US). JIANG, Jiqing [CN/US]; 8323 Bryn Glen Way, San Diego, California 92129 (US). WAN, Yongqin [CN/US]; 63 Esplanade, Irvine, California 92612 (US). CHENG, Dai [CN/US]; 11585-1 Compass Point Drive North, San Diego, California 92126 (US). HAN, Dong [CN/US]; 4221 34th St., Apt#23, San Diego, California 92014 (US). WU, Xu [CN/US]; 12631 El Camino Real, #2309, San Diego, California 92130 (US). PAN, Shifeng

(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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

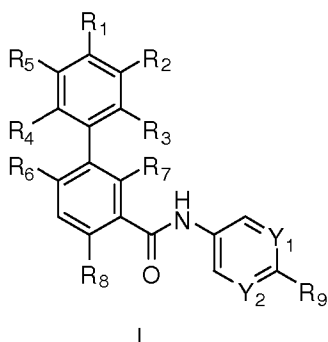
Published:

— with international search report
 — before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

6 March 2008

(54) Title: COMPOUNDS AND COMPOSITIONS AS HEDGEHOG PATHWAY MODULATORS



(57) Abstract: The invention provides a method for modulating the activity of the hedgehog signaling pathway. In particular, the invention provides a method for inhibiting aberrant growth states resulting from phenotypes such as Ptc loss-of-function, hedgehog gain-of-function, smoothened gain-of-function or Gli gain-of-function, comprising contacting a cell with a sufficient amount of a compound of Formula I.