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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052936 A3

(51) International Patent Classification:
A61K 31/4178 (2006.01) *C07D 403/14* (2006.01)

(21) International Application Number:
PCT/US2005/040372

(22) International Filing Date:
7 November 2005 (07.11.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/626,785 9 November 2004 (09.11.2004) US
60/709,648 19 August 2005 (19.08.2005) US

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

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **WAN, Yongqin** [CN/US]; 17 Bear Paw #19c, Irvine, CA 92604 (US). **MI, Yuan** [CN/US]; 11175 Affinity Court, Unit 45, San Diego, CA 92131 (US). **FAN, Yi** [CN/US]; 12228 Pepper Tree Lane, Poway, CA 92064 (US). **CHENG, Dai** [CN/US]; 11585-1 Compass Point Drive North, San Diego, CA 92126 (US). **LIU, Yi** [CN/US]; 4255 Corte De Sausalito, San Diego, CA 92130 (US). **GRAY, Nathanael, Schiander** [US/US]; 5652 Lamas Street, San Diego, CA 92122 (US). **ALBAUGH, Pamela, A.** [US/US]; 6081 Pase Monona, Carlsbad, CA 92009 (US).

(74) Agent: **REID, Scott, W.**; The Genomics Institute Of The Novartis Research Foundation, 10675 John Jay Hopkins Drive, San Diego, CA 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, 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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, HU, IE, IS, IT, LT, LU, LV, MC, 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*

(88) Date of publication of the international search report:
26 October 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOUNDS AND COMPOSITIONS AS PROTEIN KINASE INHIBITORS

(57) Abstract: The invention provides a novel class of compounds, pharmaceutical compositions comprising such compounds and methods of using such compounds to treat or prevent diseases or disorders associated with abnormal or deregulated kinase activity, particularly diseases or disorders that involve abnormal activation of the Abl, Bcr-Abl, cSrc, TPR-Met, Tie2, MET, FGFR3, Aurora, Axl, Bmx, BTK, c-kit, CHK2, Flt3, MST2, p70S6K, PDGFR, PKB, PKC , Raf, ROCK-II, Rsk1, SGK, TrkA, TrkB and TrkC kinases.

WO 2006/052936 A3