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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
1 June 2006 (01.06.2006)

PCT

(10) International Publication Number
WO 2006/058074 A1

(51) International Patent Classification:
C07D 487/04 (2006.01) *A61K 31/4985* (2006.01)

(21) International Application Number:
PCT/US2005/042455

(22) International Filing Date:
22 November 2005 (22.11.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/630,115 22 November 2004 (22.11.2004) US

(71) Applicant *(for all designated States except US)*: **VERTEX PHARMACEUTICALS INCORPORATED** [US/US]; 130 Waverly Street, Cambridge, MA 02139 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **BINCH, Haley** [GB/GB]; Unit 88, Milton Park, Abingdon, Oxfordshire OX14 4RY (GB). **ROBINSON, Daniel** [GB/GB]; Unit 88, Milton Park, Abingdon, Oxfordshire OX14 4RY (GB). **MILLER, Andrew** [GB/GB]; Unit 88, Milton Park, Abingdon, Oxfordshire OX14 4RY (GB). **FRAYSSE, Damien** [FR/GB]; Unit 88, Milton Park, Abingdon Oxfordshire OX14 4RY (GB).

(74) Agent: **DIXON, Lisa, A.**; Vertex Pharmaceuticals Incorporated, 130 Waverly Street, Cambridge, MA 02139 (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).

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*

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.

WO 2006/058074 A1

(54) Title: PYRROLOPYRAZINES AND PYRAZOLOPYRAZINES USEFUL AS INHIBITORS OF PROTEIN KINASES

(57) Abstract: The present invention relates to compounds of formula (I): wherein x, R1, R2 and R3 denote as in Claim 1, useful as inhibitors of Aurora protein kinase. The invention also provides pharmaceutically acceptable compositions comprising said compounds and methods of usig the compositions in the treatment of various disease, conditions, or disorders. The invention also provides processes for preparing compounds of the inventions.