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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 April 2007 (12.04.2007)

PCT

(10) International Publication Number
WO 2007/041130 A2

(51) International Patent Classification:
C07D 487/04 (2006.01) *A61K 31/495* (2006.01)
C07D 519/00 (2006.01) *A61P 29/00* (2006.01)

(21) International Application Number:
PCT/US2006/037593

(22) International Filing Date:
28 September 2006 (28.09.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/722,561 30 September 2005 (30.09.2005) US

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

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **SALITURO, Francesco** [US/US]; 25 Baker Drive, Marlboro, MA 01752 (US). **FARMER, Luc** [US/US]; 19 Howe Lane, Foxboro, MA 02035 (US). **WANG, Tiansheng** [US/US]; 2 Dunbar Way, Concord, MA 01742 (US). **WANG, Jian** [CN/GB]; 15 Elliot Street, Newton, MA 02461 (US). **BETHIEL, Randy** [US/US]; 314 Massachusetts Avenue, Lexington, MA 02420 (US). **WANNAMAKER, Marion** [US/US]; 375 Harvard Road, Stow, MA 01775 (US). **MARTINEZ-BOTELLA, Gabriel** [ES/US]; 5291 Washington Street, West Roxbury, MA 02132 (US). **DUFFY, John** [US/US]; 175 Carriage Hill Road, Northborough, MA 01532 (US). **ARONOV, Alexander** [RU/US]; 13 Circuit Lane, Watertown, MA 02472 (US). **LAUFFER, David** [US/US]; 254 Taylor Road, Stow, MA 01775 (US). **PIERCE, Albert** [US/US]; 27 Fainwood Circle, #1, Cambridge, MA 02139 (US).

(74) Agent: **BROWN, Karen, E.**; Vertex Pharmaceuticals Incorporated, 130 Waverly Street, Cambridge, MA 02139-4242 (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, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, 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.

(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:
— *without international search report and to be republished upon receipt of that report*

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:** DEAZAPURINES USEFUL AS INHIBITORS OF JANUS KINASES

(57) **Abstract:** The present invention relates to compounds useful as inhibitors of protein kinases, particularly of JAK family kinases. The invention also provides pharmaceutically acceptable compositions comprising said compounds and methods of using the compositions in the treatment of various disease, conditions, or disorders.

WO 2007/041130 A2