

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 September 2007 (27.09.2007)

PCT

(10) International Publication Number
WO 2007/109080 A3

(51) International Patent Classification:

C07C 231/20 (2006.01) **C07D 498/10** (2006.01)
C07C 237/04 (2006.01) **A61K 31/498** (2006.01)
C07D 209/52 (2006.01) **A61K 31/422** (2006.01)
C07D 403/12 (2006.01) **A61K 31/403** (2006.01)
C07D 403/14 (2006.01) **A61P 31/12** (2006.01)

(US). **MALTAIS, Francois** [CA/US]; 24 Randolph Dr., Tewksbury, MA 01876 (US).

(74) **Agent: O'BRIEN, Jonathan, P.**; Miller, Canfield, Paddock And Stone, 444 West Michigan Avenue, Kalamazoo, MI 49007 (US).

(21) International Application Number:

PCT/US2007/006493

(22) International Filing Date: 14 March 2007 (14.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/782,788 16 March 2006 (16.03.2006) US
60/782,976 16 March 2006 (16.03.2006) US
60/844,771 15 September 2006 (15.09.2006) US

(71) **Applicant (for all designated States except US): VERTEX PHARMACEUTICALS INCORPORATED** [US/US]; 130 Waverly Street, Cambridge, MA 02139-4242 (US).

(72) Inventors; and

(75) **Inventors/Applicants (for US only): PERNI, Robert, B.** [US/US]; 130 Robert Road, Marlborough, MA 01752 (US). **CHEN, Minzhang** [CN/US]; 35 Squirrel Hill Road, Acton, MA 01720 (US). **JUNG, Young, Chun** [KR/US]; 22 Webb Street, Lexington, MA 02420 (US). **FORSLUND, Raymond, E.** [US/US]; 17 Pinehurst Avenue, Natick, MA 01760 (US). **TANOURY, Gerald, J.** [US/US]; 1 Orchard Drive, Hudson, MA 01749 (US). **BENNANI, Youssef** [US/US]; 119 Beacon Street, Unit 3, Boston, MA 02116 (US). **ZLOKARNIK, Gregor** [DE/US]; 2754 Palomino Circle, La Jolla, CA 92037

(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, 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.

(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).

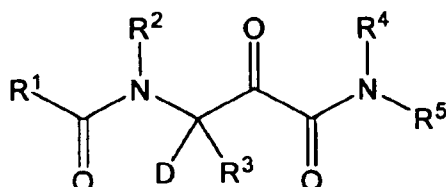
Published:

— 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:**
15 November 2007

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:** DEUTERATED HEPATITIS C PROTEASE INHIBITORS



(I)

(57) **Abstract:** A deuterated α -ketoamide steric specific compound of the formula (I), wherein D denotes a deuterium atom on a steric specific carbon atom.

WO 2007/109080 A3