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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 November 2007 (08.11.2007)

PCT

(10) International Publication Number
WO 2007/127635 A3

(51) International Patent Classification:
C07D 403/12 (2006.01) *A61K 31/437* (2006.01)
C07D 417/14 (2006.01) *A61K 31/4436* (2006.01)
C07D 471/04 (2006.01) *A61K 31/4427* (2006.01)
C07D 519/00 (2006.01) *A61P 31/18* (2006.01)

(21) International Application Number:
PCT/US2007/066700

(22) International Filing Date: 16 April 2007 (16.04.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/794,703 25 April 2006 (25.04.2006) US
60/794,700 25 April 2006 (25.04.2006) US
11/733,283 10 April 2007 (10.04.2007) US

(71) Applicant *(for all designated States except US)*: **BRISTOL-MYERS SQUIBB COMPANY** [US/US]; Route 206 and Province Line Road, Princeton, New Jersey 08543-4000 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **WANG, Tao** [US/US]; c/o Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **KADOW, John, F.** [US/US]; c/o Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **ZHANG, Zhongxing** [CN/US]; c/o Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **YIN, Zhiwei** [US/US]; c/o Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **MEANWELL, Nicholas, A.** [US/US]; c/o Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **REGUEIRO-REN, Alicia** [ES/US]; c/o Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **SWIDORSKI, Jacob** [US/US]; Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **HAN, Ying** [CN/US]; Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US). **CARINI, David, J.** @ [US/US]; Bristol-Myers Squibb Co., 5 Research Parkway, Wallingford, Connecticut 06492 (US).

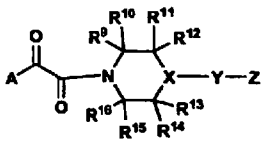
(74) Agents: **CHAPMAN, Jennifer Chin** et al.; Bristol-Myers Squibb Company, P.O. Box 4000, Princeton, New Jersey 08543-4000 (US).

(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.

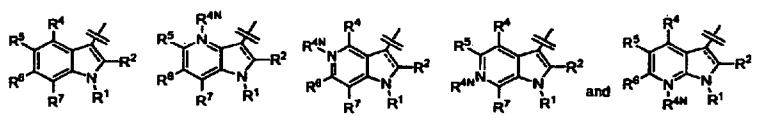
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, 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).

[Continued on next page]

(54) Title: DIKETO-PIPERAZINE AND PIPERIDINE DERIVATIVES AS ANTIVIRAL AGENTS



(I)



(II)

(57) Abstract: This disclosure provides compounds of Formula I, or pharmaceutically acceptable salts thereof; (I) wherein: A is selected from the group consisting of: (II) having drug and bio-affecting properties, their pharmaceutical compositions and method of use. In particular, the disclosure is concerned with diketo piperazine and piperadine derivatives that possess unique antiviral activity. More particularly, the present disclosure relates to compounds useful for the treatment of HTV and AIDS.

WO 2007/127635 A3

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:
13 March 2008