

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 April 2007 (05.04.2007)

PCT

(10) International Publication Number
WO 2007/038507 A3

(51) International Patent Classification:

C12P 19/38 (2006.01) *C12P 19/30* (2006.01)
C12P 19/40 (2006.01)

(21) International Application Number:

PCT/US2006/037470

(22) International Filing Date:

26 September 2006 (26.09.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/720,388 26 September 2005 (26.09.2005) US

(71) Applicant (for all designated States except US): **PHARMASSET, INC.** [US/US]; 303a College Road East, Princeton, NJ 08540 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DU, Jinfa** [US/US]; 1206 Reins Circle, New Hope, PA 18938 (US). **FURMAN, Phillip** [US/US]; 5 Quincy Court, Princeton, NJ 08540 (US). **SOFIA, Michael** [US/US]; 137 Washington Drive, Southington, CT 06489 (US).

(74) Agent: **BRUESS, Steven, C.**; Merchant & Gould P.C., P.O. Box 2903, Minneapolis, MN 55402-0903 (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).

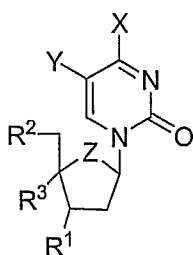
Published:

- 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

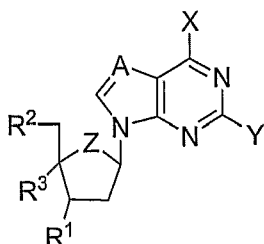
(88) Date of publication of the international search report:
13 September 2007

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: MODIFIED 4'-NUCLEOSIDES AS ANTIVIRAL AGENTS



(I)



(II)

(57) Abstract: Compounds, methods and compositions for treating a host infected with human immunodeficiency virus and hepatitis B virus comprising administering an effective amount of a described 4'-C-substituted /3-D- and /3-L-nucleoside or a pharmaceutically acceptable salt or prodrug thereof, are provided.

WO 2007/038507 A3