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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 March 2013 (07.03.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/033176 A1

(51) **International Patent Classification**:
A61P 35/00 (2006.01) ***A61K 47/10*** (2006.01)
A61K 9/00 (2006.01) ***A61K 31/7068*** (2006.01)
A61K 9/19 (2006.01) ***A61K 47/20*** (2006.01)

(21) **International Application Number**:
PCT/US2012/052816

(22) **International Filing Date**:
29 August 2012 (29.08.2012)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/529,081 30 August 2011 (30.08.2011) US

(71) **Applicant** *(for all designated States except US)*: **ASTEX PHARMACEUTICALS, INC.** [US/US]; 4140 Dublin Blvd., Suite 200, Dublin, CA 94568 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants** *(for US only)*: **JOSHI-HANGAL, Rajashree** [US/US]; 1070 W. Lagoon Rd., Pleasanton, CA 94566 (US). **TANG, Chunlin** [US/US]; 2563 Decca Lane, Walnut Creek, CA 94597 (US). **REDKAR, Sanjeev** [US/US]; 2740 Breaker Lane, Hayward, CA 94545 (US). **RAVIVARAPU, Harish** [IN/US]; 1059 Serpentine Lane, Pleasanton, CA 94566 (US).

(74) **Agents**: **KENESKY, Craig** et al.; Wilson Sonsini Goodrich & Rosati, 650 Page Mill Road, Palo Alto, CA 94304-1050 (US).

(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

WO 2013/033176 A1

(54) **Title**: DECITABINE DERIVATIVE FORMULATIONS

(57) **Abstract**: The invention provides derivatives of decitabine with superior chemical stability and shelf life, with similar physiological activity. The derivatives are provided in a non-aqueous formulation, which further stabilizes the derivatives. Methods of treating one or more myelodysplastic syndromes, leukemia, or solid tumours using the formulations are described.