



(43) International Publication Date
11 April 2013 (11.04.2013)

(10) International Publication Number
WO 2013/052613 A1

(51) International Patent Classification:

A61K 31/425 (2006.01) *C07D 417/00* (2006.01)
A61K 31/426 (2006.01) *C07D 417/02* (2006.01)

(21) International Application Number:

PCT/US2012/058674

(22) International Filing Date:

4 October 2012 (04.10.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/542,907 4 October 2011 (04.10.2011) US

(71) Applicant: **INSTITUTE FOR HEPATITIS AND VIRUS RESEARCH** [US/US]; The Pennsylvania Biotechnology Center, 3805 Old Easton Road, Doylestown, PA 18902 (US).

(72) Inventors: **CUCONATI, Andrea**; 204 Weldy Avenue, Orelan, PA 19075 (US). **XU, Xiaodong**; 4564 Summer Hill Drive, Doylestown, PA 18902 (US). **BLOCK, Timothy, M.**; 80 Foxcroft Drive, Doylestown, PA 18901 (US).

(74) Agent: **ACETO, Joseph, F.**; 1617 Newark Road, Kenneth Square, PA 19348 (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, PA, 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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: SUBSTITUTED AMINOTHIAZOLES AS INHIBITORS OF CANCERS, INCLUDING HEPATOCELLULAR CARCINOMA, AND AS INHIBITORS OF HEPATITIS VIRUS REPLICATION

(57) Abstract: Pharmaceutical compositions of the invention are presented which comprise substituted aminothiazoles derivatives. The substituted aminothiazoles derivatives have a disease-modifying action in the treatment of diseases associated with unregulated cell growth. Such diseases include cancers such as hepatocellular carcinoma, and viral infections from a hepatitis virus.



WO 2013/052613 A1