



(51) International Patent Classification:

C07D 401/12 (2006.01) **A61K 31/501** (2006.01)
C07D 405/12 (2006.01) **A61P 9/00** (2006.01)

(21) International Application Number:

PCT/US2014/010348

(22) International Filing Date:

6 January 2014 (06.01.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/750,633 9 January 2013 (09.01.2013) US

(71) Applicant: **THE REGENTS OF THE UNIVERSITY OF MICHIGAN** [US/US]; 1600 Huron Parkway, Second Floor, Ann Arbor, Michigan 48109-2590 (US).

(72) Inventors: **ZHANG, Haoming**; 5975 Cedar Ridge Drive, Ann Arbor, Michigan 48103 (US). **HOLLENBERG, Paul**; 1968 Woodlily Court, Ann Arbor, Michigan 48103 (US).

(74) Agent: **GOETZ, Robert A.**; Casimir Jones SC, 2275 De-ming Way, Suite 310, Middleton, Wisconsin 53562 (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, IR, IS, JP, KE, KG, 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, SA, 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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: MIXED DISULFIDE CONJUGATES OF THIENOPYRIDINE COMPOUNDS AND USES THEREOF

(57) Abstract: This invention is in the field of medicinal chemistry. In particular, the invention relates to mixed disulfide conjugates of thienopyridine compounds, and their use as therapeutics for the treatment, amelioration, and prevention of cardiovascular diseases.

