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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
03 January 2019 (03.01.2019)

WIPO | PCT

(10) International Publication Number
WO 2019/006299 A1

(51) International Patent Classification:
A61K 31/454 (2006.01) *A61K 47/12* (2006.01)
A61K 39/395 (2006.01)

(21) International Application Number:
PCT/US2018/040286

(22) International Filing Date:
29 June 2018 (29.06.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

62/527,744	30 June 2017 (30.06.2017)	US
62/653,436	05 April 2018 (05.04.2018)	US
62/673,064	17 May 2018 (17.05.2018)	US

(71) Applicant: **CELGENE CORPORATION** [US/US]; 86 Morris Avenue, Summit, NJ 07901 (US).

(72) Inventors; and

(71) Applicants: **BUCHHOLZ, Tonia, J.** [US/US]; 594 Kelmore Street, Moss Beach, CA 94038 (US). **CARMICHAEL, James** [US/GB]; 11 Cherry Tree Lane, Edwalton NG12 4AL (GB). **CARRANCIO, Soraya** [ES/US]; 5205 Fiore Terrace, Apt. B419, San Diego, CA 92122 (US). **FAN, Jinhong** [US/US]; 1740 Eisenhower Street, San Mateo, CA 94403 (US). **GUPTA, Rajan** [US/US]; 9 Ten Broek Court, Bridgewater, NJ 08807 (US). **LU, Gang** [CN/US]; 6681 Dondero Trail, San Diego, CA 92130 (US). **MACBETH, Kyle** [US/US]; 1356 Stevenson Street, San Francisco, CA 94103 (US). **PACE, Emily** [US/US]; 18 Loma Vista Drive, Orinda, CA 94563 (US). **PIERCE, Daniel** [US/US]; 3406 Lodge Drive, Belmont, CA 94002 (US). **POURDEHNAD, Michael** [US/US]; 4365 23rd Street, San Francisco, CA 94114 (US). **PU, Yu** [CN/US]; 17 Brentwood Drive, East Hanover, NJ 07936 (US). **WANG, Peng** [US/US]; 1113 Irving Avenue, Westfield, NJ 07090 (US). **WU, Naijun** [US/US]; 109 York Drive, Princetion, NJ 08540 (US). **YAO, Sheena** [—/US]; 1320 12th Avenue, San Francisco, CA 94122 (US).

(74) Agent: **BRUNER, Michael, J.** et al.; Jones Day, 250 Vesey Street, New York, NY 10281-1047 (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,

(54) Title: COMPOSITIONS AND METHODS OF USE OF 2-(4-CHLOROPHENYL)-N-((2-(2,6-DOXOPIPERIDIN-3-YL)-1-OXOISOINDOLIN-5-YL) METHYL) -2,2-DIFLUOROACETAMIDE

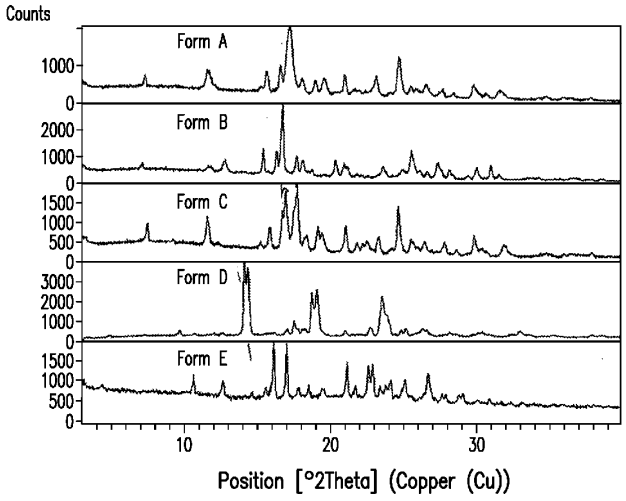


FIG. 1

(57) Abstract: Provided herein are formulations and methods of use of 2-(4-chlorophenyl)-N-((2-(2,6- dioxopiperidin-3-yl)-l-oxoisoindolin-5-yl)methyl)-2,2-difluoroacetamide or a stereoisomer or mixture of stereoisomers, pharmaceutically acceptable salt, tautomer, prodrug, solvate, hydrate, co-crystal, clathrate, or polymorph thereof.

[Continued on next page]

WO 2019/006299 A1

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, ST, 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))*

— *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))*