

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 June 2020 (25.06.2020)



(10) International Publication Number
WO 2020/132648 A1

(51) International Patent Classification:

A61P 35/00 (2006.01) C07D 413/14 (2006.01)
C07D 401/12 (2006.01) A61K 31/506 (2006.01)
C07D 401/14 (2006.01) C07D 419/14 (2006.01)
C07D 405/14 (2006.01) C07D 491/044 (2006.01)

(21) International Application Number:

PCT/US2019/068169

(22) International Filing Date:

20 December 2019 (20.12.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/783,061 20 December 2018 (20.12.2018) US

(71) Applicant: **AMGEN INC.** [US/US]; One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US).

(72) Inventors: **TAMAYO, Nuria A.**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **BANERJEE, Abhisek**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **BROWN, James Alexander**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **FROHN, Michael J.**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **CHEN, Jian Jeffrey**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **LI, Kexue**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **LIU, Qingyan**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **LOW, Jonathan Dante**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **MA, Vu**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **PETTUS, Liping H.**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **WALTON, Mary Catherine**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US).

ine; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **MINATTI, Ana Elena**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **BOURBEAU, Matthew Paul**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US). **JIA, Lei**; c/o Amgen Inc., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (US).

(74) Agent: **LEMOINE, Elsa D.**; AMGEN INC., One Amgen Center Drive, Thousand Oaks, California 91320-1799 (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, 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.

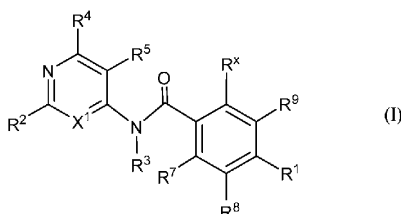
(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

(54) Title: KIF18A INHIBITORS



(57) Abstract: Compounds of formula (I): (I), as defined herein, and synthetic intermediates thereof, which are capable of modulating KIF18A protein thereby influencing the process of cell cycle and cell proliferation to treat cancer and cancer-related diseases. The invention also includes pharmaceutical compositions, including the compounds, and methods of treating disease states related to the activity of KIF18A.

[Continued on next page]

WO 2020/132648 A1

Published:

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