



(51) International Patent Classification:
C12Q 1/6886 (2018.01)

(21) International Application Number:
PCT/US2021/027042

(22) International Filing Date:
13 April 2021 (13.04.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/009,637 14 April 2020 (14.04.2020) US
63/055,111 22 July 2020 (22.07.2020) US
63/085,607 30 September 2020 (30.09.2020) US

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

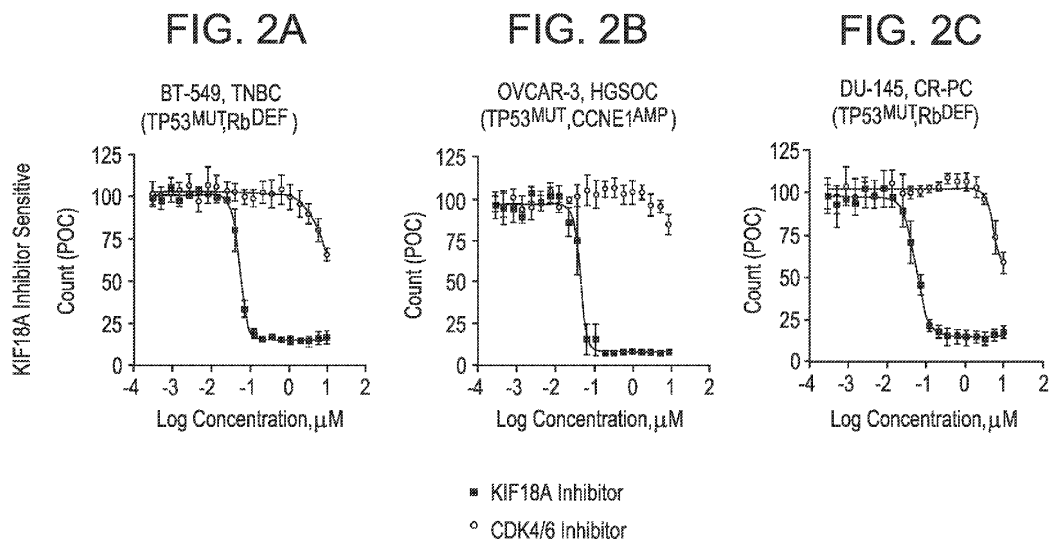
(72) Inventor: PAYTON, Marc Noel; c/o Amgen Inc., One Amgen Center Drive, Law Dept-Patent Operations, Mail Stop 28-5-A, Thousand Oaks, California 91320-1799 (US).

(74) Agent: HONG, Julie J.; c/o Amgen Inc., One Amgen Center Drive, Law Dept-Patent Operations, Mail Stop 28-5-A, 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, IT, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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,

(54) Title: KIF18A INHIBITORS FOR TREATMENT OF NEOPLASTIC DISEASES



(57) Abstract: Provided herein are methods of treating a subject having a neoplastic disease, comprising administering to the subject a KIF18A inhibitor in an amount effective to treat the neoplastic disease in a subject. Also provided are methods of inducing or increasing tumor regression in a subject with a tumor and methods of reducing tumor or cancer growth in a subject. In exemplary aspects, the method comprises administering to the subject a KIF18A inhibitor. Methods of inducing or increasing death of tumor or cancer cells in a subject comprising administering to the subject a KIF18A inhibitor are also provided herein. Advantageously, the KIF18A inhibitors selectively treat the neoplastic disease, induce or increase tumor regression, and/or induce or increase death of tumor or cancer cells without overt toxicity to normal somatic cells.

[Continued on next page]

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))*

Published:

- *with international search report (Art. 21(3))*
- *with sequence listing part of description (Rule 5.2(a))*