



(51) International Patent Classification:

A61P 11/00 (2006.01) A61K 31/4995 (2006.01)

C07D 471/04 (2006.01) A61K 31/551 (2006.01)

C07D 519/00 (2006.01) A61K 31/437 (2006.01)

A61K 31/496 (2006.01)

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).

(21) International Application Number:

PCT/US2019/049342

Published:

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

(22) International Filing Date:

03 September 2019 (03.09.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/726,583 04 September 2018 (04.09.2018) US

(71) Applicant: **THERAVANCE BIOPHARMA R&D IP, LLC** [US/US]; 901 Gateway Boulevard, South San Francisco, California 94080 (US).

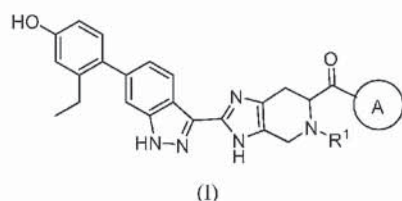
(72) Inventors: **LONG, Daniel D.**; 901 Gateway Blvd., South San Francisco, California 94080 (US). **SMITH, Cameron**; 901 Gateway Blvd., South San Francisco, California 94080 (US). **THOMPSON, Corbin**; 901 Gateway Blvd., South San Francisco, California 94080 (US).

(74) Agent: **HAGENAH, Jeffrey A.** et al.; THERAVANCE BIOPHARMA US, INC., 901 Gateway Boulevard, South San Francisco, California 94080 (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,

(54) Title: 5 TO 7 MEMBERED HETEROCYCLIC AMIDES AS JAK INHIBITORS



(57) Abstract: The invention provides compounds of formula (I) where the variables are defined in the specification, or a pharmaceutically-acceptable salt thereof, that are useful as JAK kinase inhibitors. The invention also provides pharmaceutical compositions comprising such compounds and methods of using such compounds to treat respiratory diseases.