

23 MAY 2002

2002031391

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

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
21 June 2001 (21.06.2001)

PCT

(10) International Publication Number
WO 01/44217 A1(51) International Patent Classification⁷: **C07D 277/54**,
417/12, 417/14, A61K 31/427, A61P 35/00

(21) International Application Number: PCT/US00/33037

(22) International Filing Date: 6 December 2000 (06.12.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/464,511 15 December 1999 (15.12.1999) US(71) Applicant (for all designated States except US): **BRISTOL-MYERS SQUIBB CO.** [US/US]; P.O. Box 4000, Lawrenceville-Princeton Road, Princeton, NJ 08543 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Kyoung, S.** [US/US]; 252 Forest Lane, North Brunswick, NJ 08902 (US). **KIMBALL, S., David** [US/US]; 13 Charred Oak Lane, East Windsor, NJ 08520 (US). **CAI, Zhen-Wei** [CN/US]; 184 Wildflower Lane, Somerville, NJ 08876 (US). **RAWLINS, David, B.** [US/US]; 219 Vernon Road, Morrisville, PA 19067 (US). **MISRA, Raj, N.** [US/US]; 12 Eaton Place, Hopewell, NJ 08525 (US). **POSS, Michael, A.** [US/US]; 15 Valerie Lane, Lawrenceville, NJ 08648 (US). **WEBSTER, Kevin, R.** [US/US]; 804Roelofs Road, Yardley, PA 19067 (US). **HUNT, John, T.** [US/US]; 7 Skyfield Drive, Princeton, NJ 08540 (US). **HAN, Wen-Ching** [US/US]; 2062 East Wellington Road, Newtown, PA 08940 (US).(74) Agents: **ALGIERI, Aldo, A.** et al.; Bristol-Myers Squibb Co., P.O. Box 4000, Lawrenceville-Princeton Road, Princeton, NJ 08543 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

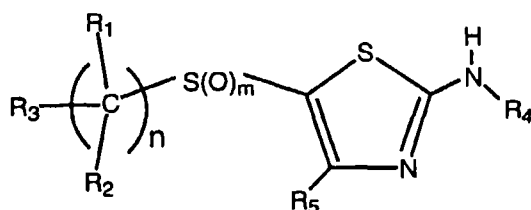


162162



ACTION

(54) Title: AMINOTHIAZOLE INHIBITORS OF CYCLIN DEPENDENT KINASES



(I)

(57) Abstract: Compounds of formula (I) and pharmaceutically acceptable salts thereof. As used in formula (I), and throughout the specification, the symbols have the following meanings: R₁ and R₂ are independently hydrogen, fluorine or alkyl; R₃ is aryl or heteroaryl; R₄ has various meanings; R₅ is hydrogen or alkyl; m is an integer of 0 to 2; and n is an integer of 1 to 3. The compounds of formula (I) are pro-

tein kinase inhibitors and are useful in the treatment and prevention of proliferative diseases, for example, cancer, inflammation and arthritis. They may also be useful in the treatment of neurodegenerative diseases such as Alzheimer's diseases cardiovascular diseases, viral diseases and fungal diseases.

WO 01/44217 A1