

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 December 2008 (18.12.2008)

PCT

(10) International Publication Number
WO 2008/153858 A1

(51) International Patent Classification:

C07D 401/14 (2006.01) *C07D 491/056* (2006.01)
C07D 403/14 (2006.01) *A61K 31/4245* (2006.01)
C07D 407/14 (2006.01) *A61K 31/444* (2006.01)
C07D 409/14 (2006.01) *A61K 31/506* (2006.01)
C07D 413/14 (2006.01) *A61P 35/00* (2006.01)
C07D 417/14 (2006.01)

(21) International Application Number:

PCT/US2008/006979

(22) International Filing Date: 4 June 2008 (04.06.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/810,282 5 June 2007 (05.06.2007) US

(71) Applicant (for all designated States except US): **SCHERING CORPORATION** [US/US]; 2000 Galloping Hill Road, Kenilworth, New Jersey 07033-0530 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **COOPER, Alan** [US/US]; 23 Natalie Drive, West Caldwell, New Jersey 07006 (US). **DENG, Yongqi** [CN/US]; 55 Ellison Road, Newton, Massachusetts 02459 (US). **SHIPPS, Gerald, W., Jr.** [US/US]; 5 Daniel Drive, Stoneham, Massachusetts 02180 (US). **SHIH, Neng-Yang** [US/US]; 2 Tyler Road, Lexington, Massachusetts 02420 (US). **ZHU, Hugh** [CN/US]; 29 Deerwood Trail W, Warren, New Jersey 07059 (US). **KELLY, Joseph** [IE/US]; 112 Princeton Road, Parlin, New Jersey 08859 (US). **DOLL, Ronald** [US/US]; 8 Concord Lane, Convent Station, New Jersey 07960 (US). **NAN, Yang** [US/US]; 163 Linden Avenue, Malden, Massachusetts 02148 (US). **DESAI, Jagdish** [US/US]; 3 Forest Park Terrace, Monroe Township, New Jersey 08831 (US). **WANG, James** [US/US]; 47 Unami Terrace, Westfield, New Jersey 07090 (US). **PALIWAL,**

Sunil [IN/US]; 5 Golf View Court, Monroe Township, New Jersey 08831 (US). **TSUI, Hon-Chung** [CN/US]; 41 Cortland Drive, East Brunswick, New Jersey 08816 (US). **BOGA, Sobhana, Babu** [IN/US]; 79 Country Club Lane, Scotch Plains, New Jersey 07076 (US). **ALHASSAN, Abdul-Basit** [GH/US]; 1 Country Club Lane, Scotch Plains, New Jersey 07076 (US). **GAO, Xiaolei** [CN/US]; 111 Timothy Place, Bridgewater, New Jersey 08807 (US). **ZHU, Liang** [CN/US]; 17 Charlesbank Way, Waltham, Massachusetts 02473 (US). **PATEL, Mehul** [US/US]; 4 Chester Avenue, Apt. 4, Waltham, Massachusetts 02453 (US).

(74) Agent: **JEANETTE, Henry, C.**; Schering-Plough Corporation, Patent Department, K-6-1 1990, 2000 Galloping Hill Road, Kenilworth, New Jersey 07033-0530 (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, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

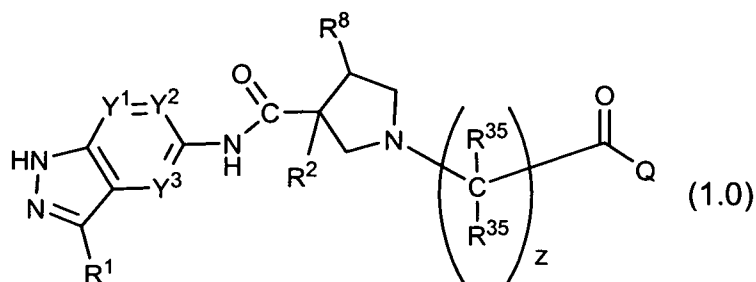
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: POLYCYCLIC INDAZOLE DERIVATIVES AND THEIR USE AS ERK INHIBITORS FOR THE TREATMENT OF CANCER



(57) Abstract: Disclosed are the ERK inhibitors of formula 1.0: (Chemical formula should be inserted here as it appears on abstract in paper form) and the pharmaceutically acceptable salts, esters and solvates thereof. Q is a piperidine or piperazine ring that can have a bridge or a fused ring. The piperidine ring can have a double bond in the ring. All other substituents are as defined herein. Also disclosed are methods of treating cancer using the compounds of formula 1.0.

WO 2008/153858 A1



-
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*