

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number
WO 2004/031153 A2

(51) International Patent Classification⁷: **C07D 221/00**

(21) International Application Number:
PCT/US2003/031102

(22) International Filing Date: 1 October 2003 (01.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/415,673 3 October 2002 (03.10.2002) US
60/418,806 15 October 2002 (15.10.2002) US

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

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEN, Frank, X.** [US/US]; 12 Bradford Lane, Plainsboro, NJ 08536 (US). **WONG, Yee-Shing** [US/US]; 26 Sherbrooke Drive, Florham Park, NJ 07932 (US). **ECKERT, Jeffrey, M.** [US/US]; 13 West Susan Street, Hazlet, NJ 07730 (US). **ZOU, Nanfei** [CN/US]; 73 Annette Drive, Edison, NJ 08820 (US). **LIANG, Feng** [US/US]; 28 Potomac Road, Monmouth Junction, NJ 08852 (US). **KIM-MEADE, Agnes, S.** [US/US]; 212 Second Street, Fanwood, NJ 07023 (US). **POIRIER, Marc** [CA/US]; 231 Waterford Drive, Edison, NJ 08817 (US). **THIRUVENGADAM, Tiruvettipuram, K.** [US/US]; 17 Village Road, Kendall Park, NJ 08824 (US). **WU, George, G.** [US/US]; 88 Vanderveer Drive, Basking Ridge, NJ 07920 (US).

(74) Agent: **HOFFMAN, Thomas, D.**; Schering-Plough Corporation, Patent Department-K-6-1 1990, 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NI, NO, NZ, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM.

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

Declarations under Rule 4.17:

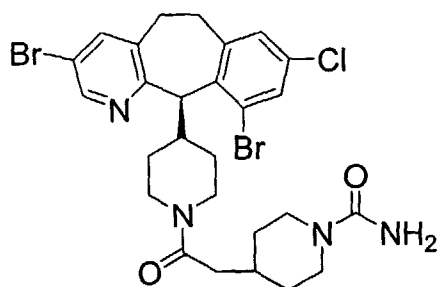
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

- without international search report and to be republished upon receipt of that 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.

(54) Title: AN ENANTIOSELECTIVE PROCESS



(57) Abstract: An enantioselective process for preparing intermediates useful in the preparation of the chiral tricyclic compound of formula (I), is disclosed.