

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/052359 A1

(51) International Patent Classification⁷: **A61K 31/335**,
C07D 305/14

(21) International Application Number:
PCT/US2003/038993

(22) International Filing Date: 9 December 2003 (09.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/431,851 9 December 2002 (09.12.2002) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, 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).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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: METHODS FOR SELECTIVELY INHIBITING JANUS TYROSINE KINASE 3 (JAK3)

(57) Abstract: Methods are disclosed for inhibiting or disrupting Janus tyrosine kinase 3 (Jak3) dependent function in cells of lymphoid or myeloid origin, especially for blocking proliferation and function of lymphocytes (*e.g.*, T-cells, B-cells). A Mannich base compound, or a derivative or modified compound, is employed which is capable of selectively inhibiting Jak3 while affecting other protein tyrosine kinase activities to a lesser extent or not at all, to provide beneficial effects such as mitigation of transplant rejection and alleviation of allergic responses with fewer side effects than with conventional immunosuppressive agents.

WO 2004/052359 A1