

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 December 2005 (01.12.2005)

PCT

(10) International Publication Number
WO 2005/112945 A2

(51) International Patent Classification⁷: **A61K 31/65**, (74) Agent: **BAKER, C. Hunter**; Choate, Hall & Stewart LLP,
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(21) International Application Number:
PCT/US2005/017831

(22) International Filing Date: 20 May 2005 (20.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/573,623 21 May 2004 (21.05.2004) US
60/660,947 11 March 2005 (11.03.2005) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): 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, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, HU, IE, IS, IT, LT, LU, MC, NL, 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:

— 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: SYNTHESIS OF TETRACYCLINES AND ANALOGUES THEREOF

(57) Abstract: The tetracycline class of antibiotics has played a major role in the treatment of infectious diseases for the past 50 years. However, the increased use of the tetracyclines in human and veterinary medicine has led to resistance among many organisms previously susceptible to tetracycline antibiotics. The modular synthesis of tetracyclines and tetracycline analogs described provides an efficient and enantioselective route to a variety of tetracycline analogs and polycyclines previously inaccessible via earlier tetracycline syntheses and semi-synthetic methods. These analogs may be used as anti-microbial agents or anti-proliferative agents in the treatment of diseases of humans or other animals.



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