

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number
WO 2005/084222 A2

(51) International Patent Classification: **Not classified**

(21) International Application Number:
PCT/US2005/006051

(22) International Filing Date: 28 February 2005 (28.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/548,402 27 February 2004 (27.02.2004) US
10/921,109 18 August 2004 (18.08.2004) US

(71) Applicant (for all designated States except US):
**SLOAN-KETTERING INSTITUTE FOR CAN-
CER RESEARCH** [US/US]; 1275 York Avenue, New
York, NY 10021 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DANISHEFSKY,**

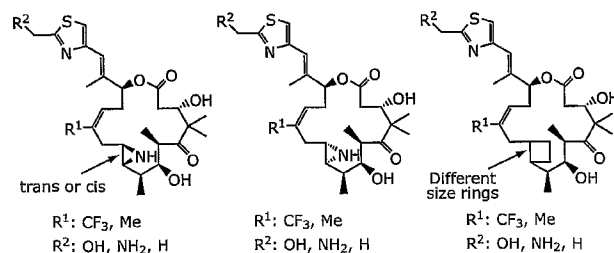
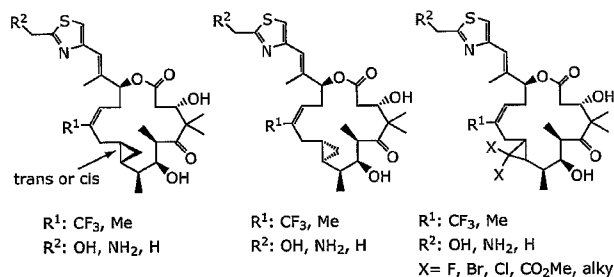
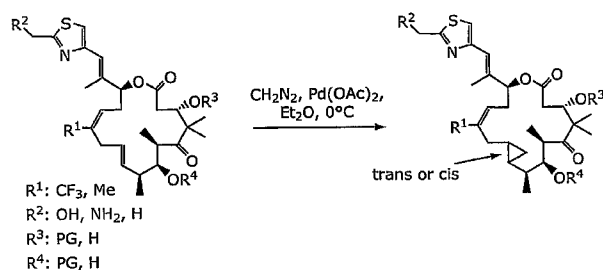
Samuel, J. [US/US]; 22 Brayton Street, Englewood, NJ 07631 (US). **RIVKIN, Alexey** [US/US]; 77 Park Avenue, Apt. #1609, Hoboken, NJ 07030 (US). **YOSHIMURA, Fumihiko** [JP/JP]; 16-1-1008 Kita 12-jo Nishi 4-chome, Kita-ku, Sapporo (JP). **CHOU, Ting-Chao** [US/US]; 599 Mill Run, Paramous, NJ 07652 (US). **GABARDA ORTEGA, Ana, Esther** [ES/US]; 95 Park Drive, Apt. #15, Boston, MA 02215 (US). **DONG, Huajin** [CN/CN]; 27, Taiping Road, Apt. #29-C-502, Beijing 100850 (CN). **WU, Kaida** [CN/US]; 520 East 79th Street, Apt. 2C, New York, NY 10021 (US). **MOORE, Malcolm, A., S.** [—/US]; 504 East 63rd Street, New York, NY 11021 (US). **DORN, David** [US/US]; 475 Main Street, New York, NY 10044 (US).

(74) Agent: **BAKER, Hunter, C.**; Choate, Hall & Stewart, Exchange Place, 53 State Street, Boston, MA 02109 (US).

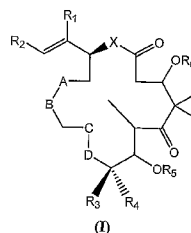
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

[Continued on next page]

(54) Title: SYNTHESIS OF EPOTHILONES, INTERMEDIATES THERETO, ANALOGUES AND USES THEREOF



(57) Abstract: The present invention provides compounds of formula (I): as described generally and in classes and subclasses herein. The present invention additionally provides pharmaceutical compositions comprising compounds of formula (I) and provides methods of treating cancer comprising administering a compound of formula (I).





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, NA, 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.

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

(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),

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.