10/09/02
20020284389

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
28 June 2001 (28.06.2001)

PCT

(10) International Publication Number
WO 01/46140 A1

(51) International Patent Classification[7]: C07D 207/26, 403/06, A61K 31/4015, 31/41, A61P 19/10

(21) International Application Number: PCT/IB00/01711

(22) International Filing Date:
20 November 2000 (20.11.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/171,353 22 December 1999 (22.12.1999) US

(71) Applicant *(for all designated States except US)*: **PFIZER PRODUCTS INC.** [US/US]; Eastern Point Road, Groton, CT 06340 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CAMERON, Kimberly, O'Keefe** [US/US]; Pfizer Global Research and Development, Eastern Point Road, Groton, CT 06340 (US). **KE, HuaZhu** [US/US]; Pfizer Global Research and Development, Eastern Point Road, Groton, CT 06340 (US). **LEFKER, Bruce, Allen** [US/US]; Pfizer Global Research and Development, Eastern Point Road, Groton, CT 06340 (US). **THOMPSON, David, Duane** [US/US]; Pfizer Global Research and Development, Eastern Point Road, Groton, CT 06340 (US).

(74) Agents: **SPIEGEL, Allen, J.** et al.; Pfizer Inc., 235 East 42nd Street, New York, NY 10017 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

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

Published:
— *With international search 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.



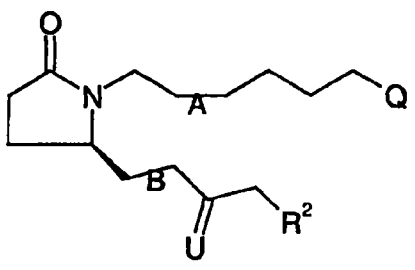
162162



ACTION

(54) Title: EP4 RECEPTOR SELECTIVE AGONISTS IN THE TREATMENT OF OSTEOPOROSIS

WO 01/46140 A1



(I)

(57) Abstract: This invention is directed to methods of treating conditions which present with low bone mass, particularly osteoporosis, frailty, an osteoporotic fracture, a bone defect, childhood idiopathic bone loss, alveolar bone loss, mandibular bone loss, bone fracture, osteotomy, bone loss associated with periodontitis, or prosthetic ingrowth comprising administering prostaglandin agonists which are EP4 receptor selective prostaglandin agonists. This invention is especially directed to those methods wherein the EP4 receptor selective agonist is a compound of Formula (I) wherein the variables are as defined in the specification.