

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 May 2002 (30.05.2002)

PCT

(10) International Publication Number
WO 02/42268 A2

(51) International Patent Classification⁷: **C07D 207/20**,
405/10, 409/14, 409/06, 403/06, 417/06, A61K 31/4015

(74) Agents: **LUMB, Trevor, J.** et al.; Pfizer Inc., 201 Tabor
Road, Morris Plains, NJ 07950 (US).

(21) International Application Number: PCT/IB01/02073

(22) International Filing Date:
5 November 2001 (05.11.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/253,275 27 November 2000 (27.11.2000) 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, Kim-
berly, O'Keefe** [US/US]; Pfizer Global Research & De-
velopment, Eastern Point Road, Groton, CT 06340 (US).
LEFKER, Bruce, Allen [US/US]; Pfizer Global Research
and Development, Eastern Point Road, Groton, CT 06340
(US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, 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, PH, 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, 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 "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

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

(57) Abstract: This invention is directed to EP4 receptor selective prostaglandin agonists of the Formula (I), wherein R², X, Z and Q are as defined in the specification. This invention is also directed to pharmaceutical compositions containing those compounds. This invention is also 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 in a mammal comprising administering those compounds.



WO 02/42268 A2