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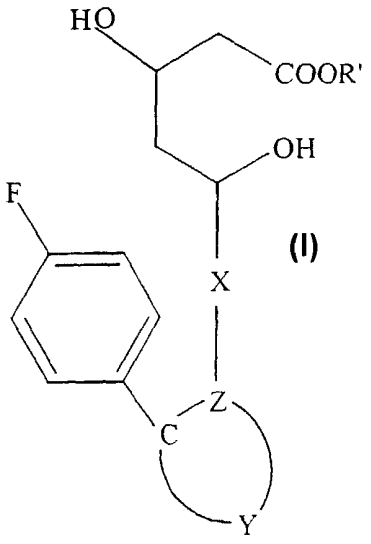
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(54) Title: STATIN-TYPE BONE GROWTH STIMULATORS



(I)

(57) Abstract: Compounds of formula (I), and the lactone forms thereof, wheren R' is H, a cation, or alkyl (1-6C); is $-CH_2CH_2-$ or -CH=CH-; Z is N or C, and the symbol (a) represents an aromatic or heteroaromatic ring system which may optionally be further substituted in addition to the indicated p-fluorophenyl substituent promote bone formation and are thus useful in treating osteoporosis, bone fracture or deficiency, primary or secondary hyperparathyroidism, periodontal disease or defect, metastatic bone disease, osteolytic bone disease, post-plastic surgery, post-prosthetic joint surgery, and post-dental implantation.

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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/366 A61K31/405 A61K31/4418 A61P3/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE, PASCAL, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 45923 A (FISHER JOHN E ;MERCK & CO INC (US); RODAN GIDEON A (US)) 16 September 1999 (1999-09-16) page 7, line 22 - line 28 page 8, line 1 - line 34 examples ---	11
X	WO 98 25460 A (ZYMOGENETICS INC) 18 June 1998 (1998-06-18) cited in the application abstract example 1 formulae pages 18-22 page 23, line 17 figure 1 --- -/--	11

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
24 January 2002	07/02/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Villa Riva, A

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PCT/US 01/01888

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	MUNDY G ET AL: "STIMULATION OF BONE FORMATION IN VITRO AND IN RODENTS BY STATINS" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, US, vol. 286, no. 5446, 3 December 1999 (1999-12-03), pages 1946-1949, XP000999135 ISSN: 0036-8075 abstract page 1946, right-hand column, line 24 - line 28 figure 2 page 1949, left-hand column, line 20 - line 27 page 1949, left-hand column, last line -middle column, line 8 ---	11
X	GARRETT IAN R ET AL: "Cerivastatin increases BMP-2 expression in vivo and bone formation in concentrations of two orders of magnitude lower than other statins." JOURNAL OF BONE AND MINERAL RESEARCH, vol. 14, no. SUPPL. 1, 1999, page S180 XP001027735 Twenty-First Annual Meeting of the American Society for Bone and Mineral Research;St. Louis, Missouri, USA; September 30-October 4, 1999 ISSN: 0884-0431 abstract ---	11
E	WO 01 37876 A (BAYER AG ;BAGI CEDO M (US)) 31 May 2001 (2001-05-31) the whole document -----	11

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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