RTMP COPY

97U5506-9

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A61K 31/59 — A1

(11) International Publication Number: WO 96/40154

(43) International Publication Date: 19 December 1996 (19.12.96)

(21) International Application Number: PCT/US96/09222

(22) International Filing Date: 6 June 1996 (06.06.96)

(30) Priority Data:
08/484,342 7 June 1995 (07.06.95) US

(71) Applicant: BONE CARE INTERNATIONAL, INC. [US/US]; 313 West Beltline Highway, Madison, WI 53713 (US).

(72) Inventors: KNUTSON, Joyce, C.; 24 North Prospect Street, Madison, WI 53705 (US). BISHOP, Charles, W.; 5 La Pointe Terrace, Madison, WI 53719 (US).

(74) Agents: WELCH, Teresa, J. et al.; Stroud, Stroud, Willink, Thompson & Howard, Suite 300, 25 West Main Street, P.O. Box 2236, Madison, WI 53701-2236 (US).

(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: USE OF VITAMIN D_4 DERIVATIVES FOR TREATING SKIN DISORDERS

(57) Abstract

Novel 1α-hydroxy vitamin D_4 and novel analogues, 1,25 dihydroxy vitamin D_4 and 1,24 dihydroxy vitamin D_4 which are useful as active compounds of pharmaceutical compositions for the treatment of disorders of calcium metabolism and various skin disorders.