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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 November 2005 (10.11.2005)

PCT

(10) International Publication Number
WO 2005/105104 A1

(51) International Patent Classification[7]: A61K 31/5685, 9/70, A61P 19/10

(21) International Application Number:
PCT/GB2005/001596

(22) International Filing Date: 28 April 2005 (28.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0409498.3 28 April 2004 (28.04.2004) GB

(71) Applicant *(for all designated States except US)*: **HUNTER-FLEMING LIMITED** [GB/GB]; Regus House, 1 Friary, Temple Quay, Bristol BS1 6EA (GB).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **MURRAY, James, Robert** [GB/GB]; Regus House, 1 Friary, Temple Quay, Bristol BS1 6EA (GB). **KAMIYAMA, Fumio** [JP/JP]; CosMed Limited, Rale YamashinaSkyheiz 210, 10 Nat-gitsujinakazike-cyo, Yamashina-ku, Kyoto 607-8161 (JP). **WÜLFERT, Ernst** [FR/BE]; Avenue des Aubepines 52, B-1180 Brussels (BE).

(74) Agent: **TUBBY, David, George**; Marks & Clerk, 90 Long Acre, London WC2E 9RA (GB).

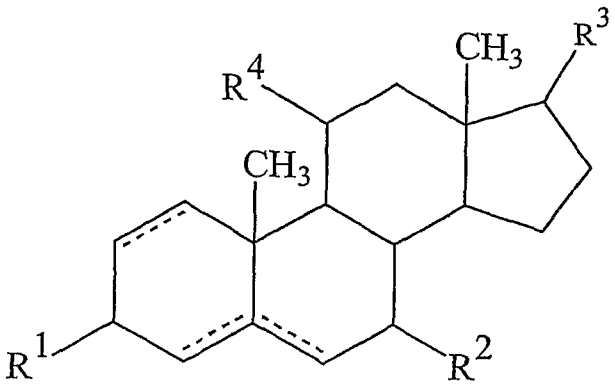
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, 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.

(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), 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:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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.

(54) Title: TRANSDERMAL STEROID FORMULATION



(I)

(57) Abstract: Compounds of formula (I) (in which R^1; R^2, R^3 and R^4 are the same as or different from each other and each represents an oxo group, a hydroxy group, a mercapto group, a hydrogen atom, a halogen atom, an alkoxy group or an aryloxy group; and the dotted line indicates that there may be a single or dour e bond between one of the respective pairs of carbon atoms) and esters thereof can be administered by transdermal administration. They are particularly effective when applied as a patch, preferably with an adhesive comprising a copolymer of from 40 to 60% by weight of methoxyethyl acrylate, from 30 to 40% by weight of lauryl acrylate or lauryl methacrylate and from 10 to 25% by weight of a polar monomer.

WO 2005/105104 A1