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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
15 December 2011 (15.12.2011)

PCT

(10) International Publication Number
WO 2011/154004 A1

(51) **International Patent Classification**:
A61K 9/12 (2006.01) ***A61K 47/10*** (2006.01)
A61K 47/06 (2006.01) ***A61K 9/00*** (2006.01)

(21) **International Application Number**:
PCT/DK2011/000060

(22) **International Filing Date**:
10 June 2011 (10.06.2011)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/353,893 11 June 2010 (11.06.2010) US

(71) **Applicant** *(for all designated States except US)*: **LEO PHARMA A/S** [DK/DK]; Industriparken 55, DK-2750 Ballerup (DK).

(72) **Inventors; and**

(75) **Inventors/Applicants** *(for US only)*: **LIND, Marianne** [DK/DK]; c/o LEO Pharma A/S, Industriparken 55, DK-2750 Ballerup (DK). **RASMUSSEN, Gritt** [DK/DK]; c/o LEO Pharma A/S, Industriparken 55, DK-2750 Ballerup (DK). **SONNE, Mette Rydahl** [DK/DK]; c/o LEO Pharma A/S, Industriparken 55, DK-2750 Ballerup (DK). **HANSEN, Jens** [DK/DK]; c/o LEO Pharma A/S, Industriparken 55, DK-2750 Ballerup (DK). **PETERSSON, Karsten** [DK/DK]; c/o LEO Pharma A/S, Industriparken 55, DK-2750 Ballerup (DK).

(74) **Agent**: **THALSØ-MADSEN, Birgit**; Senior Patent Counsel, LEO Pharma A/S, Industriparken 55, DK-2750 Ballerup (DK).

(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

WO 2011/154004 A1

(54) **Title**: A PHARMACEUTICAL SPRAY COMPOSITION COMPRISING A VITAMIN D ANALOGUE AND A CORTICOSTEROID

(57) **Abstract**: The present invention relates to a topical spray composition comprising a biologically active vitamin D derivative and a corticosteroid, and its use in the treatment of dermal diseases and conditions. The spray comprises especially a propellant selected freom the group consisting of dimethyl ether, diethyl ether and methylethyl ether or a mixture thereof and further a pharmaceutically acceptable lipid carrier solubilised or suspended in said propellant.