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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
4 April 2013 (04.04.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/045891 A1

(51) International Patent Classification:
A61K 31/05 (2006.01) *A61K 45/06* (2006.01)
A61K 31/352 (2006.01) *A61P 25/08* (2006.01)
A61K 36/185 (2006.01)

(21) International Application Number:
PCT/GB2012/052284

(22) International Filing Date:
14 September 2012 (14.09.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1116789.7 29 September 2011 (29.09.2011) GB

(71) Applicants *(for all designated States except US)*: **GW PHARMA LIMITED** [GB/GB]; Porton Down Science Park, Salisbury, Wiltshire SP4 0JQ (GB). **OTSUKA PHARMACEUTICAL CO., LIMITED** [JP/JP]; 9, Kanda-Tsukasamachi 2-Chome, Chiyoda-Ku, Tokyo, 101-8535 (JP).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **WHALLEY, Benjamin** [GB/GB]; School of Pharmacy, University of Reading, Whiteknights, PO Box 226, Reading RG6 6AP (GB). **WILLIAMS, Claire** [GB/GB]; School of Pharmacy, University of Reading, Whiteknights, PO Box 226, Reading RG6 6AP (GB). **STEPHENS, Gary** [GB/GB]; School of Pharmacy, University of Reading, Whiteknights, PO Box 226, Reading RG6 6AP (GB).

(74) Agent: **HARRISON GODDARD FOOTE**; 4th Floor, Merchant Exchange, 17-19 Whitworth Street West, Manchester M1 5WG (GB).

(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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

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

WO 2013/045891 A1

(54) **Title**: A PHARMACEUTICAL COMPOSITION COMPRISING THE PHYTOCANNABINOIDS CANNABIDIVARIN (CBDV) AND CANNABIDIOL (CBD)

(57) **Abstract**: This invention relates to a pharmaceutical composition comprising or consisting essentially of the phytocannabinoids cannabidivarin (CBDV)and cannabidiol (CBD). The composition is particularly safe and efficacious for use in the treatment of neurological conditions, characterized by hyper-excitability of the central nervous system, convulsions or seizures such as occur in epilepsy. Preferably the CBDV and the CBD are present with at least one non- cannabinoid component of cannabis such as one or more terpenes or a terpene fraction. More particularly the composition further comprises one or more cannabichromene type compounds. Particularly cannabichromene propyl variant (CBCV) and / or cannabichromene (CBC).More particularly still the composition is absent or substantially absent of other cannabinoids, including in particular tetrahydrocannabinol (THC) and tetrahydrocannabivarin (THCV), which would normally be present in significant amounts in cannabis chemotypes bred to contain a significant amount of CBDV and / or CBD.