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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 March 2023 (23.03.2023)

WIPO | PCT

(10) International Publication Number
WO 2023/044351 A1

(51) International Patent Classification:
A61K 31/454 (2006.01) *A61P 17/00* (2006.01)
A61K 9/06 (2006.01)

(21) International Application Number:
PCT/US2022/076440

(22) International Filing Date:
14 September 2022 (14.09.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

63/244,353	15 September 2021 (15.09.2021)	US
63/344,440	20 May 2022 (20.05.2022)	US
63/400,014	22 August 2022 (22.08.2022)	US

(71) Applicant: **DERMBIONT, INC.** [US/US]; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US).

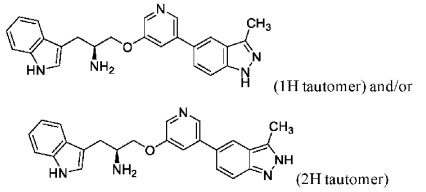
(72) Inventors: **DE SOUZA, Mark**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US). **KINCAID, John**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US). **BEUTNER, Karl**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US). **TAYLOR, Emma**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US). **GUIDALI BONJOUR, Florencia Maria**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US). **COFRE URRUTIA, Vanessa Alexandra**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US). **GREENAWAY EVANS, Charles Rodney**; 451 D. Street, Suite 908, Boston, Massachusetts 02210 (US).

(74) Agent: **UMPIERRE, Alicia**; WILSON SONSINI, 650 Page Mill Road, Palo Alto, California 94304 (US).

(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, CV, CZ, DE, DJ, DK, DM,

WO 2023/044351 A1

(54) Title: COMPOSITIONS AND FORMULATIONS FOR TOPICAL USE OF AN AKT INHIBITOR FOR THE PREVENTION, TREATMENT, AND IMPROVEMENT OF SKIN DISEASES, CONDITIONS, AND DISORDERS



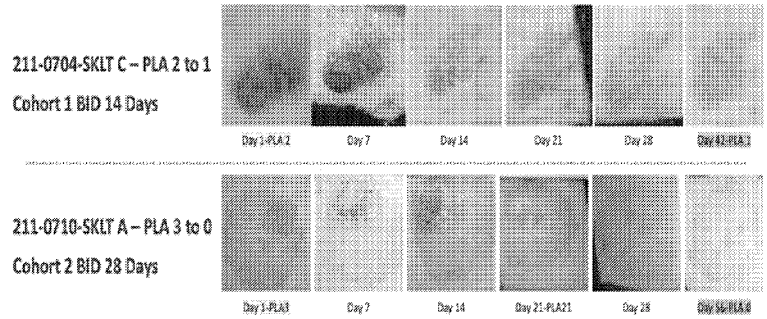


FIG. 6

(57) Abstract: Provided herein is a composition including a compound having the structure: (1H tautomer) and/or (2H tautomer) a pharmaceutically acceptable salt(s) thereof, and one or more excipients selected from (a)-(g): a) C_{2-6} alcohol; b) an organic solvent and/or a penetration enhancer; c) an antioxidant; d) a preservative; e) water; f) a pH adjuster; and g) a gelling agent, wherein C_{2-6} alcohol, the organic solvent and/or a penetration enhancer, the antioxidant, the preservative, water, the pH adjuster, and the gelling agent are defined and described herein. Methods of treating a skin disease, condition or disorder, in particular seborrheic keratosis, with the compositions are also provided herein.

[Continued on next page]

DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, ST, 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, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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