

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 April 2023 (13.04.2023)



(10) International Publication Number
WO 2023/059270 A3

(51) International Patent Classification:

A61K 47/12 (2006.01) A61K 8/37 (2006.01)
A61K 47/24 (2006.01) A61K 8/92 (2006.01)
A61K 31/4375 (2006.01) A61P 19/02 (2006.01)
A61K 8/14 (2006.01)

(21) International Application Number:

PCT/SG2022/050720

(22) International Filing Date:

07 October 2022 (07.10.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202111225V 08 October 2021 (08.10.2021) SG

(71) Applicant: NATIONAL UNIVERSITY OF SINGAPORE [SG/SG]; 21 Lower Kent Ridge Road, Singapore 119077 (SG).

(72) Inventors: LEE, Choon Keong; c/o National University of Singapore, Faculty of Science / Department of Pharmacy, 21 Lower Kent Ridge Road, Singapore 119077 (SG). PASTORIN, Giorgia; c/o National University of Singapore, Faculty of Science / Department of Pharmacy, 21 Lower Kent Ridge Road, Singapore 119077 (SG). GOH,

Wei Jiang; c/o National University of Singapore, Faculty of Science / Department of Pharmacy, 21 Lower Kent Ridge Road, Singapore 119077 (SG). TOH, Wei Seong; c/o National University of Singapore, Faculty of Dentistry, 21 Lower Kent Ridge Road, Singapore 119077 (SG). ZHANG, Shipin; c/o National University of Singapore, Faculty of Dentistry, 21 Lower Kent Ridge Road, Singapore 119077 (SG).

(74) Agent: SPRUSON & FERGUSON (ASIA) PTE LTD; P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

(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, 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, 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.

(54) Title: A COMPOSITION, A METHOD OF MAKING THE SAME AND ITS USES THEREOF

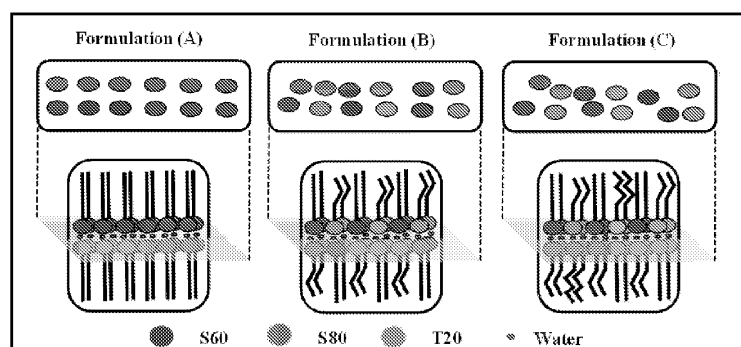


Fig. 4B

(57) Abstract: There is provided a composition comprising: a) a first surfactant having a transition temperature of at least 50 °C; b) a second surfactant having a transition temperature of less than 20 °C; c) a third surfactant having a hydrophilic-lipophilic balance (HLB) value of at least 15; d) cholesterol; e) an active agent; f) a first solvent; and g) a second solvent. There is also provided a method of making the composition, a kit comprising the composition, a method of delivering the composition.

[Continued on next page]

(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, ME, 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:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

08 June 2023 (08.06.2023)