



(51) International Patent Classification:

A61L 15/24 (2006.01) B29C 64/118 (2017.01)
A61K 47/32 (2006.01) B33Y 70/00 (2020.01)
C08G 61/12 (2006.01) B33Y 80/00 (2015.01)
C08G 61/08 (2006.01)

(21) International Application Number:

PCT/SG2024/050107

(22) International Filing Date:

27 February 2024 (27.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202300519W 27 February 2023 (27.02.2023) SG

(71) Applicants: AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis North Tower, Singapore 138632 (SG). SINGAPORE HEALTH SERVICES PTE LTD [SG/SG];

10 Hospital Boulevard, #19-01, Outram Community Hospital, Singapore 168582 (SG).

(72) Inventors: ABBAS, Mohammad Asyraf Bin; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). TEO, Peili; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). TEO, Yew Chin; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). PARK, Eun Ju; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). GUO, Jiayi; c/o Institute of Materials Research and Engineering, 2 Fusionopolis Way, #08-03, Innovis, Singapore 138634 (SG). MOK, Wan Loong, James; c/o KK Women's and Children's Hospital Pte Ltd, 100 Bukit Timah Road, Singapore 229899 (SG).

(74) Agent: DONALDSON & BURKINSHAW LLP; P.O. Box 3667, Robinson Road Post Office, Singapore 905667 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) Title: A BIOACTIVE POLY(LACTIC-CO-GLYCOLIC ACID) (PLGA) MATERIAL, RELATED PRINTED STRUCTURE AND RELATED METHODS THEREOF

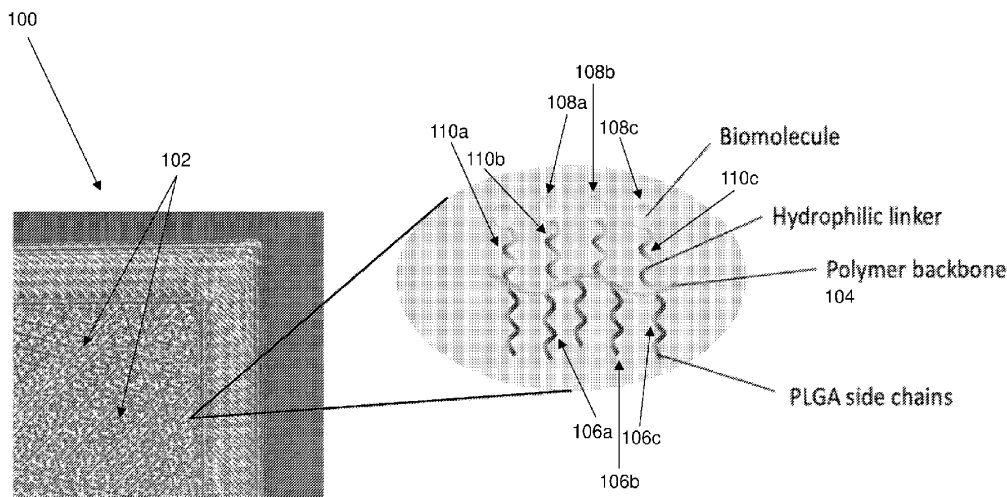


FIG. 1

(57) Abstract: There is provided a regenerative material for treatment of wounds, the material comprising: (i) a base poly(lactic-co-glycolic acid) (PLGA); (ii) a bioactive poly(lactic-co-glycolic acid) (PLGA) copolymer; and (iii) pores patterned on said material. Also provided are a medical device comprising said regenerative material, medical uses of said regenerative material, and a method of preparing said regenerative material.

[Continued on next page]

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, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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))*