



(43) International Publication Date
13 February 2014 (13.02.2014)

(10) International Publication Number
WO 2014/025312 A1

(51) International Patent Classification:
A61L 27/52 (2006.01)

(21) International Application Number:
PCT/SG2013/000312

(22) International Filing Date:
26 July 2013 (26.07.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/680,854 8 August 2012 (08.08.2012) US

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(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, 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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: METHODS OF MANUFACTURING HYDROGEL MICROPARTICLES HAVING LIVING CELLS, AND COMPOSITIONS FOR MANUFACTURING A SCAFFOLD FOR TISSUE ENGINEERING

(57) Abstract: Method of manufacturing hydrogel microparticles comprising one or more species of living cells attached thereon and/or encapsulated therein is provided. The method includes dissolving a hydrogel-forming agent in an aqueous medium to form a solution; suspending one or more species of living cells in the solution to form a cell suspension; dispersing the cell suspension into an organic oil to form a microemulsion; and subjecting the microemulsion to conditions that allow the hydrogel-forming agent to form hydrogel microparticles comprising one or more species of living cells attached thereon and/or encapsulated therein. Composition comprising a mixture of a degradable hydrogel and at least one hydrogel microparticle having one or more species of living cells, and method of manufacturing a scaffold for tissue engineering are also provided.



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