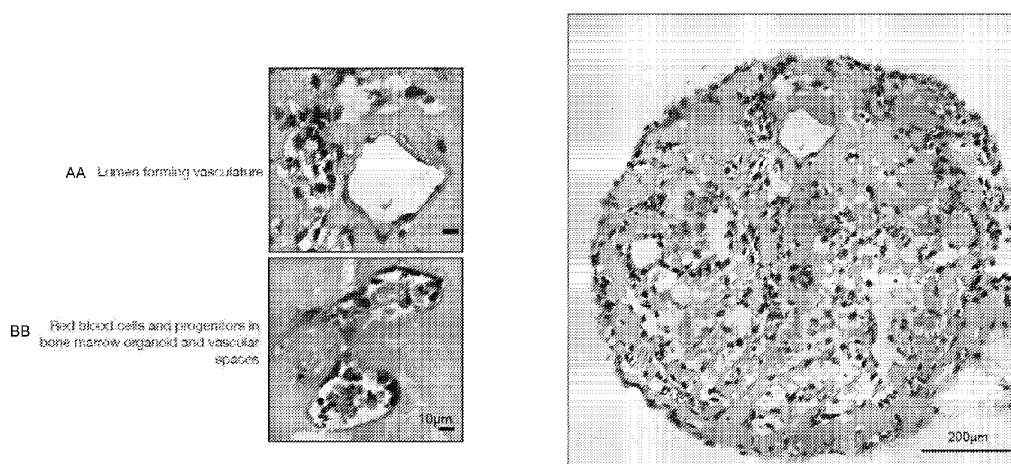




- (51) **International Patent Classification:**
C12N 5/078 (2010.01)
- (21) **International Application Number:**
PCT/GB2023/050348
- (22) **International Filing Date:**
15 February 2023 (15.02.2023)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2202025.9 15 February 2022 (15.02.2022) GB
2216647.4 08 November 2022 (08.11.2022) GB
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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, 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.
- (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, 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,

(54) **Title:** GENERATING BONE MARROW ORGANOIDS

Figure 9



(57) **Abstract:** The invention relates to a method of generating bone marrow organoids from pluripotent stem cells wherein said method comprises: a) driving induced pluripotent stem cells (iPSCs) to form mesodermal aggregates; b) inducing vascular and hematopoietic commitment of the mesodermal aggregates by further culturing the mesodermal aggregates in medium, supplemented with recombinant BMP4, FGF2, VEGFA and SCF; c) embedding the mesodermal aggregates in a hydrogel, and incubating the hydrogel in a sprouting medium comprising: a media suitable for stem cell maintenance supplemented with cytokines for differentiation, to form bone marrow organoids; and optionally d) separating the bone marrow organoids from the hydrogel for further free culture.

[Continued on next page]

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))*