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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 November 2019 (14.11.2019)

WIPO | PCT

(10) International Publication Number
WO 2019/216831 A1

(51) International Patent Classification:
C12N 5/074 (2010.01)

(21) International Application Number:
PCT/SG2019/050265

(22) International Filing Date:
10 May 2019 (10.05.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10201803944U 10 May 2018 (10.05.2018) SG

(71) Applicant: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10, Connexis North Tower, Singapore 138632 (SG).

(72) Inventors: **SZCZERBINSKA, Iwona**; c/o Genome Institute of Singapore, 60 Biopolis Street, Genome, #02-01, Singapore 138672 (SG). **CHAN, Yun Shen**; c/o Genome Institute of Singapore, 60 Biopolis Street, Genome, #02-01, Singapore 138672 (SG). **NG, Huck Hui**; c/o Genome Institute of Singapore, 60 Biopolis Street, Genome, #02-01, Singapore 138672 (SG).

(74) Agent: **DAVIES COLLISON CAVE ASIA PTE. LTD.**; 10 Collyer Quay #07-01, Ocean Financial Centre, Singapore 049315 (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, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, 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, 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,

(54) Title: CELL CULTURE MEDIUM

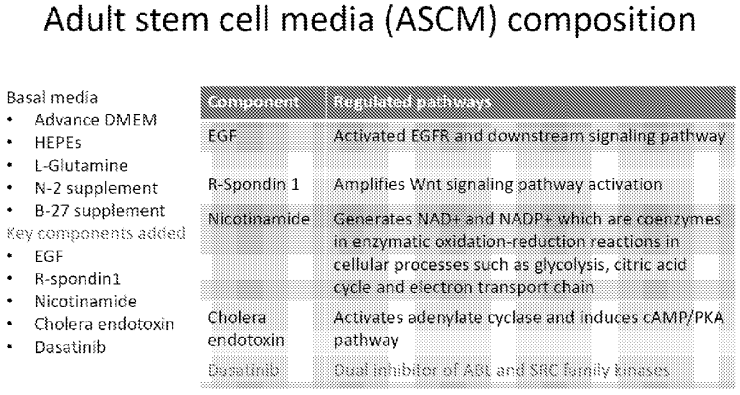


Figure 1

(57) Abstract: The present invention relates to a cell culture medium for preparing liver, gastric, pancreatic, colon or intestinal adult stem cell isolated from adult tissue, as well as for maintaining such stem cell in the undifferentiated state. The cell culture medium comprises a base medium; an ABL and SRC dual kinase inhibitor/an ABL kinase inhibitor and a SRC kinase inhibitor; a mitogenic factor; a WNT signalling pathway activator; a stimulator for NAD+ and NADP+ generation; and a cAMP/P KA pathway activator. In a particular embodiment, the ABL and SRC dual kinase inhibitor is Dasatinib; the mitogenic factor is EGF; the WNT signalling pathway activator is R-Spondin 1; the stimulator for NAD+ and NADP+ generation is nicotinamide; and the cAMP/PKA pathway activator is cholera endotoxin.

WO 2019/216831 A1

[Continued on next page]

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:

— *of inventorship (Rule 4.17(iv))*

Published:

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

— *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*