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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 December 2011 (08.12.2011)

PCT

(10) International Publication Number
WO 2011/152798 A1

(51) International Patent Classification:
C12N 5/071 (2010.01) *C12N 5/0735* (2010.01)
C12N 5/074 (2010.01) *C12N 5/10* (2006.01)

(21) International Application Number:
PCT/SG2011/000202

(22) International Filing Date:
2 June 2011 (02.06.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/350,843 2 June 2010 (02.06.2010) US

(71) Applicant *(for all designated States except US)*: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10, Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **NG, Huck, Hui** [SG/SG]; c/o Genome Institute of Singapore, 60 Biopolis Street, #02-01, Genome Building, Singapore 138672 (SG). **CHIA, Na, Yu** [SG/SG]; c/o Genome Institute of Singapore, 60 Biopolis Street, #02-01, Genome Building, Singapore 138672 (SG). **FENG, Bo** [CN/SG]; c/o Genome Institute of Singapore, 60 Biopolis Street, #02-01, Genome Building, Singapore 138672 (SG).

(74) Agent: **YU SARN AUDREY & PARTNERS**; 24 Raffles Place, #27-01 Clifford Centre, Singapore 048621 (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, 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, KM, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

— *of inventorship (Rule 4.17(iv))*

Published:

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

WO 2011/152798 A1

(54) Title: METHOD FOR INDUCING PLURIPOTENCY IN HUMAN SOMATIC CELLS WITH PRDM14 OR NFRKB

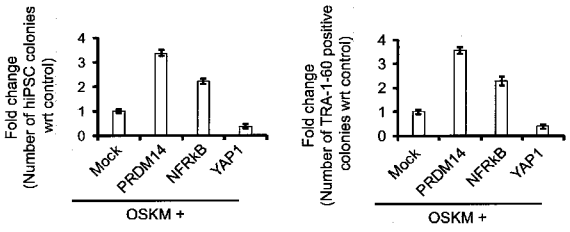


FIG. 7A

(57) Abstract: Methods of inducing pluripotency in human somatic cells and methods of maintaining pluripotency in human embryonic stem cells (hESCs) are provided, as well as cells and uses of employing such cells. The methods comprise culturing cells in the presence of (i) OCT4 and SOX2; (ii) at least one of KLF4 and c-MYC; and at least one of PRDM14 and NFRKB.