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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 March 2007 (08.03.2007)

PCT

(10) International Publication Number
WO 2007/026353 A2

(51) International Patent Classification:
A61F 2/06 (2006.01)

(21) International Application Number:
PCT/IL2006/000998

(22) International Filing Date: 29 August 2006 (29.08.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/711,668 29 August 2005 (29.08.2005) US
60/834,795 2 August 2006 (02.08.2006) US

(71) Applicant *(for all designated States except US)*: **TECHNION RESEARCH & DEVELOPMENT FOUNDATION LTD.** [IL/IL]; Senate House, Technion City, 32000 Haifa (IL).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **AMIT, Michal** [IL/IL]; 261 Yuvalim, 20142 Misgav (IL). **ITSKOVITZ-ELDOR, Joseph** [IL/IL]; 42 SheErit HaPleta Street, 34987 Haifa (IL).

(74) Agents: **G. E. EHRLICH (1995) LTD.** et al.; 11 Menachem Begin Street, 52 521 Ramat Gan (IL).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2007/026353 A2

(54) **Title:** MEDIA FOR CULTURING STEM CELLS

(57) **Abstract:** Well-defined, xeno-free culture media which comprise a TGF-beta isoform or the chimera formed between IL6 and the soluble IL6 receptor (IL6RIL6), which are capable of mainataining stem cells, and particularly, human embryonic stem cells, in an undifferentiated state are provided. Also provided are cell cultures comprising the culture media and the stem cells and methods of expanding and deriving embryonic stem cells in such well-defined, xeno-free culture media. In addition, the present invention provides methods of differentiating ESCs or EBs formed therefrom for the generation of lineage specific cells.