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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 November 2004 (11.11.2004)

PCT

(10) International Publication Number
WO 2004/096975 A3

(51) International Patent Classification[7]: C12N 5/06, C12M 3/00

(21) International Application Number: PCT/IB2004/001724

(22) International Filing Date: 3 May 2004 (03.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/467,589	2 May 2003 (02.05.2003)	US
60/554,833	19 March 2004 (19.03.2004)	US
60/557,426	29 March 2004 (29.03.2004)	US

(71) Applicant *(for all designated States except US)*: **INSCEPTION BIOSCIENCE, INC.** [CA/CA]; 200 Front Street West, Suite 3004, P.O. Box 31, Toronto, Ontario M5V 3K2 (CA).

(72) Inventors; and

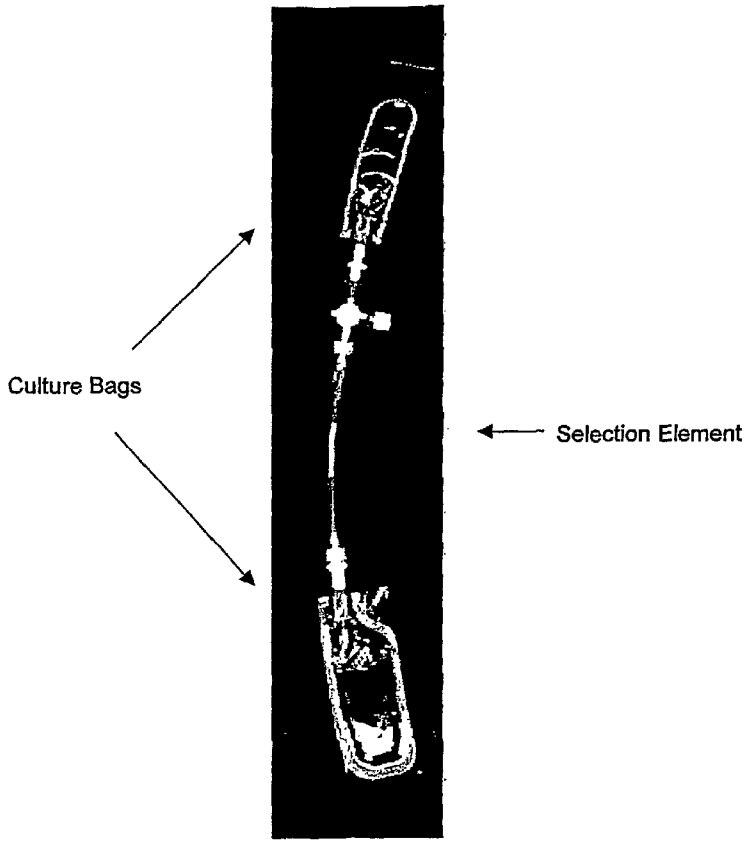
(75) Inventors/Applicants *(for US only)*: **MADLAMBAYAN, Gerard** [CA/CA]; 200 Front Street West, Suite 3004, P.O. Box 31, Toronto, Ontario M5V 3K2 (CA). **ZANDSTRA, Peter** [CA/CA]; 200 Front Street West, Suite 3004, P.O. Box 31, Toronto, Ontario M5V 3K2 (CA).

(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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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,

[Continued on next page]

(54) Title: APPARATUS AND METHODS FOR AMPLIFICATION OF BLOOD STEM CELL NUMBERS



(57) Abstract: The present invention provides an apparatus and methods for expansion of hematopoietic stem cell numbers. The stem cells are cultured and differentiated cells and endogenous growth factors are removed (depleted), permitting long term culture and expansion of the stem cells. The hematopoietic stem cells are used in numerous therapeutic procedures.

WO 2004/096975 A3

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, IT, LU, 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:

— *with international search report*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
10 March 2005

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.