



(51) International Patent Classification:

A61B 10/02 (2006.01) C12M 1/00 (2006.01)
A61B 10/00 (2006.01) A61B 5/145 (2006.01)
C12Q 1/02 (2006.01)

(21) International Application Number:

PCT/IB2018/001078

(22) International Filing Date:

13 February 2018 (13.02.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/458,375 13 February 2017 (13.02.2017) US
15/894,949 13 February 2018 (13.02.2018) US

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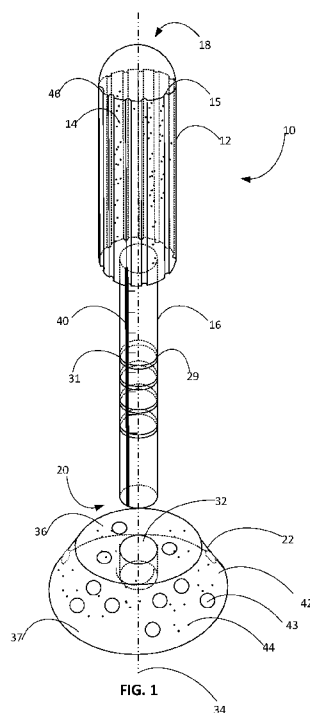
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, 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,
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:

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

(54) Title: NEW SYSTEM AND METHOD FOR COLLECTING, ENRICHING, AND ISOLATING TROPHOBLAST CELLS FROM ENDOCERVICAL CANAL



(57) Abstract: Improved systems and methods for collecting, isolating and analyzing trophoblasts from the endocervical canal for prenatal genetic testing are disclosed. Particularly, an endocervical sample collection device is disclosed, where that collection device is enhanced with surface nanostructures/microstructures and functionalized with trophoblast specific antibodies to allow the collection device to preferentially adhere to and pick up fetal trophoblasts as opposed to maternal cells and/or non-cellular materials such as endocervical mucus. In addition, a non-caustic mucolytic preparation for treating endocervical sample to remove mucus while keeping the trophoblast cells intact and viable for downstream culturing and processing is disclosed.

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

11 April 2019 (11.04.2019)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 18/01078

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 10/02, A61B 10/00, C12Q 1/02, C12M 1/00, A61B 5/145 (2019.01)

CPC - A61B 2010/0074, A61B 10/0291, A61B 10/0045, C12Q 1/02, C12M 1/00, Y10T 436/10, A61B 5/145, A61B 5/14546

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History Document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History Document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History Document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y --- A	US 2011/0301442 A1 (Lucke et al.) 8 December 2011 (08.12.2011) Entire document especially Fig. 3; para [0039], [0041], [0084]	1-4, 8 ----- 1, 5-7, 13-14, 18-21, 23-26 ----- 9-12, 15, 22
X --- Y --- A	US 2014/0073989 A1 (Genetic Technologies, Ltd.) 13 March 2014 (13.03.2014) Entire document especially Fig. 2; para [0042], [0117]-[0119], [0137], [0140]-[0141], [0153], [0155], [0164]	16-17 ----- 1, 13-14, 18-21, 23-26 ----- 9-12, 15, 22
Y	US 2010/0049083 A1 (Caillat et al.) 25 February 2010 (25.02.2010) Entire document especially Fig. 2; para [0035], [0038]-[0039], [0042], [0044]	5-7
Y	US 2015/0267240 A1 (Diamond et al.) 24 September 2015 (24.09.2015) Entire document especially para [0013]-[0014], [0018], [0021], [0035]-[0036]	24-25
A	US 2008/0262384 A1 (Wiederkehr et al.) 23 October 2008 (23.10.2008) Entire document	1-26
A	US 8,152,739 B1 (McCully) 10 April 2012 (10.04.2012) Entire document	1-26
A	US 2007/0282222 A1 (Larkin) 6 December 2007 (06.12.2007) Entire document	1-26

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Date of the actual completion of the international search

1 February 2019

Date of mailing of the international search report

22 FEB 2019

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-8300

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