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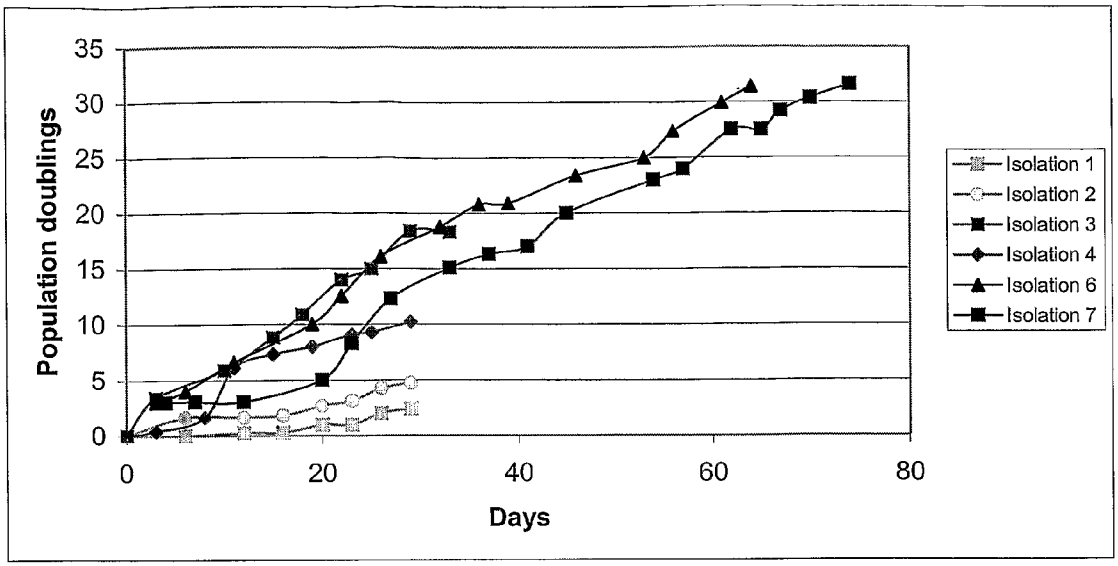
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Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
25 January 2007

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.

(54) Title: POSTPARTUM CELLS DERIVED FROM UMBILICAL CORD TISSUE, AND METHODS OF MAKING AND USING THE SAME



(57) Abstract: Cells derived from human umbilical cords are disclosed along with menthods for their therapeutic use. Isolation techniques, culture methods and detailed characterization of the cells with respect to their cell surface markers, gene expression, and their secretion of trophic factors are described.

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INTERNATIONAL SEARCH REPORT

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Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

   a. type of material

   [X] a sequence listing

   [ ] table(s) related to the sequence listing

   b. format of material

   [X] on paper

   [X] in electronic form

   c. time of filing/furnishing

   [X] contained in the international application as filed

   [ ] filed together with the international application in electronic form

   [ ] furnished subsequently to this Authority for the purpose of search

2. [X] In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. C12N5/06

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)
C12N

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

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, BIOSIS, WPI Data, PAJ, EMBASE, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MITCHELL K E ET AL: , "Matrix cells from Wharton's jelly form neurons and glia" STEM CELLS, ALPHAMED PRESS, DAYTON, OH, US, vol. 21, no. 1, January 2003 (2003-01), pages 50-60, XP002281007 ISSN: 1066-5099 cited in the application the whole document	1-102
X	US 5 919 702 A (PURCHIO ANTHONY F ET AL) 6 July 1999 (1999-07-06) the whole document	1-102
X	US 2003/161818 A1 (DAVIS DUANE ET AL) 28 August 2003 (2003-08-28) the whole document	1-102

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[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 September 2006	21. 11. 06

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Rojo Romeo, Elena

Form PCT/ISA/210 (second sheet) (April 2005)

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	WEISS M L ET AL: "TRANSPLANTATION OF PORCINE UMBILICAL CORD MATRIX CELLS INTO THE RAT BRAIN" EXPERIMENTAL NEUROLOGY, ACADEMIC PRESS, NEW YORK, NY, US, vol. 182, no. 2, August 2003 (2003-08), pages 288-299, XP001181505 ISSN: 0014-4886 the whole document	1-102
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P,X, L	WO 2005/003334 A (ETHICON, INCORPORATED; MISTRY, SANJAY; KIHM, ANTHONY, J; HARRIS, IAN,) 13 January 2005 (2005-01-13) the whole document	1-102
A	LODIE T A ET AL: "Systematic analysis of reportedly distinct populations of multipotent bone marrow-derived stem cells reveals a lack of distinction" TISSUE ENGINEERING, LARCHMONT, NY, US, vol. 8, no. 5, October 2002 (2002-10), pages 739-751, XP002306489 ISSN: 1076-3279 the whole document	
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/046851

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	VAN HOFFELEN SAMANTHA J ET AL: "Incorporation of murine brain progenitor cells into the developing mammalian retina." INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE. JAN 2003, vol. 44, no. 1, January 2003 (2003-01), pages 426-434, XP002313080 ISSN: 0146-0404 the whole document	
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A	EFRAT SHIMON: "Cell replacement therapy for type 1 diabetes" TRENDS IN MOLECULAR MEDICINE, vol. 8, no. 7, July 2002 (2002-07), pages 334-339, XP002313081 ISSN: 1471-4914 the whole document	
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INTERNATIONAL SEARCH REPORT

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-102

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-102

An isolated umbilicus-derived cell comprising a cell derived from mammalian umbilical cord tissue substantially free of blood, said cell capable of self-renewal and expansion in culture and having the potential to differentiate into cells of other phenotypes; embodiments thereof; methods.

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2. claims: 103-107, 116-118

Post-partum derived cells.

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3. claims: 108-111

Method for the preparation of therapeutic cells or cultures.

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4. claims: 112-115

Serum-free medium

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
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