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Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

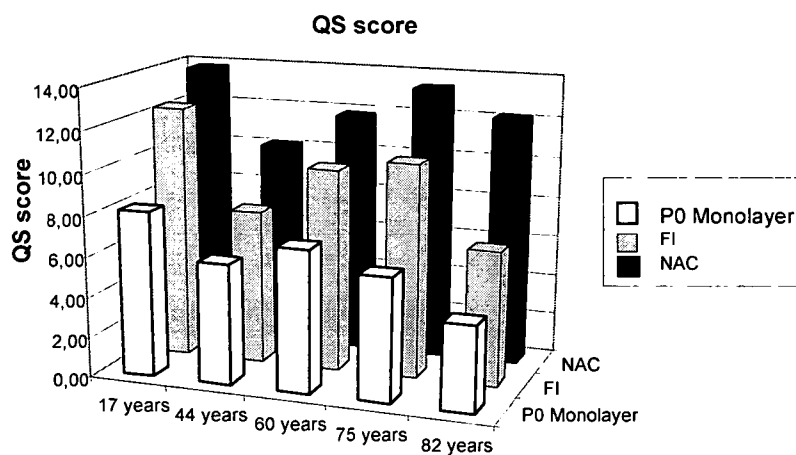
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHODS TO MAINTAIN, IMPROVE AND RESTORE THE CARTILAGE PHENOTYPE OF CHONDROCYTES



(57) Abstract: The present invention relates to regulatory cells, which are capable of restoring, maintaining or improving the stable cartilage phenotype of expanded and passaged chondrocytes. These regulatory cells are also capable of directing precursor and stem cells into the chondrogenic lineage. An enriched population of regulatory cells can be obtained by harvesting the non-adherent cells in the culture medium of a monolayer culture of PO chondrocytes.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2007/002452

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12N5/06 A61L27/38

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 A61L

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, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KAMIL S H ET AL: "Expansion of the number of human auricular chondrocytes: recycling of culture media containing floating cells." TISSUE ENGINEERING 2004 JAN-FEB, vol. 10, no. 1-2, January 2004 (2004-01), pages 139-144, XP002436250 ISSN: 1076-3279 cited in the application the whole document ----- -/--	1-4

☒ Further documents are listed in the continuation of Box C.

☐ 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

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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2007/002452

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	RIFAS L ET AL: "SELECTIVE EMERGENCE OF DIFFERENTIATED CHONDROCYTES DURING SERUM-FREE CULTURE OF CELLS DERIVED FROM FETAL RAT CALVARIA" JOURNAL OF CELL BIOLOGY, vol. 92, no. 2, 1982, pages 493-504, XP002436251 ISSN: 0021-9525 page 494, column 1, paragraphs 2,3 -----	1-4
A	HAUSELMANN H J ET AL: "PHENOTYPIC STABILITY OF BOVINE ARTICULAR CHONDROCYTES AFTER LONG-TERM CULTURE IN ALGINATE BEADS" JOURNAL OF CELL SCIENCE, CAMBRIDGE UNIVERSITY PRESS, LONDON, GB, vol. 107, no. 1, 1994, pages 17-27, XP000881946 ISSN: 0021-9533 abstract page 18, column 2, paragraph 2 -----	1-4
A	BRODKIN K R ET AL: "Chondrocyte phenotypes on different extracellular matrix monolayers" BIOMATERIALS, ELSEVIER SCIENCE PUBLISHERS BV., BARKING, GB, vol. 25, no. 28, December 2004 (2004-12), pages 5929-5938, XP004512693 ISSN: 0142-9612 the whole document -----	1-4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2007/002452

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.:

1-4

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: 1-4

Method for enriching a population of regulatory cells.

2. claims: 5-8, 16, 17

Composition comprising regulatory cells. Admixing said composition with other cells.

3. claims: 9-15

Medical use of regulatory cells and pharmaceutical composition/scaffold comprising said cells.

4. claims: 18-24

Method for preparing cells for ATC transplantation.
