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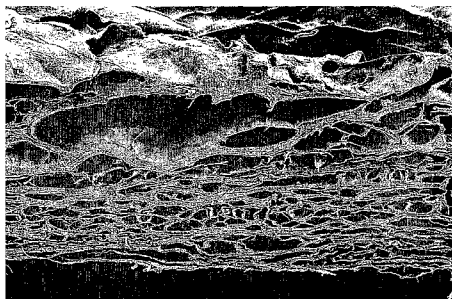
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,

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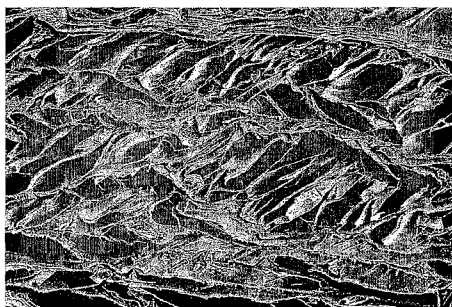
(54) Title: A SCAFFOLD MATERIAL FOR WOUND CARE AND/OR OTHER TISSUE HEALING APPLICATIONS

Figure 3.

A.



B.



(57) Abstract: A scaffold material for wound care and/or other tissue healing applications and methods for making the same is described. The scaffold material is constituted of a decellularized extracellular matrix from fish skin. The scaffold material may also include lipids from the lipid layer of the fish skin. Methods for making and using the scaffold material are also described.



SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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- 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:

9 June 2011

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2010/002528

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61L27/36 A61L15/40 A61L17/08 A61L26/00 A61L31/00

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)

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, 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	EP 0 753 313 A1 (HOKKAIDO GOVERNMENT [JP]; DAIDO HOXAN INC [JP]) 15 January 1997 (1997-01-15) page 4, line 45 - line 58; claim 1 -----	1,4,6-14
X	YE H M I ET AL: "A NOVEL NATIVE MATRIX FOR TISSUE ENGINEERING. ANALYSIS OF CELL-MATRIX INTERACTION" FASEB JOURNAL, FED. OF AMERICAN SOC. FOR EXPERIMENTAL BIOLOGY, US, vol. 14, no. 4, 15 March 2000 (2000-03-15), page A444, XP000982329 ISSN: 0892-6638 the whole document ----- -/-	1,4,6,9, 14



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

7 March 2011

Date of mailing of the international search report

13/04/2011

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2010/002528

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	T. IKOMA ET AL.: "Physical properties of type I collagen extracted from fish scales of Pagrus major and Oreochromis niloticas" INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol. 32, 28 April 2003 (2003-04-28), pages 199-204, XP002626600 page 199	1,4,6, 9-14
X	----- US 2009/036656 A1 (LAI HORNG-JI [TW] ET AL) 5 February 2009 (2009-02-05) paragraph [0022]; claim 1	1,6, 9-12,14
Y	----- US 4 801 299 A (BRENDL KLAUS [US] ET AL) 31 January 1989 (1989-01-31) column 3, line 62 - line 68; claims 1, 4-10	1-14
Y	----- SONG E ET AL: "Collagen scaffolds derived from a marine source and their biocompatibility" BIOMATERIALS, vol. 27, no. 15, 1 May 2006 (2006-05-01), pages 2951-2961, XP025097265 ELSEVIER SCIENCE PUBLISHERS BV., BARKING, GB ISSN: 0142-9612 DOI: 10.1016/J.BIOMATERIALS.2006.01.015 [retrieved on 2006-05-01] the whole document	1-14
A	----- S.E. DAHMS ET AL.: "Composition and biomechanical properties of the bladder acellular matrix graft: comparative analysis in rat, pig and human." BRITISH JOURNAL OF UROLOGY, vol. 82, 5 May 1998 (1998-05-05), pages 411-419, XP002626601 cited in the application the whole document	1-14
A	----- BOTTINO M C ET AL: "Freeze-dried acellular dermal matrix graft: Effects of rehydration on physical, chemical, and mechanical properties" DENTAL MATERIALS, vol. 25, no. 9, 1 September 2009 (2009-09-01), pages 1109-1115, XP026391587 ELSEVIER ISSN: 0109-5641 [retrieved on 2009-04-24] cited in the application the whole document	1-14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2010/002528

Box No. 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.: 15
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:
see FURTHER INFORMATION sheet PCT/ISA/210
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 No. 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:

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 fees, this Authority did not invite payment of additional fees.
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.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 15

Claim 15 relates to subject-matter considered by this authority to be covered by the provisions of Rule 39(1)(iv)/67(1)(iv) PCT.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2010/002528

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0753313	A1	15-01-1997	CA 2179881 A1 27-12-1996
			DE 69615473 D1 31-10-2001
			DE 69615473 T2 25-04-2002
			JP 2731833 B2 25-03-1998
			JP 9010246 A 14-01-1997
			NO 962679 A 27-12-1996
			US 5698228 A 16-12-1997

US 2009036656	A1	05-02-2009	NONE

US 4801299	A	31-01-1989	AU 3018284 A 04-01-1985
			DK 61585 A 08-02-1985
			EP 0128706 A2 19-12-1984
			ES 8600613 A1 16-01-1986
			WO 8404880 A1 20-12-1984
