

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 January 2009 (15.01.2009)

PCT

(10) International Publication Number
WO 2009/009620 A3

(51) International Patent Classification:

A61K 35/36 (2006.01) C08L 89/06 (2006.01)
A61K 9/19 (2006.01)

(21) International Application Number:

PCT/US2008/069563

(22) International Filing Date: 9 July 2008 (09.07.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/948,793 10 July 2007 (10.07.2007) US

(71) Applicant (for all designated States except US): **LIFE-CELL CORPORATION** [US/US]; One Millennium Way, Branchburg, New Jersey 08876 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **OWENS, Rick T.** [US/US]; 1127 Monroe Drive, Stewartville, New Jersey 08886 (US). **SUN, Wendell** [CN/US]; 2308 Birch Court, Warrington, Pennsylvania 18976 (US).

(74) Agent: **MACPHAIL, Stuart**; Fish & Richardson P.C., P.O. Box 1022, Minneapolis, Minnesota 55440-1022 (US).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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:

26 February 2009

(54) Title: ACELLULAR TISSUE MATRIX COMPOSITIONS FOR TISSUE REPAIR

(57) Abstract: The invention provides tissue repair compositions and methods of making the tissue repair compositions. Also featured are methods of treatment using the tissue repair compositions and articles of manufacture that include the tissue repair compositions.



WO 2009/009620 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/069563**A. CLASSIFICATION OF SUBJECT MATTER***A61K 35/36(2006.01)i, A61K 9/19(2006.01)i, C08L 89/06(2006.01)i*

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)

IPC 8 : as above

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 practicable, search terms used)

EKIPASS(KIPO internal), CAS(ON LINE), PUBMED

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2005-0040186 A (LEE, S. J.) 3 May 2005 (03.05.2005) See abstract; page 2, lines 14-17, 24-29; page 3, lines 2-9; example 4; claims 1, 10, 11.	1-3, 42, 43, 48, 49
A	KR 10-2005-0040187 A (LEE, S. J.) 3 May 2005 (03.05.2005) See abstract; page 3, lines 17-36; page 7, lines 2-16; claims 1, 4, 5, 11, 12.	1-3, 42, 43, 48, 49
A	US 2007/0014729 A1 (THE HOSPITAL FOR SICK CHILDREN) 18 January 2007 (18.01.2007) See abstract; paragraphs [0008]-[0010], [0045], [0059]-[0063]; claims 1-4, 20-24.	1-3, 42, 43, 48, 49
A	WO 03/032735 A1 (LIFECCELL INCORPORATION and WRIGHT MEDICAL TECHNOLOGY, INC.) 24 April 2003 (24.04.2003) See abstract; page 5, line 10-page 7, line 6;); claims 1-30.	1-3, 42, 43, 48, 49
A	CHAPLIN, J.M. et al., "Use of an Acellular Dermal Allograft for Dural Replacement: an Experimental Study". Neurosurgery, Vol.45, No.2, 1999, pp.320-327. See Abstract.	1-3, 42, 43, 48, 49



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 application or patent 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 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

09 JANUARY 2009 (09.01.2009)

Date of mailing of the international search report

09 JANUARY 2009 (09.01.2009)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

HAN, Jung Hee

Telephone No. 82-42-481-5604



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2008/069563**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.: 44-47
because they relate to subject matter not required to be searched by this Authority, namely:
The subject-matter of claims 44-47 pertains to the methods for treatment of the human or animal body by therapy, as well as diagnostic methods, and thus relates to a subject matter which this International Searching Authority is not required to search under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT.
2. ☒ Claims Nos.: 7, 34-36
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:
Claims 7, 34-36 are singular dependent claims but they are referring to multiple dependent claims which may result in lack of clarity (PCT Article 6) when they are interpreted.
3. ☒ Claims Nos.: 4-6, 8-33, 37-41, 47
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 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.:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/069563

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2005-0040186 A	03.05.2005	None	
KR 10-2005-0040187 A	03.05.2005	None	
US 2007-014729 A1	18.01.2007	None	
WO 03-032735 A1	24.04.2003	AU 2002-362932 B2 CA 2463850 A1 EP 1446015 A1 JP 2005-506121 A	28.04.2003 24.04.2003 18.08.2004 03.03.2005