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(54) Title: BIOLOGICAL TISSUE FOR SURGICAL IMPLANTATION

(57) Abstract: A method of treating a biological tissue that enables dry storage of said tissue is disclosed. In one embodiment, the method comprises contacting the biological tissue with a non-aqueous treatment solution comprising a polyhydric alcohol and a C₁-C₃ alcohol and removing a portion of the treatment solution from the solution-treated biological tissue. Also disclosed is biological tissue prepared using the above process and prosthetic devices made with such tissue.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER INV. A01N1/02 A61L27/36

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) A01N $\,$ 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

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	7,17,17,17,17,17,17,17,17,17,17,17,17,17	riciovani to ciani i vo.
X	WO 02/15948 A (OSTEOTECH INC [US]) 28 February 2002 (2002-02-28)	1,2,4-8, 10,11, 13,14
	page 10, line 21 - page 11, line 21 page 13, line 8 - line 12 page 14, line 16 - line 18	
	examples 2-4	
X	US 6 534 004 B2 (CHEN JI-FENG [US] ET AL) 18 March 2003 (2003-03-18) cited in the application column 3, line 3 - line 13 column 6, line 16 - line 29 examples 1-3	10-15
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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 filling 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 filling 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 29 July 2009	Date of mailing of the international search report 04/08/2009		
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Fax: (+31–70) 340–3016	Authorized officer Staber, Brigitte		

INTERNATIONAL SEARCH REPORT

International application No PCT/US2007/082241

(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT							
Category*							
X	WO 98/43556 A (BAXTER INT [US]) 8 October 1998 (1998-10-08) cited in the application page 12, line 8 - line 9 page 12, line 20 - line 25 figures 1,2	16,17					
A	SCHMIDT C E ET AL: "Acellular vascular tissues: natural biomaterials for tissue repair and tissue engineering" BIOMATERIALS, ELSEVIER SCIENCE PUBLISHERS BV., BARKING, GB, vol. 21, no. 22, 15 November 2000 (2000-11-15), pages 2215-2231, XP004210279 ISSN: 0142-9612 abstract	1-17					
A	FAHNER ET AL: "Systematic review of preservation methods and clinical outcome of infrainguinal vascular allografts" JOURNAL OF VASCULAR SURGERY, C.V. MOSBY CO., ST. LOUIS, MO, US, vol. 44, no. 3, 1 September 2006 (2006-09-01), pages 518-524, XP005626884 ISSN: 0741-5214 page 520 abstract	1-17					

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2007/082241

Patent document cited in search report				Patent family member(s)	Publication date
WO 0215948	A	28-02-2002	AU CA EP	8675501 A 2420113 A1 1311309 A2	04-03-2002 28-02-2002 21-05-2003
US 6534004	B2	18-03-2003	CA WO US	2335152 A1 9958082 A2 2001023372 A1	18-11-1999 18-11-1999 20-09-2001
WO 9843556	A	08-10-1998	AT AU CA DE DE EP ES JP US	229774 T 739221 B2 6772498 A 2284941 C 69810282 D1 69810282 T2 0971649 A1 2189149 T3 3527745 B2 2000511459 T 6102944 A 5928281 A	15-01-2003 04-10-2001 22-10-1998 16-05-2000 30-01-2003 13-11-2003 19-01-2000 01-07-2003 17-05-2004 05-09-2000 15-08-2000 27-07-1999