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(54) **Title**: COMPOSITION AND METHODS FRO THE PRODUCTION OF BIOLOGICAL TISSUES AND TISSUE CONSTRUCTS

(57) **Abstract**: The present invention relates to compositions and methods for preparing tissues or tissue constructs. In selected embodiments, the invention relates to the construction of a multi-layered biological structure (*i.e.* system) that includes a cellular support matrix seeded with living cells derived from a native tissue. The present invention also relates to tissue culture protocols to promote the *in vitro* growth of tissues and tissue constructs.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/09001

A. CLASSIFICATION OF SUBJECT MATTER				
IPC(7) : A61F 2/00; C12P 19/34; C12N 11/16, 11/02, 11/08, 11/04, 5/06, 5/08				
US CL : 424/423, 93.7; 435/91.1, 174, 177, 180, 182, 395, 396				
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) U.S. : 424/423, 93.7; 435/91.1, 174, 177, 180, 182, 395, 396				
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) Please See Continuation Sheet				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Y	US 6,171,610 B1 (VACANTI et al) 09 January 2001 (09.01.2001), see entire document, especially column 14, lines 44-65.	1-26		
Y	US 4,851,354 A (WINSTON et al) 25 July 1989 (25.07.1989), see entire document, especially column 1, lines 53-55.	1-26		
Y	US 4,912,032 A (HOFFMAN et al) 27 March 1990 (27.03.1990), see entire document, especially column 4, lines 45-56.	1-26		
Y	US 4,182,655 A (HARTMEIER) 08 January 1980 (08.01.1980), see entire document, especially column 4, lines 20-25.	1-26		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
* Special categories of cited documents: <table border="0" style="width:100%"> <tr> <td style="width:50%"> "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent 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 </td> <td style="width:50%"> "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 </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent 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
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent 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			
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Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230		Authorized officer <i>Falicia D. Roberts</i> for DAVID M. NAFF Telephone No. (703) 308-0196		

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

WEST

search terms: matrix, cells, sponge, culture, chamber, cyclic, hydrostatic, pressure