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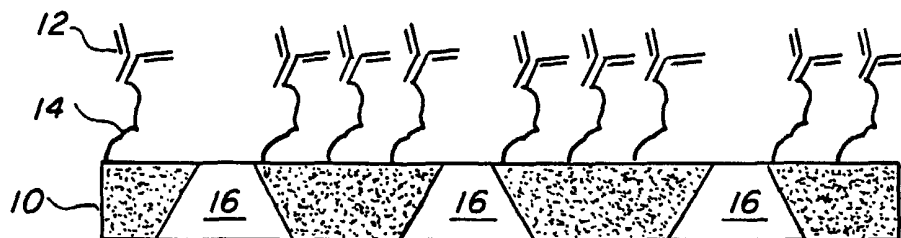
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(54) Title: NANOPOROUS MEMBRANE IMMUNOSENSOR




(57) Abstract: A sensor for a selected analyte in a test sample has according to figure 1: (a) a semipermeable membrane (10) with pores (16) for retaining the analyte, where the membrane (10) has been chemically modified by attachment of membrane modifiers (12); (b) immunoassay labels which have label binding ligands where these label binding ligands will have a binding affinity for the membrane modifiers (12) in the presence of the analyte, and a measurably different binding affinity for the membrane modifiers in the absence of the analyte; and (c) a label detecting system, for detecting the presence of the labels on the membrane (10).

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INTERNATIONAL SEARCH REPORT

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<p><b>A. CLASSIFICATION OF SUBJECT MATTER</b>                  IPC(7) :G01N 1/36, 21/64; B01L 3/00                  US CL :422/50, 99, 82.05; 436/518, 525, 526, 535.                  According to International Patent Classification (IPC) or to both national classification and IPC</p>																																									
<p><b>B. FIELDS SEARCHED</b>                  Minimum documentation searched (classification system followed by classification symbols)                  U.S. : 422/50, 99, 82.05; 436/518, 525, 526, 535.                  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched                  NONE                  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)                  EAST, WEST, PALM</p>																																									
<p><b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b></p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>US 5,531,878 A (VADGAMA et al.) 02 July 1996, col. 1, line 1-col. 3, line 5.</td> <td>1-16</td> </tr> <tr> <td>A</td> <td>US 5,202,261 A (MUSHO et al.) 13 April 1993, col. 11, line 51-col. 15, line 10.</td> <td>1-16</td> </tr> <tr> <td>A</td> <td>US 5,958,201 A (CRAIG et al.) 28 September 1999, col. 2, lines 26-55.</td> <td>1-16</td> </tr> <tr> <td>A</td> <td>US 5,773,270 A (D'ORAZIO et al.) 30 June 1998, col. 8, line 16-col. 12, line 9.</td> <td>1-16</td> </tr> <tr> <td>A</td> <td>US 5,607,567 A (YUN et al.) 04 March 1997, col. 3, line 20-col. 6, line 15.</td> <td>1-16</td> </tr> <tr> <td>A</td> <td>WO 99/67641 (CHEE et al.) 29 December 1999, page 4, line 20-page 5, line 15.</td> <td>1-16</td> </tr> </tbody> </table> <p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.</p> <table border="1"> <tr> <td>* Special categories of cited documents:</td> <td>"T"</td> <td>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</td> </tr> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"X"</td> <td>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</td> </tr> <tr> <td>"E" earlier document published on or after the international filing date</td> <td>"Y"</td> <td>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</td> </tr> <tr> <td>"I" 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)</td> <td>"&amp;"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> <td></td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	A	US 5,531,878 A (VADGAMA et al.) 02 July 1996, col. 1, line 1-col. 3, line 5.	1-16	A	US 5,202,261 A (MUSHO et al.) 13 April 1993, col. 11, line 51-col. 15, line 10.	1-16	A	US 5,958,201 A (CRAIG et al.) 28 September 1999, col. 2, lines 26-55.	1-16	A	US 5,773,270 A (D'ORAZIO et al.) 30 June 1998, col. 8, line 16-col. 12, line 9.	1-16	A	US 5,607,567 A (YUN et al.) 04 March 1997, col. 3, line 20-col. 6, line 15.	1-16	A	WO 99/67641 (CHEE et al.) 29 December 1999, page 4, line 20-page 5, line 15.	1-16	* Special categories of cited documents:	"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	"A" document defining the general state of the art which is not considered to be of particular relevance	"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	"E" earlier document published on or after the international filing date	"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	"I" 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)	"&"	document member of the same patent family	"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		
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Date of the actual completion of the international search 01 OCTOBER 2001		Date of mailing of the international search report <b>15 MAY 2002</b>																																							
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  DENISE I. DO Telephone No. (703) 308-0196																																							