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(54) Title: MULTIPLEXED ANALYSIS OF CELL-SUBSTRATE INTERACTIONS

(57) Abstract: Systems, including methods, compositions, and kits, for multiplexed analysis of interactions between cells and substrates using coded carriers.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/07112

A. CLASSIFICATION OF SUBJECT MATTER																						
IPC(7) : G01N 33/53, 33/543, 33/554																						
US CL : 435/7.1, 7.2, 7.21, 7.32,																						
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. : 435/7.1, 7.2, 7.21, 7.32,																						
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) WEST, PubMed, Medline, EMBASE, BIOSIS, SCISEARCH, CAPlus																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
Y	WO 97/20074 A1 (MANDECKI) 05 June 2997 (05.06.1997), esp. pages 6-10.	1-4, 7-33																				
Y	US 6,129,896 A. (NOONAN et al.) 10 October 2000 (10.10.00), document	1-3, 7-11, 13, 15-33																				
Y,P	BESKE et al., High-throughput cell analysis using multiplexed array technologies, Drug Discovery Today, September 2002, Vol 7 No. 18 (Supp.), pages S131-S135.	1-4, 7-33																				
A	MARTENS et al., "A generic particle-based nonradioactive homogeneous multiplex method for high-throughput screening using microvolume fluorimetry," Analytical biochemistry, August 1999, Vol 273 No. 1, pages 20-31.	1-4, 7-33																				
Y,P	WO 02/37944 (VIRTUAL ARRAYS, INC.) 16 May 2002 (16.05.02), document.	1-4, 7-33																				
A	US 6,017,496 A:(NOVA et al.) 25 January 2000 (25.01.00), esp. columns 82-90.	1-4, 7-33																				
<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"> <tr> <td>"A"</td> <td>document defining the general state of the art which is not considered to be of particular relevance</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>"E"</td> <td>earlier application or patent published on or after the international filing date</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>"L"</td> <td>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>"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>"O"</td> <td>document referring to an oral disclosure, use, exhibition or other means</td> <td>"&"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"P"</td> <td>document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </table>			"A"	document defining the general state of the art which is not considered to be of particular relevance	"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	"E"	earlier application or patent published on or after the international filing date	"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	"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)	"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	"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family	"P"	document published prior to the international filing date but later than the priority date claimed		
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"P"	document published prior to the international filing date but later than the priority date claimed																					
Date of the actual completion of the international search 23 November 2004 (23.11.2004)		Date of mailing of the international search report 04 JAN 2005																				
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer <i>Maria J. Watson</i> Zachariah Lucas Telephone No. 571-272-1600																				

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/07112

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claim Nos.: 5 and 6
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:
Please See Continuation Sheet

3. Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 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.
 No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

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Continuation of Box I Reason 2:

Claims 5 and 6 are unsearchable because it is not clear what is being claimed. Each of these claims depends from claim 1. Each of these claims is also referring to "the material." However, there is no antecedent basis for "a material" presented in the language of claim 1. It is therefore unclear what material is being referred to. Thus, no meaningful search can be performed for the limitations of claims 5 and 6.