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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



WO 03/012124 A3

(54) Title: METHODS FOR IMMOBILIZING MOLECULES TO A SOLID PHASE AND USES THEREOF

(57) Abstract: Various methodologies for the immobilization of molecules such, as multistranded nucleic acid molecules, are described. The methodologies include activation of solid supports, as well as treatment of, e.g. termini of nucleic acid molecules to render them more receptive to immobilization on surfaces.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/24377

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :C12P 19/34; C12Q 1/68
US CL :435/91.3, 6

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. : 435/91.3, 6

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, STN, MEDLINE, BIOSIS, CAPLUS, EMBASE
search terms: nucleic, immobilize, double stranded, modify, UV, etch, scratch, solid support

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,700,667 A (MARBLE et al) 23 December 1997, see entire document.	1 - 3 , 5 - 15 , 18 - 34,36-38
X	US 6,242,246 B1 (GOLD et al) 05 June 2001, see entire document.	1 - 3 , 5 - 15 , 18 - 34,36-38
X	US 4,777,129 A (DATTA GUPTA et al) 11 October 1988, see entire document.	1-3, 5-8, 10-44
Y	US 6,022,714 A (BROWN et al) 08 February 2000, see entire document.	1-44
Y	US 6,096,508 A (LEMAR et al) 01 August, 2000, see entire document.	4, 9
X,P	US 6,458,543 B1 (GOLD et al) 01 October 2002, see entire document.	1-44

Further documents are listed in the continuation of Box C. See patent family annex.

* 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
"L" document which may throw doubt 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		

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/24377

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/18961 A1 (ZENECA LIMITED) , 07 May 1998, see entire document.	1-3, 5-15,18-34,36-38
X	WO 90/07582 A1 (SISKA DIAGNOSTICS, INC.). 12 July 1990, see entire document.	1-3,5-15,18 - 34,36-38

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/24877

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

- 2. Claims Nos.:
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:

- 3. Claims 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.