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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.

(54) Title: MONITORING FOR AND DETECTING MICROBES USED IN BIOTERRORISM

(57) Abstract: The invention provides for methods of determining the presence, absence, or amount of a microbe used in bioterrorism by detecting the presence or absence of a cpn60 marker in a sample.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38020

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68

US CL : 435/6

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. : 435/6; 702/19

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.
X	US 5,807,690 A (SANDERS et al.) 15 September 1998 (15.09.1998), see especially	1-17, 21, 26-33
---	Detailed Description of the Invention.	-----
Y		18-20, 22-25
Y, E	US 6,803,379 B2 (FERNANDEZ-POL et al.) 12 October 2004 (12.10.2004), see especially	1-33
	Detailed Description of the Invention and Preferred Embodiments.	
Y	US 2002/0137196 A1 (MILES et al.) 26 September 2002 (26.09.2002), see especially	1-33
	Detailed Description of the Invention.	
Y	US 2002/0051985 A1 (WHITTEN et al.) 02 May 2002 (02.05.2002), see especially	1-33
	Description of the Preferred Embodiments.	



Further documents are listed in the continuation of Box C.



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	"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	

Date of the actual completion of the international search

10 January 2005 (10.01.2005)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/38020

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.:
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. ☐ 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:
Please See Continuation Sheet

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.: 1-33

Remark on Protest☐
☐

- The additional search fees were accompanied by the applicant's protest.
No protest accompanied the payment of additional search fees.

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-33, drawn to a method for detecting the presence, absence, or amount of one or more microbes used in bioterrorism.

Group II, claim(s) 34-36, drawn to an article of manufacture comprising at least one cpn60 antibody.

Group III, claim(s) 37-38, drawn to an article of manufacture comprising at least one cpn60 oligonucleotide.

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group I is directed to a detection method for microbes used in bioterrorism. Group II is directed to an article of manufacture comprising a cpn60 antibody. Group III is directed to an article of manufacture comprising a cpn60 oligonucleotide.

Clearly, these three Groups with their respective technical features are distinct from each other. Thus, in summary, each of Groups I-III are directed to different specific technical features and thus support this lack of unity.

Continuation of B. FIELDS SEARCHED Item 3:

WEST, PUBMED, EMBASE, MEDLINE, SCISEARCH, BIOSIS searching the following terms: detect, microbe, bioterror, cpn60, chaperonin, heat shock protein, time, environment, marker, assay, facility, water, air, food, tissue, fomite