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**WO 2007/022320 A3**

(54) Title: BACTERIAL CONTACT INHIBITION AND METHODS THEREOF

(57) Abstract: Contemplated compositions and methods relate to bacterial contact inhibition that is conferred by two gene products, CdiA and CdiB, which are encoded by the genes *cdiA* and *cdiB*, respectively. A further gene product *CdiI*, encoded by the gene *cdiI* confers immunity to contact inhibition caused by CdiAB.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US06/32064

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC: <b>A61K 31/70( 2006.01)</b>  USPC: <b>514/44</b> According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 514/44  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)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO/199822575-A2 (DILLON ET AL) 28 May 1998 (28/5/1998), (see claim 21 page 103-115, entire document, and STIC Result).	1, 5, 6, and 7
<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:		
"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 20 December 2007 (20.12.2007)	Date of mailing of the international search report <div style="text-align: center; font-size: 1.2em; font-weight: bold;">23 APR 2009</div>	
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. (571) 273-3201	Authorized officer Nina Archie Telephone No. 571-272-9938	

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US06/32064

**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search 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 No. III Observations where unity of invention is lacking (Continuation of item 3 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 additional fees, this Authority did not invite payment of any additional fees.
  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 and, where applicable, the payment of a protest fee.
  - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
  - No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/US06/32064

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, claims 1, 5, 6, and 7 and SEQ ID NO: 1 drawn to an isolated nucleic acid sequence encoding a peptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector.

Group II, claims 1, 3, 6, and 7 and SEQ ID NO: 2 drawn to an isolated nucleic acid sequence encoding a peptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector.

Group III, claims 1, 4, 6, and 7 and SEQ ID NO: 3 drawn to an isolated nucleic acid sequence encoding a peptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector.

Group IV, claims 8, 9, and SEQ ID NO: 4 drawn to an isolated polypeptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector.

Group V, claims 8, 10, and SEQ ID NO: 5 drawn to an isolated polypeptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector.

Group VI, claims 8, 11 and SEQ ID NO: 6 drawn to an isolated polypeptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector.

Group V, claims 13-15, 16, and SEQ ID NO: 4 drawn to an method of reducing bacterial contact inhibition system.

Group VI, claims 13-15, 16, and SEQ ID NO: 5 drawn to an method of reducing bacterial contact inhibition system.

Group VII, claims 17-20 drawn to an method of treating a chronic bacterial infection.

The technical feature of Group I is an isolated nucleic acid sequence encoding a peptide of a bacterial contact inhibition system, recombinant vector, a cell comprising the vector is anticipated by Dillon et al WO/199822575-A2 28 May 1998 (28/5/1998), (see claim 21 page 103-115, entire document, and STIC Result).