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C07K 16/10,
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A61P 31/14

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Declarations under Rule 4.17:

Date of publication of the international search report:
29 September 2005

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: BINDING MOLECULES AGAINST SARS-CORONAVIRUS AND USES THEREOF

(57) Abstract: The present invention provides binding molecules that specifically bind to SARS-CoV, nucleic acid molecules encoding the binding molecules, compositions comprising the binding molecules and methods of identifying or producing the binding molecules. The binding molecules are capable of specifically binding to SARS-CoV and can be used in the diagnosis, prophylaxis and/or treatment of a condition resulting from SARS-CoV.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K16/10 C12N15/13 C12N15/63 C12N5/10 A61K39/215
G01N33/68 A61P31/14

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)
IPC 7 C07K C12N A61K G01N

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 practical, search terms used)
EPO—Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tr>
<td>X</td>
<td>LIN YING ET AL: &quot;Identification of an epitope of SARS-coronavirus nucleocapsid protein.&quot; CELL RESEARCH. JUN 2003, vol. 13, no. 3, June 2003 (2003-06), pages 141-145, XP002339647 ISSN: 1001-0602 page 142, right-hand column, paragraph 2 page 142, right-hand column, last paragraph - page 143, left-hand column, paragraph 1 page 144, left-hand column, paragraph 1</td>
<td>1, 2, 5-22, 31-33</td>
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:
  *A* document defining the general state of the art which is not considered to be of particular relevance
  *E* earlier document but published on or after the international filing date
  *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)
  *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

*7* 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

*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

*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.

*8* document member of the same patent family

Date of the actual completion of the international search
9 August 2005

Date of mailing of the international search report
22/08/2005

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Authorized officer
Fuhr, C
<table>
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<tr>
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<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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</table>
**Box 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. [x] Claims Nos.: 41–45  
   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:
   
   see FURTHER INFORMATION sheet PCT/ISA/210

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).

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**Box 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 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.:

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**Remark on Protest**

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (3)) (January 2004)
Continuation of Box II.2

Claims Nos.: 41-45

The subject matter of claims 41-45 relates to compounds and compositions comprising them, characterized by the method of detecting them, according to claims 34-39. As the method of claims 34-39 is novel and inventive, the problem underlying the subject matter of claims 41-45 can be formulated to be the provision of compounds having the ability to bind to inactivated Sars-CoV in the method of claims 34-39. The solution to the problem are the compounds of claims 41-45, In the case of such so called reach through claims, the functional feature used to define the solution to the technical problem, is the problem itself. This formulation covers all future solutions to the problem, which means:

(a) The scope of the claimed invention would not be unduly limited by including technical features of the claimed compounds, since it is clearly not an undue limitation of the claim to eliminate what has not yet been invented

(b) A skilled person cannot reduce to practice a definition of the claimed subject matter because the compounds claimed per se (claim 41-45) have potentially limitless structural possibilities, and so there is absolutely no limit to the structural variation in the compounds which might act as binding molecules to (inactivated) Sars-CoV.

Consequently the requirements, whereby a functional definition might be allowed are clearly not fulfilled and so claims 41-45 are not clear (Article 6 PCT). Consequently, no search was performed for the subject matter of claims 41-45.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.
<table>
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<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
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