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Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
— *of inventorship (Rule 4.17(iv))*

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

(88) Date of publication of the international search report:
27 March 2008

(54) Title: HUMAN BINDING MOLECULES HAVING KILLING ACTIVITY AGAINST STAPHYLOCOCCI AND USES THEREOF

(57) Abstract: The present invention provides human binding molecules specifically binding to staphylococci and having killing activity against staphylococci, nucleic acid molecules encoding the human binding molecules, compositions comprising the human binding molecules and methods of identifying or producing the human binding molecules. The human binding molecules can be used in the diagnosis, prophylaxis and/or treatment of a condition resulting from Staphylococcus.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2007/055527

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K16/12 C12N15/13 A61K39/40 A61P31/04

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)
C07K

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, Sequence Search, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/103084 A (BRIGHAM & WOMENS HOSPITAL [US]; BETH ISRAEL HOSPITAL [US]; PIER GERALD) 3 November 2005 (2005-11-03) the whole document, especially figures 7 and 12	1-12
A	WO 03/059260 A (BIOSYNEXUS INC [US]; STINSON JEFFREY R [US]; SCHUMAN RICHARD F [US]; M) 24 July 2003 (2003-07-24) cited in the application the whole document, especially example 8	1-12
A	WO 03/059259 A (BIOSYNEXUS INC [US]; SCHUMAN RICHARD F; KOKAI-KUN JOHN F [US]; FOSTER) 24 July 2003 (2003-07-24) cited in the application the whole document, especially example 12	1-12

☐ 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

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 October 2007	29/01/2008

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bayer, Annette

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2007/055527

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

Although claim 12 is directed to a method of treatment or diagnosis of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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:

see additional sheet

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

4. [X] 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.:

1-12 (all partially)

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12 (all partially)

Human monoclonal antibody having opsonic phagocytic killing activity against at least two different Staphylococcus species and against at least 3 different strains of Staphylococcus aureus with a heavy chain comprising the variable region of SEQ-ID NO: 30 and a light chain comprising the variable region of SEQ-ID NO: 36 or variants thereof with at least 80% identity to the variable regions and related subject-matter.

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2. claims: 1-12 (all partially)

Human monoclonal antibody having opsonic phagocytic killing activity against at least two different Staphylococcus species and against at least 3 different strains of Staphylococcus aureus with a heavy chain comprising the variable region of SEQ-ID NO: 117 and a light chain comprising the variable region of SEQ-ID NO: 177 or variants thereof with at least 80% identity to the variable regions and related subject-matter.

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3. claims: 1-12 (all partially)

Human monoclonal antibody having opsonic phagocytic killing activity against at least two different Staphylococcus species and against at least 3 different strains of Staphylococcus aureus with a heavy chain comprising the variable region of SEQ-ID NO: 119 and a light chain comprising the variable region of SEQ-ID NO: 179 or variants thereof with at least 80% identity to the variable regions and related subject-matter.

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4. claims: 1-12 (all partially)

Human monoclonal antibody having opsonic phagocytic killing activity against at least two different Staphylococcus species and against at least 3 different strains of Staphylococcus aureus with a heavy chain comprising the variable region of SEQ-ID NO: 121 and a light chain comprising the variable region of SEQ-ID NO: 181 or variants thereof with at least 80% identity to the variable regions and related subject-matter.

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5. claims: 1-12 (all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Human monoclonal antibody having opsonic phagocytic killing activity against at least two different Staphylococcus species and against at least 3 different strains of Staphylococcus aureus with a heavy chain comprising the variable region of SEQ-ID NO: 155 and a light chain comprising the variable region of SEQ-ID NO: 215 or variants thereof with at least 80% identity to the variable regions and related subject-matter.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2007/055527

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005103084 A	03-11-2005	AU 2005236068 A1	03-11-2005
		CA 2567748 A1	03-11-2005
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