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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: HEMOPEXIN FUSION PROTEINS

(57) Abstract: Fusion proteins comprising a first protein fused to hemopexin are provided. said fusion proteins exhibit an increased circulation time.

WO 2006/018428 A3

# INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2005/054015

A. CLASSIFICATION OF SUBJECT MATTER
C12N15/62 C07K14/805

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 C12N

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, BIOSIS, EMBASE, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | US 2002/159989 A1 (BEIN KIFLAI ET AL)<br>31 October 2002 (2002-10-31)<br><br>Fig . 2, MBP-MMP3 hemopexin domain fusion protein.<br>---- | 1-3,7-9,<br>11-14,<br>35-37,39 |
| X | DATABASE UniProt 'Online!<br>21 July 1986 (1986-07-21), "Hemopexin precursor (Beta-1B-glycoprotein)."<br>XP002363645<br>retrieved from EBI accession no.<br>UNIPROT:HEMO_HUMAN<br>Database accession no. P02790<br>the whole document<br>---- | 1-3,<br>11-14,<br>17-22,<br>35-37,39 |

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[X] Further documents are listed in the continuation of Box C. [X] 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 |
|---|---|
| 20 January 2006 | 17/02/2006 |

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

4

Form PCT/ISA/210 (second sheet) (April 2005)

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | SATOH TOMOKO ET AL: "Roles of heme iron-coordinating histidine residues of human hemopexin expressed in baculovirus-infected insect cells" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 91, no. 18, 1994, pages 8423-8427, XP002363642 ISSN: 0027-8424 Abstract; p. 8423, col. 2, "Construct of Recombinant Baculovirus Containing Human Hx cDNA"; p. 8424, Fig. 1. | 1-3,7-9, 11-14, 17-22, 35-37,39 |
| X<br>Y | WO 2004/069204 A (UNIVERSITY OF CONNECTICUT HEALTH CENTER; SRIVASTAVA, PRAMOD, K) 19 August 2004 (2004-08-19)<br>Abstract; claim 1. | 1-14, 35-39<br>15,16 |
| X | US 2003/220488 A1 (CECCARDI TONI ET AL) 27 November 2003 (2003-11-27)<br>Seqs.: 2 and 4, paragraphs 36 and 37. | 1-3,7-9, 11-14, 17-22, 35-37,39 |
| X | DATABASE UniProt 'Online! 1 June 2001 (2001-06-01), "HPX protein." XP002363646 retrieved from EBI accession no. UNIPROT:Q9BS19 Database accession no. Q9BS19 the whole document | 17-22 |
| Y | WO 97/24445 A (DELTA BIOTECHNOLOGY LIMITED; BALLANCE, DAVID, JAMES) 10 July 1997 (1997-07-10) cited in the application Abstract; p.3, l. 27-30; p. 13, l. 24-p.14, l. 1 | 15,16 |

4

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2005/054015

## 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. [X] Claims Nos.: 40-41 (partially)
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 40-41 are directed to a method of treatment 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 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.:

**Remark on Protest**

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

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

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2005/054015

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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