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(54) Title: FACTOR H POLYMORPHISMS IN THE DIAGNOSIS AND THERAPY OF INFLAMMATORY DISEASES SUCH AS AGE-RELATED MACULAR DEGENERATION

(57) Abstract: The invention relates to antibodies, including monoclonal and polyclonal, or fragments thereof, which discriminate between the histidine and tyrosine isoforms of Complement Factor H and to their use in diagnostic methods and therapeutic treatments relating to Complement Factor H mediated diseases.

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2008/000218

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K14/47 G01N33/68

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 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, BIOSIS, WPI Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2006/088950 A (UNIV IOWA RES FOUND [US]; HAGEMAN GREGORY S [US]; SMITH RICHARD J [US]) 24 August 2006 (2006-08-24) paragraphs [0015], [0025], [0029], [0268], [0296] - [0298], [0322], [0328]	1-34
A	WO 2006/062716 A (UNIV YALE [US]; HOH JOSEPHINE [US]) 15 June 2006 (2006-06-15) page 8, paragraph 2 page 9, last paragraph page 48, paragraphs 2,3	1-34

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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
30 July 2008	27/08/2008

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	Hoff, Céline

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2008/000218

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JOKIRANTA T SAKARI ET AL: "Analysis of the recognition mechanism of the alternative pathway of complement by monoclonal anti-factor H antibodies: Evidence for multiple interactions between H and surface bound C3b" 1996, FEBS LETTERS, VOL. 393, NR. 2-3, PAGE(S) 297-302 , XP002490069 ISSN: 0014-5793	18-29
P,X	HAKOBYAN ET AL: "A novel monoclonal antibody specific for the 402His variant of complement factor H enables identification of the Tyr402His polymorphic status in serum samples" MOLECULAR IMMUNOLOGY, ELMSFORD, NY, US, vol. 44, no. 16, 1 September 2007 (2007-09-01), page 3951, XP022227664 ISSN: 0161-5890 the whole document	1-34
P,X	WO 2007/118095 A (UNIV IOWA RES FOUND [US]; COMPLEMENTUM LTD [FI]; HAGEMAN GREGORY S [US) 18 October 2007 (2007-10-18) the whole document	1-34
T	HAKOBYAN ET AL.: "Measurement of factor H variants in plasma using variant-specific monoclonal antibodies: Application to assessing risk of age-related macular degeneration" INVESTIGATIVE OPHTALMOLOGY AND VISUAL SCIENCE, vol. 49, no. 5, May 2008 (2008-05), pages 1983-1990, XP009104031 the whole document	1-34

INTERNATIONAL SEARCH REPORT

International application No.
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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 claims 1-10 are directed to a diagnostic method practised on 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:

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. [ ] 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/GB2008/000218

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2006088950 A	24-08-2006	AU 2006214320 A1	24-08-2006
		CA 2597411 A1	24-08-2006
		EP 1856287 A2	21-11-2007
		KR 20070112801 A	27-11-2007
WO 2006062716 A	15-06-2006	AU 2005314461 A1	15-06-2006
		CA 2588270 A1	15-06-2006
		EP 1836312 A2	26-09-2007
		JP 2008520242 T	19-06-2008
		KR 20070105969 A	31-10-2007
WO 2007118095 A	18-10-2007	NONE	