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(54) Title: COMPOSITIONS AND METHODS FOR DETECTING HISTAMINE RELATED DISORDERS

(57) Abstract: The present invention generally relates to methods and compositions (e.g., assay kit) for the diagnosis of histamine related disorders. The invention also relates to a novel molecular target of histamine related disorders and the uses thereof for detecting or diagnosing such diseases, as well as to develop adapted and efficient therapeutic treatment thereof. The invention may be used in any mammalian subject, particularly human subjects.



WO 2009/016231 A3

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

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)
C12Q

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2007/056788 A (MISSBICHLER ALBERT [AT]; MAYER ISABELLA [AT]) 24 May 2007 (2007-05-24) claims 1,9-11 page 8, paragraph 3	1-6, 12-15
X	US 6 093 551 A (RAITHEL MARTIN [DE] ET AL) 25 July 2000 (2000-07-25) abstract claims 1,10,11 column 3, line 8 - line 16 column 4, line 45 - line 47	1-6, 12-15
	-/-	

☒ 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.

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Name and mailing address of the ISA

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Schmitt-Humbert, C

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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ANONYMOUS: "D-HIT. Worldwide first DAO-activity test system to support the diagnosis of histamine intolerance"[Online] 21 February 2007 (2007-02-21), pages 1-2, XP002466267 Retrieved from the Internet: URL:http://web.archive.org/web/*/http://www.sciotec.com/download/dhit_e_050624.PDF [retrieved on 2008-01-22] the whole document	1-6, 12-15
A	LESSOF M H ET AL: "Recurrent urticaria and reduced diamine oxidase activity." CLINICAL AND EXPERIMENTAL ALLERGY : JOURNAL OF THE BRITISH SOCIETY FOR ALLERGY AND CLINICAL IMMUNOLOGY JUL 1990, vol. 20, no. 4, July 1990 (1990-07), pages 373-376, XP009094249 ISSN: 0954-7894 the whole document	1-6, 11-15
A	US 2007/048802 A1 (HARBECK RONALD J [US] ET AL) 1 March 2007 (2007-03-01) claim 1	11

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2008/060057

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:

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 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.:

1-6, 13-15 (all completely); 11-12 (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: claims 1-6, 13-15 (all completely), 11-12 (all partially)

A method for detecting the presence, stage or type of a histamine related disorder in a subject, said method being based on detecting the presence of anti-DAO antibodies; a method for assessing the efficacy of a treatment of a histamine related disorder in a subject, the method being based on comparing the amount or activity of anti-DAO antibodies and a method of selecting biologically active compounds on histamine related disorders, said method being based on selecting compounds that abolish the presence or reduce the level or activity of anti-DAO antibodies.

2. claims: claims 7-10 (all completely), 11-12 (all partially)

A method for detecting the presence or stage of chronic urticaria in a subject, said method being based on detecting an altered DAO expression or activity.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2008/060057

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007056788 A	24-05-2007	AT 502850 A1 AU 2006315062 A1 CA 2629061 A1 EP 1948819 A1 US 2008227116 A1	15-06-2007 24-05-2007 24-05-2007 30-07-2008 18-09-2008
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US 2007048802 A1	01-03-2007	NONE	