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WO 02/020002 A3

(54) Title: A METHOD FOR TREATING ALLERGIES

(57) Abstract: Use of cathepsin S inhibitors for the treatment of an allergic condition, in particular an atopic allergic condition, more specifically for the treatment of hay fever, asthma, atopic dermatitis or a food allergy.

INTERNATIONAL SEARCH REPORT

Interr al Application No
PCT/US 01/27441

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K4/00 A61K38/00 C07K5/06 A61P37/00 A61P11/06

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 A61K

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, PAJ, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate. of the relevant passages	Relevant to claim No.
X	WO 97 40066 A (BRIGHAM & WOMENS HOSPITAL ;MASSACHUSETTS INST TECHNOLOGY (US); BOG) 30 October 1997 (1997-10-30)	1-18
X	claims 1,4,14-16; p. 2, l. 8-21	1-3
Y		4-18
X	WO 99 58153 A (BRIGHAM & WOMENS HOSPITAL) 18 November 1999 (1999-11-18)	1-18
X	claims 1,3,28-30,33; p. 2, l. 1-10; p. 3, l. 9-20	1-3
Y		4-18

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[X] Further documents are listed in the continuation of box C.

[X] 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

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"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)

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"P" document published prior to the international filing date but later than the priority date claimed

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"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

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Date of the actual completion of the international search	Date of mailing of the international search report
18 July 2002	01.08.02

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	Rivat, C

Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	RIESE R J ET AL: "CATHEPSIN S ACTIVITY REGULATES ANTIGEN PRESENTATION AND IMMUNITY" JOURNAL OF CLINICAL INVESTIGATION, NEW YORK, NY, US, vol. 101, no. 11, June 1998 (1998-06), pages 2351-2363, XP002919128 ISSN: 0021-9738 cited in the application	1-18
X	p. 2352, l. 25-30; p. 2358, l. 9-11; p. 2361, l. 42-44	1-3
Y		4-18

Y	US 5 776 718 A (KLAUS JEFFREY LEE ET AL) 7 July 1998 (1998-07-07) cited in the application	1-9
Y	claims; col. 30, l. 26-28; examples 2-7,13-18; table 2	1-6
Y	claims 15-24, fig. 4-8 and 10, table 2	7-9

Y	US 6 030 946 A (RASNICK DAVID ET AL) 29 February 2000 (2000-02-29) cited in the application	1-6, 10-13
Y	claims; fig. 1a-1dd; col. 6, l. 8-10, l. 38-60; formulas 6-8, 18-20A; tables 2 and 3; examples 1-5	1-6
Y	claims 2-21, fig. 1a-1dd, formulas 1-21, examples, table 2	10-13

P,X	WO 01 40204 A (ONO PHARMACEUTICAL CO ;ITAGAKI IORI (JP); OHMOTO KAZUYUKI (JP)) 7 June 2001 (2001-06-07)	1-9
X	claims 1,3,14 and 16; compounds I-4A-22 and I-4B-22	1-6
X	compounds I-4A-3,4,10 and 11 and compounds I-4B-3,4,10 and 11 & EPO and Derwent Abstracts "activity" and "use" parts	7-9

P,X	WO 00 55144 A (MARTELLI ARNOLD J ;SAUNDERS OLIVER L (US); LINK JOHN O (US); ZIPFE) 21 September 2000 (2000-09-21) claims 4, 8, 10, 15-21, 35-37, ex. 9-10,13-14,17-20, table 1	1-6

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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.
P,X	WO 00 51998 A (BOEHRINGER INGELHEIM PHARMA) 8 September 2000 (2000-09-08)	1-3,7-9, 14-18
X	Formula (I) and (Ia) with R6 is substituted alkyl; p. 155, l. 15-31	1-3,7-9
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Y	WO 99 48911 A (REDDY ANDHE VENKAT NARENDER ;ZHOU NIAN (CA); SINGH RAJESHWAR (CA);) 30 September 1999 (1999-09-30) Formula I with R4 is formula (F); claims 1 and 15; p. 2, 4th paragraph; examples 39-40 and 50	1-3, 10-13
Y	WO 99 24460 A (NOVARTIS ERFIND VERWALT GMBH ;ALTMANN EVA (CH); LATTMANN RENE (CH)) 20 May 1999 (1999-05-20) cited in the application Formula I; claims 1-15; p. 22, l. 1-3; examples	1-3, 14-18
Y	WO 00 49008 A (EDWARDS PHILIP NEIL ;LARGE MICHAEL STEWART (GB); OLDFIELD JOHN (GB) 24 August 2000 (2000-08-24) Claim 1; Formula (I); examples 14-108	1-3, 14-18
P,X	WO 01 19796 A (LINK JOHN O ;ZIPFEL SHEILA (US); AXYS PHARM INC (US); GRAUPE MICHA) 22 March 2001 (2001-03-22) Claims; examples; tables 1 and 2; p. 178, l. 27-p. 179, l. 3	1-3, 14-18
P,X	WO 01 09110 A (BOEHRINGER INGELHEIM PHARMA) 8 February 2001 (2001-02-08) Claims; formulas (I) and (Ia); p. 5, l. 19-25; p. 152, l. 8-26	1-3, 14-18

INTERNATIONAL SEARCH REPORT

Ir tional application No.
PCT/US 01/27441

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 1-18 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. [X] Claims Nos.: 1-6 (all in part)
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).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. [X] 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.

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

International Application No. PCT/US 01 /27441

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-6 (all in part)

Present claims 1-18 relate to an extremely large number of possible compounds/methods. Support within the meaning of Article 6 PCT is to be found, however, disclosure within the meaning of Article 5 PCT is lacking (no examples provided for all inventions). In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

The applicant's attention is drawn to the fact that claims, or parts of 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.

International Application No. PCT/US 01 /27441

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. Claims: 1-6

   Sulfonyl-containing cathepsin inhibitors for use in the treatment of allergic conditions

2. Claims: 1-3, 7-9

   Linear cathepsin inhibitors for use in the treatment of allergic conditions

3. Claims: 1-3,10-13

   Ethylenediamine-containing cathepsin inhibitors for use in the treatment of allergic conditions

4. Claims: 1-3, 14-18

   Nitrile-containing cathepsin inhibitors for use in the treatment of allergic conditions

INTERNATIONAL SEARCH REPORT

Information on patent family members

Interl al Application No
PCT/US 01/27441

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Interna l Application No
PCT/US 01/27441

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