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*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*



WO 03/011314 A3

(54) Title: USE OF LHRH-ANTAGONISTS FOR THE IMPROVEMENT OF T-CELL MEDIATED IMMUNITY

(57) Abstract: The invention concerns the use of appropriate doses of an LHRH-antagonist to lower sex hormone levels resulting in a modification of the T-cell population in an individual suffering from a disease that will respond favourably to such modification. A preferred LHRH-antagonist is cetrorelix.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K38/09 A61P31/18 A61P35/00 A61P37/06 A61P25/28
 A61P19/02 A61P11/06 A61P17/00 A61P13/08

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 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, CHEM ABS Data, EMBASE, SCISEARCH, CANCERLIT, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	WO 96 03138 A (HAMPTON ROADS MEDICAL COLLEGE ; ORTHO PHARMA CORP (US)) 8 February 1996 (1996-02-08) page 3, line 20 - page 4, line 1 page 4, line 16 - page 5, line 9 page 5, line 20 - line 25 page 7, line 7 - line 18 page 10, line 4 - line 12 page 11, line 24 - page 12, line 12 page 12, line 23 - page 14, line 2 page 17, line 1 - line 10 claims 1,8,11 --- -/--	1-5,7-9



Further documents are listed in the continuation of box C.



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

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.

Z document member of the same patent family

Date of the actual completion of the international search

7 August 2003

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28/08/2003

Name and mailing address of the ISA

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Cielen, E

INTERNATIONAL SEARCH REPORT

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X	US 5 663 145 A (ENGEL JURGEN ET AL) 2 September 1997 (1997-09-02) column 1, line 15 - line 54 column 2, line 8 - line 9 column 2, line 48 - line 56 column 3, line 5 - line 12 claims 1,3-5,7,13-17,24,25 ---	1-4,7-11
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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	ERB KATHARINA ET AL: "Pituitary and gonadal endocrine effects and pharmacokinetics of the novel luteinizing hormone-releasing hormone antagonist teverelix in healthy men: A first-dose-in-humans study." CLINICAL PHARMACOLOGY & THERAPEUTICS, vol. 67, no. 6, June 2000 (2000-06), pages 660-669, XP008020354 ISSN: 0009-9236 abstract page 660, column 2, paragraph 1 -page 661, column 2, paragraph 2 figures 1-3 page 666, column 2, paragraph 3 - paragraph 4 page 667, column 2, paragraph 3	1-4,7-9
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P,X	DATABASE WPI Week 200219, 30 October 2001 (2001-10-30) Derwent Publications Ltd., London, GB; AN 2002-011076 XP002249847 FURUYA S., SUZUKI N.: "Preventives/remedies for Alzheimer's disease" & WO 01 78780 A (TAKEDA CHEM IND LTD), 30 October 2001 (2001-10-30) abstract	1-4,8,9
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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.
P, X	WO 02 30351 A (BOYD RICHARD) 18 April 2002 (2002-04-18) page 5, line 4 - line 19 page 13, line 16 - line 30 page 15, line 7 - line 17 page 16, line 26 -page 17, line 4 ---	1-3, 5-9
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E	WO 02 102401 A (ZENTARIS AG) 27 December 2002 (2002-12-27) the whole document -----	1-4, 7-11

INTERNATIONAL SEARCH REPORT

International application No.
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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. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-7 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:

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:

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claims 1-11 relate to compounds and their therapeutic applications defined by reference to a desirable characteristic or property, namely "an LHRH antagonist", "that will lower sex hormone levels to a certain extent but not below the castration level", "resulting in modification of the T-cell population", "in an individual suffering from a disease that will respond favourably to such a modification", "resulting in an enhanced immune response to an antigen". The claims cover all compounds and therapeutic applications having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds and therapeutic applications. 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. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compounds by reference to their pharmacological profile and the therapeutic applications by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible.

Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the LHRH antagonists specifically disclosed in claims 7, 10-11 and the diseases specifically mentioned in claims 4 and 6.

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 SEARCH REPORT

Information on patent family members

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