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(54) Title: COVALENTLY BINDING IMAGING PROBES

(57) Abstract: The present invention relates to molecular probes of the formula (I) L1-R1-L-A-X as defined herein that allow for the observation of the catalytic activity of a selected capase, cathepsin, MMP and carboxypeptidase in in vitro assays, in cells or in multicellular organisms, a method for their preparation and the use thereof.



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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2009/000815

A. CLASSIFICATION OF SUBJECT MATTER

INV. C07D277/42 A61K31/495 C07D403/12 C07D413/12

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)

C07D

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, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/036725 A1 (BOGYO MATTHEW S [US] ET AL) 15 February 2007 (2007-02-15) examples 1,2	1-68
Y	WO 2006/063762 A (NOVARTIS AG [CH]; NOVARTIS PHARMA GMBH [AT]; PFEFFER SABINE [DE]; NOBS) 22 June 2006 (2006-06-22) cited in the application examples 1-3	1-19
Y	WO 01/58886 A (NOVARTIS AG [CH]; NOVARTIS ERFIND VERWALT GMBH [AT]; MISSBACH MARTIN []) 16 August 2001 (2001-08-16) page 7; examples 1-12	1-19
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☒ 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
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- *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

17 November 2009

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23/11/2009

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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.
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Y	WO 00/32620 A (MERCK FROSST CANADA INC [CA]; GRIMM ERICH L [CA]; RENAUD JOHANNE [CA];) 8 June 2000 (2000-06-08) cited in the application examples -----	1-19
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Y	WO 2005/105781 A (AVENTIS PHARMA GMBH [DE]; KALLUS CHRISTOPHER [DE]; HEITSCH HOLGER [DE]) 10 November 2005 (2005-11-10) cited in the application examples -----	1-19

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. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 19 is 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 all searchable 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.:

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

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