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(81) Designated States (unless otherwise indicated, for every

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- with international search report (Art. 21(3))
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22 July 2010

(15) Information about Correction:

Previous Correction:

see Notice of 25 March 2010

(54) Title: IMMUNOGENIC AMPHIPATHIC PEPTIDE COMPOSITIONS

(57) Abstract: The present application pertains to a composition, comprising (a) amphipathic peptides; (b) lipids and (c) at least one immunogenic species. Respective compositions are suitable for immunogenic species transport and delivery, for example for systemic or local delivery to a mammal. Also provided are pharmaceutical compositions, comprising respective compositions. Methods of forming the foregoing are also provided.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/050764

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61K9/127 A61K39/39 A61K39/145 A61K39/155 A61K39/385
 A61P31/16
 ADD.
 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)
 A61K A61P

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, EMBASE, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FERNANDO G J P ET AL: "Peptide polymerisation facilitates incorporation into ISCOMs and increases antigen-specific IgG2a production" VACCINE, BUTTERWORTH SCIENTIFIC. GUILDFORD, GB, vol. 13, no. 15, 1 January 1995 (1995-01-01), pages 1460-1467, XP004057459 ISSN: 0264-410X	1,29,30
Y	e.g. page 1461, left-hand column, section 'Peptides synthesized'; page 1463, left-hand column, last paragraph; the whole document ----- -/--	2-28,31,32

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.
"&" document member of the same patent family |
|---|---|

Date of the actual completion of the international search	Date of mailing of the international search report
7 May 2010	25/05/2010

Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer <p style="text-align: center; margin-top: 10px;">Gruber, Andreas</p>
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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/050764

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 2007/145659 A1 (UNIV CALIFORNIA [US]; CHILDREN S HOSPITAL OAKLAND RE [US]; FORTE TRUDY) 21 December 2007 (2007-12-21) e.g. paragraph 118; Example 2; claims 1-16; SEQ ID NO: 2; SEQ ID NO:3; the whole document</p>	1-28, 30-32
A	<p>BARR I G ET AL: "ISCOMs (immunostimulating complexes): the first decade" IMMUNOLOGY AND CELL BIOLOGY, CARLTON, AU, vol. 74, no. 1, 1 February 1996 (1996-02-01), pages 8-25, XP002128950 ISSN: 0818-9641 e.g. page 9, left-hand column, paragraph 2; page 11, left-hand column, paragraph 1; page 11, right-hand column, section starting at paragraph 3; the whole document</p>	1-32
Y	<p>WIMLEY W C ET AL: "Determining the membrane topology of peptides by fluorescence quenching." BIOCHEMISTRY 11 JAN 2000 LNKD-PUBMED:10625491, vol. 39, no. 1, 11 January 2000 (2000-01-11), pages 161-170, XP002581605 ISSN: 0006-2960 e.g. footnote 'Abbreviations' on page 161: Ac-18A2-NH2...; page 169, right-hand column, paragraph 2; the whole document</p>	2-28,31, 32
A	<p>MISHRA V K ET AL: "Interaction of model class A1, class A2, and class Y amphipathic helical peptides with membranes." BIOCHEMISTRY 27 AUG 1996 LNKD-PUBMED:8780526, vol. 35, no. 34, 27 August 1996 (1996-08-27), pages 11210-11220, XP002581606 ISSN: 0006-2960 the whole document</p>	1-32

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/050764

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 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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-32(partially)

A composition, comprising: (a) particles that comprise (i) an amphipathic peptide that comprises less than 30 amino acids and (ii) a lipid and (b) at least one immunogenic species associated with said particles; method; both in which the amphipathic peptide comprises an amino acid sequence selected from the following: SEQ ID NOs 1,3,4,5

2. claims: 1-32(partially)

A composition, comprising: (a) particles that comprise (i) an amphipathic peptide that comprises less than 30 amino acids and (ii) a lipid and (b) at least one immunogenic species associated with said particles; method; both in which the amphipathic peptide comprises the following amino acid sequence : ELLEKWKEALAALAEKLLK (Seq. ID No. 2)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/050764

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007145659	A1	US 2010047163 A1	25-02-2010