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(54) Title: ADJUVANTED VACCINE FORMULATION

(57) Abstract

The present invention provides vaccine formulations comprising T–independent or polysaccharide conjugate vaccines adjuvanted with an immunostimulatory CpG oligonucleotide.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 98/08562

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61K39/39 A61K39/02 A61K39/015 //A61K39/09

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 6 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	R.S. CHU ET AL.: "CpG OLIGODEOXYNUCLEOTIDES ACT AS ADJUVANTS THAT SWITCH ON T HELPER 1 (Th1) IMMUNITY." JOURNAL OF EXPERIMENTAL MEDICINE, vol. 186, no. 10, 17 November 1997, pages 1623-1631, XP002910130 NEW YORK, N.Y., US see page 1624, right-hand column, line 1; figure 1; table 1 see page 1629, right-hand column, paragraph 4 - page 1630, right-hand column, paragraph 1 --- -/--	1-8

[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

"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)

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"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

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"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
21 June 1999	06/07/1999

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	Ryckebosch, A

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP 98/08562

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	A.M. KRIEG ET AL.: "CpG MOTIFS IN BACTERIAL DNA TRIGGER DIRECT B-CELL ACTIVATION." NATURE, vol. 374, 6 April 1995, pages 546-549, XP002106695 LONDON, GB cited in the application see page 548, right-hand column, paragraph 2 see page 549, left-hand column, paragraph 2 ---	1-8
P,X	D.S. THREADGILL ET AL.: "MITOGENIC SYNTHETIC POLYNUCLEOTIDES SUPPRESS THE ANTIBODY RESPONSE TO A BACTERIAL POLYSACCHARIDE." VACCINE, vol. 16, no. 1, January 1998, pages 76-82, XP002911830 GUILDFORD, GB cited in the application see the whole document ---	1-3,7,8
P,X	EP 0 855 184 A (G.B. LIPFORD ET AL.) 29 July 1998 see page 4, line 21 - page 5, line 31; claims; table 4 ---	1,3,7,8
P,A	WO 98 37919 A (UNIVERSITY OF IOWA RESEARCH FOUNDATION) 3 September 1998 see SEQ ID NO:27 see claims; table 4 -----	1-8

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 98/08562

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:
Remark: Although claim 8 is 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:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP 98/08562

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 855184 A	29-07-1998	AU 6293498 A	18-08-1998
		WO 9832462 A	30-07-1998
WO 9837919 A	03-09-1998	AU 6667498 A	18-09-1998