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(54) Title: VACCINES FOR BROAD SPECTRUM PROTECTION AGAINST DISEASES CAUSED BY *NEISSERIA MENINGITIDIS*

(57) Abstract: The present invention generally provides methods and vaccines for the prevention of diseases caused by *Neisseria meningitidis* bacteria, particularly serogroup B strains.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/23842

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 39/095

US CL : 424/249.1

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)

U.S. : 424/92, 424/250.1, 435/252

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
American Society of Microbiology, all electronic journals

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NAESS et al. Human T-Cell Response after Vaccination with the Norwegian Group B Meningococcal Outer Membrane Vesicle Vaccine. Infection & Immunity. 1998, Vol. 66, No. 3, pp. 959-965, see entire document.	1-2, 39
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Y		3-38
X	HANEBERG et al. Intranasal Administration of a Meningococcal Outer Membrane Vesicle Vaccine Induces Persistent Local Mucosal Antibodies and Serum Antibodies with Strong Bactericidal Activity in Humans. Infection & Immunity. 1998, Vol. 66, No. 4, pp. 1334-1341, see entire document.	1-2, 24, 39
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Y		3-38
A	US 5,705,161 A (VAN DER LEY et al.) 06 January 1998.	1-39
X	WEDEGE et al. Immune Response against Major Outer Membrane Antigens of Neisseria meningitidis in Vaccinees and Controls Contracted Meningococcal Disease during the Norwegian Serogroup B Protection Trial. Infection & Immunity. 1998, Vol. 66, No. 7, pp. 3223-3231, see entire document.	1-2, 35, 39
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Y		3-38
A	US 4,601,903 A (FRASCH, C.) 22 July 1986.	1-39

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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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"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	

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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.
X	LEHMANN et al. Human Opsonins Induced during Meningococcal Disease Recognize	1-9
---	Outer Membrane Proteins Por A and Por B. Infection and Immunity. 1999, Vol. 67, No.	-----
Y	5, pp. 2552-2560. see entire document	10-39
X	ROSENQVIST et al. Human Antibody Responses to Meningococcal Outer Membrane	1-9, 16, 35, 38, 39
---	Antigens after Three Doses of the Norwegian Group B Meningococcal Vaccin. Infection &	-----
Y	Immunity. 1995, Vol. 63, No. 12, pp. 4642-4652. see entire document.	10-15, 17-34, 37

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

Biosis, CABA, CAPlus, Embase, Lifesci, Medline, Scisearch, Uspatfull and Japio

Search terms used : Neisseria meningitidis, vaccine, omv, outermebrane, broad spectrum immunity, composition.