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(71) Applicant (for all designated States except US): **PRO-TEIN POTENTIAL LLC** [US/US]; 9640 Medical Center Drive, Rockville, MD 20580 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HOFFMAN, Stephen, L.** [US/US]; 308 Argosy Drive, Gaithersburg, MD 20878 (US). **LIANG, Hong** [US/US]; 852 Bayridge Drive, Gaithersburg, MD 20878 (US). **SIM, Kim, Lee** [US/US]; 308 Argosy Drive, Gaithersburg, Md Maryland 20878 (US).

(74) Agents: **BENZ, William, H.** et al.; Foley & Lardner LLP, 1530 Page Mill Road, Palo Alto, CA 94304-1125 (US).

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(54) Title: DNA SEQUENCES, PEPTIDES, ANTIBODIES AND VACCINES FOR PREVENTION AND TREATMENT OF SARS

(57) Abstract: The invention comprises novel DNA, protein, and peptide sequences and novel vaccines, therapeutics and antibodies created with the novel DNA and peptides to prevent or treat SARS by administration of recombinant proteins, synthetic peptides, recombinant viruses, recombinant bacteria, DNA plasmids, RNA plasmids, or other molecular constructs or delivery systems.



WO 2005/016247 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/20068

A. CLASSIFICATION OF SUBJECT MATTER
IPC: C07H 21/02(2006.01),21/04(2006.01)

USPC: 536/23.1,23.72

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. : 536/23.1,23.72

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 practicable, search terms used)
PUBMED

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BINNS et al. Cloning and sequencing of the gene encoding the spike protein of the coronavirus IBV, Journal of General Virology 1985, Vol. 66, p. 719-726.	50-53
A	Bonavia et al. Identification of a receptor-binding domain of the spike glycoprotein of human coronavirus HCoV-229E. Journal of Virology 2003 February, Vol. 77(4), p. 2530-	50-53 and 55
X	Ruan et al. Comparative full-length genome sequence analysis of 14 SARS coronavirus isolates and common mutations associated with putative origins of infection. Lancet 2003	50-53
---	May, Vol. 361 (9371), p. 1779-1785.	-----
Y		55
Y	Morikawa et al. Reduction in CD4 binding affinity associated with removal of a single glycosylation site in the external glycoprotein of HIV-2.	55

☐ 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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
10 December 2007 (10.12.2007)

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Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (571) 273-3201

Authorized officer
Louise Humphrey, Ph.D.
Telephone No. 571-272-1600

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/20068

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.: 1-49
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:
no CRF was submitted.
3. ☒ Claims Nos.: 54 and 56-60
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 additional fees, this Authority did not invite payment of any 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.