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(71) Applicant (for all designated States except US): **TTI ELLEBEAU, INC.** [JP/JP]; Shinkan Building, 4-8-8 Higashi Shinagawa, Shinagawa-Ku, Tokio 140-0002 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **REED, Steven, G.** [US/US]; 2843 122nd Place Northeast, Bellevue, WA 98005 (US). **COLER, Rhea, N.** [TT/US]; 4250 West Cramer Street, Seattle, WA 98199 (US).

(74) Agents: **ENFIELD, David, L.** et al.; Seed Intellectual Property Law Group PLLC, Suite 5400, 701 Fifth Avenue, Seattle, WA 98104-7064 (US).

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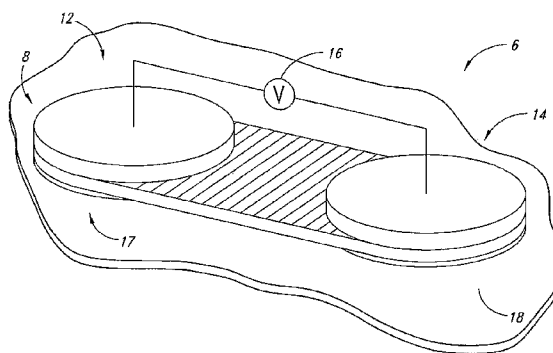
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3 July 2008

(54) Title: DEVICE AND METHOD FOR ENHANCING IMMUNE RESPONSE BY ELECTRICAL STIMULATION



(57) Abstract: A device and a method are provided to enhance an immune response to a vaccine or immunogen by electrical stimulation of a biological interface in conjunction with administration of the vaccine or immunogen.

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2006/049499

## A. CLASSIFICATION OF SUBJECT MATTER

INV. A61N1/30  
ADD. A61K39/00

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)

A61N

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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 92/07618 A (ALZA CORP [US]) 14 May 1992 (1992-05-14) page 1, lines 5-10 page 11, line 25 - page 12, line 22 page 19, line 26 - page 20, line 30	24
X	WO 01/68889 A (MALONE ROBERT W [US]; MALONE JILL G [US]; DRABICK JOSEPH J [US]) 20 September 2001 (2001-09-20) page 1, lines 2-5 page 5, line 9 - page 7, line 6 page 11, line 27 - page 13, line 1 ----- -/--	24, 25

☒ 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

21 May 2007

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Name and mailing address of the ISA/

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

Authorized officer

Gentil, Cédric

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/049499

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TITOMIROV A V ET AL: "In vivo electroporation and stable transformation of skin cells of newborn mice by plasmid DNA." BIOCHIMICA ET BIOPHYSICA ACTA 17 JAN 1991, vol. 1088, no. 1, 17 January 1991 (1991-01-17), pages 131-134, XP002434231 ISSN: 0006-3002 figure 1 page 131, column 2, lines 28-33 -----	24,25
P,X	WO 2006/055729 A (TRANSCUTANEOUS TECHNOLOGIES IN [JP]; MATSUMURA AKIHIKO [JP]; REED STEV) 26 May 2006 (2006-05-26) the whole document -----	24,25
A	PREAT V ET AL: "TOPICAL DELIVERY OF NUCLEIC ACIDS IN THE SKIN" SCIENCES TECHNIQUES ET PRATIQUES STP PHARMA SCIENCES, PARIS, FR, vol. 11, no. 1, 2001, pages 57-68, XP001120878 ISSN: 1157-1489 the whole document -----	24,25

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2006/049499

## Box 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.: **1-23**  
because they relate to subject matter not required to be searched by this Authority, namely:  
**see FURTHER INFORMATION sheet PCT/ISA/210**
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 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 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

International Application No. PCT/US2006 /049499

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Claims Nos.: 1-23

Rule 39.1(iv) PCT - Method for treatment of the human or animal being by therapy.

The method for enhancing an immune response of a mammal to a vaccine or immunogen, as defined in claims 1-23, relates to the curing of diseases or malfunctions of the body in order to restore or maintain health. Therefore claims 1-23 define a method of treatment of the human or animal body by therapy, for which no international search needs to be carried out (Rule 39.1(iv) PCT).

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/049499

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