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(US). ZARRAGA, Isidro Angelo E. [PH/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

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(74) Agents: RINGSRED, Ted K., et al.; 3M Center, Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

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(71) Applicant (for all designated States except US): 3M INNOVATIVE PROPERTIES COMPANY [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

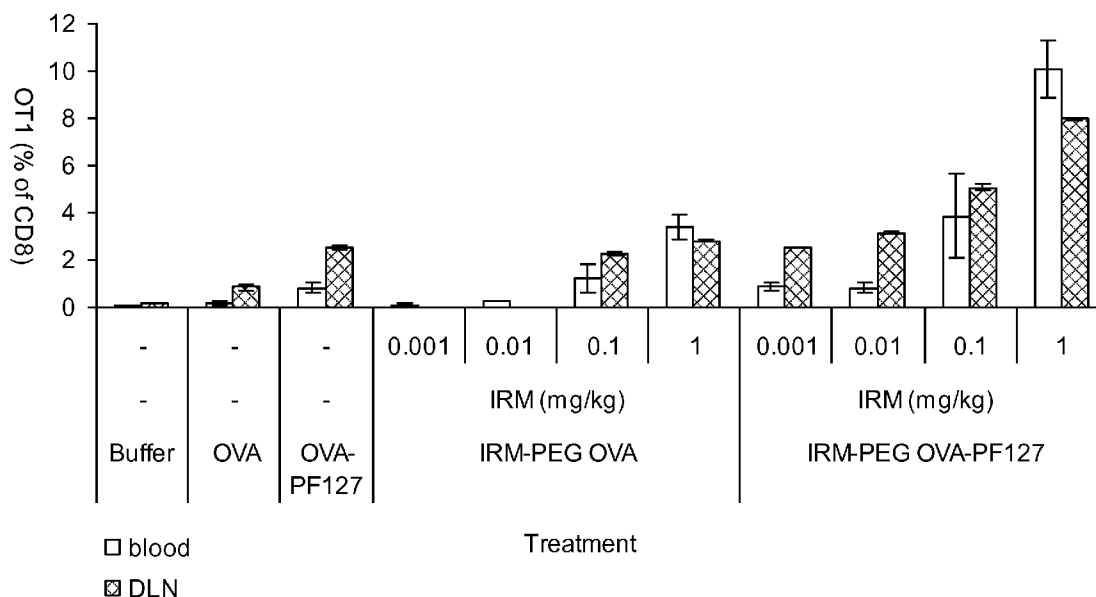
(72) Inventors; and

(75) Inventors/Applicants (for US only): GORSKI, Kevin S. [US/US]; 3955 San Nicolas Court, Newbury Park, California 91320 (US). ORTIZ, Ronnie [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). STOESZ, James D. [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427

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[Continued on next page]

(54) Title: FORMULATION FOR DELIVERY OF IMMUNE RESPONSE MODIFIERS



(57) Abstract: The present invention provides pharmaceutical compositions that include an IRM-PEG complex and an antigen, formulated together in a thermoresponsive gel. In another aspect, the present invention also provides a method of eliciting an antigen-specific immune response in a subject. Generally, the method includes administering to the subject a pharmaceutical composition comprising an IRM-PEG complex and an antigen, formulated together in a thermoresponsive gel, in an amount effective to generate an immune response in the subject against the antigen. In yet another aspect, the present invention also provides a method of treating a condition in a subject. Generally, the method includes administering to the subject a pharmaceutical composition comprising an IRM-PEG complex and an antigen, formulated together in a thermoresponsive gel, in an amount effective to ameliorate at least one symptom or clinical sign of the condition.

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PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/071433

A. CLASSIFICATION OF SUBJECT MATTER
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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

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, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	COESHOTT CLAIRE M ET AL: "Pluronic(R) F127-based systemic vaccine delivery systems" VACCINE, vol. 22, no. 19, 23 June 2004 (2004-06-23), pages 2396-2405, XP004515456 ISSN: 0264-410X abstract page 2396, right-hand column, paragraph 2 - page 2397, right-hand column, paragraph 4 page 2400, left-hand column, last paragraph - page 2401, right-hand column, paragraph 3 page 2402, left-hand column, paragraph 1 page 2402, right-hand column, paragraph 3 - page 2404, left-hand column, paragraph 3 ----- -/--	1-15

☒ 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

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20/02/2008

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

MONTERO LOPEZ, B

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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.
Y	WO 2005/110013 A (3M INNOVATIVE PROPERTIES COMPANY) 24 November 2005 (2005-11-24) cited in the application the whole document -----	1-15
A	WO 96/40731 A (MOUNT SINAI SCHOOL OF MEDICINE OF THE CITY UNIVERSITY OF NEW YORK) 19 December 1996 (1996-12-19) the whole document -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/071433

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:

Although claims 13 and 14 are 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 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 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 allsearchable 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 reportcovers 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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/071433

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 2005110013	A	24-11-2005	AU	2005244260 A1		24-11-2005
			CA	2562283 A1		24-11-2005
			EP	1735010 A2		27-12-2006
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WO 9640731	A	19-12-1996	AU	6255096 A		30-12-1996