Abstract: This invention provides methods for eliciting an immune response in a subject comprising administering to the subject part of a regimen (i) more than one dose of a nucleic acid prime, and (ii) more than one dose of a protein boost composition, wherein each dose of the nucleic acid prime is administered to the subject at a first predefined interval and each dose of the protein boost composition is administered to the subject at a second predefined interval, and wherein the protein boost composition comprises a prophylactically or therapeutically effective dose of (a) a trimeric HIV-1 gp140 protein complex, or (b) a superparamagnetic particle and a trimeric HIV-1 gp140 protein complex so affixed thereto as to permit recognition of the complex by a subject's immune system. The invention also provides methods for prophylactically or therapeutically treating HIV-1 infection in a subject. The invention further provides uses of a nucleic acid prime and a protein boost composition for the manufacture of separate coadministerable medicaments to be administered to a subject.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC: A61K 39/21 (2007.01)

USPC: 424/208.1
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.: 424/208.1

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)
MEDLINE, WEST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>BINLEY et al. A Recombinant Human Immunodeficiency Virus Type 1 Envelope Glycoprotein Complex Stabilized by an Intermolecular Disulfide Bond between the gp120 and gp41 Subunits Is an Antigenic Mimic of the Trimeric Virion-Associated Structure. JOURNAL OF VIROLOGY, January 2000, Vol. 74, No. 2, p. 627-643.</td>
<td>3-5, 28, 52-54, 77</td>
</tr>
<tr>
<td>Y</td>
<td>BINLEY et al. Enhancing the Proteolytic Maturation of Human Immunodeficiency Virus Type 1 Envelope Glycoproteins. JOURNAL OF VIROLOGY, March 2002, Vol. 76, No. 6, p. 2606-2616.</td>
<td>27, 76</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

Date of the actual completion of the international search
14 November 2006 (14.11.2006)

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

Date of mailing of the international search report
27 DEC 2006

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

Form PCT/ISA/210 (second sheet) (April 2005)
INTERNATIONAL SEARCH REPORT

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.:
   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. [x] Claims Nos.: 31,32,80 and 81
   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.

Form PCT/ISA/210 (continuation of first sheet(2)) (April 2005)
### DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
</table>