

In 2005, 13 new trials of preventive AIDS vaccine candidates began in 9 countries around the world. Two of these involved vaccine candidates that entered Phase II trials, an intermediate stage of clinical evaluation. India, China, and Rwanda started their first AIDS vaccine trials last year and South Africa began the country's first Phase II AIDS vaccine trial. Several of these newly initiated trials involved novel vaccination strategies, including prime-boost regimens where two candidates are administered separately to try to improve the immune responses induced. The table below is a list of all ongoing AIDS vaccine trials.

| Ongoing Trials of Preventive AIDS Vaccines  |  |            |   |  |  |  |
|---|--|------------|---|--|--|--|
| Trial No.   | Title  | Start Date | Organizer/Sponsor, Manufacturer                                     | Project Site(s)  | Vaccine Name   | Antigen (Clade)  |
| <b>Phase III (Large trials in high-risk populations; test vaccine efficacy)</b>                           |  |            |   |  |  |  |
| RV 144  | A trial of Aventis Pasteur live recombinant ALVAC-HIV (vCP1521) priming with VaxGen gp120 B/E (AIDSVAX® B/E) boosting  | Oct-03     | WRAIR, Department of Community Disease Control, MOPH, TAVEG, AFRIMS | Thailand (several)   | Prime: ALVAC vCP1521<br>Boost: AIDSVAX B/E   | env (E), gag/pol (B), env (B,E)  |
| <b>Phase II (Mid-sized trials in low- and high-risk populations; test vaccine safety, immunogenicity)</b> |  |            |   |  |  |  |
| IAVI A002   | A placebo-controlled, double-blind trial to evaluate the safety and immunogenicity of tgAAC09, an HIV vaccine containing clade C Gag-PR-ΔRT DNA in an adeno-associated virus (AAV) capsid, administered twice, at three dosage levels and two dosing intervals       | Nov-05     | IAVI, Targeted Genetics   | South Africa (3)<br>Later: Uganda, Zambia  | tgAAC09  | gag, PR, RT (C)  |
| HVTN 204  | A clinical trial to evaluate the safety and immunogenicity of a multiclade HIV-1 DNA plasmid vaccine, VRC-HIVDNA016-00-VP, followed by a multiclade recombinant adenoviral vector HIV-1 vaccine boost, VRC-HIVADV014-00-VP   | Sep-05     | NIAID, VRC, HVTN, Vical, GenVec                                     | USA (7), Brazil (2), South Africa (3)<br>Later: Haiti, Jamaica                     | Prime: VRC-HIVDNA-016-00-VP<br>Boost: VRC-ADV-014-00-VP  | gag, pol, nef (B), env (A,B,C);<br>gag, pol (B), env (A,B,C)                             |
| HVTN 502/Merck 023  | A double-blind, randomized, placebo-controlled, proof-of-concept study to evaluate the safety and efficacy of a three-dose regimen of the Merck adenovirus serotype 5 vaccine (MRKAd5 HIV-1 Gag/Pol/Nef)   | Dec-04     | HVTN, NIAID, Merck  | USA (12), Canada, Peru (2), DR, Haiti, Puerto Rico, Australia, Brazil (2), Jamaica | MRKAd5 HIV-1 Gag/Pol/Nef   | gag, pol, nef (B)  |
| ANRS VAC 18   | A randomized, double-blind vaccine trial to compare the safety and immunogenicity of 3 doses of LIPO-5 versus placebo  | Sep-04     | ANRS, Aventis Pasteur   | France (6)   | LIPO-5   | 5 lipopeptides containing CTL epitopes from Gag, Pol, Nef (B)                            |
| <b>Phase I (Small trials in low-risk populations; test vaccine safety, immunogenicity)</b>                |  |            |   |  |  |  |
| HVTN 064  | A clinical trial to evaluate the safety and immunogenicity of recombinant protein vaccine EP-1043 and the DNA vaccine EP HIV-1090 given alone or in combination  | Jan-06     | HVTN, NIAID, Pharmexa-Epimmune                                      | USA (3), Peru (2)  | EP-1043, EP HIV-1090   | gag, pol, vpr, nef (B); Protein containing T-helper epitopes from env, gag, pol, vpu (B) |
| IAVI D001   | A randomized, placebo-controlled, dose-escalating, double-blinded study to evaluate the safety and immunogenicity of TBC-M4 (modified vaccinia Ankara (MVA) HIV-1 multigenic subtype C) vaccine  | Dec-05     | IAVI, Therion   | India  | TBC-M4   | env, gag, tat-rev, nef-RT (C)  |
| IAVI V001   | A randomized, placebo-controlled, double-blind trial to evaluate the safety and immunogenicity of a multiclade HIV-1 DNA plasmid vaccine followed by recombinant, multiclade HIV-1 adenoviral vector vaccine or the multiclade HIV-1 adenoviral vector vaccine alone | Sep-05     | IAVI, NIAID, VRC  | Rwanda, Kenya  | Prime: VRC-HIVDNA-016-00-VP<br>Boost: VRC-ADV-014-00-VP  | gag, pol, env (B); gag, pol, env (A,B,C)   |
| RV 158  | A double-blind, randomized, dose escalating, placebo-controlled, study of safety and immunogenicity of WRAIR/NIH live recombinant MVA-CMDR (HIV-CM235 env/CM240 gag/pol) administered by intramuscular or intradermal route  | Sep-05     | WRAIR, NIH  | USA<br>Later: Thailand   | MVA-CMDR   | gp160, gag, and pol (integrase-deleted and reverse transcriptase nonfunctional) (A,E)    |
| HVTN 063  | A clinical trial to evaluate the safety and immunogenicity of HIV-1 Gag DNA vaccine alone or with IL-15 DNA, boosted with HIV-1 Gag DNA + IL-15 DNA, HIV CTL multipeptide peptide vaccine, or HIV-1 Gag DNA + IL-12 DNA  | Sep-05     | HVTN, NIAID, Wyeth  | USA (7), Brazil (2)  | Prime: GENEVAX Gag-2692 +/- IL-15 DNA; Boost: Multipeptide CTL Peptide vaccine or GENEVAX Gag-2692 + IL-15 DNA or GENEVAX Gag-2692 + IL-12 DNA | gag (B); env, gag, nef (B) or gag (B)  |
| HVTN 060  | A clinical trial to evaluate the safety and immunogenicity of an HIV-1 Gag DNA vaccine with or without IL-12 DNA adjuvant, boosted with homologous plasmids or with HIV CTL multipeptide peptide vaccine, RC529-SE, plus GM-CSF                                      | Sep-05     | HVTN, NIAID, Wyeth  | USA (3), Thailand  | Prime: GENEVAX Gag-2692 +/- IL-12 DNA adjuvant<br>Boost: DNA plasmids or RC529-SE and GM-CSF   | gag (B); gag (B) or env, gag, nef (B)  |

## Ongoing Trials of Preventive AIDS Vaccines

| Trial No.  | Title  | Start Date | Organizer,Sponsor, Manufacturer | Project Site(s)  | Vaccine Name  | Antigen (Clade)   |
|--|--|------------|---------------------------------|--|---|---|
| <b>Phase I (Small trials in low-risk populations; test vaccine safety, immunogenicity) • Continued from front page</b> |  |            |                                 |  |   |   |
| HVTN 054   | A dose-escalation clinical trial to evaluate the safety and immunogenicity of a multiclade, multivalent recombinant adenoviral vector HIV vaccine, VRC-HIVADV014-00-VP, in participants who have low titers of pre-existing Ad5 neutralizing antibodies    | Apr-05     | HVTN, NIAID, VRC                | USA (4)  | VRC-HIVADV014-00-VP   | <i>gag, pol (B), env (A,B,C)</i>  |
| N/A  | A randomized, placebo-controlled, double-blind trial to evaluate the safety and immunogenicity of a multiclade HIV-1 DNA plasmid vaccine   | Mar-05     | Guangxi CDC                     | China  | DNA vaccine   | DNA plasmids (B,C)  |
| N/A  | Evaluation of the tolerability and safety of a recombinant HIV-1 multi-envelope DNA plasmid vaccine (EnvDNA)   | Feb-05     | St. Jude, NIH                   | USA  | EnvDNA  | <i>env (A,B,C,D,E)</i>  |
| IAVI C002  | A randomized, placebo-controlled, dose-escalating, double-blinded, study to evaluate the safety and immunogenicity of a modified vaccinia Ankara (MVA) expressing HIV-1 clade C env/gag-pol and nef-tat fusion genes (ADMVA) vaccine                       | Jan-05     | IAVI, ADARC                     | USA (2)  | ADMVA   | <i>env/gag-pol, nef-tat (C)</i>   |
| VRC 009 (05-I-0081)  | A clinical trial to evaluate the safety and immunogenicity of a booster dose of a recombinant multiclade HIV-1 adenoviral vector vaccine, VRC-HIVADV014-00-VP, in volunteers who were previously immunized with VRC-HIVDNA009-00-VP in VRC 004 (03-I-0022) | Jan-05     | NIAID, VRC                      | USA  | VRC-HIVADV014-00-VP   | <i>gag/pol Polyprotein, env (A,B,C)</i>   |
| HVTN 057   | A clinical trial to evaluate the safety of a multiclade recombinant adenoviral vector vaccine administered to participants from HVTN 052   | Nov-04     | HVTN, NIAID, VRC                | USA (14)   | VRC-HIVADV014-00-VP   | <i>gag/pol Polyprotein, env (A,B,C)</i>   |
| HVTN 059   | A study to evaluate the safety of and immune response to an alphavirus replicon, HIV-1 subtype C Gag vaccine, AVX101   | Oct-04     | HVTN, NIAID, Alphavax           | USA (6), South Africa, Botswana  | AVX101 (VEE)  | <i>gag (C)</i>  |
| HVTN 055   | A trial to evaluate the safety and immunogenicity of rMVAHIV and rFPVHIV vaccines, alone or in combination   | Sep-04     | HVTN, NIAID, Therion            | USA (4), Brazil (2)  | TBC-M358(MVA); TBC-M335 (MVA); TBC-F357(FPV); TBC-F349(FPV) | <i>env, gag (B); tat, rev, nef, RT (B); env, gag (B); tat, rev, nef, RT (B)</i> |
| N/A  | A clinical trial to assess the safety and immunogenicity of an HIV vaccine based on AVANT's Therapore(R) technology  | Jul-04     | WRAIR, NIAID                    | USA  | LFN-p24   | Anthrax-derived polypeptide LFn gag p24 protein (B)                             |
| HVTN 056   | A clinical trial to evaluate safety and immunogenicity of a CTL multi-epitope peptide vaccine formulated with RC529-SE, with or without GM-CSF   | Apr-04     | HVTN, NIAID, Wyeth              | USA (7)  | Wyeth multiepitope CTL peptide vaccine                      | CTL epitopes from <i>env</i> or <i>gag</i> (B)                                  |
| VRC 008 (05-I-0148)  | A clinical trial of a prime-boost HIV-1 vaccination schedule: multiclade DNA vaccine, VRC-HIVDNA016-00-VP, followed by multiclade adenoviral vector vaccine, VRC-HIVADV014-00-VP   | Apr-04     | NIAID,VRC                       | USA  | Prime: VRC-HIVADV014-00-VP<br>Boost: VRC-HIVDNA016-00-VP    | <i>gag/pol Polyprotein, env (A,B,C)</i>   |
| HVTN 044   | A clinical trial to evaluate safety and immunogenicity of the DNA vaccine VRC-HIVDNA009-00-VP with plasmid cytokine adjuvant VRC-ADJDNA004-IL2-VP  | Dec-03     | HVTN, NIAID, VRC                | USA (7)  | VRC-HIVDNA009-00-VP<br>IL-2/Ig DNA adjuvant                 | <i>gag, pol, nef (B), env (A,B,C)</i>   |
| HVTN 049   | A clinical trial to evaluate safety and immunogenicity of a gag DNA/PLG and env DNA/PLG microparticle vaccines and gp140/MF59 adjuvant vaccine   | Dec-03     | HVTN, NIAID, Chiron             | USA (11)   | Gag and Env DNA/PLG;<br>Oligomeric gp140/SF-162             | <i>gag, env DNA/PLG (B); Oligomeric gp140 (B)</i>                               |
| IAVI A001  | A randomized, placebo-controlled, double-blind dose-escalation trial to evaluate the safety and immunogenicity of tgAAC09, a gag-PR-ΔRT AAV HIV vaccine  | Dec-03     | IAVI, Targeted Genetics         | Belgium (2), Germany (2), India  | tgAAC09   | <i>gag, protease, RT (C)</i>  |
| N/A  | MRKAd5 HIV-1 as a prime, ALVAC vCP205 as a boost   | Sep-03     | Merck, Aventis Pasteur          | USA (17)   | Prime: MRKAd5 HIV-1<br>Boost: ALVAC vCP205                  | <i>gag (B); env, gag, pol (B)</i>   |
| HVTN 050/ Merck 018  | A dose-escalating study of the safety, tolerability, and immunogenicity of a three-dose regimen of the MRKAd5 HIV-1 Gag vaccine  | Jan-03     | HVTN, NIAID, Merck              | USA (11), Malawi, Haiti, Thailand, Brazil (2), Puerto Rico, South Africa, Peru, DR |   | MRKAd5 HIV-1 <i>gag (B)</i>   |
| B011/ RV 138   | A study of Aventis Pasteur live recombinant ALVAC-HIV (vCP205, HIV-1 Env/Gag/Pol) administered subcutaneously via ex vivo transfected, autologous dendritic cells  | Jul-02     | WRAIR                           | USA  | ALVAC-HIV vCP205  | <i>env, gag, pol (B)</i>  |

**ADARC:** Aaron Diamond AIDS Research Center; **AFRIMS:** Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, is a joint U.S.-Royal Thai Army command; **ANRS:** Agence Nationale de Recherche sur le SIDA; **DR:** Dominican Republic; **Guangxi CDC:** Guangxi Centre for Disease Control and Prevention, China; **HVTN:** HIV Vaccine Trials Network; **IAVI:** International AIDS Vaccine Initiative; **MOPH:** Ministry of Public Health Thailand; **NIAID:** US National Institute Allergy and Infectious Diseases; **NIH:** US National Institutes of Health; **St. Jude:** St. Jude Children's Research Hospital; **TAVEG:** Thai AIDS Vaccine Evaluation Group; **VRC:** Vaccine Research Center at the US National Institutes of Health; **WRAIR:** Walter Reed Army Institute of Research

Sources: **IAVI**, **VRC**, **HVTN**, [clinicaltrials.gov](http://clinicaltrials.gov), <http://chi.ucsf.edu/vaccines>, [www.anrs.fr](http://www.anrs.fr)

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