RV534: Phase I, Proof of Concept, Open-Label, Randomized Clinical Trial to Evaluate the Safety and Effects of Using Prime-boost HIVIS DNA and MVA-CMDR Vaccine Regimens with or without Toll-like Receptor 4 Agonist on HIV Reservoirs in Perinatally HIV Infected Children and Youth

Jintanat Ananworanich on behalf of the EPIICAL Team

Co-PI: Paolo Palma
Site Pis: T. Puthanakit (Thailand), S. Barnabas (S. Africa), P. Palma (Italy)

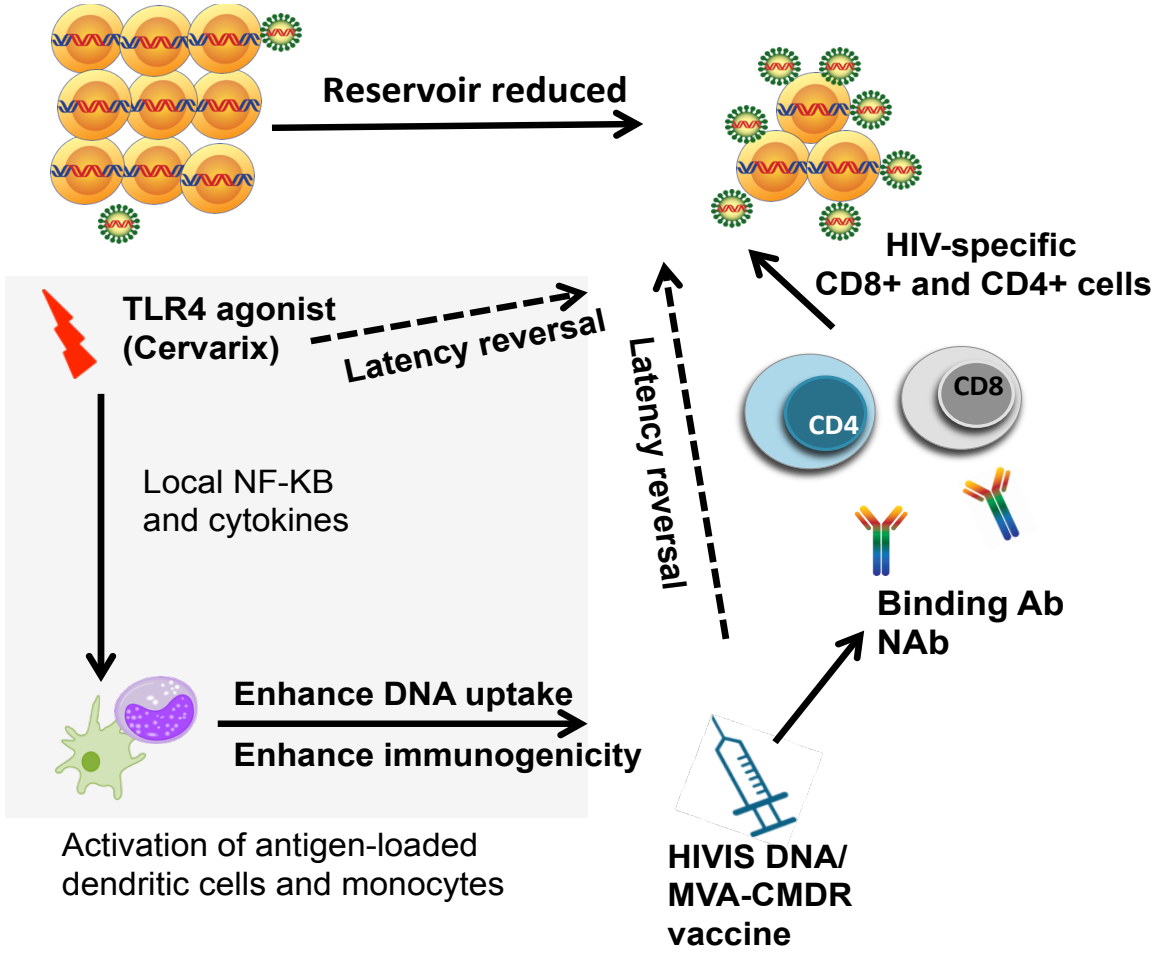
Co-investigators: B. Wahren, D. Persaud, S. Pahwa, M. Cotton, P. Rossi, C. Qiaquinto, N. Cotugno, M. Cameron, S. Aungulruengkitt, R. Gorelick, F. Maldarelli, J. Lifson, P. Blomberg, E. Sandstorm, L. Trautmann, S. Vasan and M. Robb

Funding source: U01AI135941

Introduction

- Immune interventions are needed for reservoir reduction
  - HIVIS DNA and MVA-CMDR induces HIV-specific T cells, binding Ab, NAb and ADCC
  - Cross clade responses
  - Responses to HIVIS DNA may be enhanced by TLR4 agonist adjuvant

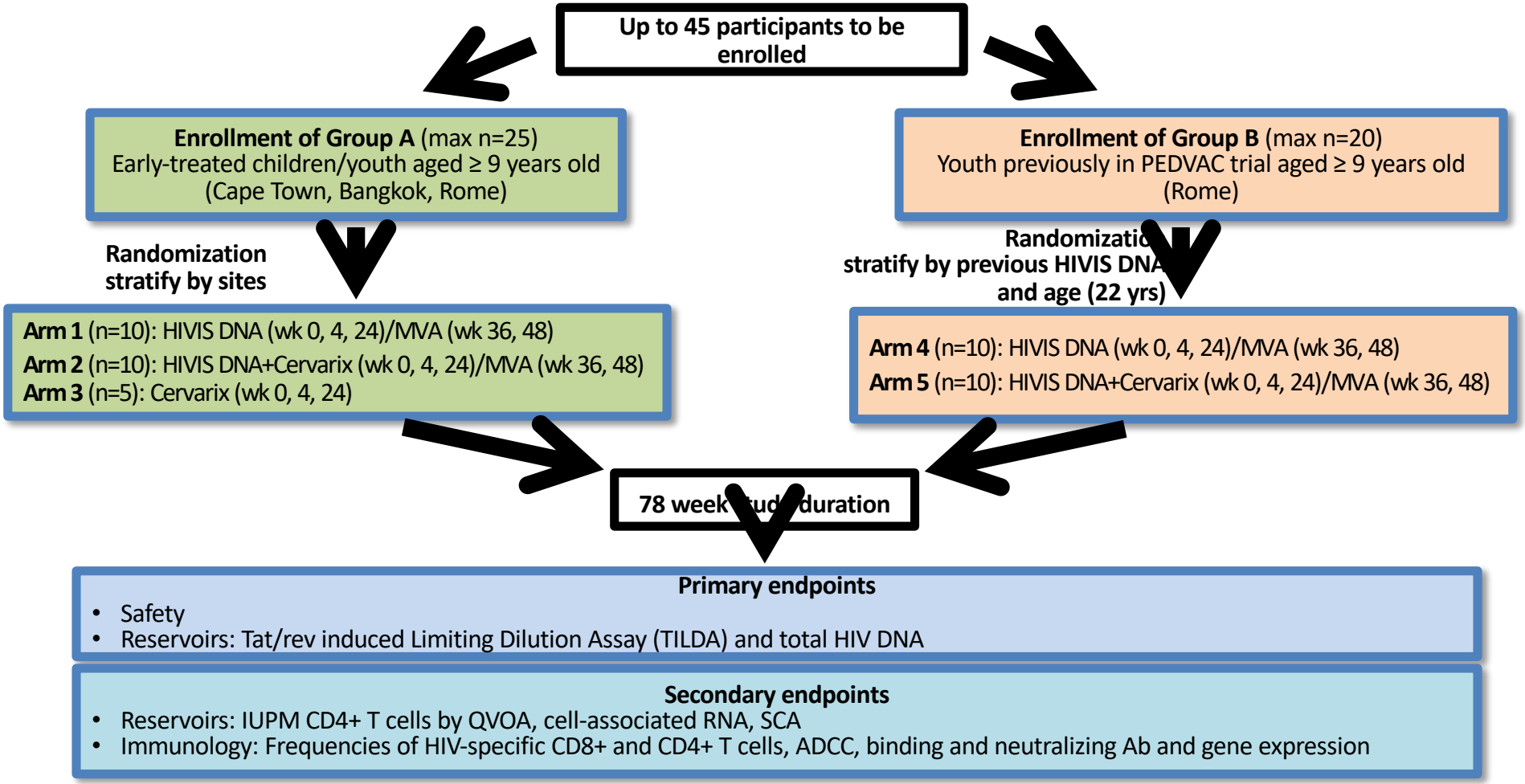
- Unique populations
  - Early treated, long-term virally suppressed children and youth
  - Youth previously vaccinated with HIV vaccine in the PEDVAC study in Rome
    - The late boost effect


Reservoir reduced
HIV-specific
CD8+ and CD4+ cells
TLR4 agonist
(Cervarix)
Latency reversal
Latency reversal
CD4
CD8
Local NF-KB
and cytokines
Binding Ab
NAb
Enhance DNA uptake
Enhance immunogenicity
Activation of antigen-loaded
dendritic cells and monocytes
HIVIS DNA/
MVA-CMDR
vaccine

Products

- Combination HIVIS DNA/MVA-CMDR in > 450 adults with favorable safety profile
- HIVIS DNA
  - 7 plasmids (Env gp160 A, B, C, gag p37 A, B, Rev B, Rtmut B)
- MVA-CMDR
  - Env gp150 E, gag p55 A, Pol (RTmut, PRmut) A
- Licensed HPV vaccine (Cervarix)

Study Design



Timelines

- DAIDS CSRC review
- First participant first visit: March 2018
- Last participant last visit: October 2020

Questions