

Inauguration of

**Swiss Vaccine Research Institute  
Foundation  
(SVRI)**



**Giuseppe Pantaleo**

**5 December 2007**

**Lausanne**

# Swiss Vaccine Research Institute Foundation (SVRI)

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- **Rationale**
- **Institutional Partners**
- **Objectives**
- **Research Plan**
- **Collaborations**
- **Management Structure**
- **Funding**

# Rationale for the Creation of SVRI

- **To promote, coordinate and advance vaccine research in Switzerland**
- **To support the implementation of the Scientific Strategic Plan of the Global HIV Vaccine Enterprise**
- **To create synergy in the research agenda with the Collaboration for AIDS Vaccine Discovery (CAVD) funded by the Bill & Melinda Gates Foundation**

# Swiss Vaccine Research Institute Foundation

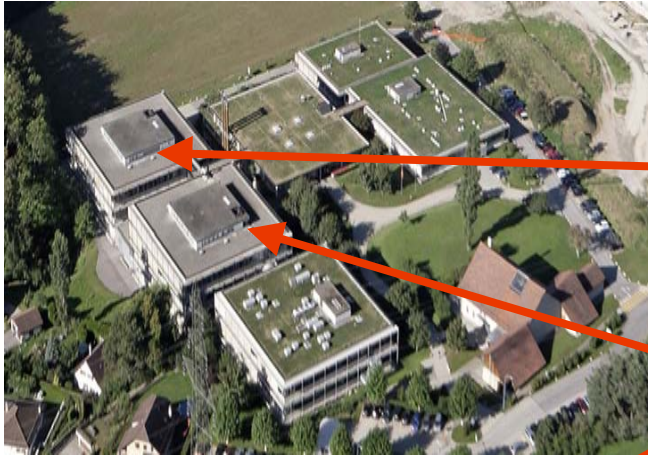
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# Institutional Partners of SVRI

- **Centre Hospitalier Universitaire Vaudois (CHUV) and University of Lausanne (UNIL), Lausanne**
- **Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne**
- **Institute for Research in Biomedicine (IRB), Bellizona**
- **Ludwig Institute for Cancer Research (LICR), Lausanne Branch**

# Geographic Locations



**LICR**  
Cancer Research

**CHUV (Epalinges) & IRB**  
Immunology



**EPFL**  
Molecular Virology  
Vectorology



**CHUV**  
Clinical Research



# Strengths of the Partnership

- **CHUV and LICR has a long-standing tradition in immunology and vaccine research particularly in the HIV, malaria and cancer fields**
- **The IRB has outstanding competences both in innate and adaptive immunity and has developed novel strategies for the analysis of antibody responses and isolation of human monoclonal antibodies**
- **The recent development of the Life Science School at the EPFL has allowed the development of outstanding scientific programs in the microbiology and molecular virology fields**
- **The partnership with EPFL provides to the vaccine program a direct access to engineering, micro and nano technologies potentially relevant in vaccine formulation and delivery**

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# Primary Objectives

- **To create new research groups of young scientists, who will pursue their academic career within the CHUV/UNIL or EPFL network**
- **To develop an immunology laboratory platform for the standardization and for the development of the most modern technologies for the evaluation of vaccine induced immune responses with the rapid transfer in clinical monitoring**
- **To develop a microbiology laboratory platform for the identification and selection of criteria (genetic stability, tropism, distribution, infectiveness) critical for the selection of the most promising microbial vector-based candidate vaccines in pre-clinical development**
- **To create a vaccine research platform with main focus on discovery and early clinical development (phase I/IIa) that ensures both pre-clinical and clinical vaccine development through a coordinated program in fundamental, translational and clinical sciences**
- **To promote and to support innovative research projects**

# Other Objectives

- **To promote coordination, collaboration and cooperation amongst the fundamental, translational and clinical scientists working in vaccine development in the fields of HIV, malaria, TB, influenza and cancer in Switzerland**
- **To train generations of young scientists in the field of vaccinology**
- **To partner with the major international private/public organizations involved in vaccine development**
- **To foster collaboration with industrial partners**
- **To protect intellectual property generated from the fundamental, translational and clinical programs**

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# Research Plan – HIV Vaccine

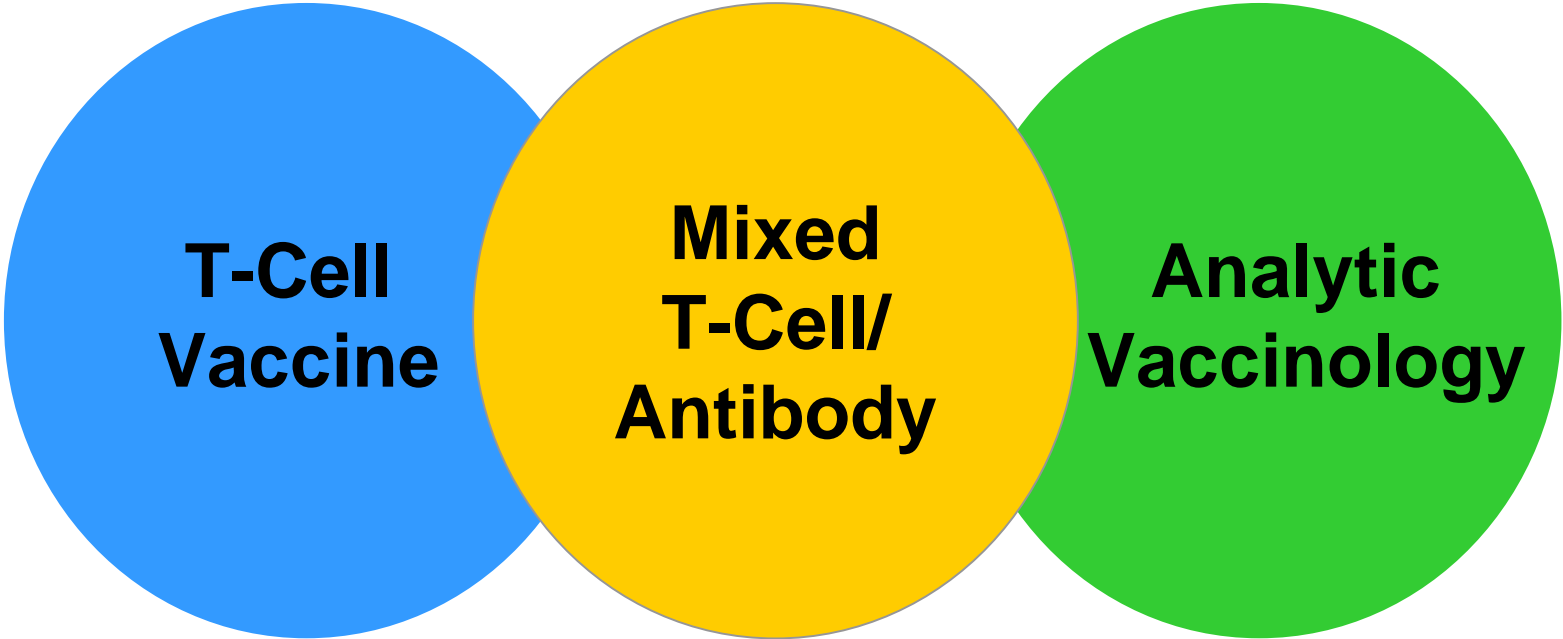
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## **Methods and Approaches:**

- **T-cell vaccine platform**
- **Analytic vaccinology platform**
- **Mixed T-cell/Antibody platform**

# Research Plan – HIV Vaccine

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**T-Cell  
Vaccine**

**Mixed  
T-Cell/  
Antibody**

**Analytic  
Vaccinology**

# Research Plan – Malaria Vaccine

- **Development of antibodies against proteins predicted to be present in the parasite erythrocytic stage using peptide-based strategies**
  - Merozoite Surface Protein – 2 (MSP-2); 2 peptides of 90 aa
  - $\alpha$ -Helical coiled coil protein motif; 10 peptides of 30 aa

# Research Plan – Cancer Vaccine

- **Phase I clinical trials of peptide based cancer vaccines in melanoma patients**
- **Optimization of vaccine adjuvants. A recent key observation is the potent adjuvant activity of TLR-9 agonist emulsified in incomplete Freund's adjuvant at inducing strong tumor reactive CD8 T cell responses**
- **Other tumor targets: head and neck, colorectal carcinoma**

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# Collaborations – National Level

- **Strong collaboration between CHUV (Pantaleo and Calandra's groups) and IRB (Lanzavecchia's group) through the Gates funded PTVDC program**
- **Strong collaboration between Pantaleo and Calandra's groups (Service of Immunology and Infectious Diseases) on innate and adaptive immunity projects**
- **Strong collaboration between Spertini and Corradin's groups (Service of Immunology and Institute of Biochemistry) on malaria immunogens design and clinical development**
- **Ongoing interactions between the EPFL (Jeff Hubble) and the CHUV regarding the development of new formulation/delivery strategies for DNA-based vaccines**

# Collaborations – National Level

- **Other collaborations to be developed:**
  - Swiss Tropical Institute
  - WHO centre in Epalinges (training)
  - Vaccine centre in Geneva (pre-clinical models of neonatal vaccine research and policy maker activities)
  - EuroChavi genetic platform
  - Travel Medicine and Vaccination centre at the outpatient university centre in Lausanne

# Collaborations – International Level

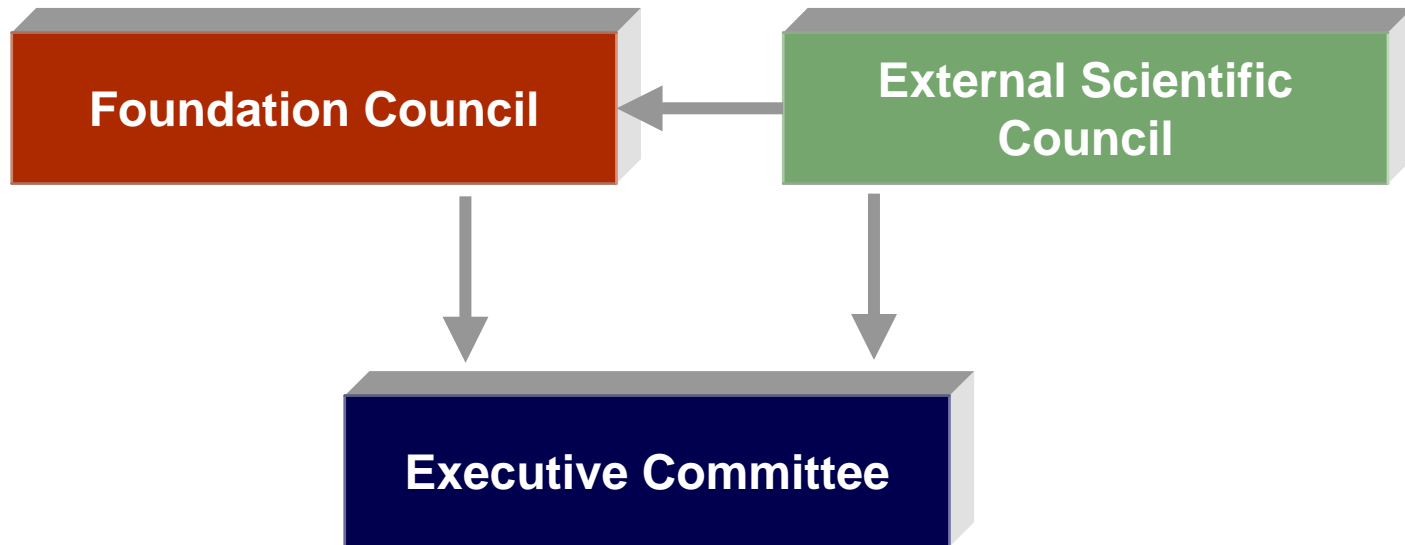
- **National Institute of Allergy and Infectious Diseases, NIH, Bethesda, USA**
- **HIV Vaccine Trial Network (HVTN)**
- **Bill and Melinda Gates Foundation**
- **Global HIV/AIDS Vaccine Enterprise**
- **WHO – Vaccine Program**
- **European Developing Countries Trial Partnership (EDCTP)**
- **Cancer Research Institute**
- **The Wellcome Trust**
- **EuroVacc**
- **International AIDS Vaccine Initiative (IAVI)**
- **European Vaccines and Microbicides Enterprise (Europrise)**
- **European Malaria Vaccine Initiative (EMVI)**
- **European TB Vaccine Network**
- **Center for HIV-AIDS Vaccine Immunology (CHAVI)**

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# Management Structure



# Members

## ■ **Foundation Council**

- B. Decrauzat, President (Director General, CHUV)
- D. Arlettaz, Member (President, Univ. of Lausanne)
- P. Francioli, Member (Dean, Faculty of Biology and Medicine, Lausanne)
- G. Nosedà, Member (President, IRB)
- H.R. MacDonald, Member (Director, LICR)
- J.-J. Paltenghi, Member (EPFL)
- J.-P. Rochat, Member

# Members

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## ■ Executive Committee

- **G. Pantaleo, Executive Director (Chief, Service Immunology & Allergy, CHUV)**
- **D. Trono, Member (Dean, Life Sciences Faculty, EPFL)**
- **H.R. MacDonald, Member (Director, LICR)**
- **A. Lanzavecchia, Member (Scientific Director, IRB)**

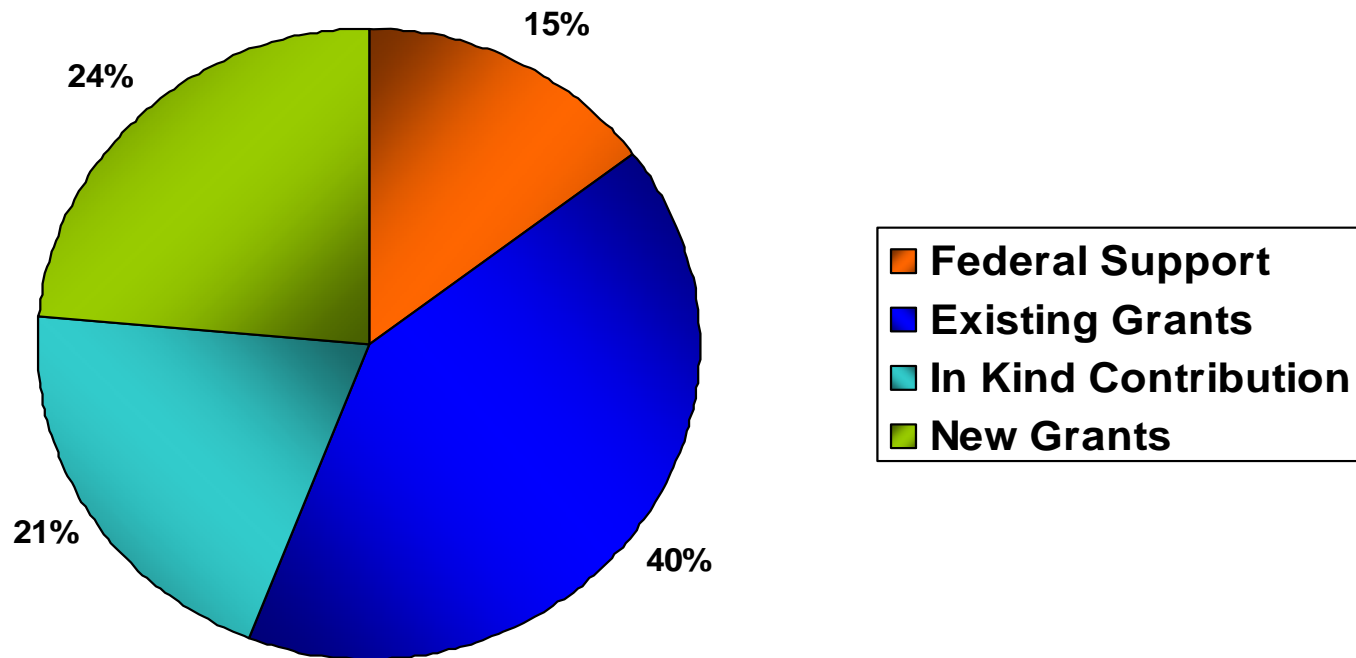
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# SVRI Funding Breakdown

**Estimated Funding for four years: CHF 34 Million**



# Partnership of SVRI

