



Newsletter



NEWS

IRB a founding member of the Swiss Institute for Vaccine Research.

A simple phrase in a press release this summer of the Bill and Melinda Gates foundation announcing major funding of HIV research in Switzerland noted: "The Government of Switzerland has pledged to support the establishment of a vaccine institute in Lausanne that will contribute to the implementation of the Enterprise scientific plan."

That ambitious initiative became a reality **on December 20th** with the official founding of the Swiss Institute for Research in Vaccines, ISVR.



Director Antonio Lanzavecchia

The IRB with its powerful immunology and vaccine program is proud to be one of the four founding members of this important and unique institute. The other members are the CHUV, the Ludwig Institute and the EPFL, all based in Luasanne.

The ISVR will concentrate first on basic, clinical and translational research in the domain of the three principal infectious diseases; HIV/AIDS, Tuberculosis (TB) and Malaria. Attention will also be paid to the threat of pandemic flu and the search for effective

vaccines against Hepatitis C, Dengue Fever and other infectious diseases.

Protective vaccines against a variety of infectious agents represent one of the most significant successes of biomedical research in the 20th century. In spite of this success the most devastating infectious diseases currently facing the world population, HIV/AIDS, TB and Malaria, are lacking an effective vaccine. The ISVR is dedicated to filling this gap.

Recent studies on vaccines against tumors, have fueled optimism in this convergent field of infectious diseases and cancer. More than 20% of cancers are related to infection such as Hepatitis B and C and Human Papiloma. Preventative vaccines have been shown to reduce substantially the incidence of cancer. For this reason the development of a multi-disciplinary vaccine program against both infectious agents and cancer will encourage the most effective use of resources. The ISVR will favor scientific and technological exchange between researchers in the domains of oncology and immunology leading to effective pre-clinical and clinical development.

The ISVR shares its ambitious goal with many international initiatives of academic, political, social, and industrial nature who seek to reduce the devastating effects of infectious diseases and cancer.

The principal objectives of the ISVR are:

- To develop a platform of immunology laboratories open to standardization and for the development of new and innovative technologies to evaluate the immune response induced by vaccines in with the aim of rapidly transferring the most effective candidates to pre-clinical and clinical experiments.
- To develop a platform of microbiological laboratories to identify the criteria (genetic stability, tropism, distribution, infectiousness) essential for the selection of vaccine candidates, based on the most promising microbial vectors in pre-clinical development.
- To develop a platform of vaccine research with the principal objective of discovering and developing early pre-clinical (Phase I/IIa) to ensure the development of vaccines in a

coordinated basic, translational and clinical approach.

- To create 2 to 4 new research groups through the recruitment of promising young scientists to senior track assistant professorships. These recruits will be able to pursue their academic careers at the EPFL or the CHUV/ UNIL.
- To promote the coordination and collaboration of various activities in basic, translational and clinical research in Switzerland dedicated to the goals of the ISVR.
- To favor the exchange of information amongst specialists in the strategic fields of vectors, innate and acquired immunity, adjuvants, and delivery mechanisms as well as clinical fields of epidemiology, global health and clinical trials.
- To train the next generation of vaccinology scientists.
- To maintain relationships with the most important public and private organizations dedicated to the development of vaccines.
- To encourage and facilitate industrial collaborations.
- To protect the intellectual property developed by the ISVR.

Organization of the ISVR.

The founding members of the ISVR are:

- Le Centre Hospitalier Universitaire Vaudois



CHUV will implement a translational research program aimed at the identification of immunological correlates of protection and the development of a platform to evaluate the immune response induced by vaccines. CHUV will also provide infrastructure for clinical trials.

- The Ludwig Institute for Cancer Research



LICR engages leading scientists and clinicians in an integrated effort to understand and confront the global challenge of cancer.

- L'Ecole Polytechnique Fédérale de Lausanne



EPFL will implement a program of basic research in virology, microbiology and the study of vectors. The close proximity of specialists in robotics and micro technology will be leveraged to encourage the development of novel automated immunological testing systems. EPFL will provide its infrastructure in proteomics, micro imaging, biomedical imaging, protein production and high throughput biomedical screening.

- The Institute for Research in Biomedicine, Bellinzona



IRB will implement a program of basic research in immunology with the principal aim of characterizing memory T-cells as well as the study of the mechanisms of memory T-cell response.

Telethon.

TELETHON

Telethon raises funds to help fight genetic disorders. In Switzerland 50 % of the funds raised are distributed for research while the remaining 50 % are dedicated to active support of patients and families. For several years Telethon has funded the research of Maurizio Molinari. This year Fabio Grassi, Giorgio Nosedà and Tom Brooks participated in the fund-raising effort appearing on TSI and Teleticino to underline the fact that donations from Ticino also support important research in Ticino.

Fabio Grassi has submitted a request for funding to Telethon for a promising research project aimed at understanding a devastating genetic disorder called Omenn syndrome.

IRB opens a dialogue with the Middle School science teachers of Canton Ticino.

In an on-going effort to increase awareness of the IRB in Ticino and to encourage young students to consider a career in Science, an initiative was launched by Federica Sallusto to open a dialogue with Middle School Science teachers. On the **13th of December** a group of 26 teachers from all over the Canton participated in a workshop designed to explore ways in which IRB and the Middle Schools can collaborate. Several ideas were tabled including the organization, in conjunction with the International Day of Immunology, of an event. The teachers were especially interested in the idea of collaborating to

develop new innovative teaching materials to help them explain the basic concepts of immunology to their teenage students.

Nobel Laureate lectures at the IRB.



Professor Rolf Martin Zinkernagel

Rolf Martin Zinkernagel is Professor of Experimental Immunology at the University of Zurich. Together with the Australian Peter Doherty he received the 1996 Nobel Prize in Physiology or Medicine for the discovery of how the immune system recognizes virus-infected cells. With this he became the 24th Swiss Nobel Laureate. He received his MD from the University of Basel in 1970 and his PhD from the Australian National University in 1975. In addition to the Nobel Prize, he also won The Albert Lasker Medical Research Award in 1995.

His talk was entitled "Against dogma and against feelings" and was followed by a Journal Club and an informal dinner.

Funding for research in Ticino.



The Consiglio di Stato of Canton Ticino has agreed to invest 15 million Swiss francs in research over the next 4 four to five years. The organizing principle of the investment is to favor three strategic areas; Biotechnology, Nano-technology and Scientific Calculation. The source of the funding is the one time windfall of 70 million Swiss francs from the sale of gold reserves by the Confederation. It is hoped that following this funding period 2007-2012 the Canton will consider including IRB funding as a permanent budget item thus guaranteeing greater stability and confidence, and allowing the IRB to engage in long-term strategic planning.

High School Students visit IRB.

Jonas Pfaff e Marco Tognetti, two senior students from the Locarno High School, as part of their optional Biology course, visited the lab of Federica Sallusto. The students are doing a research project on T lymphocytes and spent the day exploring the topic together

with Greta Guarda e Andrea Reboldi.

"It was a once in a lifetime experience!"



Jonas and Marco observing work in the lab

EVENT CALENDAR

Friday, December the 1st, 2006

Ira Mellman: "Cell Biology of dendritic cells"

Dept. Cell Biology, Ludwig Institute for cancer Research Yale, University School of Medicine, New Haven, USA

Monday, December 4th, 2006

Rolf Zinkernagel: "Against dogma and against feelings"

University Hospital Zürich, Institute of Experimental Immunology, Zürich



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