

# Newsletter

## NEWS

**A vital tool in the study of HIV infection developed at the Institute for Research in Biomedicine, Bellinzona, has been validated in collaboration with the University of Zürich.**



*Dr. Markus Manz*

HIV, the virus that causes AIDS, only infects humans. This human-specificity of HIV is a major obstacle to the study of potential treatments or vaccines, essentially limiting tests to either in vitro laboratory experiments or actual clinical trials. The missing link between the laboratory and the clinic has been a pre-clinical animal model in which to verify vaccines or therapies before tests are run on human patients.

Dr. Markus Manz of the Institute for Research in Bellinzona has developed a method to overcome this obstacle by providing, for the first time, an accurate animal model for the study of human specific viruses in a controlled pre-clinical setting.

The importance of this method to HIV research has now been validated by a study performed in collaboration with the laboratory of Dr. Roberto Speck, Division of Infectious Diseases at the University of Zürich, and published today in the Proceedings of the National Academy of Sciences.

Together with Dr. Stefan Baenziger this work shows how the new model can be used as an effective pre-clinical test for HIV. The Swiss National Fund supported the project. The University of Zurich will continue with this work on HIV in collaboration with the University Hospital of Zurich.

A project to further improve the model, especially with respect to the evaluation of vaccine candidates is being carried out by the group of Dr. Manz in Bellinzona and the group of Prof. Dr. Richard Flavel of Yale University, in the US. Entitled "A Mouse Model to Evaluate Live Attenuated Vaccine Candidates" the project is one of 14 Grand Challenges in Global Health funded by the Bill and Melinda Gates Foundation.

How it works: Immune deficient mice are injected with human blood forming stem cells leading to the development of a human immune system in the mouse including the formation of lymph nodes. These mice are then prone to human-specific viruses that target the immune system such as HIV, resembling the infection in humans.

### Visit from a Delegation of Cuban Scientists.

In February of this year the Secretary of State for Research, Charles Kleiber visited Cuba with representatives of about ten Swiss Universities. This visit allowed interaction between the respective scientific communities especially with respect to research. The level of Research in Cuba has been recognized even by the US government which, in an exception to the economic blockade, has recently allowed an American Biotechnology firm to acquire a license to produce an anti-tumor vaccine discovered at a Cuban Research Institute.

On the **16th of October** a Delegation of Cuban Scientists embarked on visit to Switzerland to solidify the relationships formed in Cuba.

After their arrival at Kloten, the ten scientists traveled to Ticino. Hosted by the IOSI and the IRB they were treated to scientific presentations and a tour of the facilities.

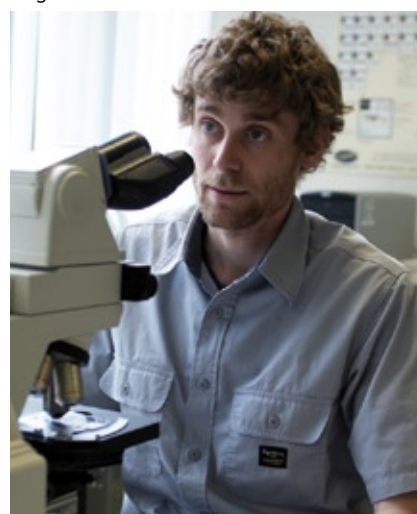


*The Delegation of Cuban Scientists*

Following a lunch in Castelgrande awash in early autumn sun, the Cuban delegation left for Basel, Lausanne, Bern and Zurich to continue their scientific tour of Swiss institutes.

### Daniel Venetz has been awarded a Cloëtta Foundation fellowship for three years to continue his work in the lab of Mariagrazia Uguccioni.

The Fellowship is specifically dedicated to MD/PhD students who have shown excellence during their university studies and have presented to the Swiss National Foundation for Science a project for completing their education in basic research.



*Daniel Venetz*

Daniel's project is focused on chemokine expression and activities in tumours. Recent studies of Uguccioni's group shed new light on the chemokines that had

previously been reported to exclusively mediate lymphocyte homing into secondary lymphoid organs: CXCL13 and CCL21. Both chemokines can be induced upon inflammation and in B cell derived tumours. The role played by chemokines in the development of lymphomas in extranodal sites is addressed by Daniel's project that will, in parallel, dissect the chemokine expression in human lymphoid organs to elucidate the mechanisms of tumour development and growing. The study aims to determine the organ-specific molecular profiles of lymphomas arising at different sites, with respect to the expression of chemokines and of chemokine receptors. This study will be based on the knowledge acquired in previous studies of chemokine expression in gastric and central nervous system lymphomas.

#### EVENT CALENDAR

Tuesday, October 10th, 2006

**Anna Mondino: "The making and breaking of tumor-specific T cell memory"**

Biotechnology School, Vita-Salute San Raffaele, Italy

Friday, October 13th, 2006

**Ian Colditz: "Regulation of neutrophil migration through inflammatory lesions"**

CISRO Livestock Industries, Armidale, Australia

Thursday, October 23th, 2006

**Anna Villa: "RAG mutations and severe combined immunodeficiency"**

CNR-ITB, Segrate, Italy

Friday, October 27th, 2006

**Tim Sparwasser: "Regulating the regulators: in vivo targeting of DC subsets and tregs using BAC technology"**

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*Special thanks to  
The Helmut Horten Foundation*