SWISS BRIDGE AWARD 2006 – WINNERS

Prof. Dr. **Matthias Egger** of the Institute for Social and Preventive Medicine (ISPM) at the University of Bern receives CHF 250,000.– for the project:

HIV-related lymphomas in the era of Highly Active Antiretroviral Therapy.
The chances of getting cancer of the lymph glands is increased 165-fold in AIDS patients compared with the non-affected population. Indeed "lymphomas", as these cancers are called, are included by some experts as part of the AIDS illness. The gratifying success of HAART (Highly Active Antiretroviral Therapy) against HIV associated morbidity and mortality, has not had much impact on the incidence of the cancer complication. This European study is massive and probably the biggest available, and thus will define exactly what the scale of the problem is, and point to ways of controlling it better.

Dr. **Manel Esteller** of the Cancer Epigenetics Laboratory at the Spanish National Cancer Centre (CNIO) in Madrid receives CHF 150,000.– for the project:

Characterization of the DNA Methylation Patterns of Double Strand DNA Viruses Associated with Human Cancer: Clinical and Epidemiological Impact.
Certain viruses have been known to play a part in causing cancer, thought to be due to interference with the cell's DNA. DNA is the stuff of genes, and is damaged in many cancers. But recently the chemical substances in intimate contact with DNA may be altered in cancers. This important project looks closely at virus-induced cancers in culture in test tubes to study how viruses have adapted the infected cells to escape rejection and killing by the cells, and eventually have helped to turn the cells cancerous. The hypothesis is that part of the trickery of the virus is in changing the "epigenetics" of the target cells (see below).

Dr. **Zdenko Herceg** of the Molecular Carcionogenesis & Biomarkers Group at the International Agency for Research on Cancer (IARC) in Lyon receives CHF 100,000.– for the project:

Role of epigenetic changes induced by environmental and dietary factors in human cancer.
The unraveling of the Human Genome, i.e. the identification of each human gene was a massive achievement, because it opened the way to link genes with ill health. In cancer many such genes have surfaced, but surprisingly, gaps exist in explanation of causation of cancer by implicating genes alone. It would appear that defects in the chemical structures which surround the genes may be as much to blame in certain cancers as direct damage to genes themselves. The above project from Spain examines this in depth in cancers associated with viruses. Epigenetics as the name suggests is the study of those molecules which cushion genetic material, and this European study led from IARC in France will look at links between known cancer-causing triggers like cigarettes and the "epigenetic" changes in cancer tissues. These last have already been collected from patients suffering from cancers of the lung, head, neck and oesophagus.

Please do not hesitate to request more information on the projects supported from info@swissbridge.ch.