



SystemsX.ch
The Swiss Initiative in Systems Biology

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Press release

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World class in Systems Biology is the aim

Switzerland launches its largest research initiative ever in order to learn the language of life.

Switzerland wants to become a world leader in Systems Biology. About 400 million Swiss Francs will be invested into in this emerging field. The research initiative SystemsX.ch is at the core of this effort and coordinates the interests of eight universities, three research institutions and industry. An investment of this magnitude into one research field is unprecedented in Switzerland.

After decoding the genomes of various plants, animals and microorganisms, Systems Biology is regarded as the next major step that will drive biological research. Current technologies allow biologists to spell all the letters in the genetic material, however, these technologies offer very little in the way of deciphering this complex code. Pharma- and biotechnology companies hope that Systems Biology will give them new tools for use in drug discovery and development.

Systems Biology is expensive, and requires the development and maintenance of elaborate technological platforms. Such platforms could not be financed by a single university or research institution individually. In addition good Systems Biology relies on the successful interaction of scientists from multiple disciplines including Biology, Chemistry, Mathematics, Computer Science, and Engineering.

After careful consideration of all of these issues, Swiss universities and research institutes decided to pool their knowledge and resources in a single research consortium called SystemsX.ch. The Universities of Basle, Berne, Lausanne, Fribourg, Geneva, and Zurich, the Paul Scherrer Institute, Friedrich Miescher Institute, and the Swiss Institute for Bioinformatics teamed up with the two Federal Institutes of Technology in Zurich and Lausanne to support this research initiative. At a press conference in Berne, the State Secretary for Education and Research Charles Kleiber stated that «A cooperation of this magnitude among the universities is of unparalleled character, and on many levels embodies the way projects should be tackled and coordinated among Swiss institutes in the future».

Financing research with federal, university, and industry funds

In its 2007 fall session, the Swiss parliament allocated 200 million Swiss Francs (CHF) for research in the area of Systems Biology from 2008-2011 (subject to yearly budget decisions). CHF 100 million will flow into Systems Biology research projects at the universities and other significant Swiss research institutions, which are partners of

SystemsX.ch. However, monies will only be distributed to those partner institutions if they commit an equal amount to the research project in question. This means the federal government is requiring that an additional CHF 100 million come from the individual partners of SystemsX.ch. On top of that, parliament approved a CHF 100 million budget for the continued development of the Systems Biology relevant ETH Zurich Department for Biosystems Science and Engineering located in Basle.

Assuming universities and higher education institutions continue to apply for and obtain other grants to support their research activities (i.e. via the Swiss National Science Foundation and EU grants) and keep up their cooperation with industry partners, we can expect about CHF 400 million to flow into Systems Biology research from 2008-2011. A financial commitment of this scale for a specified research area is unprecedented in Switzerland. Concurrently, SystemsX.ch represents the largest thematically defined research initiative in recent (Swiss) history.

In the international arena, this effort is by no means unsubstantial. Since 2004 Great Britain has invested £88 million (CHF 214 million) into Systems Biology research. In Germany the federal government plans to spend about € 37 million per year (CHF 62 million) on Systems Biology from 2008-2011. This leaves the Swiss investment at the top of its class when spending is considered as an amount per population size.

Application deadline is end of 2007

All applications must be submitted by the end of the year. So far, the management office counts eighteen project ideas with intension of becoming research projects funded by SystemsX.ch. Projects in Zurich, Basle, and Lausanne, which are currently still being funded with monies from previous Systems Biology grants from the fusion partners of SystemsX.ch must reapply for funding under the new scheme. Ralph Eichler, Chairman of the Board of Directors for SystemX.ch and ETH Zurich president says, «The scope and volume of individual projects should be in the range of CHF 1-5 million per year». In addition to these rather large 'Research Technology and Development' (RTD) projects, SystemsX.ch will fund about 40 «Interdisciplinary PhD» projects (IPhD) and 40 «Interdisciplinary Pilot Projects» (IPP). The IPPs should help seed interdisciplinary interactions among researchers from various academic backgrounds and institutions by allowing them to collaborate on an exciting and high risk project for a year.

The Swiss National Science Foundation (SNSF) has been mandated to supervise the scientific quality of SystemsX.ch projects. A special SNSF panel has been created for the evaluation, and periodical review of all the applications for RTD and IPhD projects. In addition to its six Swiss National Science Council members, this panel will contain internationally recognized experts from various disciplines crucial to Systems Biology. It is the first time the SNSF has agreed to be responsible for the quality control of a large research initiative, which it is not directly funding. This represents another important novelty being launched under the SystemsX.ch initiative.



All strategic and operational business decisions and transaction, including the administration and distribution of the SNSF-approved grants, will be left to SystemsX.ch. SystemsX.ch is operationally controlled by a Scientific Executive Board which is chaired by ETH Zurich Prof. Ruedi Aebersold. The Board of Directors (BoD) functions as the strategic organ of the organization. The BoD is made up of all the presidents, rectors, and directors of the SystemsX.ch member institutions plus two guests to represent the interests of industry.

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