



SystemsX

The Swiss Initiative in Systems Biology

Newsletter #5
February 16th
2006

SystemsX on new juridical ground

Zürich/Basel. thm. SystemsX resides on new juridical ground. The SystemsX founder universities ETH Zürich, University of Basel and University of Zürich signed a partnership agreement which defines SystemsX as simple partnership (einfache Gesellschaft). The three partners are represented with equal rights in the partners meeting (former board of directors) of SystemsX. Two experts of Novartis and Roche attend these meetings as permanent guests. The new partnership agreement allows the entry of further universities or scientific institutions to SystemsX. A number of Swiss universities have already signalled interest in joining. The agreement regulates also the status of the Scientific Nodes and Glue Projects of SystemsX. Scientific Nodes remain autonomous entities of one of the SystemsX partner universities. Intellectual property produced at a Scientific Node belongs to the University which carries the Node. Glue Projects, the technology platforms of SystemsX, are supported and financed jointly by all SystemsX partners, hence, intellectual property will be shared.

More information in the press release (in German):

http://www.systemsx.ch/news/news_1.html

Fourth Basel Computational Biology Conference



Basel. The registration deadline for the fourth Basel Computational Biology Conference on March 16 and 17, 2006 is approaching. The conference takes place at the Biozentrum in Basel. Please register before February 20 to reserve your place at the symposium. For program details, abstracts, and registration please visit our website at:

<http://www.bc2.ch/2006/>

Keynote lectures by:

Minoru Kanehisa (Kyoto University, Japan)
Martin Vingron (MPI für Molekulare Genetik, Berlin)

Workshop finds: Two computational Projects are needed

SystemsX's demands in informatics are best met by a pair of computational projects. This is the result of a workshop held in Basel at the beginning of the year. One already planned Glue Project should focus on information technology infrastructure, management, storage, and sharing of the data. The other computing project should aim at the development of methods for computational analysis and modelling.

Basel. Computational approaches are an important part of Systems Biology, ranging from the management and integration of large datasets, the development of new computational analysis and modelling methods. It is therefore one of the priorities of SystemsX to establish one or several projects in computational biology and data management. For this purpose, Rudolf Aebersold (ETH Zürich) and Manuel Peitsch (Novartis, Basel) organized a one-day workshop attended by representatives of the Universities of Basel and Zürich, the ETH Zürich, Novartis, the Swiss National Supercomputing Center, and the Swiss Institute of Bioinformatics. The workshop was held on January 10, 2006, in Basel and hosted by the Biozentrum.

The first half of the day focused on the different kinds of data that are being generated by researchers within the SystemsX initiative and the challenges associated with the management, integration, and analysis of these data. Presentations were given by researchers from ETH Zürich and the University of Basel on proteomics, transcriptomics, metabolomics, and imaging data.

During the second half of the day the focus shifted to areas of computational expertise represented at different institutions across Switzerland. Presentations were given by representatives of the Universities of Basel and Zürich, the ETH Zürich, Novartis, and the Swiss Institute of Bioinformatics.

The discussions following these presentations made it clear that one of the main challenges that is to be addressed is making sure that the large datasets produced within SystemsX are processed and stored in such a way that they can be easily shared between research groups, and that they are standardized in formats that allow for downstream analysis using computational methods. A second major challenge is how to coordinate the interaction between experimental researchers that produce the data, researchers that develop computational analysis and modelling methods, and those responsible for managing the data. It was agreed that these goals can probably be best achieved by a pair of computational projects, one focused on information technology infrastructure, management, storage, and sharing of the data (already planned), and the other focused on the development of methods for computational analysis and modelling. A consensus emerged that it is extremely important to have a good coordination between the IT glue project, the computational analysis project, and the scientific nodes in which much of the data will be produced. This could be accomplished by focusing the efforts of the IT project and the computational analysis project around concrete collaborative projects between the experimental and computational researchers.

The development of a general information technology glue project has already gotten underway. As for the computational analysis project, it was decided that Erik van Nimwegen (University of Basel) and Jörg Stelling (ETH Zürich) will take responsibility for organizing this project. This collaborative effort will thus combine the expertise of computational and mathematical researches from both Basel and Zürich.

Eric van Nimwegen

First ETH Symposium on Synthetic Biology

Zürich. thm. This is the third announcement of the first ETH Symposium on Synthetic Biology on February, 24th.2006. It is organized by ETH Professors Sven Panke and Jörg Stelling, and presents some cracks in the emerging field as well as a critical view on risks and ethical dimensions. For further information check the site www.syntheticbiology.ethz.ch (from February 20th).

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zürich

«What I cannot create, I do not understand»
- Hermann Weyl

**FIRST
ETH SYMPOSIUM
ON SYNTHETIC BIOLOGY**
Synthetic Biology and the place for engineering in biology
FRIDAY, 24 FEBRUARY 2006, 14.00 - 18.00, ETH MAIN BUILDING, HG D1.1

PROGRAM

1. Engineering foundations for synthetic biology Drew Endy, MIT Synthetic Biology Group, USA	2. Engineering multicellular systems Ron Weiss, Princeton University, USA	3. Tools for simulating and designing networks Luis Serrano, EMBL, Heidelberg, Germany
4. Counting to infinity Class Cloning Club iGEM05, ETH Zurich, Switzerland	5. Multicellularity in Microorganisms University of Cambridge iGEM05 team	6. Risks and the ethical dimension of synthetic biology Peter Schaber, ETH-Zentrum der Universität Zürich, Switzerland

MAVT
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ETH ZÜRICH

Everybody is invited, no charges
The symposium is free of charge.

«FIRST ETH SYMPOSIUM ON SYNTHETIC BIOLOGY – SYNTHETIC BIOLOGY AND THE PLACE FOR ENGINEERING IN BIOLOGY»

Friday, 24. February 2006, ETH main building, HG D1.1., from 14.00-18.00

«Engineering foundations for synthetic biology»;
Drew Endy, MIT Synthetic Biology Group
«Counting to infinity»;
ETH iGEM2005 team
«Engineering multicellular systems»;
Ron Weiss, Princeton University

Coffee Break

«Metabolites to morphogens»;
Cambridge University iGEM2005 team
«Tools for simulating and designing networks»;
Luis Serrano, EMBL, Heidelberg
«Risks and the ethical dimension of synthetic biology»;
Peter Schaber, University of Zurich
The symposium is free of charge.

Centre for Integrative Systems Biology at Imperial College



London. thm. The Imperial College in London is building up a Centre for Integrative Systems Biology (CISBIC). The centre, which is scheduled to start in the next few months, shall serve as a nucleus for promotion of Systems Biology research groups across Imperial College and the wider academic and industrial community, said Prof. Douglas Young, founding Director of the centre at a recent visit to ETH Zürich. It is aimed to build the Centre around the biological theme of host-pathogen interactions in plants and animals, the so-called exemplar project. All of the post-docs involved in the exemplar project - in the first phase, a team of three biologists, six mathematical/computer modellers, and one statistical modeller - will share the same lab and office space on one floor (about 700 m²) of the Flowers Building on the South Kensington campus of Imperial College. There are funds to recruit a new chair in Systems Biology. Ideally, this person will also be the new director of CISBIC. The CISBIC has five core facilities in glycoproteomics, metabonomics, cell imaging, transcriptomics, and data integration, which are located in adjacent buildings. The CISBIC is projected for five years and can draw on a budget of 7.54 m £ (17.15 m CHF). One Million is invested by Imperial College, 6.54 Million stem from the Biotechnology and Biological Sciences Research Council (BBSRC) and the Engineering and Physical Sciences Research Council (EPSRC). These institutions plan to fund UK Systems Biology in the next years with a total of approximately 40 Million £ (90 Million CHF).

More information: <http://www.doc.ic.ac.uk/bioinformatics/CISB/>

Munich Systems Biology Forum

Munich. thm. Universities and research institutions in and around Munich created the «Munich Systems Biology Forum» (MSBF). It currently comprises groups from Ludwig-Maximilians-Universität, Technische Universität München, the GSF-Forschungszentrum für Umwelt und Gesundheit, the Max-Planck-Institute for Biochemistry, and Industry. The objective of MSBF is to initiate an open forum for information and enable contact and collaboration between teams interested in systems biology research, applications and education. Activities are a two-weekly seminar series and an annual Systems Biology workshop. A summer school this year is devoted to NanoScience and Systems Biology.

More information: <http://www.msbf.mpg.de/>

Particulars



Prof. Heini Murer is the new Prorector Research of University of Zürich. He will take office on March 1st, 2006 and will also be a member of SystemsX's partners meeting. He follows Prof. Alexander Borbély who served as Prorector Research for six years.

Remarks by the Editor

This is the fifth newsletter about SystemsX, the Swiss Initiative in Systems Biology. This newsletter appears sporadically to inform about what is going on in and around SystemsX. The circle of addressees is kept wide. Do not hesitate to spread the newsletter further. Anyone who wishes to be put on the list of addressees can subscribe by sending an email to thomas.mueller@systemsx.ch. By the same way anyone who does not want to receive the newsletter can be put off the list.

The aim of these newsletters is to help building a Systems Biology research community in Switzerland. Don't hesitate to send me your opinion and suggestions for enhancements on this newsletter.

Please inform me about any open positions in SystemsX.

If you read or hear any news which might be of interest for all SystemsX affiliates, please, let me know.

And especially for the SystemsX scientists: **Please, don't forget...
...to inform me about any of your upcoming papers in Systems Biology.**

Regards
Thomas Müller



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