

## Networking Systems Biology

workshops in Berlin 12-14 May 2014

as satellites of the conference

### Systems Biology of Mammalian Cells (SBMC)

<http://www.sbmc2014.de/programme/scientific-programme/>

Organizers: ERASysAPP – ERA-net for Systems Biology Applications (<http://www.erasysapp.eu/>) in collaboration with ISBE -Infrastructure Systems Biology Europe (<http://project.isbe.eu/>)-WP13.

Location: [Abion Hotel Berlin](#), Alt Moabit 99, 10559, Berlin, Germany.

#### Workshops (invitation-only):

- 14. May (Wednesday) at 18.00 - 15. May (Thursday) at 17.30: Workshop **“Networking Systems Biology: academia-industry”**
- 15. May (Thursday) at 18.00 - 16. May (Friday) at 17.30: Workshop **“Networking Systems Biology: research centres”**

Estimated number of participants: up to 40

#### Outline of the programme of the **Workshop “Networking academia-industry”**

Chair of the workshop: Dr Hans V. Westerhoff (Universities of Amsterdam (NL) and Manchester (UK))

##### **14.05.2014 – Workshop “Networking Systems Biology: academia-industry”, Day 1**

17:30 Registration

18:00 Introductory lecture of workshop by **Dr Adriano Henney (Virtual Liver Network, Germany)**  
workshop 1 during Networking dinner (finger food)

##### **15.05.2014 - Continuation of Workshop “Networking academia-industry”, Day 2**

8:30 Morning coffee/tea

9:00 Short introduction of participants about current SB activities and future needs (3 min & 3 slides each)

10:30 Coffee break

11:00 ISBE’s networking concept (Hans V. Westerhoff)

*Annotation:* The structure proposed by ISBE (Infrastructure for Systems Biology Europe) contains three types of centres, with superefficient connections between them as core infrastructure, and

supereffective connections of users (industry, academia) to this core. The three types of centre are data generation centres, stewardship centres, and modelling-integration centres.

11:20 Plenary discussion

*Discussion topics:* Is this structure useful for industry? What expertise would industry like to have in each type of centre? Would they rather have 1 on 1's with individual centres? Would industry itself be willing to be one of the types of centre? What type of connections would they want? Would they be willing to co-fund a centre?

12:30 Lunch

13:30 Instructions on breakout sessions on industry needs, Egils Stalidzans

13:45 Two rounds of breakout sessions in 4 groups (the same questions for all groups)

- What systems biology is not yet ready for industry and needs to be developed?
- Is a technology market internet platform for industry-academia collaboration needed? Would it work?
- Is industry interested in PhD students or rather PI's themselves (because no training is then required)?
- How should the funding of systems biology (in the wide sense) be improved to become more attractive to industry participation?
  - Full funding by EU; is this important?
  - Should PhD student/Postdoc inclusion in industry be facilitated (work in industry or in academia and frequently visit industry)?
  - 1 academic group-1 industry, or industry participating in an academic network? How should this be expressed in calls?
  - Facilitating exchange of researchers between academia and industry by funding mechanisms: can that work (industrial secrets)?
  - Should public-private partnerships be formed and how? One per project? More permanent ones? Should this be 1/1 or many/many?
  - How can IP and knowledge be treated/protected in such collaborations?
  - How is it possible to work on systems biology of a problem without knowing all the commercially-sensitive details?
  - Should grant funding rates by government depend on percentage of results that will be public versus private?

15:30 Coffee break

16:00 Reports from break-out groups, 10 minutes per group.

16:45 Plenary discussion and ranking of workshop report topics concerning 1) industry/academia collaboration needs and 2) ISBE-related comments.

17:15 Closing remarks of workshop "**Networking academia-industry**"

## **Outline of the programme of Workshop “Networking of research centres”**

Chair of the workshop: Dr Hans Westerhoff (Universities of Amsterdam (NL) and Manchester (UK))

### **15.05.2014 - Workshop “Networking Systems Biology: research centres”, Day 1**

18:00 Introductory lecture of workshop “Networking of research centres” by **Hans V. Westerhoff** and joint dinner of workshops “Networking academia-industry” and “Networking of research centres”.

### **16.05.2014 - Workshop “Networking Systems Biology: research centres”, Day 2**

8:30 Morning coffee/tea

9:00 Short introduction of participants about current SB activities and future needs 3 min & 3 slides per academic participant.

10:00 Introduction of ISBE research centre collaboration and integration model, Hans Westerhoff.

10:20 Coffee break

10:50 Breakout discussion about ISBE collaboration model

- What should be specific about **data generation centres** for systems biology? Should this only be modeling/stewardship defined data (i.e. data under standard conditions). Should these centres also develop new technologies? Or beta test new technologies? Standardize new technologies?
- What should **stewardship centres** do? Only define standardization or also enforce standardization? Do research into defining good standards? Redo already done experiments/models under standard conditions? What else?
- What should **modelling-integration centres** do? Integrate all the data into model, also literature data or only data from user? Help with design of the project? Enforce a minimum standard for doing systems biology (e.g. mandate that there should be modelling)? Should the modelling centre be able to do all kinds of modelling, or should it refer to other centres for many types of modelling?
- Should the centres be national, at a single university or multinational?
- Should the centres be connected by ultrafast internet lines creating a virtual single lab situation?
- Should data and model sharing be enforced?
- Would you want to become a centre? Which type? What is your expertise for this type of centre?
- What type of connections should there be between centres (and between centres and users)? Ultrafast web links, or also mobility of researchers?
- True exchange (PhD student or postdoc visits the centre for > 3months to do a project), or hotel functions (client researcher comes and does one or two experiments in the centre), or just service provision (centre does the experiments for the client researcher?)

11:50 Reporting on breakout sessions

12:30 Lunch

13:30 Report about earlier conclusions on SB research centre collaboration and discussion, Olga de Brito.

13:50 Instructions on breakout sessions, Olga de Brito.

14:00 Breakout sessions in 4 groups (the same questions for all groups)

- Sharing of infrastructures (outside ISBE): Are there examples of shared infrastructure? How are they working? Are they closed to two teams or are they open? Should they be open? Would an ISBE be better?
- Data management: which type of data needs to be managed? Should data be managed in association with models?
- IP issues in consortia. Should IP be shared? Should data be shared? Should models be shared?
- Added value aspects of intensive networking: interdisciplinarity, fast technology exchange.

15:00 Coffee break

15:30 Reports from break-out groups, 10 min. per group.

16:15 Plenary discussion and ranking of workshop report topics and conclusion priorities about 1) research centre collaboration needs and 2) ISBE-related comments.

16:45 Closing remarks of workshop **“Networking Systems Biology: of research centres”**