ERASysBio Summer School
Data Management for Systems Biology

Universidad de Verano de Adeje, Tenerife, Spain
28th – 31st July 2008

Monday, 28th July 2008

	Delegates to Arrive
17:00 – 19:00	Registration
19:00	Dinner

Tuesday, 29th July 2008

08:00 – 09:00	Breakfast
09:00 – 09:05	Welcome by ERASysBio Network Steering Committee Chair *Alf Game, BBSRC, UK*
09:05 – 10:30	Networking exercise *Led by Gabriela Pastori, BBSRC, UK* Aim: to introduce participants in a structured environment. Participants to interact in a speed-dating exercise comprising brief introductions and rapid discussion Structure: 20 participants will remain seated; the other 20 rotate every 3 / 4 minutes
10:30 – 10:45	Coffee Break and Refreshments
10:45 – 11:45	Session 1 – Introduction to Data Generation, Standardisation and Storage, including the SysMO Data Management Strategy as a case study. *Led by Isabel Rojas, European Media Laboratory, Villa Bosch, Germany*
11:45 – 12:00	Formation of Breakout Groups and General Introduction to the Exercise
12:00 – 13:00	Lunch

13:00 – 15:30 Exercise on Data Generation, Standardisation and Storage

a. Background:
   - o Identification of data storage required (experimental, models)
   - o Definition of the minimum requirements for data storage
   - o Identification and implementation of data management solutions

b. Standardisation:
   - o Identification of standards required
   - o Identification and definition of common vocabularies and ontologies
   - o Storage of raw and secondary data in standard databases (e.g. Enzyme Kinetics)

c. Standard Operation Procedures (SOPs):
   - o Definition and storage of SOPs (for modelling, experimentation)
   - o Implementing SOPs in multi-partner projects

15:30 – 15:45 Coffee Break and Refreshments

15:45 – 16:15 Hands on Exercise and Feedback on case

16:15 – 17:00 Keynote Lecture: Update on Systems Biology Markup Language
Sven Sahle, SBML Editor, University of Heidelberg – Bioquant, Germany

20:30 Dinner

Wednesday, 30th July 2008

9:00 – 9:10 Recap of day 1

9:10 – 10:15 Introduction to data exchange and data sharing
Led by Katy Wolstencroft and Franck Tanoh, School of Computer Science, University of Manchester, UK

- Data Exchange through Web Services
  - o Problems and advantages of distributed data/repositories
  - o Publishing your data – when and where?

- Automating processes through workflows
  - o Examples from the field
  - o Data gathering
  - o Data analysis
  - o Knowledge mining and modelling

10:15 – 10:35 Coffee Break and Refreshments

10:35 – 13:00 Hands on exercise – Using Taverna

1. Finding and invoking web services
2. Building a simple workflow

13:00 – 14:00 Lunch

14:00 – 15:00 Hands on Exercise Continued

3. Finding and running workflows
4. Sharing data and workflows through my Experiment
5. Workflow reuse

15:00 – 15:15 Coffee Break and Refreshments

15:15 – 17:00 Hands on Exercises Continued - Advanced workflow exercises

6. Iteration
7. Service Substitution
8. Failover

17:00-18:00 Workflow Issues

This final session will be designed around participants. We will discuss issues and problems that have arisen throughout the day, but there will also be time for people to discuss their own data exchange projects as a *workflows/web services surgery.*

20:30 Dinner

Thursday, 31st July 2008

08:00 – 09:00 Breakfast

09:00 – 11:00 Presentation of Final Session, including Feedback
Gabriela Pastori, BBSRC, UK

11:00 – 11:15 Coffee Break and Refreshments

11:15 – 12:00 Keynote Lecture: Current thinking and future challenges of data management for systems biology
Alfonso Valencia, Centro Nacional de Biotecnologia, Madrid, Spain

12:00 – 12:15 Closing remarks
Veronika Simons, ERASysBio coordinator, PtJ Juelich, Germany

12:30 – 13:30 Lunch & End