

# Meeting of the Spanish Systems Biology Network (REBS): From genomes to *In silico* and back.

## PROGRAMME

Plenary lectures, oral presentations as well as the session of the Spanish's Systems Biology network will be allocated as follows. Posters will be allocated early Friday until late afternoon.

### Thursday, November 15th 2007

**17.00-20.00 Reception**

**17.40-18.00 Meeting Welcome**

**18.00-18.45 Plenary Lecture**

**Prof. M. Reuss.** *University of Stuttgart (Stuttgart, Germany).*

*“Marrying diverse partners – a mixed complementary approach for integrating bottom-up and top-down methods in systems biology”*

**18.45-19.30 Plenary Lecture**

**Prof. N. Lindley.** *Laboratoire Biotechnologie-Bioprocédés, INSA (Toulouse, France).*

*“Conserved regulatory networks coupling glycolysis to desirable and non-desirable characteristics of gram+ bacteria”.*

**20.30 Meeting Dinner**

**Friday, November 16th 2007**

**8.30-11.20 Systems Biology: Fundamentals and tools**

**8.30-8.50-Albert Sorribas.** *Grup de Bioestadística i Biomatemàtica, Departament de Ciències Mèdiques Bàsiques. Institut de Recerca Biomèdica de Lleida (IRBLLEIDA), Universitat de Lleida.Spain.*

*“Identifying design and operational principles in metabolic systems: advantages and limitations of alternative mathematical formalisms”*

**8.50-9.10-Francisco Llaneras and Jesús Picó.** *Institute of Industrial Computing and Control, Technical University of Valencia. Valencia. Spain.*

*“Estimation over time of metabolic fluxes in scenarios with uncertain and/or insufficient measurements”*

**9.10-9.30- Horacio E. Pérez Sánchez.** *Forschungszentrum Karlsruhe GmbH. Institut für Nanotechnologie (INT) . Karlsruhe (Germany)*

*“High throughput in-silico screening against flexible protein receptors”*

**9.30-9.50- Federico Morán.** *Grupo de Biofísica. Dept. de Bioquímica y Biología Molecular I. Fac. Químicas, Universidad Complutense Madrid. Madrid, Spain.*

*“Extension of the stoichiometric analysis to self-maintaining metabolisms”*

**9.50-10.10- Eva Balsa-Canto.** *Process Engineering Group. Spanish Council for Scientific Research, IIM-CSIC. Spain.*

*“An optimal identification procedure for model development in Systems Biology: Applications in Cell Signalling”*

**10.10-10.40 Coffee break**

**10.40-11.00-Eduardo Pareja.** *Bioinformatics Unit, Era7 Information Technologies SLU, BIC-Granada Parque Tecnológico Ciencias de la Salud, Granada, Spain.*

*“KEYPROTEINS: A database of sequences of mammalian transmembrane proteins”*

**11.00-11.20- [Àlex Gómez-Garrido](#).** *CBBL, Universitat Pompeu Fabra, Barcelona.Spain.*

*“Analysis of identifiability and application of optimal experimental design tools to the complete BioModels database”*

## **11.20-17.25 Systems Biology Applications: BioMedicine and Bioprocesses**

### **11.20-12.05- Plenary Lecture**

**Prof. L. Alberghina.** *University of Milan-Bicocca (Milan, Italy)*

*“Systems biology of the cell cycle”.*

**12.05-12.25-J. Bondia.** *Institute of Control Systems and Industrial Computing – ai2, Technical University of Valencia, Valencia, Spain.*

*“Prediction of postprandial glucose under uncertainty in Type 1 Diabetes Mellitus: a comparison of Interval Methods and Monte Carlo Simulation”*

**12.25-12.45- Marta Cascante.** *Universitat de Barcelona-IBUB (Institute of Biomedicine University of Barcelona). Spain.*

*“Robust metabolic network adaptation in multifactorial disease could become new targets for novel designed therapies”*

### **12.45-14.00 Meeting of the Spanish`s Systems Biology network. Task Groups.**

### **14:00-15:00 Lunch and Poster Session**

### **15.00-15.45- Plenary Lecture**

**Prof. J. Snoep.** *University of Stellenbosch, (Stellenbosch, South Africa)*

*“Data and model integration using JWS Online”.*

**15.45-16.05- F. Sánchez-Jiménez.** *Departments of Molecular Biology and Biochemistry. University of Málaga Spain.*

*A trip towards a multilayer and extended view of amine metabolism assisted by Systems Biology technologies: the need of a consensus group.*

**16.05-16.25- Joaquín Ariño.** *Universidad Autónoma de Barcelona. (on behalf of TRANSLUCENT-SysMo). Spain.*

*Redes de interacción génica y modelización de la homeostasis de cationes en la levadura S. cerevisiae.*

**16.25-16.45- Angel Sevilla.** *Department of Biochemistry and Biol. Molec. B e Inmunol. Faculty of Chemistry. University of Murcia. Spain.*

*“New insights on the monitoring of a biotransformation process using Systems Biology”*

**16.45-17.05- Nestor V. Torres.** *Biochemical Technology Group, Department of Biochemistry and Molecular Biology. University of La Laguna. La Laguna, Spain.*

*“A systems biology approach to the modeling and analysis of the ligninolytic fungus Phanerochaete chrysosporium growth”*

**17.05-17.25-Pau Ferrer.** *Department of Chemical Engineering, Universitat Autònoma de Barcelona. Spain.*

*“Towards the understanding of Pichia pastoris’ central metabolism responses to environmental modifications through metabolic network and <sup>13</sup>C- based metabolic flux analyses: A baseline study for metabolic engineering”*

## **ORGANIZING COMITEE**

**M. Cánovas** University of Murcia (Spain).

**M. Cascante** University of Barcelona (Spain).

**J.L. García** CIB (Madrid, Spain).

<b>J. Banga</b>	IIM-CSIC (Spain)
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<b>S. F. Elena</b>	IBMCP (CSIC-UPV, Spain).

## **SCIENTIFIC COMITEE**

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**Julio Banga**