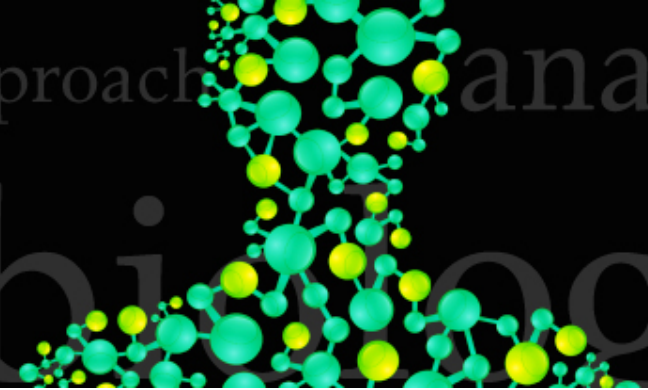


ICSB 2013
COPENHAGEN

The 14th International
Conference on Systems Biology



Tutorial Workshop

Modelling and Simulation

of Quantitative Biological

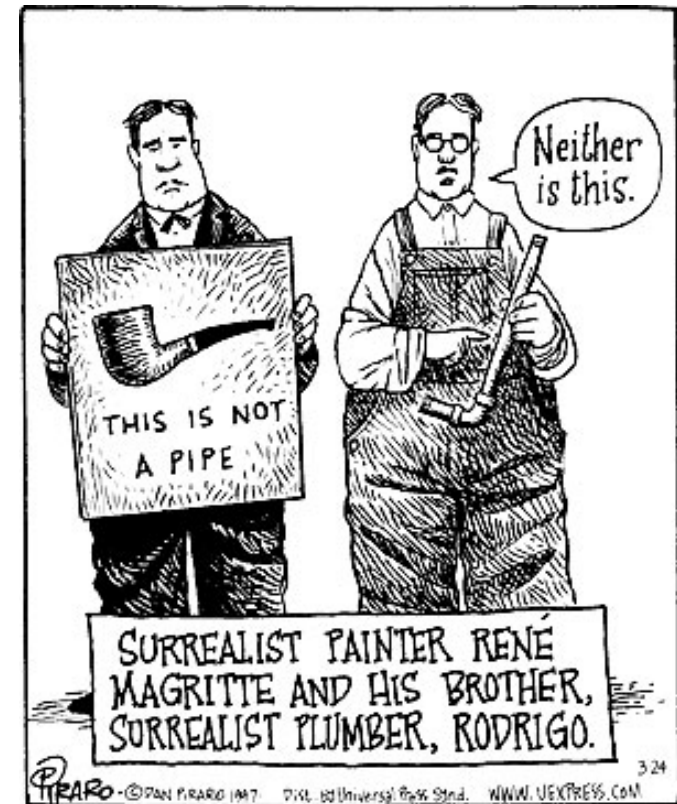
Models



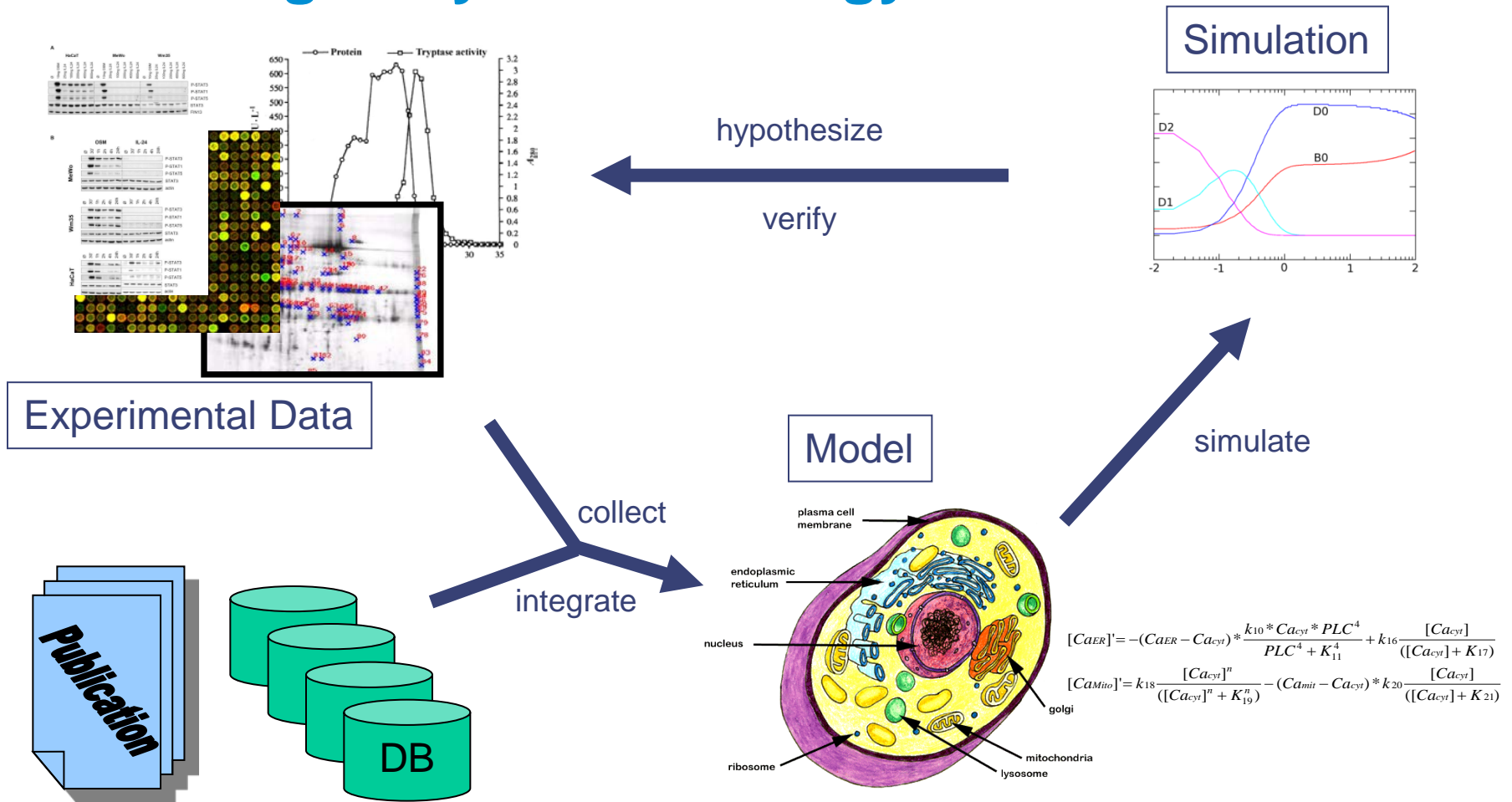
Heidelberg Institute for
Theoretical Studies



Modelling is Data Representation



Modelling in Systems Biology



What will you learn here?

- Setting-up quantitative computer models of biological networks
- Using experimental reaction kinetics data for model setup
- Simulating quantitative biological models in different software tools
- Refining biological models: parameter estimation, optimization and model fitting
- Visualising and analysing biological models
- Integrated handling of data, models and processes

MODELLING



Isabel Rojas (1968 – 2013)

Community standards and formats for models

09:45 **COMBINE** – Nicolas Le Novère (Babraham Institute, Cambridge, UK)

10:00 **SBML** – Mike Hucka (Caltech, Pasadena, CA, USA) – remotely

10:40 **SBGN** – Tobias Czauderna (IPK Gatersleben, Germany)

11:00 *Coffee*

Setting up models using experimental data

11:15 **SABIO-RK** – Martin Golebiewski & Andreas Weidemann (HITS Heidelberg, Germany)

11:45 **CellDesigner** – Akira Funahashi & Noriko Hiroi (Keio University, Yokohama, Japan)

12:45 *Lunch Break (self-pay)*

Setting up and simulating models

13:45 **COPASI** – Sven Sahle, Frank Bergmann, Ursula Kummer (University of Heidelberg, Germany) & Pedro Mendes (University of Manchester, UK)

14:45 **Virtual Cell** – Ion Moraru (University of Connecticut Health Center, Farmington, CT, USA)

15:45 *Coffee*

Online tools, model databases and model management

16:00 **SysMO-DB and Virtual Liver SEEK** – Katy Wolstencroft (University of Manchester, UK) & Martin Golebiewski

16:15 **SYCAMORE** – Andreas Weidemann (University of Heidelberg & HITS Heidelberg, Germany)

16:45 **BioModels** – Nick Juty (EMBL-EBI, UK) & Nicolas Le Novère (Babraham Institute, Cambridge, UK)

17:15 **JWS Online & OneStop** – Jacky Snoep & Dawie van Niekerk (Univ. of Stellenbosch, South Africa)

17:45 **Closing discussion**

HOW STANDARDS PROLIFERATE: (SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)

