ELIXIR Meeting, 4-5 November 2013

Peter Juvan, University of Ljubljana, Slovenia
• Slovenian ELIXIR node is represented by Centre for Functional Genomics and Bio-Chips (CFGBC)

• CFGBC represents a **16-member consortium** of *academia, research institutes, clinical institutes* and *pharmaceutical industry*

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**SterolTalk**

Functional genomics of the cross-talk of cholesterol homeostasis and drug metabolism

- Equipment for preparation and analysis of low and medium density microarrays
- Numerous applications in expression profiling and CGH
- Data mining, Bayesian networks, dynamical modeling
- Systems biology of hepatic lipid
- High density microarray platforms (Agilent and Affymetrix)
- Opening of CFGBC

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**Expression of interest**

2001 2003 2005 2007 2008 2009 2010 2011 2012 2013

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**Memorandum of understanding**

- ESFRI/ELIXIR included in the Construction of national research infrastructure plan

**Construction of national research infrastructure plan**
What are the training **needs** and what are you doing to address these needs?

**University of Ljubljana (UL),** Faculties of Medicine, Computer and Information Science, Electrical Engineering and Biotechnical Faculty are the **main teaching institutions**

- interdisciplinary doctoral study **Biosciences**
- undergraduates enrolled in **Functional Genomics** with major in **Biochemistry** or **Medicine**

**University of Primorska (UP),** Faculty of Mathematics, Natural Sciences and Information Technologies

- undergraduates with major in **Bioinformatics** and **Biopsychology**

**University of Maribor (UM),** Faculty of Health Sciences

- interdisciplinary masters study **Bioinformatics**
What are the training needs and what are you doing to **address** these needs?

- **Our common goal** is to establish the basis of the mid-European ELIXIR interdisciplinary training center in Slovenia.
- **Training efforts** are in concert with the ESFRI activity Infrastructure Systems Biology Europe (ISBE) and the Coordinated Action for Systems Medicine (CASyM).
  - CASyM training event: **SYSTEMS MEDICINE OF MULTIFACTORIAL DISORDERS WORKSHOP & TUTORIAL** (2013)
  - **MOLECULAR MEDICINE AND BIOTECHNOLOGY**, International Symposium at 40\(^{th}\) Anniversary of IBK and 20\(^{th}\) Anniversary of MCMB of the Faculty of Medicine UL (2012)
  - Summer school **PHARMACOGENOMICS OF INDIVIDUAL DRUG THERAPY** within Marie Curie Research Training Network **FightingDrugFailure** (2011)
  - CFGBC Symposium **FROM ARRAYS TO UNDERSTANDING DISEASES** (annual event)
What can you offer at a Pan-European level that is sustainable?

• **Interdisciplinary trainings** for post-genome technologies and computation, such as the hands-on experience on next generation sequencing with data analysis course.

• **Organization of workshops** related to different EU projects, special and summer courses on topics related to bioinformatics, genomics and systems biology/medicine, or linked to international scientific symposia.

• CFGBC consortium members hold expertise in post-genome technologies, computation (development of tools, pipelines and web-based applications), statistical background of genome analysis, and modeling/simulation of biological system dynamics.
What is your **vision** for a Pan-European, over-arching training strategy?

- **Bridge ESFRI activities**, supported by **Slovenian Ministry of Education, Science and Sport**, and coordinated by CFGBC consortium members

- **Establish a Pan-European interdisciplinary training center** in Slovenia for **post-genome technologies and computation** based on expertise of CFGBC consortium members