

Minutes EMERGENCE Kick-off Meeting

March 12, 2007, ETH Zurich

Participants:

1. ETH Zurich, represented by Sven Panke, Jörg Stelling, Frauke Greve
2. Consejo Superior de Investigaciones Cientificas (CSIC), Victor de Lorenzo
3. Centro Nacional de Investigaciones Oncologicas (CNIO), Alfonso Valencia
4. Helmholtz Zentrum für Infektionsforschung (HZI), Vitor Martins dos Santos
5. Royal DSM, Markus Wyss
6. University College London, Nicolas Szita
7. Geneart AG, Ralf Wagner, Matthias Arnold
8. Center for Genomic Regulation (CRG), Andreu Alibes, Michela Bertero
9. Ecole Polytechnique, Pablo Tortosa
10. MIT Boston, Randy Rettberg

Actions:

- Welcome by Sven Panke
- Introduction of each Emergence partner (S. Panke, J. Stelling, V. de Lorenzo, A. Valencia, V. Martins dos Santos, M. Wyss, N. Szita, R. Wagner, A. Alibes, P. Tortosa, R. Rettberg) and Christian Krassnig (EU-NEST/ERC)
- Introduction and discussion of the single workpackages (WP) (slides of presentations will be placed in a secure section of our Emergence webpage).
- **Objectives of WP1, General networking activities, represented by Vitor Martins dos Santos**
 - Establishing a networking platform for current and future synthetic biology projects
→ Implementing study groups.
 - Organizing thematic workshops for IT standardization → One workshop could be organized in parallel to the Synthetic Biology Conference 3.0.
 - Fostering interactions between other synthetic biology groups, emphasis on US, Mid-East and Asia → Exchange visits with other scientists.
- **Objectives of WP2, Attracting talent to Synthetic Biology in Europe, represented by Sven Panke**
 - Attracting young students from engineering and natural sciences to Synthetic Biology
→ e.g., organizing summer schools for app. 20 students in spring/summer to prepare them for the iGEM competition.

- Provide an institutional platform to integrate different educational backgrounds (national and engineering science) → e.g. organizing a Master in Synthetic Biology. Questions: is the job market already ready, how many students, what kind of students (biologists, biomaterials, nanotechnology, chemists, engineering), where (at three schools all over Europe)?
- Providing an educational resource for the communication with the scientific community and the general public → e.g., creating a kind of IET knowledge network (www.theiet.org).
- **Objectives of WP3, European IT infrastructure for Synthetic Biology, represented by Alfonso Valencia**
 - Developing the concepts for integrated workflow infrastructure based on the registry → Adopt technologies to access disperse information/systems.
 - Implementation of basic software infrastructure and integration of tools and methods for sequence design and analysis → Add relevant external information and methods. TF and TFBS re-design methods.
 - Development and integration of software for model-based sequence analysis and design → Connect to external methods for modeling design.
- **Objectives of WP4, Towards a consensus language for Synthetic Biology: Formatting and categorization of transcriptional working states, represented by Victor de Lorenzo**
 - Development of a robust conceptual basis for formatting prokaryotic promoter components and categorization of their performance in quantitative and connectable ways.
 - Description of suitable measuring technology for determining the required system characteristics.
 - Exemplification of biological design procedure with the IT tools designed in WP4.

What to do?

- Early assembly of an expert group on standardization and connectivity of minimal functions.
- Text-mining on quantitative data relevant to promoter functioning (connection to WP3).
- Modelization of 4 types of prokaryotic promoters as the standard components of choice for building complex regulatory circuits.
- In silico analysis of the data collected for developing a concept aimed at reaching a transatlantic consensus.
- **Objectives of WP5, Building the Academia-Industry Interface (including Intellectual Property Rights), represented by Markus Wyss**

- Definition of priorities of the European industry in the field of SB.
- Education and training of European industry re. concepts and tools of SB.
- Facilitating seamless adoption of SB achievements by the European industry.
- Develop a strong IP position in SB for European industry.

Planned lines of activities:

- Two workshops among the European industry to define the needs and interests of industry in synthetic biology.
- Workshops to train industry representatives in the tools and concepts of synthetic biology (linked to industry-relevant conferences), and
- Participation of industry representatives in student workshops and academic conferences in synthetic biology.
- Development of an IP strategy in synthetic biology.
- A workshop on either:
 - the opportunities for start-ups in the field of synthetic biology; or
 - with potential investors to evaluate their priorities and interests in synthetic biology.
- **Objectives of WP6, Project management, represented by Frauke Greve**
 - The coordination of the overall EMERGENCE project
 - Communication with the EU
 - Networking to other European projects using the webpage, newsletters and meetings
 - Webpage design with wiki-like structure to enhance the exchange between the EMERGENCE partners.
 - Newsletter with subscribing possibilities.

Important: no **Consortium Agreement** is needed for the coordination action (CA) EMERGENCE!