Project no. 043338

Project acronym: EMERGENCE

Project title: A foundation for Synthetic Biology in Europe

Instrument: NEST Pathfinder

Thematic Priority: Synthetic Biology

Deliverable 2.3. Report on state of planning affairs at schools intending to participate in the Master

Due date of deliverable: 24
Actual submission date: 24

Start date of project: 1.12.2006 Duration: 36 months

Organisation name of lead contractor for this deliverable: Ecole Polytechnique

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Deliverable D2.3.: Intermediate report on state of affairs regarding an MSc-level teaching program in Syntehtic Biology.

Responsible: Alfonso Jaramillo (EP & Universite d'Evry Val d'Essonne, Sven Panke, ETHZ)

EP is working towards the establishment of a European master in Systems and Synthetic Biology for the work package 2 "Attracting talent to synthetic Biology in Europe", together with partners 1, 10, and Prof. Kitney from the Imperial College London.

Current perspective on "Home institution": University of Evry/Genopole, France

Aims:
The aims will include:

- Attract students from the Life Sciences, Mathematics, Engineering, Chemistry, Physical and Computer Sciences
- Interdisciplinary education
- Hands-on experience in experimental Biology, modeling and designing
- Additional expertise in acknowledging ethical issues associated with developing fields.

Organizational structure:
- Master 2 (French system), recognized by AERES
- Partnership with École Centrale Paris, AgroParis Tech, Telecom SudParis
- Excellent research facilities offered on-site (iSSB)
- Stipends offered to foreign students.
- Projected start: fall semester 2010
- program participants: appr. 30/year

Key educational elements:
- Introduction to genomic biology
- Introduction to statistical machine learning for inference of biological networks
- Introduction to Mathematics applied to Biology

Modules in

- Integrative biology
- Integrative and spatial view of cellular machinery: from biology to modeling
- Synthetic biology
- Synthetic Biology for biosynthetic chemistry
- Designing, construction and characterization of biological parts and devices
- Practical work on biological device engineering
- Modelling and engineering of molecular interaction networks