TITOLO PROGETTO

TARPOL - Targeting environmental pollution with engineered microbial systems á la carte
Linea finanziamento: VII FP- Cooperation Environment
Area Scientifico Disciplinare: 05_ Scienze biologiche

STRUTTURA (Dipartimento/Centro)
European Center for Living Technology

DOCENTE RESPONSABILE SCIENTIFICO
POLI Irene

DATI FINANZIARI

Costo Complessivo del Progetto	Finanziamento Complessivo Assegnato	Costo totale delle attività a Ca' Foscari	Assegnazione Complessiva a Ca' Foscari
1.468.696	997.216	49.061	32.811

INIZIO ATTIVITA' (previsione)
2007

FINE ATTIVITA' (previsione)
2009

ABSTRACT PROGETTO

Synthetic Biology -SB- deals with rational combination of biological properties with central elements of engineering design. By merging the genetic tool box already available with engineering disciplines & computer sciences there is a great opportunity for a new approach to environmental pollution problems through application of modelling techniques & organizing development of novel biological systems across a hierarchical architecture with defined & standardized interfaces.
However this faces 3 major bottlenecks: -The scientific & technical European contributors on SB have so far failed to recognise their latent capacity to shape a fresh discipline at their very interface; -SB still lacks a comprehensive language & shared conceptual frame for the description of minimally functional biological parts; -The development of SB touches on social sensitivities related to recreating life-in-the-test-tube which threatens to re-awaken the GMO controversy. Thus scaring off the necessary industrial input in the field. To tackle these challenges, we propose a 2-year program run by a large expert group to coordinate the fragmented efforts & direct this discipline into the most industrially beneficial and socially viable directions. We aim to energise and mobilise the European scientific, technical & social professionals to empower a new capacity to exploit properties present in Biological systems for environmental issues. TARPOL will recruit the required environmental competences from neighbouring disciplines and will set up a number of material and computational resources for advanced refactoring of biological systems. We will establish a frame consensus for procedure and parts standardization and pursue the awareness and eventual insertion of SB into the Environmental Biotechnology context by exploring its industrial interface.
Finally, we will pursue the establishment of a solid European Research Agenda on SB-for-Environment at the service of implementing the KBBE vision.

SITO INTERNET: http://sb-tarpol.org/