

# SYMBIOmatics

## SYnergies in Medical informatics and BIOinformatics

**SYMBIOmatics is a Specific Support Action that aims to identify and exploit synergies between bioinformatics and medical informatics. The project will document the state-of-the-art in biomedical informatics in Europe.**

### Objectives of the project

Bioinformatics and medical informatics are both rapidly advancing fields. Advances in molecular biology, the starting point for bioinformatics, demand that it broaden its domain to the biology of cells, tissues, organs, organisms and populations. Within medicine, increasing understanding of the molecular basis of disease, and the effect of genotype on disease propensity and treatment efficacy, create an opportunity for convergence between the disciplines.

There are emerging proofs of concept of the clinical importance of biological and genetic information. We are witnessing the adoption of biological and/or genetic information into informatics systems for clinical practice (e.g. in functional imaging, electronic patient records and especially clinical trials). We are furthermore witnessing a growing recognition of the importance of biomedical informatics integration technologies and platforms to enable the integration of bioinformatics and medical informatics information. This is particularly important in the area of semantic interoperability and ontologies in biomedicine which provide a structure for the organisation and sharing of knowledge between the domain of medicine, biology and genetics.

The objectives of the **SYMBIOmatics** SSA are to stimulate these developments and seek to identify and exploit synergies between bioinformatics and medical informatics as well as identifying addressable challenges for the medium term future.

Specifically to:

- Document state of the art activities in Biomedical Informatics in the EU member states
- Identify potential research challenges and opportunities (visions).

- Prioritise these according to (i) appropriateness to fund at an EU level; (ii) likelihood of strong intermediate results and (iii) industry commitment/validation.
- Summarise and make recommendations for the prioritised research actions to be taken into account in future European Commission funding programmes.

### Project Description

**SYMBIOmatics** is an information gathering and dissemination activity which will stimulate developments in bioinformatics and medical informatics and exploit the synergy between them.

The project will document the state-of-the-art in biomedical informatics in Europe and identify areas of new opportunity.

This will be done by systematically identifying European expert and collecting their insights. Initially this will be approached through an open-ended consultation whose output will be used to create an internet

survey from which results will be summarised and presented.

Simultaneously, bibliometric and data-mining methods will identify and analyse the content of the relevant scientific literature. Areas of opportunity will then be documented and prioritised.

An Open meeting on 29th June 2006 will present these findings for discussion by the wider community of bioinformatician, medical informaticians, practitioners who activities currently or in the future will intersect these domains and nationally and internationally mandated policy makers.

A White Paper summarising the findings will be completed by Nov 2006 and will provide input to future European scientific and funding policy

***“The project will document the state-of-the-art in biomedical informatics in Europe and identify areas of new opportunity”***

## Expected Results & Impacts

Upon successful completion, the impact of the **SYMBIOmatics** SSA can be identified both in terms of the specific short term objectives and deliverables of the SSA and in terms of the medium and longer benefits to the EU member states.

- Specific Deliverables

The impact in term of the specific deliverables will be:

- A documented survey of EU activity based on synergies in biomedical informatics.
- A set of prioritised and achievable research challenges and opportunity to drive the area forward under FP7
- Medium term impacts The medium and longer term impacts are expected to include but not be limited to:
  - Contributions to standards and specifically standards underlying the intersection of bioinformatics and medical informatics
  - Recommendations for prioritised research will impact of CEC policy development. Specific contributions to policy development will also be coordinated with other IST ERA coordination projects.
- Longer term impacts
  - In the longer term the impact from the standards and subsequently funded research is likely to impact but not be limited to the following areas:
    - Changes in electronic patient records
    - Standards for use of personal genetic information in clinical trials
    - Health and risk assessment

## SYMBIOmatics

### SYnergies in Medical informatics and BIOinformatics

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#### Partners:

- Institute of Health "Carlos III" (ES)
- Ministry of Education and Science (ES)
- Foundation for Research and Technology Hellas (GR)
- University of Genoa (IT)
- Institute of Biomedical Technologies (IT)
- Erasmus Medical Center (NL)
- INSERM (FR)
- Scientific Generics Ltd (UK)
- Ipsos-UK Ltd (UK)

**Timetable:** from 05/05 – to 11/06

**Total cost:** € 550,000

**EC funding:** € 550,000

**Instrument:** SSA

#### Project Identifier:

IST-2004-015862

#### Keywords:

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bioinformatics,  
medical informatics,  
eHealth.