

Promoting and Monitoring Biomedical Informatics in Europe

INBIOMEDvision is a Coordination and Support Action that aims to promote Biomedical Informatics by means of the permanent monitoring of the scientific state-of-the-art and the identification of common grounds and potential synergies between current Bioinformatics and Medical Informatics approaches.

Objectives of the project

Biomedical Informatics (BMI) is a scientific discipline that deals with the integrative management and synergic exploitation of the wide and inter-related scope of information that is generated and needed in healthcare settings, biomedical research institutions and health-related industry. The field is closely related with a series of partially overlapping disciplines (i.e. Bioinformatics, Medical Informatics, Biomedical Imaging, Neuroinformatics) which may benefit from the integrative and translational perspective underlying the Biomedical Informatics concept.

Development of effective translational IT approaches will facilitate the application of knowledge resulting from the basic biomedical research to disease diagnosis, prevention and treatment

INBIOMEDvision promotes BMI by means of monitoring of the scientific state-of-art and the existing activities in the theme, and the analysis of the emerging challenges and opportunities, contributing to a better dissemination of the knowledge in the field. The objectives of the project are:

- To provide an overview of the state-of-the-art methods and models that connect biological systems described at the molecular level with the clinical physiopathology and to compile the existing knowledge on genotype and phenotype data resources.
- To consolidate a BMI community of researchers by congregating and promoting the interaction between scientists from a wide range of related fields.
- To develop and facilitate training activities able to engender new generations of scientists and professionals having the BMI perspective, as well as the skills for using the computational methods and tools in this field.
- To widely disseminate the BMI knowledge and resources.
- To devise sustainability measures that ensure the long-term maintenance of the INBIOMEDvision activities after the termination of the EU-funded CSA.

Project Description

INBIOMEDvision aims to become a European-wide initiative intended to monitor the evolution of the Biomedical Informatics field and address its scientific challenges by means of collaborative efforts performed by a broad group of experts with complementary perspectives on the field.

The project will:

- Generate a permanently updated and electronically accessible catalogue of initiatives and resources in the field.
- Publish and distribute an electronic newsletter on Biomedical Informatics.
- Produce periodic state-of-the-art reviews on the matter.
- Execute prospective analyses on Biomedical Informatics.
- Organise and carry out community building activities (web page, scientific events and training activities).

The community building activities, scientific events and training activities will proactively seek the involvement of participants from different communities. The project will intensively collaborate with the current projects and initiatives in Biomedical Informatics and related fields.

Many relevant European scientists that have a key role in other Biomedical Informatics initiatives are involved in project activities

as INBIOMEDvision Members, and will be invited to take part in the project activities.

The creation of an Overseas Scientific Advisory Board formed by highly recognised scientists guarantees the connection between the initiatives on Biomedical Informatics world wide.

Training and dissemination activities will contribute to build bridges between the Bioinformatics and Medical Informatics communities and will help facilitate the translation of knowledge from the biomedical research laboratory to the clinic, and vice versa.

SCENARIO

Through the establishment of a scientific observatory on the Biomedical Informatics field, which will compile and disseminate state-of-the-art knowledge and resources on the matter, and the organisation of relevant scientific forums and training activities, the integrative and translational visions of Biomedical Informatics will be further developed and exploited, contributing in this way to better application of IT tools in the disease prevention, diagnosis and treatment.

Expected Results & Impacts & Preliminary results

INBIOMEDvision aims at:

- Setting up an observatory on the achievements and evolution of the Biomedical Informatics field, which will contribute to a more intense and coordinated development of this discipline.
- Facilitating the development of a translational Bioinformatics perspective allowing a better application of the biomedical research results to the clinical research and practice.
- Facilitating the re-use of clinical information in basic biomedical research.
- Overcoming barriers of communication between the scientists working on Bioinformatics and those devoted to Medical Informatics.
- Constituting a useful tool to emphasize the integrative and translational perspective underlying the Biomedical Informatics continuum, including the connections that should exist among Public Health Informatics, Clinical Informatics, Medical Imaging, Systems Biology and Bioinformatics areas.



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KEYWORDS

Biomedical informatics, Translational bioinformatics, Research re-use of clinical information, Personalised medicine, Virtual physiological human, State-of-the-art analysis, Scientific prospective analysis