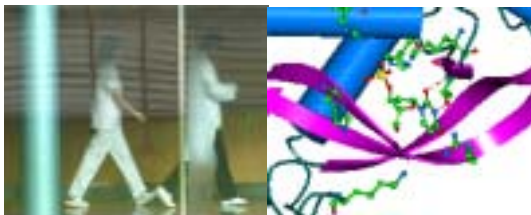


## THIRD INFOBIOMED TRAINING CHALLENGE

### Goal of INFOBIOMED

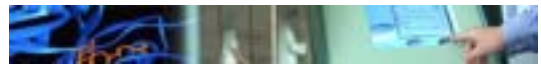
**T**he INFOBIOMED Network of Excellence aims to promote the consolidation of Biomedical Informatics (BMI). BMI is placed in the confluence of **Bioinformatics** and **Medical Informatics**, two disciplines that up to now have for the most part evolved in an independent way. **The synergy between Bioinformatics and Medical Informatics offers excellent opportunities for the advancement of personalised healthcare.** The integration and exploitation of all the data and information generated by these disciplines requires a **new synergetic approach that enables a two-way dialogue between them** that comprises data, methods, technologies, tools and applications. The progress of BMI as an integrative discipline will help to facilitate the translation of biological research results into clinical solutions.



### Interdisciplinary approach to Biomedical Informatics

**W**ithin INFOBIOMED, a pilot project on **Host-Pathogen interactions** is being undertaken. This project aims to take a first step towards personalised medicine by combining bioinformatics, basic laboratory studies and clinical data.

The project team is currently working to characterise and model the **pathway biology** of Interferon. Further, they aim to understand how pathogens such as viruses subvert this system. The approach is to integrate novel bioinformatics strategies and wet-lab investigations to generate a new understanding of the host-pathogen interaction and apply this knowledge to obtain new insights into Hepatitis C infected patient responses to interferon therapy.



### Training Challenge description

**T**he INFOBIOMED approach of integrating **medical informatics, immunoinformatics, and bioinformatics** is to foster **collaboration on complex case studies within a small group of researchers, who have a widely varying but complementary backgrounds, ensuring a way of crossing borders between disciplines.** This approach has proved to be successful, and INFOBIOMED would like to expose future biomedical informatics scientists to this integrative approach through the **Third INFOBIOMED Training Challenge.**

The **format** of the training activity will be based on **two groups of five advanced students with expertise on different biomedical informatics fields, who will collaboratively work on a single case study.** Each student is required to submit a motivated case study upon application.

Among the case studies proposed, the organizing committee will select **one case study per group**, according to the potential it offers for cross-disciplinary approaches.

Examples of case studies are:

- **An infectious disease** in which the underlying mechanisms of the host-pathogen interaction are not yet understood.
- A clinically significant infectious disease in which informatics approaches have yet to make an impact on diagnosis and treatment.

The practical approach of the course is that each group will intensively collaborate during the 5 course days conducting research aimed at proposing a valid approach to the problem that integrates the variety of points of view represented by the different disciplines involved. INFOBIOMED staff members from different areas of expertise will closely supervise and collaborate with the different groups during the whole course. Before the course week, participants will be required to revise the case study from their own area of expertise. On the last day of the course, each team will make a **presentation of the integrative approach proposed for its respective project**. After the course week, students are expected to work on the finalization of the project approach and deliver a project report.

All members of the team that presents the best integrative approach will be awarded with an **exchange fellowship** that will allow them to stay for one month in one of the INFOBIOMED partner organisations (see [www.infobiomed.org](http://www.infobiomed.org) for a partner list).

### Prerequisites

**G**raduate students with major in: Medical Informatics, Bioinformatics, Biomedical Informatics, Medicine, Biology, Chemistry, Epidemiology, Pharmacology, Physics, Mathematics.

### Goals

- To **participate** in a **multidisciplinary research-based training environment**;
- To learn the **difficulties of crossing “language borders”** in the context of a specific research problem;
- To become aware of **contents of other disciplines** and their particular approaches to the same problem;
- To use the own expertise to **advance science** in the area of the case study.

### Application

**T**he [Application Form](#) must include:

- CV, including description of expertise and computational skills
- Description of a potential case study for which the applicant has advanced or expert knowledge (300 words)
- Description of computational tools needed during the course. Participants are encouraged to bring their own laptops.

Complete application documentation must be sent before the application deadline.

### Practical Information

- **Course capacity:** two groups of five students.
- **Funding:** Travel and lodging will be covered. No registration fees will be charged.
- **Application deadline: 12<sup>th</sup> of July**
- **Notification of acceptance:** 19<sup>th</sup> of July
- **Study material sent to participants:** 12<sup>th</sup> of September
- **Course Dates: from 2<sup>nd</sup> to 6<sup>th</sup> of October 2006**
- **Location:** Edinburgh, UK
- **Self study:** one week before course, and one week afterwards
- **Course coordination:**  
Kevin Robertson ([kevin.robertson@ed.ac.uk](mailto:kevin.robertson@ed.ac.uk))  
Eva Molero ([emolero@imim.es](mailto:emolero@imim.es))