

EIBIR Facts and Figures

Foundation

EIBIR was established by the European Society of Radiology in 2006 as a non-profit limited liability company based in Vienna.

Aims

In analogy to the NIH's Institute of Biomedical Imaging and Bioengineering (NIBIB) in the US, a pan-European research network was established in order to promote state-of-the-art research as well as to profit from synergies. EIBIR's mission is to co-ordinate the development of biomedical imaging technologies within Europe and support the dissemination of knowledge with the ultimate goal of improving diagnosis, treatment and prevention of disease.

As a first step an extensive database comprising the present research infrastructure was set up, including information on the specialties of each institute (also including information on the available research devices). All these specifications are currently available in our restricted members area for over 280 European Institutions (2/3 clinical research, 1/3 basic research) and of course to the industry partners.

The database has been extended and all members can now upload information on current, planned and completed assessment studies in their institution.

EIBIR functions as coordinator for research in the field of biomedical imaging and facilitates consortia as well as programme partnerships. Research projects have been successfully submitted within the 7th framework programme of the EU, for which EIBIR is in charge of coordination and project management (HAMAM, ENCITE, PEDDOSE.NET, Euro-Biolmaging).

EIBIR has set itself the target to establish and support **educational and exchange programmes for researchers** as well as to organise **workshops and meetings on relevant research subjects**.

Structure

EIBIR has been designed as a multidisciplinary organisation and currently, five organisations act as **co-shareholders**: The European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry (COCIR), the European Association of Nuclear Medicine (EANM), the European Federation of Organisations of Medical Physicists (EFOMP), the European Organisation for Research and Treatment of Cancer (EORTC) and the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB).

Apart from the congregation of co-shareholders, EIBIR also has a **Scientific Advisory Board**, headed by a scientific director (currently Prof. Hennig, Freiburg/DE) who advises the co-shareholders on scientific issues. The Scientific Advisory Board acts as national contact point for the member institutions and coordinates the implementation of all EU projects.

Members who want to initiate projects within the framework programme of the EU can contact the Scientific Advisory Board and apply for EIBIR to assist in writing and managing the proposal. The Scientific Advisory Board is entitled to appoint taskmasters for new initiatives and projects.

Financing

EIBIR was initially launched with funds from the **ESR – European Society of Radiology**.

In 2006 the EIBIR Industry Panel was launched. Bayer Schering Pharma, Bracco, GE HealthCare, Philips and Siemens supported the establishment of EIBIR's structure as well as the head office in Vienna with € 50,000 each per year.

With regard to the future support from the industry, EIBIR proposed a reduced annual support payment of € 10.000 per company starting from 2010. The reason is a planned augmentation of the Industry Panel and also because EIBIR will be funded by multiple sources in the future.

Apart from the costs for EU funded research projects, a minimum of € 200,000 additionally per year is necessary in order to work up the structure of EIBIR and to initiate new projects.

EIBIR initiatives

The following descriptions will give you an overview of EIBIR's current initiatives.

Cell Imaging Network

A network of expert centres involved in MRI-based cell imaging has been established, focusing on the use of in-vivo cell imaging for research on cell-based therapies.

Out of the network a successful EU proposal, **ENCITE**, was submitted to the FP7 health call and favourably evaluated.

Biomedical Image Analysis Platform

The mission and aims of the platform are to foster European collaboration between academic groups and industry in biomedical image analysis, to act as a representative of European biomedical image analysis research at the EU or international level and to stimulate biomedical image analysis research and innovation, and to further strengthen the position of European academia and industry in this field.

The steering group of the platform consists of 10 university institutes. Their key research activities include the development, implementation and validation of quantitative imaging biomarkers (cardiovascular disease, neurodegenerative disease, oncology, etc.; drug discovery and development, screening and early diagnosis, therapy monitoring and follow-up) as well as minimally invasive image guided interventions (patient modelling, improved intra-operative guidance). Out of this initiative, the project **HAMAM** was developed and successfully submitted within the 7th framework programme of the EU.

EuroAIM

EuroAim is an initiative for technology assessment in diagnostic imaging and image-guided interventions and is currently in its start-up phase. As a first step, the working group was established in the form of a google site. The members database was also augmented by information on assessment studies. The long-term goal is to facilitate the organisation and performance of multi-centre clinical imaging trials across Europe, in analogy to ACRIN in the US.

The Scientific Advisory Board will thus set up a sub-committee to develop a strategic plan in order to advance this project.

A **CAD imaging consortium** has been formed by Myriam Hunink. Several sites have joined this initiative. We are using a Google Group website to keep participants informed. Protocols for two pooled analyses have been written. Objective of proposed analyses is to predict **coronary artery disease (CAD)** in patients with chronic stable angina pectoris based on age, sex, type of chest pain, risk factors, and non-invasive imaging results. For more detailed information on participation and contribution please see www.eibir.org!

Chemistry Platform

The Chemistry Platform is due to be implemented during 2008 and will consist of top-class European research teams in the field of probe development for different imaging modalities. The objective of the platform is to seek collaboration between chemists dedicated to the development of new imaging reporters and biomedical teams interested in validating new diagnostic procedures.

EIBIR will be the ideal vehicle to create a bridge between the medical community, industrial and academic biomedical teams and chemistry-based groups at university and government research institutions.

Together with two consortia of Europe's top expertise in the relevant fields, EIBIR submitted two new proposals within the EU FP7 programme HEALTH call early December.

One project, related to EIBIR's Chemistry Platform, deals with the development of smart agents that provide maps of values of physico-chemical parameters such as pH and pO₂ or of

specific enzymatic activities. The obtained maps will be fused with anatomical images to provide completely new information content that has up to now not been accessible via imaging methods.

The second project, **PEDDOSE.NET**, focuses on nuclear medicine and consists in a literature survey on dosimetry and health effects of diagnostic applications of radiopharmaceuticals.

EIBIR projects

The following descriptions will give you an overview of EIBIR's current projects.

ENCITE

The project ENCITE (European Network for Cell Imaging and Tracking Expertise) is funded by the European Commission within the 7th framework programme (FP7) for research, comprising 21 project partners from 10 different countries. The four-year-project began on June 1st, 2008.

The project aims to:

- develop imaging methods improving spatio-temporal tracking of labelled cells
- develop new contrast agents and procedures improving sensitivity and specificity of cellular labelling
- develop dual/multi-modality imaging procedures to cross-validate each individual approach
- combine molecular biology for the generation of molecular/cellular imaging reporters with multimodal imaging techniques

A Competitive Call for new project partners was carried out during the first year and the institutes selected for the implementation of the additional tasks will add tremendous expertise and value to the team.

HAMAM

The three-year project HAMAM (Highly Accurate Breast Cancer Diagnosis through Integration of Biological Knowledge, Novel Imaging Modalities, and Modelling) will provide a means to seamlessly integrate the available multi-modal images and patient information in a single clinical workstation. Based on knowledge gained from a large multi-disciplinary database, populated within the scope of this project, suspicious breast tissue will be characterised and classified. The HAMAM project started in September 2008.

PEDDOSE.NET

EIBIR has entered into grant agreement negotiations with the European Commission on the submitted PEDDOSE.NET project, which is coordinated by EIBIR and scientifically led by Dr. Michael Lassmann from the University of Würzburg. It is fully supported by EANM, the European Association of Nuclear Medicine, which is a coshareholder organisation of EIBIR. The aim of the project is to provide data on dosimetry and corresponding dose related risks when administering radiopharmaceuticals for diagnostic purposes in children and adults. The composition of the consortium ensures that contacts to other bodies such as the International Commission on Radiological Protection (ICRP), the Medical Internal Radiation Dose (MIRD) Committee of the Society of Nuclear Medicine or member state radiation protection agencies are provided in order to obtain upto-date information on the developments in this field. The expected start date of the project is November 2009.

Euro-Biolmaging

Euro-Biolmaging is one of the 10 projects on the European Roadmap for Research Infrastructures in biomedical sciences and is jointly coordinated by EIBIR and the European Molecular Biology Laboratory (EMBL). The goal of Euro-Biolmaging is to establish a pan-European imaging infrastructure for biological and medical research. The Euro-Biolmaging infrastructure will provide access to state-of-the-art imaging technologies, training and a continuous development of imaging research technologies. It will consist of distributed centres of excellence with a strong focus on either biological or medical imaging.

If you would like to receive more detailed information on EIBIR's EU Projects write to office@eibir.org.

Check www.eibir.org for regular updates!