

A Greek Research Infrastructure for Visualizing and Monitoring Fundamental Biological Processes (BioImaging-GR)

BioImaging-GR is Greek a state-of-the-art Biological Imaging infrastructure, within the framework of Euro-BioImaging, the associated pan-European ESFRI Research Infrastructure (www.eurobioimaging.eu). BioImaging approaches are becoming widely used and are greatly appreciated as cutting-edge tools for dissecting complex biological phenomena, for understanding cell structure and dynamics, and for extracting biological information of clinical relevance. Recent advances in imaging technologies and the development of several innovative microscopy modes have opened new vistas in the field of Biological Imaging that is rapidly gaining critical importance in the area of Life Sciences. BioImaging-GR aims to create a strongly interlinked and geographically distributed infrastructure for general-access, high-end biological imaging providing a range of imaging methods to scientists, interested stakeholders, SMEs and enterprises in Greece and neighboring countries. Moreover, BioImaging-GR will seek to acquire and provide access to "beyond state-of-the-art" imaging technologies, which are not easily accessible to the broader imaging community. In addition to the acquisition and upgrade of facilities, BioImaging-GR will introduce new expertise, relevant to biomedical imaging through recruitment and training of resident personnel. Through BioImaging-GR, the national investment in imaging infrastructure will be used in the most cost-effective and efficient way by applying the highest quality standards in management, access and service of imaging facilities. Modernizing BioImaging infrastructure and acquiring or generating the necessary expertise will allow Greece to maintain a competitive position in the field of Biomedical research, and provide cutting-edge facilities to the broader research community in south-east Europe.

Objectives

BioImaging-GR, coordinated by FORTH, aims to create a distributed infrastructure for general access, high-end biological imaging providing a range of imaging methods to scientists in Greece and neighboring countries by pursuing the following goals:

1. Expand existing and establish new BioImaging facilities, such as next-generation fluorescence microscopy, electron microscopy (conventional TEM and SEM, as well as CLEM), PET, Micro-CT, fMRI, intravital imaging, microfluidics, ratiometric imaging, super-resolution microscopy and others.
2. Provide training and imaging services to the research community and industrial users in Greece and neighboring countries using cutting-edge BioImaging technologies.
3. Enhance the research and innovation potential of the Greek biomedical research community by networking and coordinating existing facilities, which operate at different centers, towards maximum complementarity and minimum redundancy.

BioImaging-GR is a distributed RI (with 21 partner Research Institutes and University Departments), with a central coordinating Hub (FORTH), serving as a single point of entry to the national infrastructure, and distributed partner Nodes that provide access to high-end BioImaging instrumentation and services.

