Services offered by Euro-BioImaging

Service/Tool Name	Description	Contact	Mode of access
Biological imaging	Multi-modal advanced light microscopy • Laser scanning confocal microscopy (LSCM / CLSM) • Spinning disc confocal microscopy (SDCM) • Deconvolution widefield microscopy • Multiphoton microscopy systems • Total internal reflection fluorescence microscopy (TIRF) • Fourier transform infrared imaging (FTIR) Super resolution microscopy • Stimulated emission depletion microscopy (STED) • Photo activated localization microscopy (PALM) • Stochastic optical reconstruction microscopy (STORM) • Reversible saturable optical fluorescence transitions (RESOLFT) • Ground state depletion microscopy (GSD) / Ground state depletion microscopy followed by individual molecule return (GSDIM) • 4Pi microscopy Functional imaging • Fluorescence correlation spectroscopy (FCS) • Fluorescence cross-correlation spectroscopy (FCCS) • Fluorescence-lifetime imaging microscopy (FLIM) • Fluorescence resonance energy transfer (FRET) • Fluorescence recovery after photobleaching (FRAP)	access-bio [at] eurobioimaging.eu http://www.eurobioimaging-interim.eu/locations-and-technologies.html	Open access with selection procedure based on scientific soundness and technical feasibility of the project

	• Raman spectroscopy High-throughput microscopy Electron microscopy Correlative light electron microscopy (CLEM) Mesoscopic imaging: • Objective-coupled planar illumination (OCPI) • Selective plane illumination microscopy (SPIM) • Optical projection tomography (OPT) • Digital scanned laser light-sheet fluorescence microscopy (DSLM) Additional services that can be requested include e.g.: • Technical assistance to run instruments • Methodological setup (e.g. design of study protocol and standard operation procedures) • Training in infrastructure use • Probe preparation • Animal preparation • Animal facilities • Wet lab space • Server space • Data processing and analysis • Housing facilities		
Multi-modal Molecular Imaging	Available technologies are: • (Micro)-PET • (Micro)-SPECT • (Micro)-MRI/MRS • (Micro)-CT • (Micro)-US • (Micro)-PET/CT	access-med [at] eurobioimaging.eu http://www.eurobioimaging-interim.eu/locations-and-technologies.html	Open access with selection procedure based on scientific soundness and technical feasibility of the project

	• (Micro)SPECT/CT • Optical imaging • *Note: The "micro" prefix in brackets before the name of a technology, e.g. (micro)-MRI, indicates that imaging equipment and set-up optimized for both large and small animals are available.* Additional services that can be requested include e.g.: • Relaxometry • Probe preparation • Animal preparation • Animal facilities • Cell culture, microscopy, histology • Wet lab space • Radiochemistry facility • Radionuclide production facility (cyclotron) • Laboratory for detector development and testing • Image processing and analysis • Biobanking		
Medical Imaging	• High-Field MRI • Phase contrast imaging • Multimodal Imaging (MRI-PET) • Population Imaging • Challenges framework Additional services that can be requested include e.g.: • Technical assistance to run instrument • Methodological setup (e.g. design of study protocol and standard operation procedures) • Training in infrastructure use	access-med [at] eurobioimaging.eu http://www.eurobioimaging-interim.eu/locations-and-technologies.html	Open access with selection procedure based on scientific soundness and technical feasibility of the project

	• Probe preparation • Animal preparation • Animal facilities • Wet lab space • Server Space • Data processing and analysis • Preclinical and clinical expertise in academic and industry-sponsored trials • Nanobody platform for radio-immune-imaging		
Data	Euro-BioImaging features the Image Data Resource (IDR), an online, public resource that stores, integrates and serves image datasets from published scientific studies. The IDR aims to make previously unattainable datasets publicly available, allowing searching, viewing, mining and even processing and analyzing large complex multidimensional life sciences image data. All datasets have been annotated with author-supplied metadata. A pilot IDR and annotation framework was recently implemented based on UK funding for the University of Dundee and EMBL-EBI. To support scientists also in image data processing and analysis, EuBI plans to create a European Image Resource Portal (IRP) as a repository of standardized and quality controlled software applications and to provide cloud computing services.	https://www.eurobioimaging-interim.eu/image-data-resource.html	Open access
Training (planned)	Operator expertise is key to the ultimate yield and impact of research using imaging technologies. As users often lack specific technology knowledge, standardized training and technical support will be provided by the EuBI infrastructure. It will coordinate and support several levels of training, focusing on three different target groups. - Current and future users will receive training courses	http://www.eurobioimaging.eu	Open access

	and hands-on-training for use of instruments designed to bring each user to the level required to use the technology, successfully perform experiments at the facility and analyse results. - In addition, a system for training of the imaging facilities' staff will be set-up, which will help to educate a new generation of imaging experts ("train the trainer" e.g. in facility management, or advanced technology courses). - Furthermore, EuBI will offer general training for a broad scientific audience covering all training aspects related to imaging (e.g. regular courses on specific imaging modalities, online training courses, and online repository of training material, summer schools etc.).		