

EURO  BIOIMAGING

2025

ANNUAL REPORT

Image life, *discover the future*

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We are the European landmark Research Infrastructure for biological and biomedical imaging as recognized by the European Strategy Forum on Research Infrastructures (ESFRI). Euro-Biolmaging is the gateway to 295 world-class imaging facilities across Europe.

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ABOUT US

FOREWORD FROM THE DIRECTORS



John Eriksson
Director General



Antje Keppler
Section Director Bio-Hub



Linda Chaabane
Section Director Med-Hub

2025 was a year of strong mission delivery that enabled growth, collaboration, and new strategic opportunities for Euro-Biolmaging. Our European community continued to advance imaging-driven research, strengthen collaborations, and expand access to cutting-edge imaging technologies and expertise.

By providing open access to advanced imaging technologies and expertise, Euro-Biolmaging continues to support scientific discovery across disciplines and borders. Imaging technologies allow scientists to visualise and better understand everything from living cells and developing organisms to human health and advanced materials, opening new possibilities for discovery and innovation in fields ranging from life sciences and medicine to environmental research and beyond.

User access funding continued to play a crucial role in 2025 by supporting interdisciplinary research and enabling scientific collaboration across borders. National, EU and other user access funding programmes provide important opportunities for researchers from all over the globe to connect, exchange knowledge, and access technologies that may not be available within their own institutions or countries. Euro-Biolmaging is proud to contribute to these efforts through a broad portfolio of user access initiatives.

Through hosting external users, Euro-Biolmaging Nodes continue to encounter new scientific challenges, acquire new knowledge, and gain opportunities to push their systems and expertise to new frontiers. These interactions also created and deepened collaborations between Nodes, researchers, and industry partners, co-creating an ecosystem that supports innovation, technology development, and scientific exchange across Europe.

In November, the Euro-Biolmaging community further expanded with the addition of three new Nodes, increasing and amplifying the infrastructure's capacity, expertise, and reach.

Horizon Europe and additional EU-funded projects also played an important role in advancing our strategic goals. In 2025, the EVOLVE project continued to allow us to provide opportunities to Node staff and team members, building our skills, capacity, and collaboration across our community. In addition, our team dedicated significant effort to developing new project proposals aimed at advancing activities in key strategic areas, including AI-driven research, pandemic preparedness, biotechnology and biomanufacturing, environmental effects on health, and sustainable data and computing solutions.

We are especially proud to recognise the expertise, dedication, and commitment of our colleagues whose efforts resulted in 12 newly funded projects that will help shape Euro-Biolmaging in the years ahead. These newly funded projects create unique opportunities to develop new services, expand collaborations, and explore emerging scientific and technological frontiers together with our users and partners. They will also deliver new capabilities for our users, support the continued development of our infrastructure and services, and help us further facilitate collaborative work with partner research infrastructures and organisations across Europe.

None of this would be possible without the commitment and collaboration of our colleagues, partners, and Nodes across Europe. We look forward to continuing to build and strengthen Euro-Biolmaging together.

INFRASTRUCTURE AT A GLANCE

Euro-BioImaging is the European Research Infrastructure Consortium (ERIC) for biological and biomedical imaging. Established as an ERIC in 2019, it is a distributed Research Infrastructure that brings together leading imaging facilities across Europe. These facilities, grouped together as Euro-BioImaging Nodes, provide researchers with open access to state-of-the-art imaging technologies, image analysis services, training, and expert support throughout the research lifecycle.

The infrastructure is coordinated by the Euro-BioImaging Hub, which supports and connects the Nodes through central services, including user access management, image data services, policy and advocacy activities, and community and capacity-building initiatives.

Our Mission

We empower researchers with open access to innovative biological and biomedical imaging technologies, expertise, data services, and training. We enable cutting-edge research and contribute to addressing pressing societal challenges. As an ERIC and an ESFRI Landmark Research Infrastructure, Euro-BioImaging contributes to the overall competitiveness of the European Research Area.



19

MEMBERS
(COUNTRIES & EMBL)



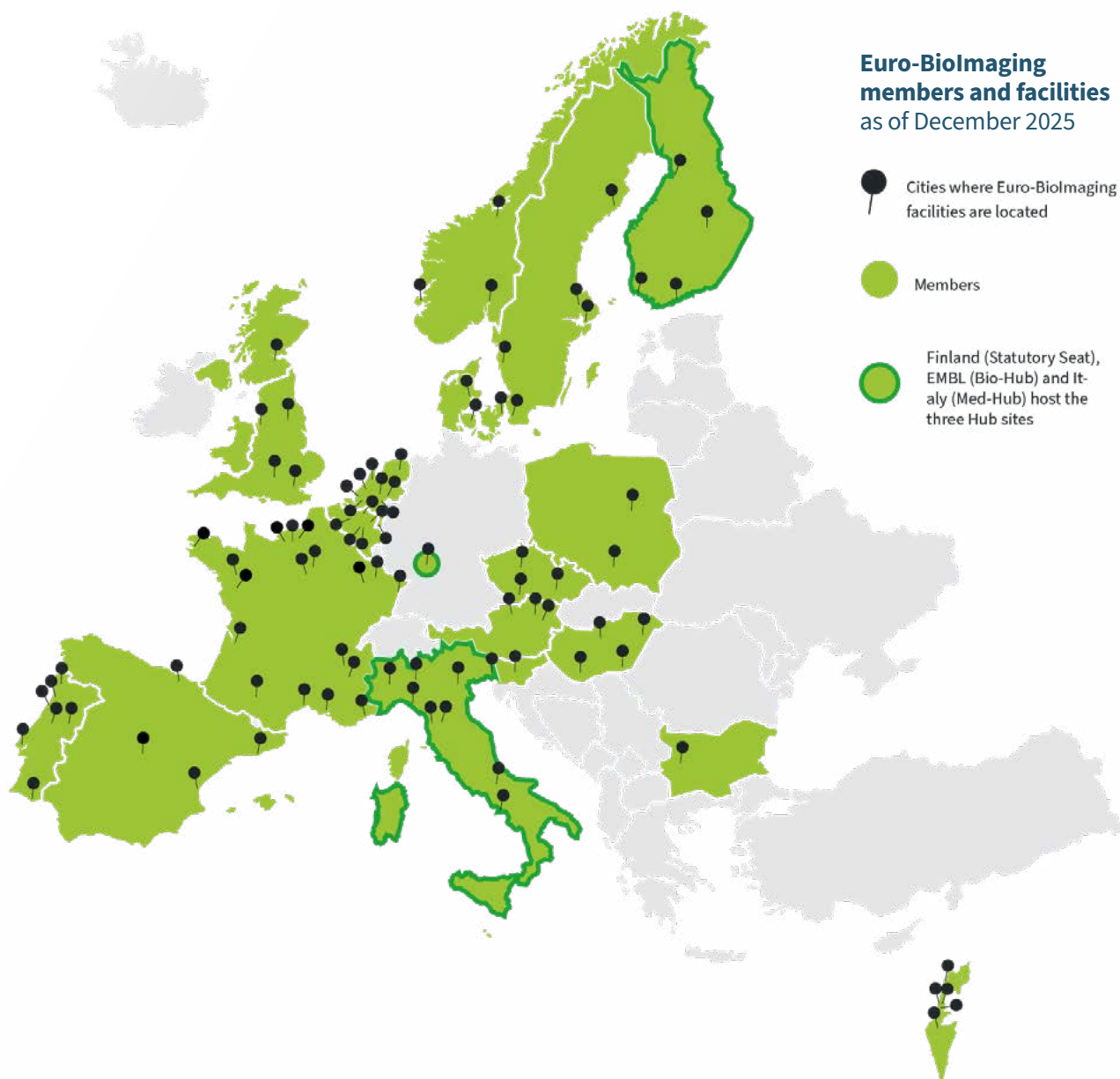
39

NODES



295

IMAGING
FACILITIES



120+

TECHNOLOGIES &
IMAGE DATA SERVICES



915

USER
PROJECTS



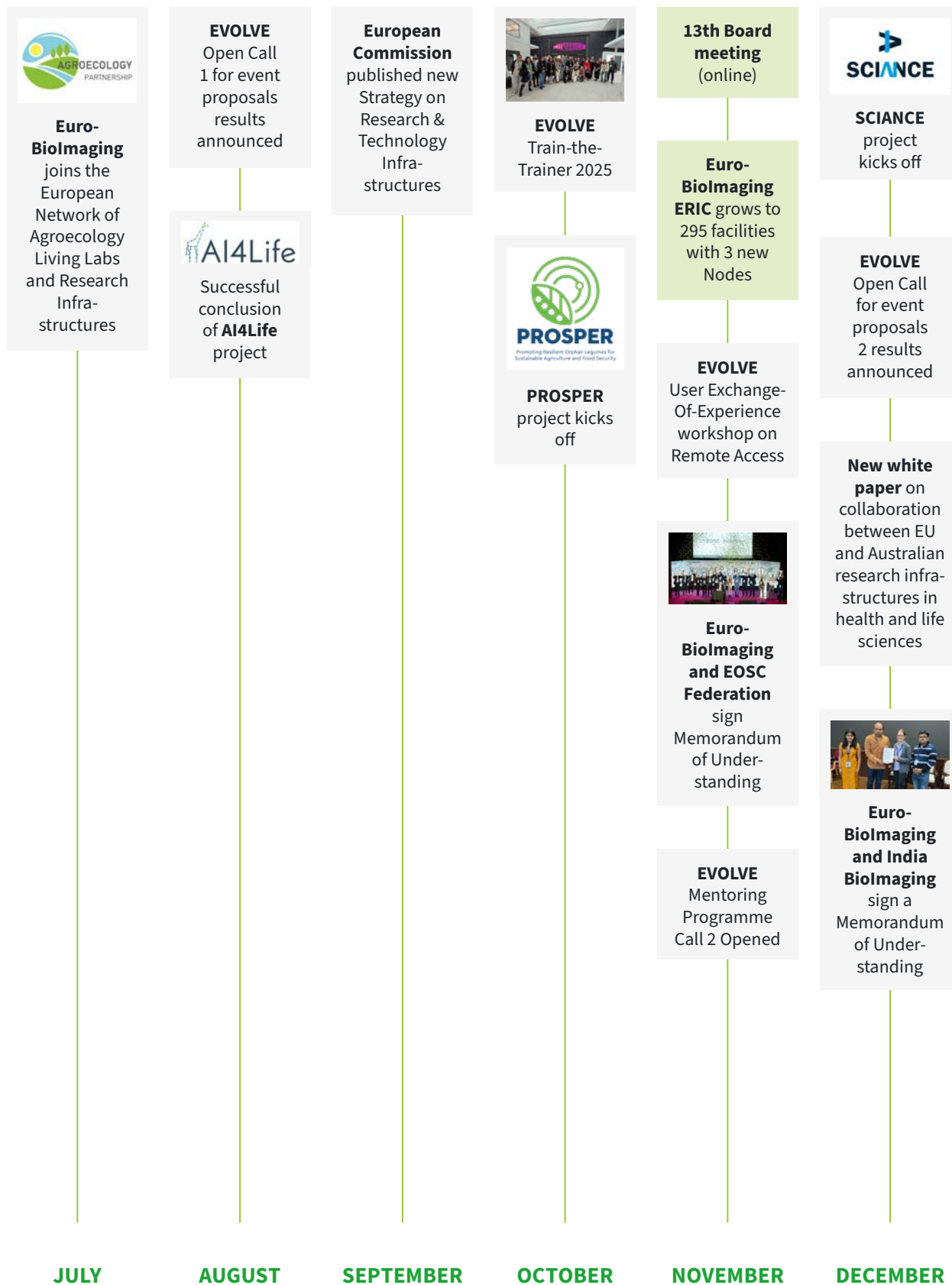
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EU-FUNDED
PROJECTS

HIGHLIGHTS OF 2025

Governance
milestone





OUR TEAM



Statutory Seat
Turku, Finland



Bio-Hub
EMBL, Germany



Med-Hub
Torino, Italy



JOHN ERIKSSON
Director
General



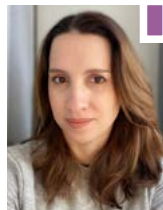
LINDA CHAABANE
Section Director
Med-Hub



ANTJE KEPPLER
Section Director
Bio-Hub



NANCY AGUIRRE
Administration
and
Communications
Intern



VICTORIA LUCIA ALONSO
Scientific Project
Manager



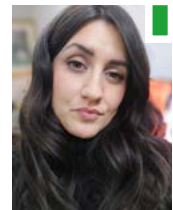
AMARANTA AMADOR BERNAL
Head of Legal
Services and
International
Relations



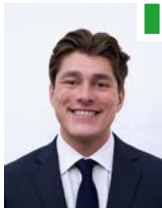
DANIELA AVILES HUERTA
Scientific
Project Manager



JOHANNA BISCHOF
Head of Bio-Hub
Operations



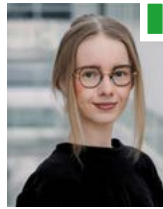
ANNA ELENA BITETTI
Image Data
Scientist



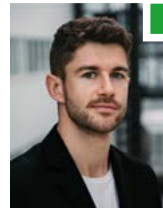
JOAKIM EDMAN
EWP Intern



AYOUB EL GHADRAOUI
EU Project
Manager



SOLVEIG ERIKSSON
Multimedia
Producer



JIRI FUNDA
EU Project
Manager



FRANCESCO GAMMARACCIO
Image Data
Scientist



CAMILO GUZMÁN
Scientific
Officer - Quality
Management
of Biological
Imaging



DARIO LONGO
Senior Scientist



RAKESH MAHATO
Software
Developer



AASTHA MATHUR
Head of Image
Data Services



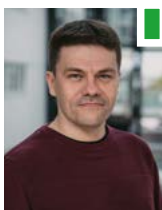
MARIA MIRZA
Scientific Project
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ADÉLA NOVÁKOVÁ
Communications
Officer



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Software
Developer



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Senior Scientific
Project Manager



SANJANA SINGH
Scientific Project
Manager IMAGINE



SUSANNE VAINIO
Scientific
Officer - Quality
Management
of Medical
Imaging



ALESSANDRA VIALE
Head of Med-Hub
Operations



AMAN YADAV
Senior Software
Developer



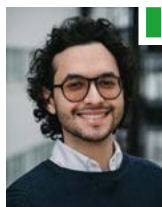
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Scientific Project
Manager



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CHILDRESS POLI**
Senior External
Communication
Officer



SUDEEP DAS
AI and Biomedical
Data Strategy
Officer



RAFAEL DIAZ
Junior Scientific
Officer



**GIUSEPPE
DIGILIO**
Operations
Advisor



**DOROTHEA
DÖRR**
Scientific Project
Manager



**ANNE-CHARLOTTE
JOUBERT**
Senior Officer for
European Affairs
and Stakeholder
Engagement



**KRANTHI
THEJ KANDULA**
Scientific
Software Engineer



**PASI
KANKAANPÄÄ**
Senior Scientific
Manager



**ISABEL
KEMMER**
FAIR Image
Data Steward



**DALE
LAWSON**
Senior Scientific
Project Manager



ANTING LI
Personal
Assistant to the
Management



BUĞRA ÖZDEMİR
Image Data
Specialist



**CLAUDIA
PFANDER**
Strategic Business
Developer &
Industry Board
Coordinator



ILARI PULLI
Head of
Operations



**FERIEL
RAMDHANE**
Image Data
Scientist



**ZORICA
RUOHONEN**
Finance and
Administration
Manager



ARINA RYBINA
Scientific Project
Manager

At Euro-Biolmaging, everything starts with people. People who care deeply about science, collaboration, and opening doors for others. We are one team with many voices, connected by a shared commitment to empowering researchers through open access to imaging technologies, data services, training, and expertise.

What makes Euro-Biolmaging special is not only what we provide, but also the passion, generosity, and dedication of the people who work every day to support our scientific community.

MANY THANKS!

DALE LAWSON and **ARINA RYBINA** have both moved on to new opportunities in 2025. We would like to sincerely thank them for their contributions to Euro-Biolmaging and wish them all the best in their future endeavours.

GOVERNANCE

Euro-Biolmaging is managed by its Hub and governed by the Euro-Biolmaging Board. The Scientific Advisory Board, Panel of Nodes and Industry Board Advisory Panel provide strategic and operational guidance on scientific, technical, service provision and industry-related matters. Together, these bodies play an active role in supporting the operation and development of the infrastructure. Here are some highlights from 2025.



The 12th Euro-Biolmaging Board meeting took place in Amsterdam, from May 13-14, 2025, hosted by our colleagues from NL-Biolmaging. It was the occasion for the Euro-Biolmaging Board members to meet in person to receive updates on the Euro-Biolmaging activities and make strategic decisions to guide the infrastructure.



The 2025 Panel of Nodes meeting took place at EMBL Heidelberg on March 23, 2025. It brought together representatives from our 41 Nodes for important updates and to elect its new Co-Chairs. This group is an important Advisory body within the Euro-Biolmaging Governance concerning Euro-Biolmaging ERIC activities related to the Nodes. Image copyright EMBL/PhotoLab Massimo Del Prete.



The 2025 Panel of Nodes meeting was the final meeting chaired by Panel of Node Co-Chairs Marc van Zandvoort (AMMI Node) and Julia Fernandez-Rodriguez (NMI Node), to whom we are very grateful for their excellent services over the past four years. Pictured above (from left to right): John Eriksson, Marc van Zandvoort, Julia Fernandez-Rodriguez, Antje Keppler and Linda Chaabane.



From March 25-28, Euro-Biolmaging Hub team was delighted to host our Node community & industry partners. The Euro-Biolmaging All Hands Meeting is the occasion to connect with colleagues from around Europe and exchange on topics ranging from imaging technology innovation, data, training & international collaboration. We exchanged experiences on user access, training course management, outreach activities and more, heard from our Global Biolmaging partner Microscopy Australia and had inspiring discussions around data standards, future training programmes, and impact assessment.

The background features a complex, organic pattern of overlapping shapes in a vibrant green and solid black. The shapes are fluid and interconnected, creating a sense of movement and depth. The green areas vary in size and shape, some appearing as large, rounded forms, while others are more intricate, narrow passages or points of connection between larger black areas. The overall effect is a modern, minimalist aesthetic.

IMPACT

UNDERSTANDING IMPACT AT EURO-BIOIMAGING

The impact Euro-BioImaging achieves is not the result of a single activity, but comes from a connected system that enables scientific discovery, strengthens communities, and contributes to innovation across Europe and beyond.

As a pan-European research infrastructure, Euro-BioImaging operates at the intersection of open access, expertise, data, policy, and collaboration. By bringing together nationally funded imaging facilities into a coordinated European infrastructure, Euro-BioImaging amplifies the value of these investments and enables access to technologies and knowledge beyond what any single institution or country could provide.

Through fostering training and collaboration, Euro-BioImaging strengthens its Node community - building expertise, fostering collaboration, and continuously developing services. This, in turn, enables a broader range of researchers to perform excellent science - from support in designing imaging experiments and accessing advanced imaging technologies, to analysing image data, developing skills, and translating results into scientific and technological outcomes that address societal challenges.

The following section highlights key areas through which this interconnected impact is achieved and becomes visible:



User Access – opening an increasing number of high-end imaging technologies and expertise to a broad and diverse research community, enabling excellent and collaborative science



Policy and Representation – contributing to the development of the European Research Area and ensuring that imaging and Research Infrastructures are effectively represented at national, European, and global policy levels.



Image Data Initiatives – advancing FAIR data practices and building the foundations for large-scale, data-driven research through European and global coordination of initiatives advancing data sharing and reuse



Industry Engagement and Innovation – fostering collaboration with industry to support technology development, and enabling access of industry to imaging services to advance their competitiveness



Training and Capacity Building – strengthening skills, knowledge exchange, and collaboration to enable long-term community development across Nodes

Together, these dimensions illustrate how Euro-BioImaging acts as a coordinating platform that connects Nodes, users, scientific communities, technology developers and policy stakeholders to deliver scientific excellence, innovation, and societal impacts.

USER ACCESS

In November 2025, three new Nodes joined the Euro-Biolmaging infrastructure. These include France Life Imaging (FLI), the Advanced NL-Biolmaging Node, and the Madrid Advanced Microscopy Center (MAdMiC). These new facilities bring new technologies and expertise to the network and contribute to increasing the visibility of Euro-Biolmaging with new user communities, not only geographically, with MAdMiC being strategically located in Madrid, one of Europe's southern innovation hubs, but also thematically, with FLI, able to address increasing demand for high-end translational imaging by introducing a unique biomedical imaging capability in France. The Advanced NL Microscopy Node marks an important step of increasing national coordination of access to microscopy resources in the Netherlands. As of December 2025, there are a total of **295 imaging facilities** in Euro-Biolmaging, forming 39 Nodes!



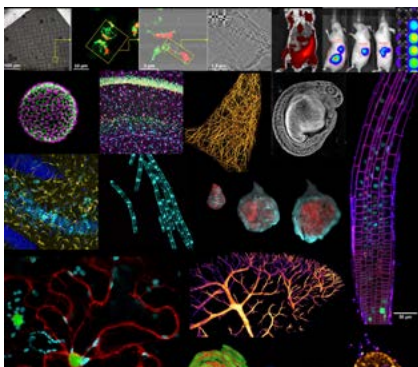
Image courtesy of FLI

France Life Imaging

France Life Imaging (FLI) is a well-established national infrastructure, coordinated by the CEA, comprising facilities within Inserm, CNRS and Inria, and 15 universities across the country. FLI comprises 44 medical imaging platforms and over 160 in vivo imaging systems. In addition, FLI has a transversal platform dedicated to Image Analysis and Management (IAM), as well as four networks of expertise, focusing on critical areas of medical imaging, and a training network, promoting knowledge sharing and skill development.

Advanced NL Microscopy node

The Advanced NL Microscopy Node is the first Node in Euro-Biolmaging to arise via a Node merger following the development of a community coordination processes. It brings together in one multi-sited Node the expertise of 5 former Nodes in the Netherlands. For users, this means one access point to the expertise in correlated light and electron microscopy, optical imaging, high-throughput screening, as well as functional imaging and spectroscopy, with applications across health, drug discovery and plant sciences.



Images courtesy of MAdMiC Node

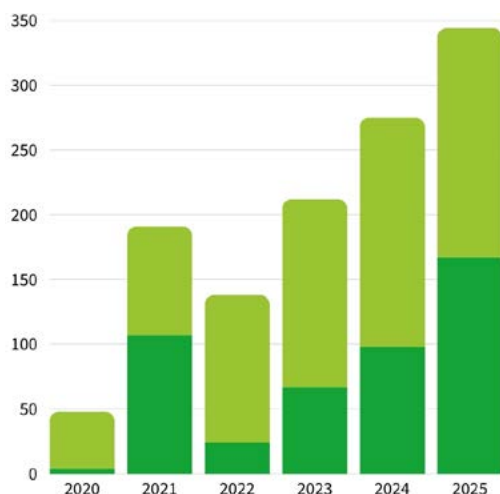
Madrid Advanced Microscopy Centre - MAdMiC

MAdMiC brings together four leading, well-established imaging facilities from two of Spain's top research institutions. By offering access to 26 microscopy systems, MAdMiC enables cross-scale imaging from the mesoscopic to nanoscale through an extensive array of functional microscopy methods. MAdMiC places particular emphasis on life imaging, nanoscopy and ultrastructural imaging.

In addition to expanding user access opportunities by adding new facilities to our infrastructure, Euro-BioImaging has seen user access grow thanks to Horizon Europe and other user access funding programmes. These programmes have boosted the visibility of our infrastructure with potential users and led to a significant number of supported user projects in the thematic – or geographic - areas they focused on.

Between 2020 and 2025, only 10% of Euro-BioImaging user projects have received funding through these mechanisms. But in terms of visibility, the impact is much higher, since more applications were received than projects could be funded. The collaborations fostered via funded user projects are crucial contributions to interdisciplinary research aligned with European priorities and global challenges. In the schema, we provide an overview of funded user access over the years and the quotes below provide insight into the impact of these funding programmes.

Percent of proposals with funding requests



51%

of user access requests
in 2025 were linked to a
funding application

- Proposals with funding requests
- Proposals without funding requests

“ ISIDORe opened the door for us to integrate several scientific services and expertise across Europe, and has been a facilitator for the overall project implementation. Thanks to ISIDORe and Euro-BioImaging, we could have free access to state-of-the-art imaging expertise and technologies offered at EMBL.

Susana Guerra, Professor of Microbiology at the Autonomous University of Madrid

“ The i4A projects are a great way to connect expertise across borders and to show how open-access infrastructures like Euro-BioImaging can make a real difference.

Vlada Filimonenko, Advanced Light & Electron Microscopy Prague Node

Funding for imaging projects is provided by:



Funded by
the European Union



CHAN
ZUCKERBERG
INITIATIVE



DATA INITIATIVES

EUCAIM and CANDLE are two of the strategic European initiatives paving the way to enable data-driven research, innovation and policy. These projects contribute to the backbone of Europe's long-term strategy for data-driven, AI-enabled cancer care under the European Cancer Mission. Euro-Biolmaging and its Nodes are actively engaged in both of these projects, providing the framework and the important image data resources cancer researchers need to boost their research.

EUCAIM is coordinated by Prof. Luis Martí Bonmatí, director of the **Radiology and Medical Imaging Node in Valencia**, who is leading a consortium of 95 partners from 17 countries to build a pan-European digital federated infrastructure of cancer-related images to the validation and development of AI tools. Several Nodes of Euro-Biolmaging are providing expertise and tools or contribute with high quality data to validate the platform.



While implementing the processes and workflows to manage user requests and populating the repository with new data and tools - all activities where Euro-Biolmaging Hub and Nodes contribute - EUCAIM is also looking ahead to its sustainability and exploring the potentialities of becoming a European Digital Infrastructure Consortium (EDIC). Euro-Biolmaging is leading the work package on sustainability, ensuring the strategic role of European Research Infrastructure Consortia with a long-lasting contribution to EUCAIM in the future.



EUCAIM consortium meeting. Euro-Biolmaging was represented by Linda Chaabane and Alessandra Viale. Photo courtesy of EIBIR.



The **CANDLE** project is led by Health-RI, a Dutch organisation developing a national data infrastructure to enable the reuse of health and life sciences data. It supports the establishment of National Cancer Data Nodes. These nodes will boost the reuse of cancer data for research, innovation and policy-making in order to improve diagnostics and treatment for cancer patients, as well as prevention and early detection for citizens not yet affected by the disease. They will connect to the UNCAN.eu platform and closely align with the European Health Data Space. Within this project, Euro-Biolmaging ERIC will assist in the design of national nodes, support their user communities, develop a network resource kit, and provide guidance on best practices for data use.

EOSC Since 2021, Euro-BioImaging has been a member of the EOSC-Association (EOSC-A), which is the legal entity coordinating co-creation of the European Open Science Cloud (EOSC). Over the years, through our participation in EOSC-A Task Forces, and in working groups together with organisations in the ERIC Forum and ESFRIs, we have been providing inputs to the Strategic Research & Innovation Agenda and its Multi-Annual Roadmap that shape future research and innovation activities.



In December 2025, Antje Keppler, Director of our Bio-Hub, was elected to the EOSC Association Board of Directors, allowing Euro-BioImaging to strengthen our support of the EOSC and contributing to setting open science policy priorities in early 2026. This also promotes a strong representation of the Life Sciences Research Infrastructures and ERICs in co-creating the EOSC. On the operational side, Aastha Mathur, our Head of Image Data Services, was selected to co-chair the EOSC Federation's interim Node Operations Committee in early 2026, giving Euro-BioImaging a strategic position in EOSC Federation governance.

EOSC Life Sciences Connect Node

Throughout 2025, Euro-BioImaging has been involved with the Life Sciences Connect Node (LSC Node) alongside its life sciences research infrastructure partners ELIXIR, EMBL, and Instruct ERIC. The LSC Node will serve as a thematic entry point for life science users in the EOSC and provide them various relevant and interoperable services, as well as connection to generic services and infrastructure through the wider EOSC federation.



The EOSC Life Sciences Connect team at the EOSC Symposium in 2025. Euro-BioImaging is represented by Aastha Mathur, Head of Image Data Services.

Overview of the 13 organisations that form the first generation of EOSC Federation Nodes.

Source: <https://eosc.eu/news/eoscs-build-up-phase-to-begin-with-march-kick-off>



TRAINING

As part of the Horizon Europe project EVOLVE, Euro-Biolmaging has developed a Training Programme for Node staff, with the goal of developing new, high-quality services, strengthening management and coordination of facilities, and helping Node staff in their own skill and career development. The training programme has three pillars that Node staff participate in - Job Shadowing, Mentoring, and Training courses.

Job shadowing



Co-funded by
the European Union

The cross-Node Job shadowing programme is an opportunity for Node Staff to work with staff at other Euro-Biolmaging Nodes to learn new skills and to exchange ideas and best practices. Participants in the programme explored imaging technologies and sample preparation techniques, image analysis, as well as core facility management-related topics.

Aside from learning new skills, trying new imaging approaches, and exchanging ideas, participants expanded their professional networks and built friendships that will lead to stronger science and new collaboration opportunities. Grantees are actively sharing what they learned in their home institutions and Nodes, leading to greater impact. Job shadowing truly brings our Node community closer together and encourages the exchange of best practices amongst facilities. (More info in Nodes section, p. 72).



Map of Node participation in the EVOLVE job shadowing programme in 2025.

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Participants visiting other Nodes

“ The EVOLVE Job Shadowing Programme is an excellent opportunity for professional development, network building, and strengthening the Euro-Biolmaging community as a whole.

Dr. Mohesh Moothanchery, University of Liverpool,
Centre for Preclinical Imaging

“ The {job shadowing} opportunity allowed me to explore new microscopy techniques I had never used before, such as FLIM, FRET, dOPM, and SRS Raman. It was fascinating to see how these technologies can uncover new layers of biological information. It was incredibly useful to test and discuss the advantages and disadvantages of different systems.

Patrícia Rodrigues, GIMM, PPBI, mentee and job shadowing participant

Mentoring

The first cohort, which ran from February 2025 until July 2025, brought together 14 mentoring pairs from across Euro-BiolImaging and the Global BiolImaging network. Participants represented a diverse range of facilities, scientific backgrounds, and career stages, creating a rich environment for mutual learning. Mentor-mentee pairs met regularly during the 6-month programme and benefitted from Mentoring Master Classes for the entire cohort.



◀
Read more
Mentoring
stories

Train-the-Trainer

In October 2025 the Euro-BiolImaging team had the immense pleasure of welcoming more than 30 colleagues from 20 Nodes for the first Euro-BiolImaging/ EVOLVE Train-the-Trainer course. The course imparted skills on how to develop your own courses and workshops.

This diverse group of core facility staff came together at the EMBL Heidelberg to share experiences, exchange tools and formats, co-develop their next training course, and explore opportunities for collaboration with industry and across Nodes.

5

Days

20

Nodes

30

Participants

The impact of this course will be far-reaching, as its insights and methodologies will be integrated into training programmes across Europe. By mutualising knowledge and sharing experience, this EVOLVE Train-the-Trainer course has a reach and impact that goes far beyond the participants and trainers.

Train-the-trainer course attendance

Attendants node of origin



POLICY

Euro-BioImaging plays an active role in the European Research Area, and is heavily invested in direct EU stakeholder engagement and collaborations on the European level, including via the ERIC Forum, the ESFRI Stakeholders Forum, LS-RI Strategy Board and EOSC Association. Via these organisations, Euro-BioImaging Hub team members ensure that the perspectives and needs of distributed Research Infrastructures and the imaging community are heard and aim to influence European policy to ensure sustainable support for Research Infrastructures, open access, and FAIR data.

ERIC Forum

ERIC Forum is the bottom-up organisation of European Research Infrastructure Consortium (ERIC). Via the Forum, ERICs speak with one voice to their major stakeholders and therefore, the ERIC Forum is one of the leading science policy voices in Europe.

Euro-BioImaging Bio-Hub Director, Antje Keppler, was Chair of the ERIC Forum for two consecutive terms, from January 1, 2023 to December 31, 2025. Under her strong leadership, the Forum continued to grow as a trusted partner for the European Commission, ESFRI, and the ERIC Committee.



Antje Keppler, ERIC Forum Chair from January 2023, hands over to the new ERIC Forum Chair, Bonnie Wolff-Boenisch (CESSDA ERIC), and Vice-Chair, Eija Juurola (ACTRIS). Photo by ERIC Forum.

It provides important input to policy discussions on sustainability, access, and governance of large-scale RIs. Her term culminated in the new Strategy on European Research & Technology Infrastructures (see next page).

In addition, Euro-BioImaging is active in the ERIC Forum 2 project, leading Work Package 6 at the forefront of aligning ERICs with EU policy priorities specifically for user access and enhancing visibility in national arenas.



Ilari Pulli, Head of Operations, presents at the ERIC Forum Annual Meeting.

New Strategy on Research & Technology Infrastructures

At the European Research & Innovation Days, which took place in Brussels from September 16-17, the European Commission announced a new strategy. The strategy identifies Research Infrastructures, such as Euro-BioImaging ERIC, that offer open access to cutting-edge technologies & expertise, as key competitive assets for Europe's future. The strategy calls for open access, FAIR data, strong talent pipelines and closer links between science and industry. Further strengthening infrastructures and building talent will be the objective of European policy to ensure innovation & competitiveness of the European Research Area in the global arena.



SCIANCE: Shaping the European AI-in-Science Agenda for the Life Sciences

Euro-BioImaging is a partner in the Horizon Europe SCIANCE project. Within the project, Euro-BioImaging coordinates the Life Sciences pilot area, ensuring that the community's strategic priorities and research requirements are well represented in the development of the European AI-in-science agenda and the Resource for AI Science in Europe (RAISE). Participating in SCIANCE positions Euro-BioImaging at the forefront of policy-making for

AI-driven research. It provides a unique opportunity to build strategic relationships with leading AI research centers and European e-infrastructures. By contributing directly to the Strategic Research and Innovation Agenda, Euro-BioImaging ensures that the needs of the biological and biomedical imaging communities are represented in future European funding calls and infrastructure roadmaps.



Group picture of the SCIANCE consortium at the SCIANCE project kickoff meeting. Euro-BioImaging was represented by Scientific Project Manager, Dorothea Dörr.

INDUSTRY RELATIONS

Euro-BioImaging continues to develop its interactions with industry, deepening relations with the Euro-BioImaging Industry Board (EBIB) partners, engaging with innovators across Europe and creating opportunities for our Nodes to connect to imaging companies and industry users.

Euro-BioImaging Industry Board (EBIB)

In 2025 we saw three new additions to the EBIB: IVIM Technology, specialising in in vivo imaging, joining in January as the second non-European EBIB member, followed by JEOL Ltd. in February, significantly strengthening industry representation in electron microscopy. In June, Proteintech, a major producer of imaging reagents became the latest member to join the EBIB. These additions broaden the technological expertise represented within the EBIB and strengthen connections between imaging technology developers and Euro-BioImaging Nodes.

In January 2025, Herbert Schaden (ZEISS) was confirmed as Chair of the EBIB for another two-year

term, while Frederik Siegmann from PicoQuant took on the role of Vice-Chair for the first time, ensuring a strong EBIB leadership that bridges continuity with new impulses from one of the smaller companies on the board.

The highlight of relations between our Nodes and EBIB members was an Academia-Industry Day together with a technical workshop organised alongside the annual All Hands Nodes Meeting in Heidelberg. The meeting provided opportunities for direct exchange on technology development, user needs and future collaboration and saw active participation of industry experts in plenary sessions, panels and strategic break-out sessions.



Frederik Siegmann, PicoQuant, Vice-Chair of the Euro-BioImaging Industry Board took the stage at the Academia-Industry Day of the All Hands Nodes Meeting in Heidelberg.

Engaging with European innovators

We widened our engagement beyond the EBIB at major European events targeting industry. From 1-3 April, Euro-BioImaging took part in the **European Innovation Council (EIC) Summit** in Brussels as invited panel member and official EIC partner, contributing to discussions on how Research Infrastructures can support innovation pipelines and technology validation. The event gave access to innovative SMEs and start-ups across different sectors that are looking for collaborations and support.

Euro-BioImaging also participated with a booth at the **German Biotechnology Days** in Heidelberg, focussing on the use of imaging technologies in biotechnology applications at SMEs, start-ups and industry, while October found us at the **Nordic Life Science Days** in Gothenburg. Further outreach activities included participation in scientific congresses with strong industry presence such as ESMI, ELMI, EACR Congress and the International Congress of Immunology.



Euro-BioImaging, represented by Claudia Pfander (in photo on the right) and Anne-Charlotte Joubert, attended the EIC Summit in Brussels in April 2025 as an official EIC Partner. Group photo: EISMEA Communications.

Training and exchange-of-experience

As industry user access to Euro-BioImaging services becomes increasingly relevant, Euro-BioImaging fostered a monthly **Exchange of Experience series on working with industry users** for Nodes to share best practices and upskill Nodes of different experience levels. In 10 topic-focussed sessions, Node representatives covered topics such as business models for commercial services, funding mechanisms for pilot projects, compliant tools for the management of quotes and invoices or interpersonal skills needed to manage expectations in academia-industry projects.

Industry partners contributed to the **Train-the-Trainer course** on training course development, offered under the EVOLVE framework, and shared their insights on corporate and customer training programmes with facility staff. In addition, we kicked off the EVOLVE **industry job shadowing pilot** between Node staff and industry partners. Through these activities, Euro-BioImaging continues to facilitate access for companies to advanced imaging expertise across its distributed Nodes and to support the setup of collaborations with industry partners across Europe.

The background features a complex, organic pattern of overlapping shapes in two colors: a vibrant green and a solid black. The shapes are fluid and non-geometric, creating a sense of movement and depth. The green shapes are scattered throughout, often appearing as if they are floating or emerging from the black background. The overall composition is balanced and visually striking.

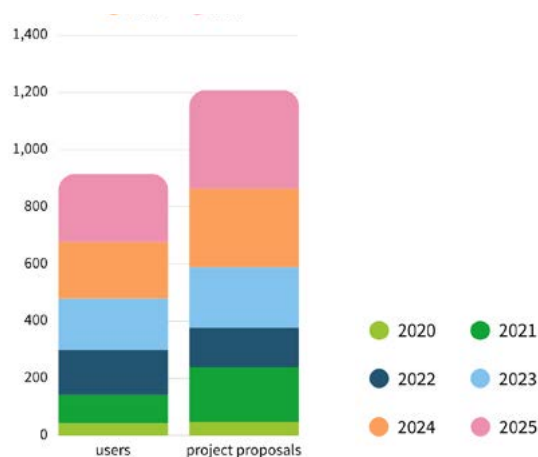
**EXCELLENT
SCIENCE**

ABOUT OUR USERS

Euro-BioImaging is open to researchers from all backgrounds and career stages, and any country in the world. The diversity of Euro-BioImaging's growing user base is highlighted here, with data collected in the Euro-BioImaging Access Portal (EAP) over the period 2020-2025.

Celebrating 1,200+ user requests!

The number of Euro-BioImaging users is growing each year. In 2025, we crossed the threshold of 1,200 user requests recorded in the Euro-BioImaging Access Portal. Out of these, 915 were approved and started by end of 2025. These numbers include users from academia and industry.

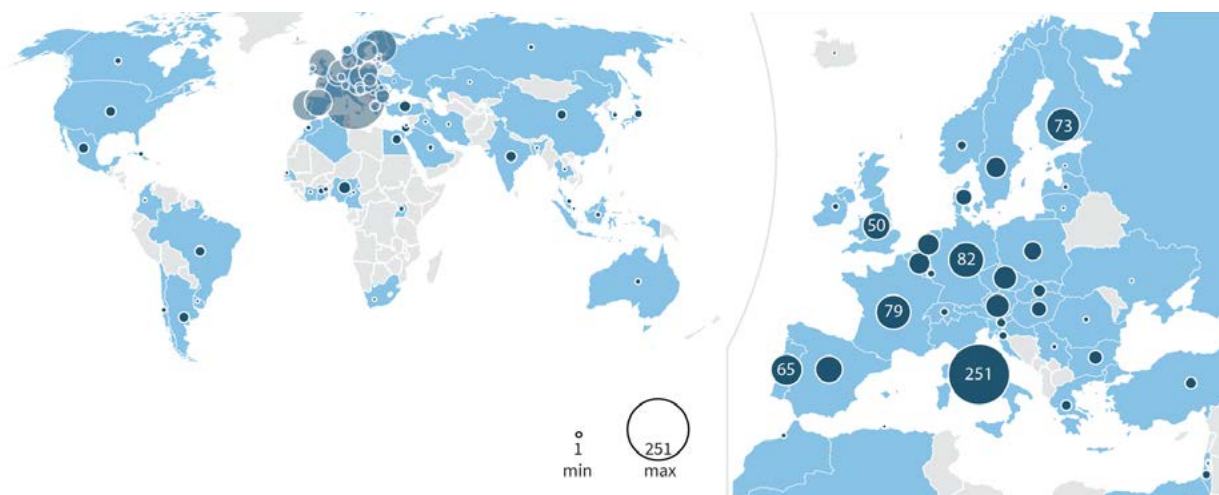


“ In 2025, we have seen an increase in the number of user requests - in large parts supported by EU and international funding calls that support user access. But it is not just an increasing number of applications, we are also seeing a real increase in where users are coming from and the diversity of research topics, requested technologies and samples that are being imaged.

Johanna Bischof, Head of Bio-Hub Operations

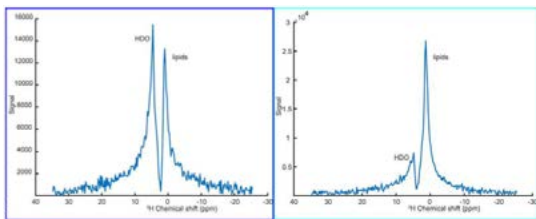
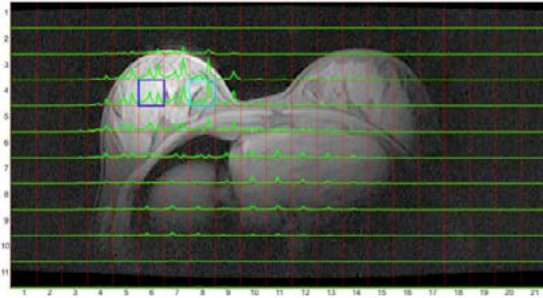
Euro-BioImaging users, country of origin 2020-2025

Total amount of users per country



USER STORIES

Through the excellent technologies and expertise provided by our Nodes, Euro-BiolMaging users are able to delve deep into diverse research topics. We explore the range of expertise available at Euro-BiolMaging Nodes by highlighting projects that received user access funding through different mechanisms in 2025.



Axial slice of two natural abundant 2H MRSI scans of a healthy volunteer acquired after each other and selected voxels (indicated in blue and light blue) containing different ratios of glandular breast tissue and fat (submitted to ISMRM).

Multiplex imaging to study the lymphatic system

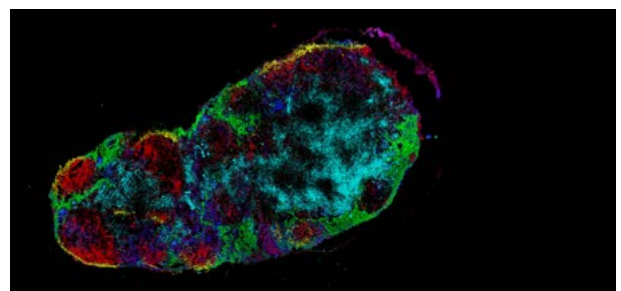
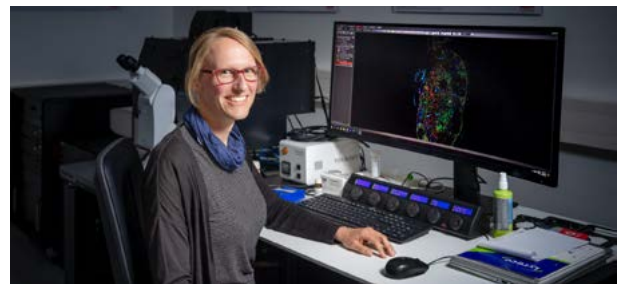
Dr. Sarah Hofmann, Mannheim University Hospital, is studying the lymphatic system, with a specific focus on lymph nodes. She also received funding from the canSERV project to further elucidate the spatial distribution of lymphatic endothelial and immune cell interactions in tumor-draining lymph nodes using state-of-the-art multiplex-capable microscopes at the EMBL Imaging Centre, part of Euro-BiolMaging's **EMBL Node**. This powerful technique allows her to visualise more than five different markers simultaneously in a single sample, providing a richer and more detailed understanding of the complex cellular interactions at play.



Cancer

Feasibility of Deuterium Metabolic Imaging in the human breast

Dr. Claudius Sebastian Mathy, from the Friedrich-Alexander University Erlangen-Nuremberg, received funding from EU-funded canSERV to undertake a project in close collaboration with the Utrecht UMC team, part of our **Dutch High Field Imaging Hub Node**. The project developed a coil configuration and acquisition workflow for unilateral breast scans at 7T, integrating transmit and receive elements for both 2H and 1H imaging. After phantom testing, a series of feasibility scans were acquired from healthy volunteers both at natural deuterium abundance and following oral administration of 2H -labelled glucose. This project demonstrated for the first time the feasibility of performing Deuterium Metabolic Imaging (DMI) in the human breast for tumor and metastasis detection.



Multiplex fluorescence imaging of lymph nodes. Images courtesy of Sarah Hofmann (pictured above).

Exploring new treatment strategies for HER2-positive breast cancer

Dr. Veronika Huntošová and her team from the Center for Interdisciplinary Biosciences at the Technology and Innovation Park of the Pavol Jozef Šafárik University in Košice are working to develop new breast cancer therapies. With canSERV funding, they designed a genetically encoded photosensitising protein that can be guided directly to HER2 receptors on breast cancer cells. This work represents an important preparatory step towards more precise and personalised treatment strategies for HER2-positive breast cancer. Advanced light and electron microscopy services from the **Cellular Imaging Hungary Node** site at the University of Debrecen allowed the team to visualise the interaction between the targeting protein and breast cancer cells at multiple levels.



Veronika Huntošová and the team of the Cellular Imaging Hungary Node in front of the Electron Microscope used in the experiments.



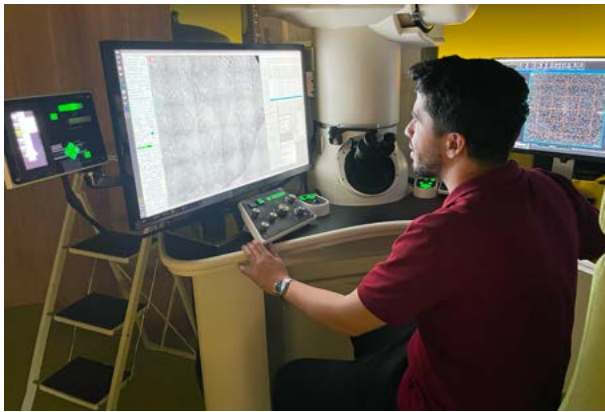
Hamouch Zeinab and her supervising professor, Prof. Daniele Cornara, at the Centre for Cellular Imaging, part of our Swedish NMI Node.



Agroecology

Electron Microscopy to understand spittlebug feeding dynamics

Hamouche Zeineb is a PhD student at the University of Bari Aldo Moro - Department of Soil, Plant and Food Sciences (DiSSPA), in Italy, who received funding from the EU-funded AgroSERV project to investigate how spittlebugs bite into olive trees. These bites can transmit the pathogen *Xylella fastidiosa* which leads to Olive wasting disease with significant economic impact in large olive plantations. Using Array Tomography at the Centre for Cellular Imaging, University of Gothenburg, part of our **Swedish NMI Node**, allowed Zaineb to shed light on overlooked aspects of the impact of spittlebug stylets penetration inside olive plant tissues and feeding dynamics, which can inform how this disease vector can be targeted.



Dr. Anil Can during different phases of his experiment at the Advanced Light and Electron Microscopy Node Prague.

Reproductive health

Toxicity impacts in testicular tissue

Dr. Anil Can from Acibadem Üniversitesi in Istanbul traveled to Prague to explore the fine structure of mitochondria in testicular tissue. Supported by the Imaging4All (i4A) programme, coordinated by Global BioImaging and funded by the Wellcome Trust, Anil spent two weeks at the Electron Microscopy Core Facility (IMG EM) of the Institute of Molecular Genetics of the Czech Academy of Sciences, part of the **Advanced Light and Electron Microscopy Prague Node** of Euro-BioImaging. His project focused on studying mitochondrial damage caused by MSG and the ameliorating effects of ferulic acid on this—a topic with important implications for understanding toxicity impacts in male reproductive health. The entire IMG EM team supported the project using Focused Ion Beam Scanning Electron Microscopy (FIB-SEM) and Transmission Electron Microscopy (TEM) to capture the ultrastructure of mitochondria in three dimensions.



Understanding sperm movement in 3D



Understanding how sperm move in three dimensions is key to advancing reproductive health and improving fertility diagnostics. For Dr. Haydee Hernández from the Centro de Investigación en Ciencias, UAEM, in Cuernavaca, Mexico, this question lies at the heart of her scientific journey. With support from a COMULISglobe international access grant - funded by the Chan Zuckerberg Initiative - she travelled to the Euro-BioImaging **Mesoscopic Imaging Node** in Barcelona, Spain, to apply advanced mesoscopic imaging techniques to study sperm motion with unprecedented resolution—bringing together fluorescence and label-free elastic scattering microscopy to visualise structure and function in living cells.



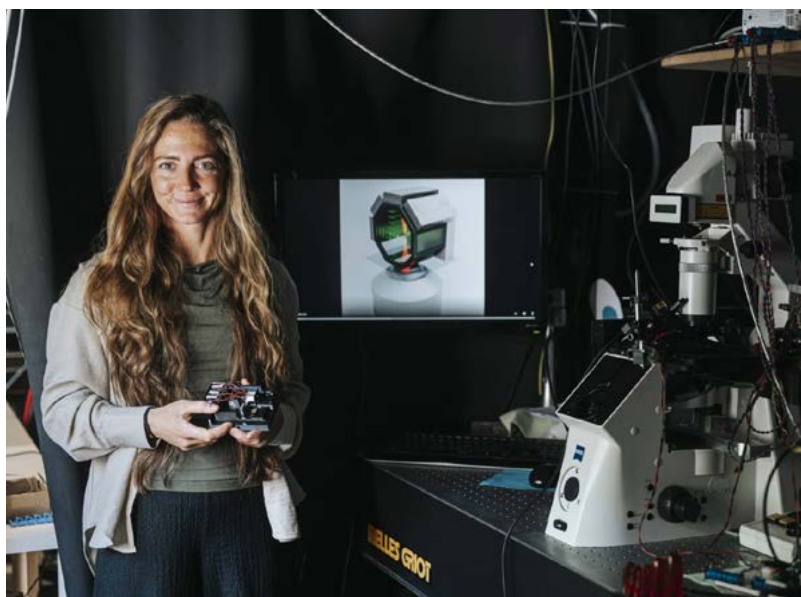
Dr. Haydee Hernández from the Centro de Investigación en Ciencias, UAEM.

Tools Development

Ultrasound-induced sample reorientation for enhancing penetration depth in Optical Coherence Tomography

Optical Coherence Tomography (OCT) is a label-free technique that has emerged as an excellent tool for monitoring the structure and function of organoids. However, the opaque nature of many organoids limits its applications.

In their work on acoustofluidic platforms for trapping and rotational manipulation of biological samples for tomography, Dr. Mia Kvåle Løvmo and Prof. Monika Ritsch-Marte, from Institute of Biomedical Physics, Medical University of Innsbruck, have explored having multi-angle views of the sample to resolve this issue. Together with their collaborators at the Medical University of Vienna, part of **Austrian BioImaging/CMI Node**, Prof. Wolfgang Drexler and Dr. Shiyu Deng, they launched an exciting project to combine for the first time acoustic trapping and rotation with OCT.



Dr. Mia Kvåle Løvmo with the acoustofluidic device used for ULTIMA-OCT (Image courtesy: Franz Oss).
Read the article: <http://dx.doi.org/10.1038/s41467-024-46506-2>



3D reconstruction of the rat femoral-tibial region from high resolution micro-CT, with the trabecular compartment highlighted in yellow. Image courtesy of Prof. Lombardi.

Osteology

Using micro-CT to better understand forever chemicals

Prof. Giovanni Lombardi, from IRCCS Ospedale Galeazzi-Sant'Ambrogio in Milan (Italy) and Poznań University of Physical Education (Poland), is currently investigating the effects on bone microarchitecture of the exposure to per- and polyfluoroalkyl substances (PFAS) used as additives in various consumer products.

High-resolution micro-CT is critical for this study, and Prof. Lombardi requested access to the CNR Institute of Clinical Physiology in Pisa, part of our **Multimodal Molecular Imaging Italian Node** to acquire micro-CT images of rat bones exposed to variable doses of PFAS, taking advantage of the SEELIFE funding for user access to Italian Nodes which was available in 2025.

PUBLICATIONS

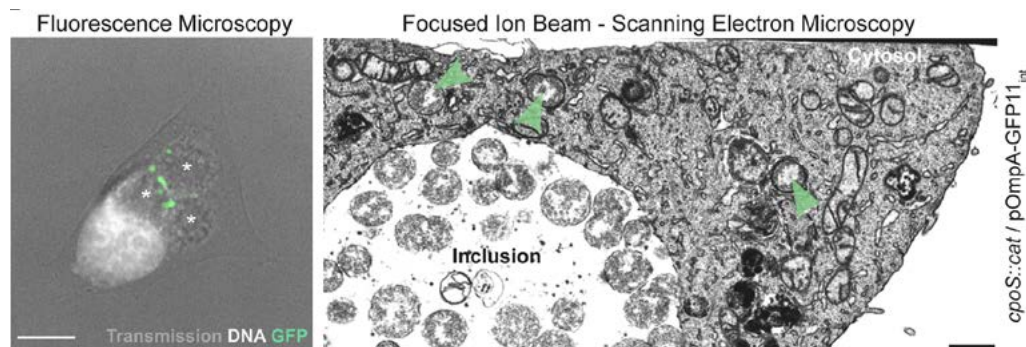
2,550+

Access to imaging services through Euro-BioImaging enables our users to collect high-quality data, contributing to scientific publications. Here we highlight some publications from users that were released in 2025.

publications with support from Euro-BioImaging core facility staff members were reported in 2025

Targeting intra-cellular pathogen escape mechanisms

Some pathogens, such as *Chlamydia trachomatis*, infect the insides of cells and evade the intrinsic defenses of the cells they infect. Researchers from the Umeå University worked with the **Swedish NMI Node** facility UCEM to identify a key protein allowing this evasion of host cellular immune surveillance. The work included a whole-genome CRISPR screen in combination with CLEM for the intracellular localisation and visualization. Bacterial cells were targeted by a split-GFP reporter system for targeting and FIB-SEM provided visualisation of the areas at highest resolution. <https://doi.org/10.1371/journal.pbio.3003297>

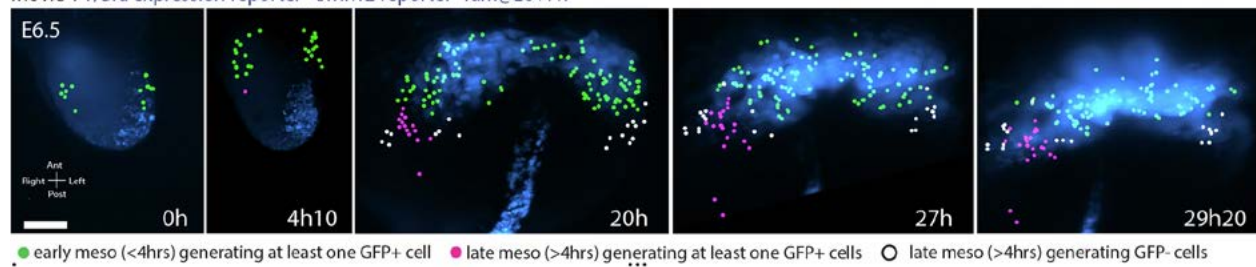


FIB-SEM analysis validating inclusion damage at the ultrastructural level. (Figure 5E. Babu Sait MR, et al., 2025. Used under a CC BY 4.0 license.)

How to make a heart

Formation of the heart in an early mammalian embryo is a critical developmental process that requires groups of stem cells to move to the right location, develop into the correct cell type. To understand this process in mouse embryos, researchers from University College London worked with the Microscopy facility at the Francis Crick Institute, part of the **UK Node**, to use light-sheet microscopy to enable long-term live imaging and single-cell tracking of different groups of progenitor cells which form different heart components and follow different migration pathways and dynamics. <https://doi.org/10.1038/s44318-025-00441-0>

Movie 1 T/Bra expression reporter cTnnT2 reporter Tam@E6+7h

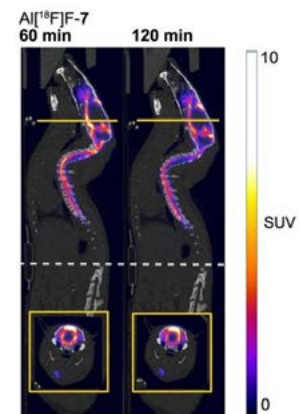


(i) Fate maps showing early (green) and late (magenta) mesoderm contributing to cTnnT-2a-GFP+ progenitors. Non-contributing, late progenitors are in white. (ii) Each colour represents a distinct clone. (iii) cTnnT-2a-GFP+ cells are in red, cTnnT-2a-GFP- cells in white. Scale bar: 100 μ m. (From Figure 5, Abukar et al, 2025.) Used under a CC BY 4.0 license.

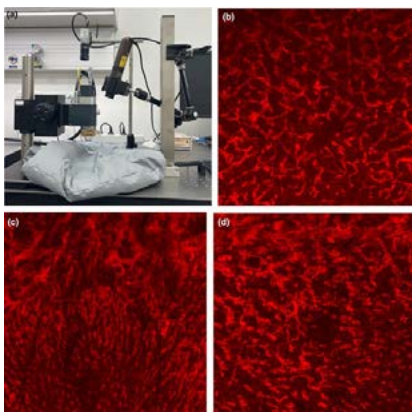
Development of new albumin-binding radiotracers for PET imaging of cerebrospinal fluid flow in the glymphatic system

There is a growing interest in understanding the function and activity of the glymphatic system, a recently discovered brain-wide clearance system that allows the cerebrospinal fluid (CSF) flow to clear metabolic waste. At the University of Helsinki, part of the **Finnish Biomedical Imaging Node**, four albumin-binding PET radiotracers were developed and tested for their potential in the non-invasive visualisation of the central nervous system and the study of the glymphatic fluid flow in rodent models. These are the first reported tailor-made tracers for this purpose and have been shown to be important precursors towards PET imaging studies of CSF flow in humans in the future.

<https://doi.org/10.1186/s41181-025-00365-4>



CNS delivery of one of the tracers after cisterna magna infusion. (From Figure 4, Peltoniemi et al., 2025). Used under a CC BY NC-DC 4.0 International License.



Examples of OCTA images of (b) healthy control, (c) psoriatic skin and (d) atopic dermatitis skin (From Figure 1, Knudsen et al., 2025.) Used under a CC BY NC 4.0 license.

Optical Coherence Tomography Angiography provides insights into the microvascular alterations in non lesional psoriatic skin and atopic dermatitis

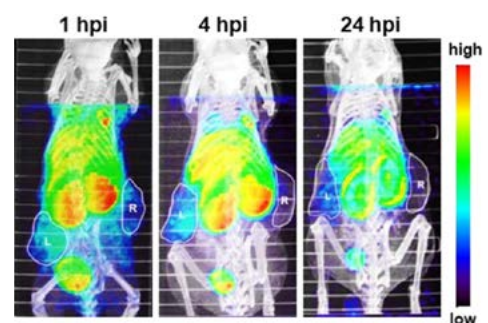
Microvascular changes and angiogenesis are important features of psoriasis and atopic dermatitis (AD). At Aarhus University, **Danish Bioluminescence Node**, a study on patients with psoriasis, AD, and healthy controls used Optical Coherence Tomography Angiography (OCTA) to assess these changes. Results showed significant differences in microvascular structure between lesional and nonlesional skin in both diseases, and OCTA appears to be a promising non-invasive tool for visualizing these structural changes.

<https://doi.org/10.1093/skinhd/vzaf083>

Development of a novel anti-CEACAM5 VHH for SPECT imaging and potential cancer therapy applications

Carcinoembryonic Antigen-Related Cell Adhesion Molecule 5 (CEACAM5) is a glycoprotein highly expressed in many epithelial cancers and widely used as a diagnostic marker. At the preclinical imaging facility of the **AMMI Maastricht Node**, a novel anti-CEACAM5 VHH (6B11) labelled with ^{99m}Tc was prepared, to evaluate its potential as a diagnostic SPECT tracer and as a targeting-moiety for the development of VHH-based anti-CEACAM5 drug conjugates. Overall, 6B11 resulted to be a promising candidate with good targeting properties.

<https://doi.org/10.1007/s00259-025-07321-z>



Representative SPECT-CT images of a tumor-bearing mouse after ^{99m}Tc -6B11 injection. (From Figure 3, Cong et al, 2025.) Used under a CC BY 4.0 license.

The background features a black field with several large, organic, rounded shapes in a vibrant green color. These shapes overlap and flow across the page, creating a dynamic and modern aesthetic. The text is positioned within one of the black areas.

**TECHNOLOGY
& INNOVATION**

TECHNOLOGIES



IN VIVO IMAGING

ELECTRON MICROSCOPY

LIGHT MICROSCOPY

SAMPLE CHARACTERISATION & EX VIVO IMAGING

CORRELATIVE & MULTIMODAL IMAGING

IMAGE DATA ANALYSIS

Providing open access to imaging technologies and expertise is Euro-Biolmaging's core business. But beyond providing access to existing imaging systems, the expert staff at the Euro-Biolmaging Nodes are driving innovation in imaging and pushing boundaries by developing new imaging methods and workflows.

120+

Imaging technologies
available to users

In these pages, we explore the cutting-edge technologies available to users through Euro-Biolmaging Nodes and highlight innovations in imaging that are being led within the framework of Euro-Biolmaging, either by the expert core facility staff at our Nodes or by EU-funded projects.



Structured Illumination Microscope (SIM) with three colors in action at Center for Advanced Optical Microscopies, Jožef Stefan Institute, Ljubljana, SIMBiON Node. Photo by B. Kokot.



Upgraded MR scanner (Cima X) at the Multimodal Imaging Node in Brno. Photo by Jakub Rozboud.



34

Biomedical imaging
technologies



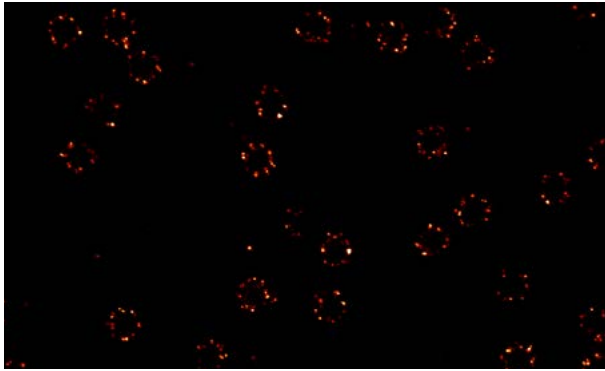
90

Biological imaging
technologies

SPOTLIGHT ON MINFLUX

MINFLUX is a cutting-edge super-resolution light microscopy technique that bridges the gap between traditional fluorescence microscopy and structural biology by achieving nanometre-scale precision. It works by combining features of different super-resolution approaches and localizing single fluorescent molecules with extremely high accuracy, using a targeted illumination strategy that requires only very few emitted photons.

MINFLUX is currently the light microscopy method closest to structural biology, enabling the study of molecular details at the nanometre scale previously accessible only by electron microscopy or crystallography. Beyond fixed samples, MINFLUX makes it possible to capture dynamic molecular processes in living systems with unprecedented spatial and temporal resolution. After years of development, in 2025 MINFLUX - both for imaging as well as for tracking - is now well established as an open access service offer in core facilities and available at several Euro-Biolmaging Nodes with capacity to support many user projects.



Nuclear pore complexes. The localisation precision is around 2 nanometres. Each “dot” represents a single Nup96 protein. Image from the EMBL Imaging Centre, part of EMBL Node, where MINFLUX is available in open access. Copyright EMBL.



Selene Roberts at the OCTOPUS facility, UK Node, provides MINFLUX services.



Ana Agostinho, Advanced Light Microscopy Facility, Scilifelab, part of Swedish NMI Node, supports users with MINFLUX.



STED and 2D MINFLUX set-up at the Polish Advanced Light Microscopy Node, Nencki Institute in Warsaw.

In addition to the Nodes pictured above, MINFLUX is available in open access at France-Biolmaging, Italian ALM Node, and Danish Biolmaging Node.

SPOTLIGHT ON INNOVATION

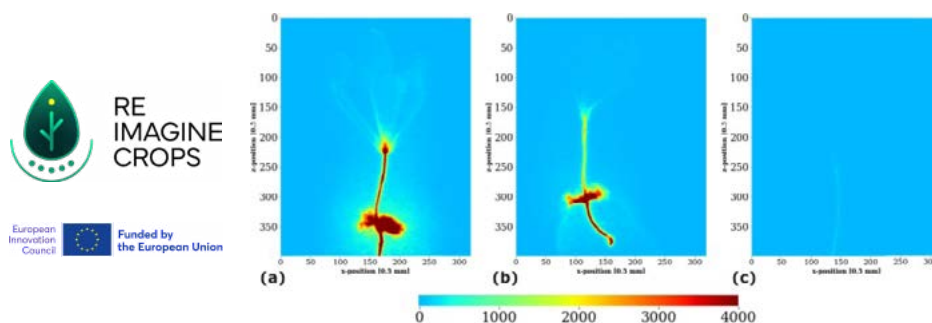
The RE-IMAGINE-CROPS project, funded by the European Innovation Council under Horizon Europe, officially launched in May 2025. Its ambitious vision is to revolutionise sustainable agriculture by bringing biomedical imaging technologies into the field. As global food demand intensifies, and resource scarcity becomes critical, European agriculture requires smarter, data-driven decision-making tools. The project addresses this challenge by developing a portable, multimodal imaging platform that combines Positron Emission Tomography (PET) and Multiphoton Endoscopy (ME). This platform is designed to measure plant physiological and metabolic responses to nitrogen fertilisation directly in the field in real time. It will yield insights previously obtainable only in laboratory settings.



Ciarán Butler-Hallisey (left) joined the Euro-Biolmaging team as RE-IMAGINE-CROPS Project Coordinator in 2026. Here he visits project partner LIGHTCORE technologies where optical engineer Naveen Gajendra Kumar (right) shows the development of the multiphoton endoscope fibre.

The project brings together five European countries and eight leading institutions in research, imaging, and agriculture. The partnership unites experts in plant science, biomedical engineering, optical physics, artificial intelligence, and agri-food innovation. The consortium includes Euro-Biolmaging ERIC as coordinator, academic partners at the University of Turku (FiBI Node - Finland), Maastricht University (AMMI Node - The Netherlands), CNRS (University of Lille, France), and the University of Teramo (Italy), and industry leaders LIGHTCORE Technologies (France), BF Educational (Italy), and VRVis (a member of Austrian Biolmaging/ CMI). This blend of academic rigour and industry know-how positions the project to deliver scientific excellence and real-world agricultural impact.

The project team has focused on establishing collaborative frameworks, refining technical specifications, and preparing the groundwork for technology development. Looking ahead, the multi-modal imaging of crops will generate rich visual data at multiple scales, which will be processed using dedicated artificial intelligence and visual computing methods to extract actionable insights into plant health, nitrogen utilisation efficiency, and environmental stress responses. Over the three-year project period, this integrated approach from field imaging to computational analysis to optimised nitrogen fertilisation strategies will demonstrate a new standard for precision agriculture rooted in real-time biological understanding.



PET imaging of spinach leaves with different biostimulant treatments. The PET images shows how different stimulants change the metabolism. Antonecchia et al., 2025. Used under a CC-BY-4.0 license. <https://doi.org/10.1016/j.atech.2025.101298>

SPOTLIGHT ON INNOVATION

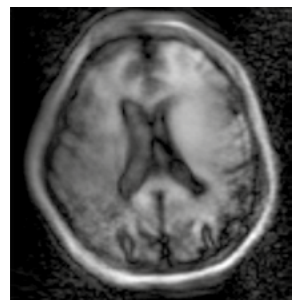
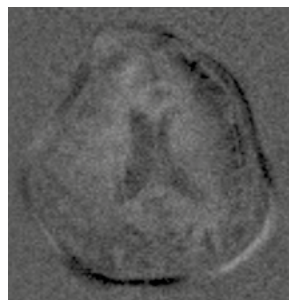
Our Nodes are at the forefront of developments that will push the frontiers of imaging and advance scientific applications. In the next pages we highlight two highly interesting MR systems that can be used in the context of physical exercise, a new sample preparation method to use MSI for lipid mapping, and new optical architecture for high-speed 3D imaging.

Wide bore MRI scanner to monitor the body during exercise

At the **Dutch High Field Imaging Hub Node**, thanks to the support received by the Dutch Research Council to the BioMotive project, a 3T MR scanner with a 2-metre bore will be built at UMC Utrecht. This “walk-in” bore is a unique feature which will allow scanning subjects while moving in a natural position inside the magnet. Additionally, a commercially available 0.5T vertical open MR scanner will be installed at the University of Twente, also allowing for upright imaging. The available space in both scanners will enable obtaining information about the inner workings of the human body during function or exercise in the natural position; not affected by the different exposure to gravity when the body is placed horizontally, as in standard instruments. Advanced signal acquisition and reconstruction will make it possible to scan given parts of the body in real time during physical exercise, observing how the musculoskeletal, cardiovascular and metabolic systems interact.

Portable MRI scanner to monitor the body

Within the Horizon Europe project NEXTMRI, the **Radiology and Medical Imaging Valencia Node** is contributing to the development of a portable 0.086T, 350 kg MRI scanner based on a Halbach-type magnet configuration. Designed primarily for hospitals and clinical environments with limited access to high-end imaging infrastructure, the system targets neuroimaging as well as imaging of extremities. Its compact size and weight also enable deployment at sport events and facilities allowing rapid on-site assessment of athletes who suffered injuries. The scanner is currently a prototype under testing on individuals with musculoskeletal issues or multiple sclerosis. Given the low magnetic field, advanced software to improve image quality is needed, and this is where our Valencia Node is contributing, leading efforts in clinical validation and AI-based image reconstruction and improvement.



Photos of developments from NEXTMRI, including the portable prototype in action (left), and an image acquired with it (center), then improved by image processing (right). Photos courtesy of the Radiology and Medical Imaging Valencia Node.

Method development for correlating lipid molecular information with anatomy in *C. elegans*

Caenorhabditis elegans (*C. elegans*) is widely used as a model organism to investigate fat storage and lipid metabolism. Mass spectrometry imaging (MSI) is a powerful technique for the visualisation of lipid distribution within tissues, but its application to *C. elegans* has been constrained by challenges in achieving consistent sample preparation. At the MSI facility of the **AMMI Maastricht Node**, a microfluidic-based method for the preparation of consecutive sections of nematodes while preserving key internal structures has been developed. This approach supports multimodal analysis of individual worms by combining MSI with Oil Red O staining, allowing detailed visualisation of lipid distribution across different anatomical regions.

The MSI-derived lipid maps can be integrated with optical images to allow full image reconstruction, providing a more comprehensive understanding of the relationship between anatomy and lipid distribution in *C. elegans*.

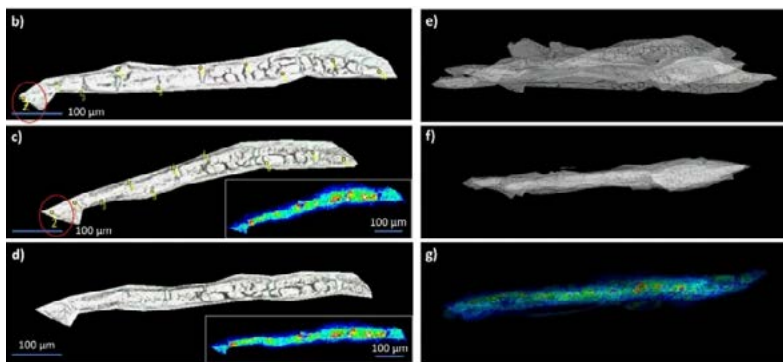
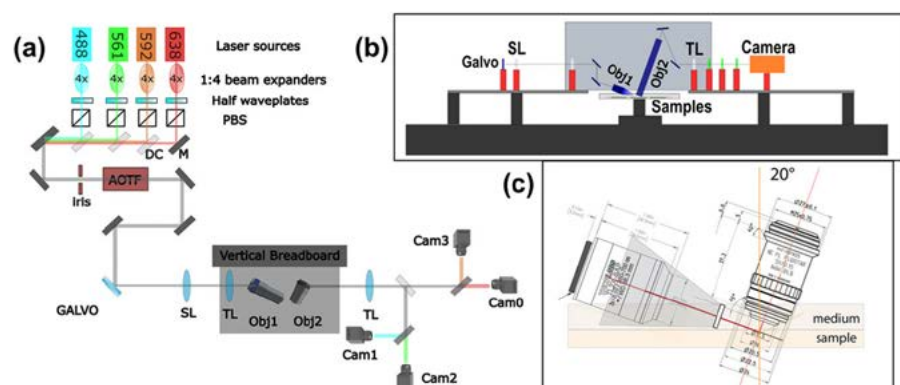


Image reconstruction and 3D visualisation of *C. Elegans* based on optical and MSI images. Used under a CC-BY-4.0 license. Mandic et al, 2025. <https://doi.org/10.1038/s41598-025-09577-9>

High-Speed, Multi-Color Light-Sheet Microscope for 3D Imaging of Large Cleared Human Brain Tissues

The Quad-SPIM is a custom-built light-sheet fluorescence microscopy setup designed for high-speed 3D imaging of large cleared biological specimens, developed by the team at LENS, part of the **ALM Italy Node**. The system is based on a dedicated optical architecture featuring multi-arm light-sheet illumination, high-numerical-aperture detection, and simultaneous four-channel spectral acquisition, integrated with custom software for hardware control, synchronisation, and large-scale data handling. The setup enables rapid volumetric imaging with subcellular resolution and was validated on cleared post-mortem human brain tissue, demonstrating scalability and robustness for large-volume structural imaging applications.

a) Schematic representation of the optical path of our LSFM setup. For simplification, the beam combining the 4 laser lines is depicted in grey. PBS: polarizing beam splitter; DC: dichroic mirrors; SL: scanning lens, TL: tube lens. b) Frontal view scheme: the two lifted lateral breadboards hold the vertical breadboards where the objectives are located. c) Graphical representation of the positions of the excitation and detection objectives, which are tilted by 20 degrees relative to the horizontal and vertical axes, respectively. Figure 1 a-c of Perego et al, 2025. <https://doi.org/10.1002/lpor.202501725>



Used under a CC-BY-4.0 license.

The background features a black field with several large, overlapping, organic shapes in a vibrant green color. These shapes are reminiscent of cells or fluid droplets, creating a dynamic and modern aesthetic.

DATA SERVICES

OVERVIEW

Modern biological and biomedical imaging generates vast, complex datasets that hold tremendous scientific value. At Euro-BioImaging, we provide a comprehensive suite of Data Services designed to support researchers and core facility staff throughout the entire data lifecycle and make fundamental contributions to the data-driven research landscape. Many of our activities around technical tools development, data stewardship, and community building are supported via EU funded projects.

From scientific discovery to community building



Image analysis services offered through expert image analysts at the nodes provide users with tailored solutions, from basic processing to advanced workflows, empowering scientists to accelerate discovery and enhance the impact of their research.



FAIR data services provided together with our Nodes, include guidelines, trainings, and support for adoption of practices that yield FAIR (Findable, Accessible, Interoperable and Reusable) and AI ready image data to push frontier research.



Tool development and maintenance support towards FAIRification, management, quality control, and curation of image data is provided together with Euro-Bioimaging Nodes to enhance cloud readiness and AI compatibility, and promote uptake of community recommendations.



Via **Community data initiatives**, we empower the imaging community to create, share, and advance FAIR image data and services through coordination and policy support, and creating environments for exchange of experience across disciplines and across the globe.

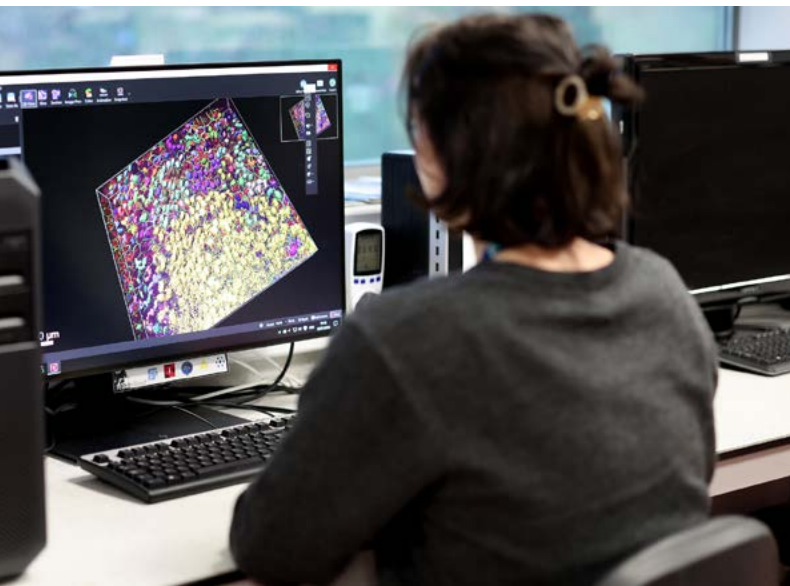
To bring all of these efforts together into a coherent service offer, Euro-BioImaging Hub team runs Expert Groups, participates in Horizon Europe-funded projects, and provides valuable training and technical tools to help facility staff and researchers on their journey to unlock the power of imaging data.



Check out
our data services

IMAGE DATA SERVICES

Image Data Analysts at our Nodes provide expert, personalised support for transforming complex imaging data into meaningful scientific insights. They collaborate closely with users to tailor analysis solutions—whether it involves basic image processing, advanced workflows, or machine learning techniques—empowering scientists to accelerate discovery and enhance the impact of their research. In addition to directly supporting users, many of our bioimage analysts are involved in developing and actively maintaining open image analysis tools and libraries, which serve Euro-BiolImaging users as well as the global scientific community.



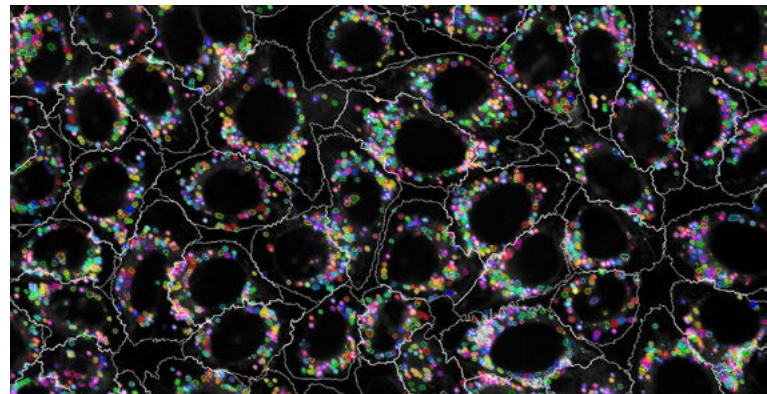
French PhD student Lucie Marx is working in CCI Liverpool on a project on Hirschsprung disease, performing data analysis on cell explants from mouse peritoneal tissue. Credit: University of Liverpool

300+

staff members provide image analysis and management services at Euro-BiolImaging Nodes

73

users have been supported through Euro-BiolImaging Image Data Services in 2025



Software for integrated microfluidics into live-cell imaging experiments. Image courtesy of Barcelona Live and Intravital Node.

Image Data Analyst Expert Group

Euro-BiolImaging runs an Image Data Analyst Expert Group to provide a forum for the image data experts at Nodes to discuss challenges they face in provision of Image Data Analysis as a service, and to exchange experience within our very open and active community. The group is currently working on providing best practice examples and community guidelines for offering image analysis services, together with input from the global community.

PRECLINICAL IMAGE DATA SUPPORT

To support the research community and facilitate compliance with FAIR data principles and support the potential reuse of image data, we provide tools for sharing, managing and processing of preclinical imaging datasets across multiple biomedical imaging modalities:

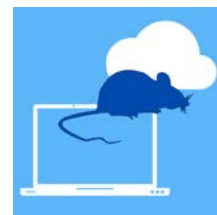


Preclinical Image DATaset Repository (PIDAR):

A public repository of metadata from preclinical imaging datasets covering several imaging modalities (CT, MRI, PET, etc.), from published studies. Curated with over 200 metadata and domain-specific ontologies, it enables efficient dataset discovery and reuse. PIDAR provides connections to XNAT platforms for facilitating findability of image datasets.

XNAT for Preclinical Imaging Centers (XNAT-PIC):

An open-source Windows application extending XNAT to facilitate the preclinical data management workflows. It supports DICOM conversion, data annotation and upload, improving data organisation and interoperability.



XNAT Instance:

A pilot repository hosted at the University of Turin (HPC4AI) for temporary secure storage, sharing, and processing of imaging data. It can be exploited to facilitate collaboration and data sharing across partners, in addition to management of multicentric studies. Integrated with PIDAR, it provides access to tools for image data analysis. Access upon request.

Preclinical in vivo Imaging Expert Group

Node staff can gain further support on preclinical image data management by participating in the newly established Preclinical in vivo Imaging Expert Group. This group holds bimonthly meetings, focussing on two main areas: preclinical image data management and animal and other models in research.

The group continues to work on finding better solutions for storing, processing, and sharing large and complex preclinical imaging datasets, while addressing the challenges posed by the lack of standardised tools and the diversity of data management systems across facilities.

At the same time, the members explore the ethical, regulatory, and practical issues related to the use of animals in research, including restrictions in transnational access and the search for alternative models.

Contributing to international efforts

The Euro-BioImaging community also contributes to international working groups via Global BioImaging (GBI). In 2025, the article titled, “A global effort toward standards for data sharing in biomedical imaging: Developing Consensus and Infrastructure for Global Data Interoperability” was published building on efforts of the Biomedical Imaging Community Working Group in GBI. This article examines the global challenges and emerging solutions in sharing and standardising biomedical imaging data across modalities and highlights international efforts to develop FAIR, interoperable frameworks that bridge biological and clinical imaging communities. (doi: [10.1038/s44319-025-00652-w](https://doi.org/10.1038/s44319-025-00652-w))

DATA STEWARDSHIP

Data stewards support researchers to make image datasets FAIR and openly available via public repositories. Increasingly, Euro-BioImaging plays a coordinating and advisory role, bringing data stewards at our Nodes, and beyond, together to exchange best practices. With its coordinating role, Euro-BioImaging understands their needs, and develops and raises awareness of tools and resources to support and facilitate the important work of data stewards embedded in their local communities. By empowering the people who work with imaging data, and through direct interaction with researchers and imaging experts, Euro-BioImaging supports global efforts to bring high-quality image data and metadata into the realm of Open Science.

The **Euro-BioImaging Data Steward Expert Group**, launched in October 2025, brings together data stewards and professionals involved in bioimaging data management and curation. Open to all Euro-BioImaging Nodes and invited experts, it currently includes representatives from the UK, the Netherlands, Portugal, Sweden, Denmark, the Czech Republic, Finland, and EMBL, as well as NFDI4BIOIMAGE. Meeting monthly, the group fosters knowledge exchange, addresses shared challenges, and promotes FAIR data stewardship while keeping members informed of relevant developments and tools. Early discussions have focused on FAIR data management and the characteristics of ideal bioimage facilities and the group will continue to address common challenges and aims to develop tailored recommendations and best practices for FAIR bioimage facilities.



FAIR Data resources

Euro-BioImaging offers a range of free, curated resources, tools, and guidelines to support the bioimaging community. From the image repository decision tree to the research data management plan template, these resources are readily available to download or use online, helping researchers adopt and implement FAIR data practices with ease.

Tricia Loo proudly displays the Euro-BioImaging repository decision tree at the IACF, Copenhagen, part of Danish BioImaging Node.

TRAINING

Euro-BioImaging increasingly organises and participates in training events covering a comprehensive range of topics like image data management, data formats and standards and the implementation of FAIR principles in the biological and biomedical imaging domain. By bringing together experts at the Nodes, researchers, and the imaging community, these events aim to foster the exchange of experiences, invite collaboration, enhance technical skills, and promote innovative approaches in the dynamic field of image data.



BAND Virtual Desktop to support training courses

To support image data analysis courses, Euro-BioImaging supports maintenance of the BAND virtual desktop. Accessible directly through a standard web browser, BAND provides a fully-equipped image analysis environment with a wide range of preinstalled tools and programming frameworks. Along with training opportunities, BAND also provides an environment for comprehensive testing of newly developed image analysis tools. Openly available to anyone in the life sciences research community since April 2025, thanks to a successful collaboration between Euro-BioImaging and EGI Federation members CESNET and GRNET, BAND was used successfully in **10 training courses to over 230 users** between April 2025 and February 2026.

10

Data-related training sessions conducted by the Euro-BioImaging Hub team in 2025

Image Data Community Days

The first **Image Data Community Days**, held online from 7–11 April 2025, gathered nearly **500 participants from 40 countries** for an intensive week dedicated to bioimaging data and FAIR practices. With more than 60 talks, workshops, and interactive, community-building sessions, the event brought together researchers, imaging facility staff, data stewards, students, and industry partners to exchange concrete experience on image data management, analysis, and sharing. Overall, the Image Data Community Days strengthened an international network of imaging and data experts and created lasting value for the community through 100 shared resources and recorded sessions that remain available beyond the event.

“ *This is a great opportunity to be in touch with other microscopists, ask questions and learn, learn a lot!* ”

Participant at the Image Data Community Days

TOOLS DEVELOPMENT

Next Generation File Formats (NGFF), including OME-Zarr, are community-driven, FAIR-compliant, cloud-optimized file formats designed to address the scale and complexity of modern imaging data. Together with the extensive Open Microscopy Environment (OME) community, Euro-BioImaging supports the development and implementation of the OME-Zarr file format, which enables cloud-native, parallel data access.



With OME-Zarr a selection of software tools and devices are able to access the same datasets from centralised storage. “Multiple clients” by Henning Falk, ©2022 NumFOCUS, is used under a CC BY 4.0 license.

EuBI-Bridge

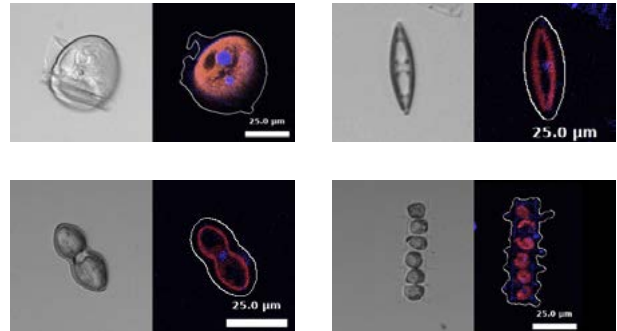
To facilitate broad adoption and maximize the benefits of OME-Zarr, we are actively developing a set of tools that simplify working with OME-Zarr. One of these tools is EuBI Bridge, our open-source Python-based software. Available as a Python library, command line tool or a graphical user interface, EuBI-Bridge supports parallelised

conversion of a wide range of formats to OME-Zarr. Beyond data conversion, EuBI-Bridge also provides data visualisation and metadata editing utilities, combining three functionalities in one package. Within 2025, EuBI-Bridge recorded **661 installations** and was featured in multiple training events.

EuBI-Bridge was used by Tina Wiegand to convert a large marine sample data set from the TREC Expedition to OME-Zarr as part of data submission to the BioImage Archive in 2025.

“EuBI-Bridge facilitated our work a lot!”

Tina Wiegand, EMBL TREC



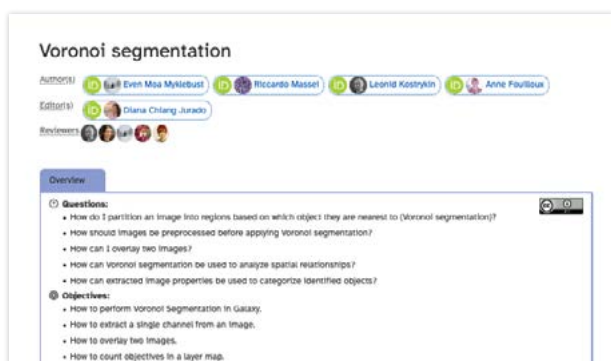
TRaversing European Coastlines (TREC) Live Plankton High-Content Fluorescence Microscopy Dataset. BioStudies, S-BIAD2258. Retrieved from <https://www.ebi.ac.uk/biostudies/bioimages/studies/S-BIAD2258>

IMAGE DATA TOOLS ACROSS DOMAINS

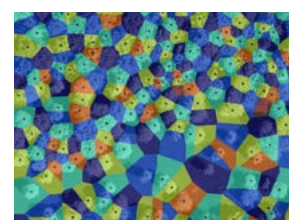
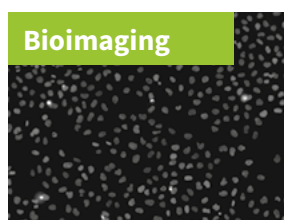
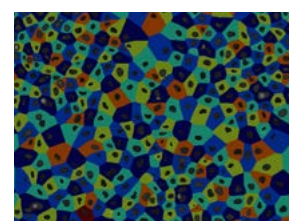
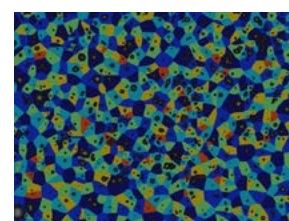
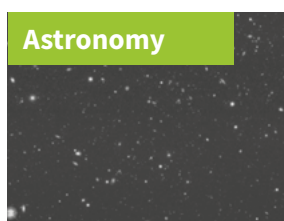
Imaging techniques have become increasingly popular across scientific fields due to their ability to provide rich and comprehensive information. These images, image series, and videos are invaluable resources, offering researchers a wealth of information to explore and analyse. Despite the widespread use of imaging, the practice of extracting quantitative information from image data remains fragmented across scientific communities. Scientists often work in isolated silos, resulting in limited cross-talk and collaboration. This isolation can lead to redundant work and inefficient resource utilisation, as experts in different domains may duplicate efforts unknowingly. The rise of AI and machine learning further complicates this landscape, with access to the necessary tools and computational resources becoming a significant bottleneck for researchers. That is why Euro-BioImaging is actively engaging with multidisciplinary communities to streamline and develop image data analysis and tools.

FIESTA

The OSCARS-FIESTA project aims to tackle the challenges by creating image analysis workflows that can be shared and reused across multiple scientific domains, such as bioimaging, environmental sciences, and astrophysics.



Exemplary workflow for voronoi segmentation of images from bioimaging, environmental sciences, and astrophysics domain. Even Moa Myklebust, Riccardo Massei, Leonid Kostykin, Anne Fouilloux, Voronoi segmentation (Galaxy Training Materials). <https://training.galaxyproject.org/training-material/topics/imaging/tutorials/voronoi-segmentation/tutorial.html>



The **FAIR Image Data Workflows Expert Group** at Euro-BioImaging brings together researchers, developers, and trainers to share knowledge, develop best practices, and collaboratively enhance FAIR principles in bioimage data analysis.

Our primary goals are to:

- Coordinate efforts to reduce redundancy in tools, workflows, and training.
- Share our work to showcase our advancements.

- Support each other through knowledge-sharing, troubleshooting, and collaboration.
- Implement FAIR principles to make workflows reproducible and reusable.
- Expand documentation and training resources for accessible learning and skill-building.

AI-READINESS OF IMAGE DATA & SERVICES

AI4Life

After three years of collaboration, innovation, and community building, the AI4Life project came to a close in 2025 — but its impact and mission will continue.

AI4Life brought together leading experts in life science imaging, artificial intelligence, and research infrastructures to make AI-powered image analysis more accessible, interoperable, and open.

Advancing open science and collaboration

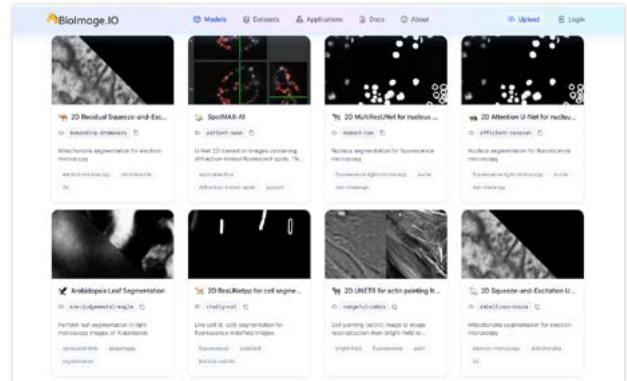
The project embraced open science practices, ensuring that its results — from software tools to workflows and datasets — remain accessible and reusable by the community.

The BioImage Model Zoo (BMZ) is at the heart of these achievements, a platform that democratises access to pre-trained AI models. By offering models with standardised metadata, reproducible deployment options, and integration with widely used analysis tools, the BMZ empowers life scientists – regardless of their computational expertise – to apply AI methods to their imaging data.

AI4Life's commitment to FAIR principles is also evident in its data services, which include curated datasets with ground-truth annotations, standards for AI-ready data, and deposition services to ensure reproducibility.



◀
Learn more
about all AI4Life
results on our
website.



What's Next for AI4Life

Although the project has officially concluded, its mission continues. The infrastructures, communities, and open resources established through AI4Life will remain at the core of efforts to advance FAIR, accessible, and AI-driven bioimaging.



Key outputs supported during the lifetime of AI4Life project, including development of standards for AI-ready image datasets, and the BioEngine, providing scalable access to cloud infrastructure for serving AI models, are now being extended through the RI-SCALE project. This project develops scalable Data Exploitation Platforms (DEPs) that will allow extension of AI4Life services with powerful computational environments and AI ready data.

foundingGIDE

Two years after its launch, foundingGIDE (founding a Global Image Data Ecosystem initiative) has become an established global effort addressing metadata standardisation challenges and advancing interoperability across biological and preclinical imaging data domains. Coordinated by Euro-BiolImaging, the project brings together international imaging communities from Europe, Australia and Japan, image data repositories, and infrastructure providers to develop the foundations of a connected Global Image Data Ecosystem (GIDE).

A key element of foundingGIDE's success has been its strong emphasis on engagement across the global imaging community, demonstrated through two successful international Community Events held in 2024 and 2025 (see Outreach section). These meetings advanced the project's mission to build community-driven technical foundations that support biological and preclinical imaging data sharing and reuse.

In parallel, the project achieved significant technical progress in 2025. Published as deliverables, the community undertook extensive analyses of existing imaging ontologies, metadata models, and repository standards across the biological and preclinical imaging landscape. This work identified commonalities, gaps, and opportunities for harmonisation while providing practical recommendations to improve semantic consistency, interoperability, and data discoverability across imaging repositories. Taken together, this work is a major step forward for Open Science and AI-readiness of imaging data across continents.



“ In 2025, major technical groundwork has been performed in foundingGIDE, which will enable the future image search portal. Together with the community events, this work is key for Euro-BiolImaging Nodes and Users.

Maria Mirza, Scientific Project Manager,
foundingGIDE

foundingGIDE has been an important initiative to get the global imaging community to speak the same language when it comes to data. An important outcome in 2026 will be the development of a common search portal to major open image data repositories, BioImage Archive, Image Data Resources and SSBD, allowing users to find images by keywords across modalities.

Together, these activities reinforce Euro-BiolImaging's crucial role in enabling open, interoperable, and globally connected imaging data infrastructures for the life sciences.

The background consists of several large, overlapping, organic shapes in a vibrant green color against a solid black background. The shapes are fluid and non-geometric, creating a dynamic and modern aesthetic. The word 'OUTREACH' is centered within one of the black areas.

OUTREACH

COMMUNITY

Euro-Biolmaging works closely with an extensive and varied network of stakeholders, including the scientific community, our community of Nodes, our Research Infrastructure partners, the European Commission, our Member States, and international imaging communities.

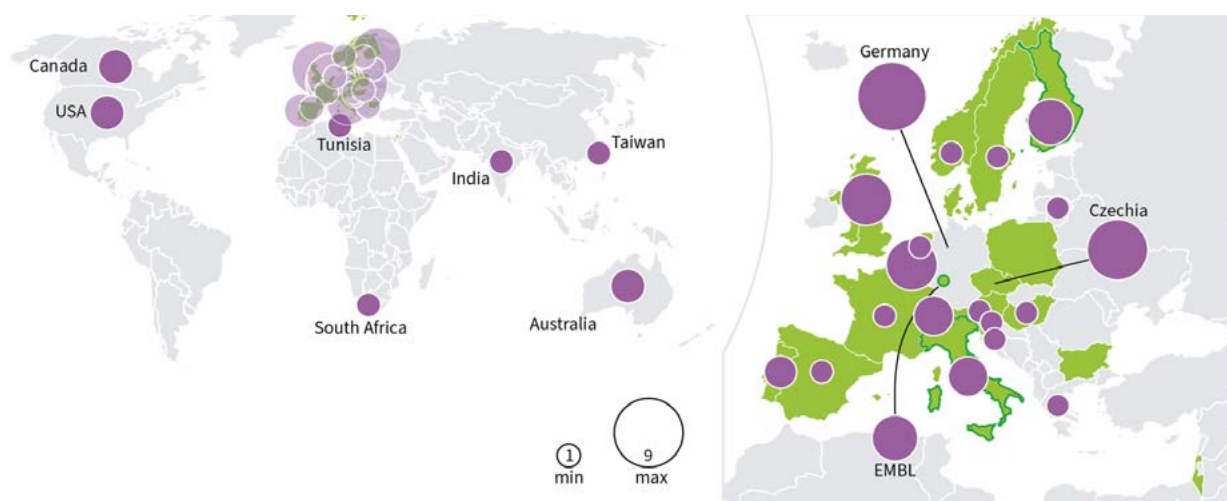
A significant focus is placed on connecting with the scientific community - ensuring that more and more researchers are aware of the opportunities offered by Euro-Biolmaging. We do this by attending conferences and meetings organised by different scientific and imaging communities. We also organise our own events, such as the Image Data Community Days and the Virtual Pub. Finally, we work closely with our Scientific Ambassadors, a group of individuals who are intrinsically embedded in their own individual research ecosystems and are supporting Euro-Biolmaging in raising awareness.

In these pages you will see how the Euro-Biolmaging Hub team engages with multiple target audiences, strengthens the Node community, and builds lasting collaborative relationships that ultimately enhance scientific outputs within the European Research Area.

Euro-Biolmaging participation in externally organised community-oriented events & conferences, in-person 2025

Total amount of events attended per country

non-member member hub



62

In person conferences & community events attended by Hub team members in 2025

91

Events organised by Euro-Biolmaging for various stakeholders, both online & in person

~5,300

Attendees at events organised by Euro-Biolmaging in 2025



BNMI Symposium, Gothenburg, Sweden



MCM, Slovenia



István Ábrahám memorial workshop, Pécs, Hungary



EACR 2025, Lisbon, Portugal



Turku Biolmaging Day, Turku, Finland



IUIS, Vienna, Austria



Turku PET Symposium, Turku, Finland



Visit to CAPI Node, Prague, Czechia



Seeing is Believing, EMBL Heidelberg



EMIM 2025, Bilbao, Spain



ELMI 2025, EMBL Heidelberg



Nordic Life Sciences Days, Stockholm, Sweden



Image Data Formats Training course, EMBL Heidelberg



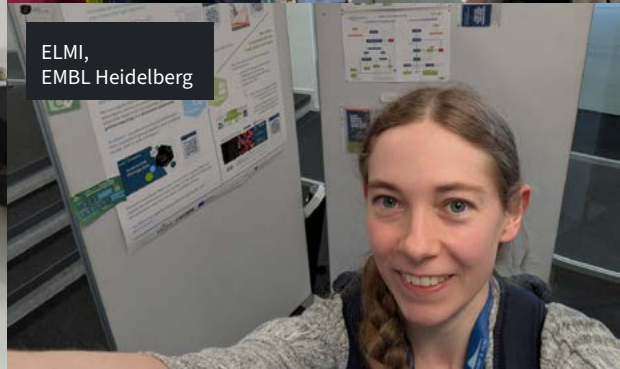
Visit to PRIME Node, Nijmegen, the Netherlands



SPAOM, Lisbon, Portugal



BioCity Symposium, Turku, Finland



ELMI, EMBL Heidelberg

SCIENTIFIC AMBASSADORS

In order to raise awareness of Euro-Biolmaging within the research community, Euro-Biolmaging developed a Scientific Ambassadors programme.

Conceived in 2023 by Beatriz Serrano-Solano and managed by a cross-Hub Task Force, our Scientific Ambassador Programme became operational with EVOLVE funding in 2024. Each year, 10-12 highly motivated individuals are selected in a competitive process and trained to inform others about Euro-Biolmaging. Thanks to the EVOLVE project, Ambassadors can receive support to travel to conferences, to spread the word about Euro-Biolmaging with their community. In addition, Ambassadors are connected with Node staff for outreach & awareness projects, and support Euro-Biolmaging on selection committees. Monthly meetings ensure regular guidance from the Hub team, feedback from the Ambassadors, and co-development of new initiatives by the Scientific Ambassador cohort.

Between Spring 2024 - Spring 2026, we were lucky to work with twenty-three selected Scientific Ambassadors from 12 countries and EMBL. These individuals carried out impactful outreach activities on behalf of Euro-Biolmaging (see graphic below) and raised the visibility of our infrastructure. In addition, the programme provided valuable networking & visibility opportunities to the Ambassadors themselves.




Our Scientific Ambassador, Virginia Silio (right, University College London), represented Euro-Biolmaging at MMC 2025, where she met Georgina Fletcher (left, UK Node coordinator), and Johanna Bischof (centre, Head of Bio-Hub operations).

Nearly
2,000 researchers
reached by Scientific Ambassadors
at conferences & events

“Through interactions with different Nodes and people involved, I gained experience in building and maintaining professional connections and in understanding how scientific networks can grow and create opportunities over time.

Scientific Ambassador Vanessa Coelho-Santos,
University of Coimbra

Ambassador activities

-  **29** Presentations
-  **15** Node interviews (incl. planned)
-  **10** Social media videos to promote Nodes or the Ambassador programme
-  **5** Participation in evaluation committees

EXPERT GROUPS

Aside from conferences and events, another important way that Euro-Biolmaging engages with Nodes but also the wider imaging community is via its different Expert Groups. With the Expert Groups, our mission is to increase collaboration and connections between our Nodes and provide opportunities to share and advance knowledge on relevant topics. Several of our Expert Groups are also open to the wider imaging community - including Euro-Biolmaging partner communities, external experts, Euro-Biolmaging Industry Board members and more.



Spotlight on Smart Microscopy Working Group

This Expert Group brings together academic and industry participants to facilitate the development, standardisation, and uptake of applications and solutions in this emerging field. It provides a forum for the imaging industry to engage with the imaging community for feedback and use cases. Resources from the Smart Microscopy Working Group are available on GitHub and YouTube.

11

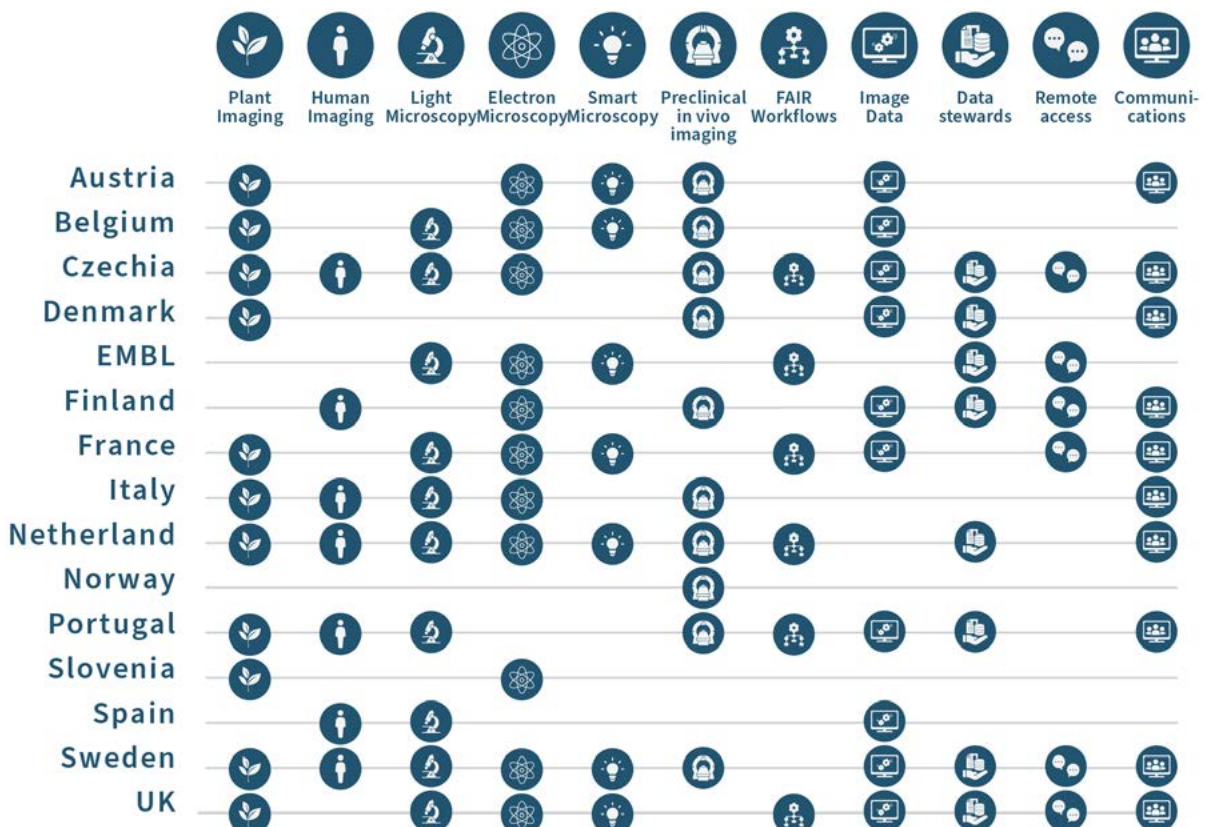
Expert Groups run by Euro-Biolmaging

3

Expert Groups open to the wider imaging community

15

Member countries' Nodes participating regularly in our Expert Groups



Overview of participation in Euro-Biolmaging Expert Groups in 2025, by member country.

EUROPEAN STAKEHOLDERS

Euro-Biolmaging is part of a larger ecosystem of Research Infrastructures, which all provide scientific services to researchers. We work closely with our Research Infrastructure partners via EU-funded projects, joint events and more. Via multiple collaboration pathways including policy events and other strategic forums, Euro-Biolmaging Hub team members raise the profile of imaging on the European stage. Here are some highlights from 2025.

16

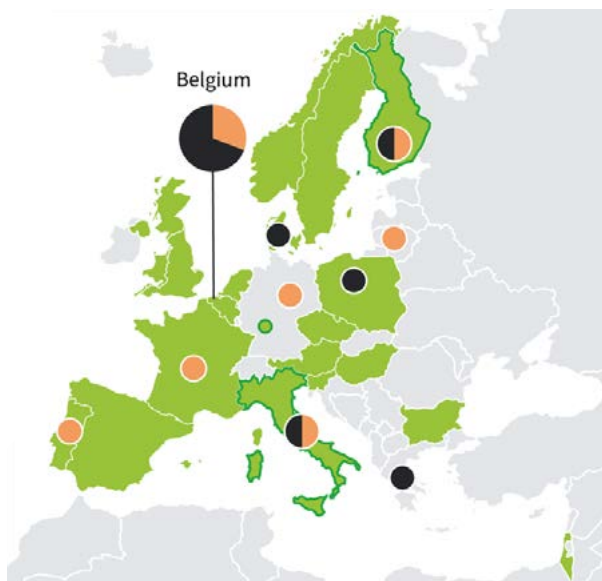
In person policy & EU-funded project events attended by Hub team members in 2025



Ilari Pulli presents updates from Work Package 6 of ERIC Forum 2 project at the ERIC Forum Annual Meeting in Brussels.



Bugra Oezdemir represented Euro-Biolmaging at a EU Research Infrastructures Special Session at FEBS 2025 in Istanbul alongside INFRAFRONTIER, EU-OPENSREEN and Instruct.



Map of Euro-Biolmaging participation in policy events (shown in black) & EU-funded projects meetings (shown in orange).



Ilari Pulli, Amaranta Amador Bernal and Anne-Charlotte Joubert attended the European Research & Innovation Days in Brussels with key EC stakeholders.



Members of EMBRC ERIC visited the Euro-Biolmaging Statutory Seat as part of a cross-RI staff exchange programme.

INTERNATIONAL STAKEHOLDERS

Euro-BioImaging has close working relationships with imaging facilities and networks around the globe. Here are the countries and continents that we worked closely with in 2025, either through presentations and community events or collaborative projects.



Canada

The Global BioImaging Exchange of Experience 2025 took place in Montreal, Canada, co-hosted by BioImaging North America (BINA) and Canada BioImaging. The event brought together over 400 participants, on site and online to discuss “Imaging in 2035: Sustaining Imaging Infrastructure Ecosystems.” Euro-BioImaging was delighted to be part of this inspiring event that brings together the global imaging community.



Euro-BioImaging Hub team members at Global BioImaging’s Exchange of Experience in Montreal, Canada.

Latin America

The final meeting of RI-Hubs project, funded under the 4th EU-LAC Joint Call, took place in November 2025 in Buenos Aires and online. It brought together facility experts and RI operators from the imaging and structural biology communities together with policy-level actors from Europe and Latin America. Participating in RI-Hubs along with institutes from two of our Nodes (PPBI and ALM Italy) allowed us to underpin our long-standing cooperation with the Latin America BioImaging (LABI) through training, staff exchanges, and policy collaborations.



During the RI-Hubs project, a number of webinars were organised to bring Latin American and European scientists and policy makers together.

Tunisia

Euro-BioImaging, represented by Feriel Ramdhane, attended the 3rd annual meeting of the ISMRM African Chapter, in Tunis, Tunisia, in collaboration with the Tunisian Society of Radiology. The conference provided an excellent opportunity to share automated quality assessment tools for clinical MRI datasets and the XNAT tools developed by Euro-BioImaging as well as network and exchange with this community.



Feriel Ramdhane presenting at ISMRM African chapter in Tunis, Tunisia.



At the IBIAM 2025, we renewed the Memorandum of Understanding with our India BioImaging partners.

India

India BioImaging is one of Euro-BioImaging's most long-standing international partners. Since 2013, Euro-BioImaging has had a collaboration agreement with India BioImaging, collaborating for staff exchange and other opportunities. We were delighted to join this year's India BioImaging Community (IBIAM 2025) meeting, where we renewed our collaboration agreement, and set the stage for strengthening our ongoing collaboration.

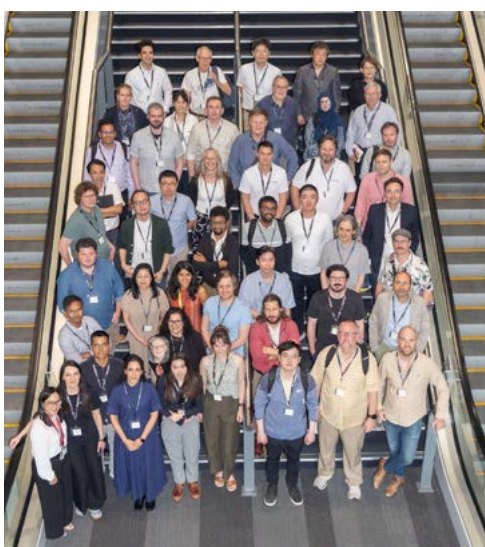
Australia

Prato Event

From September 16-19, 2025, representatives of European and Australian Health Research Infrastructures gathered at the Monash University Prato Centre in Prato, Italy. The Euro-BioImaging Directorate was invited to attend, along with representatives from European Research Infrastructure partners, BBMRI, ELIXIR, Instruct, INFRAFRONTIER, EATRIS and EMBL, European funders and policy makers, and their counterparts from the Australian NCRIS group of health research infrastructures and government representatives. A major outcome of the meeting was the publication of a White Paper on "Building an Intercontinental Research Infrastructure Ecosystem in Health and Life Sciences: Opportunities for Australia-Europe Collaboration."



Representatives of European and Australian Health Research Infrastructures gather at the Monash University Prato Centre in Prato, Italy, in September 2025.



Group photo from the foundingGIDE Community Event.

foundingGIDE Community Event

The 2025 foundingGIDE Community Event, themed *Imaging Data Ecosystem: Towards Shared Solutions*, took place in Brisbane, Australia. Hosted by our local partners, Microscopy Australia and National Imaging Facility, the event gathered a global network of researchers, infrastructure providers, and data experts to push forward a shared vision of an interoperable global image data ecosystem. The event showcased diverse perspectives from multimodal brain research to AI-ready infrastructures, facility-level metadata capture to global policy frameworks, and highlighted how local innovations can contribute to global standards.

FIVE YEARS OF VIRTUAL PUB

The Virtual Pub, our weekly online seminar series, is one of Euro-Biolmaging's most important outreach initiatives, and 2025 was its 5 year anniversary. Born during the pandemic, the Virtual Pub has survived and thrived in the years since thanks to its rich programme that brings a well-balanced range of biological & biomedical imaging technologies, applications, and image data analysis methods to our key audience of imaging core facility staff and beyond.

By participating in the Virtual Pub, an ever-widening circle of imaging enthusiasts have come to know about Euro-Biolmaging, including strategically selected invited speakers, partner imaging communities, imaging industry representatives, technology developers and researchers. In the past five years, the Virtual Pub has become a dynamic and inclusive meeting place for the imaging community and an accessible, online knowledge exchange forum across countries, disciplines, and career stages.

Thanks to our collaboration with 3 partner organisations, synergy with the Tech Exchange (an online lecture series from industry partners aligned with the Virtual Pub organised by the Euro-Biolmaging Industry Board), multiple Special Edition Virtual Pubs focusing on new user communities, and an increasing number of talks that put our Nodes in centre stage, the Virtual Pub has proven its ability to showcase the remarkable diversity of modern imaging, while keeping Euro-Biolmaging in the spotlight.

Special edition

Virtual Pubs in 2025:



3 partner communities

Virtual Pub in 2025:

93

Average attendees

14

Talks from our Nodes



2

Special Edition Virtual Pubs with new user communities

217

Cumulative events between 2020-2025

13,721

Cumulative attendees between 2020-2025

DIGITAL COMMUNICATIONS

Euro-Biolmaging leverages multiple digital communication channels in order to interact with its key target audiences. Our website, which was redesigned in 2024, continues to be the keystone to our digital communications strategy, showcasing our news and events and sharing information about Euro-Biolmaging user projects and more with diverse audiences. In addition to our website, Euro-Biolmaging has three regular newsletters - a general newsletter to all stakeholders, a monthly newsletter for Nodes and a new user newsletter started in 2025 that is sent to Euro-Biolmaging users. This newsletter communicates about training, funding, and other opportunities to this key audience. We aim to send it out four times a year.

Despite the perturbations to the social media landscape, our social media channels continue to be a good way to inform our community about events like the Virtual Pub, funding opportunities and the activities of our community. Like many other research infrastructures, we are moving away from X and see the most engagement and growth on LinkedIn. In 2025, we crossed the threshold of 10,000 followers on this professional social media platform and will continue to concentrate our efforts there in 2026.

Highlights:

10k

Followers on LinkedIn

1,000

Researchers receive our “user” newsletter

EURO-BIOIMAGING ONLINE

WEBSITE



696,309

Page views
between
2020 - December 2025

SOCIAL MEDIA

0 2,000 4,000 6,000 8,000 10,000



10,352 followers



6368 followers



2066 followers



1477 followers



1292 subscribers

NEWSLETTER



3

Regular newsletters -
to three target audiences

10,481

Cumulative recipients
including Nodes, Users
RI partners & Governance

49,5%

Average opening rate for
campaigns in 2025

The background features a black field with several large, organic, rounded shapes in a vibrant green color. These shapes overlap and flow across the page, creating a dynamic and modern aesthetic. The text is positioned within one of the black areas.

FUNDED PROJECTS

OVERVIEW

In 2025, Euro-BioImaging ERIC continued to lead and contribute to a growing portfolio of EU-funded projects supporting the implementation of our strategic goals. Through these projects, Euro-BioImaging strengthened Open Science practices, expanded collaboration with European research infrastructures and stakeholder networks, promoted technological innovation, facilitated excellent research projects with imaging expertise via user access funding, and reinforced its role at the forefront of imaging science and AI-readiness.

Several new projects launched during the year contributed directly to these objectives. CANDLE supports the development of the European Health Data Space (EHDS) by enabling interoperable data sharing and collaboration across infrastructures. OSCARS-FIESTA advances Open Science through the development of reusable, openly accessible image analysis workflows that can be shared across disciplines. SCIANCE develops a Strategic Research Innovation Agenda for AI in Science in Europe.

Projects such as PROSPER and RE-IMAGINE-CROPS highlight Euro-BioImaging's commitment to promoting scientific innovation and exploring new application areas for advanced imaging technologies beyond biological and biomedical. In particular, RE-IMAGINE-CROPS, which is coordinated by Euro-BioImaging and launched in May 2025 (see Technologies section), represents an important step in expanding imaging technologies into the field of sustainable agriculture.

At the same time, Euro-BioImaging continued to provide user access funding via INFRASERV projects canSERV and AgroServ, leading to excellent science and new research results. Several major projects also reached completion in 2025, such as AI4Life (see Data Services section). In 2025, the Euro-BioImaging Hub team actively pursued new project opportunities to further advance our goals and broaden our impact. These efforts led to the announcement of 12 newly funded projects in 2026, further strengthening the Euro-BioImaging portfolio.



OUR PROJECTS



EVOLVE

The aim of the EVOLVE project is to catalyse the strategic evolution of Euro-BiolMaging ERIC, consolidating its role as a prominent pan-European research infrastructure and strengthening its capacity to respond to the needs of its diverse and expanding stakeholders. In 2025, we pursued diverse activities under the EVOLVE framework, providing impact in a range of areas.



Skill-building and outreach

A central focus of EVOLVE in 2025 was the continued empowerment of the Euro-BiolMaging Nodes and their expert staff, through job shadowing, training and mentoring (see Impact Section). Substantial efforts were also made in community engagement and outreach activities. From the Scientific Ambassadors Programme (see Outreach section), to a successful All Hands Nodes Meeting (see About Us), and the first EVOLVE-supported event for general public engagement, initiatives through the EVOLVE project helped raise visibility of Euro-BiolMaging. In addition to the above, multiple online workshops and seminars, including the Image Data Community Days (see Data Services) and two Special Editions of the Virtual Pub (see Outreach), helped us engage with new communities.



“La Vie est Belle” - a general public awareness initiative in collaboration with MRI, part of France-BiolMaging, and Euro-BiolMaging via the EVOLVE project reached thousands of citizens in southern France. Photo courtesy of Ariane Abreu.

Strengthening the organisation

Regarding organisational development, the next-generation Euro-BiolMaging Access Portal, designed to streamline and harmonise user access across the distributed infrastructure, is being continuously developed. Another pillar of organisational strengthening is the Euro-BiolMaging Hub staff training, empowering the team to be better able to serve the community. This work took the form of staff exchange visits and targeted online training sessions. Finally, the development of socio-economic impact pathways has progressed, enabling a more systematic evaluation of Euro-BiolMaging’s contributions to science, innovation, and society.

Major milestone

A major milestone in 2025 was the Periodic Report summarising all the work within EVOLVE in the first 18 months of the project life. The report was submitted and positively evaluated by the EC. The review acknowledged that the project is smoothly achieving its objectives. Taken together, EVOLVE has played a vital role in transforming strategic vision into tangible outcomes in 2025.



**Co-funded by
the European Union**

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FINANCIAL INFORMATION

BUDGET TABLES

Euro-BiImaging ERIC is funded by the annual membership contributions from the ERIC members in accordance with the Euro-BiImaging ERIC Statutes. External funding sources are comprised of Horizon Europe projects. Euro-BiImaging ERIC's accounts are audited annually according to Finnish law.

Table 1. Income statement FY 2025 budgeted and actual, FY2024 actual

Income Statement	2025		2024
Income, basic operation budget	Budget	Actual	Actual
Membership Contributions	€2,059,665	€2,059,666	€1,961,585
Other	€0	€23,007	€0
Total Income	€2,059,665	€2,082,673	€1,961,585
Expenses, basic operation budget			
Personnel Cost	-€1,480,000	-€1,199,792	-€1,259,332
Meetings	-€60,000	-€41,651	-€36,227
Equipment and software	-€65,000	-€70,161	-€85,815
Travel	-€170,000	-€114,811	-€188,927
Other	-€284,665	-€262,301	-€331,084
User Access Reimbursements		€0	-€19,452
Total Expenses	-€2,059,665	-€1,688,717	-€1,920,838
Result, basic operation budget	€0	€393,956	€40,747

In-kind membership contributions received in 2025 amounted to 0.5 FTE, remaining unchanged from 2024.

Table 2. Overview of reserve funds at period end

Financial Year	2025	2024
Reserve at period start	€1,948,017	€1,907,270
Result of the period	€393,956	€40,747
Total Reserve at Period End	€2,341,972	€1,948,017

Table 3. Costs booked to external funding sources

Financial Year	2025	2024
Total costs booked to external funding sources	€1,978,208	€1,957,201

The background features a complex, organic pattern of overlapping shapes in two colors: a vibrant green and a solid black. The shapes are fluid and interconnected, creating a sense of movement and depth. The green shapes are primarily located in the upper and lower-left areas, while the black shapes fill the rest of the frame, creating a high-contrast, modern aesthetic.

**FROM OUR
NODES**

MEET THE NODES

Euro-BioImaging Nodes are diverse in size and organisation and expertise. They support user projects, are active in European and nationally funded research projects, support and develop technological breakthroughs, organise outstanding training courses and conferences, contribute to Master's and PhD programmes, and make science accessible to the general public with their outreach efforts.

Euro-BioImaging Nodes are made up of Europe's most state-of-the-art biological and biomedical imaging facilities. In order to join Euro-BioImaging, Node candidates undergo a stringent selection process by the Euro-BioImaging Scientific Advisory Board before being approved by the Euro-BioImaging Board. In addition, Euro-BioImaging Nodes undergo evaluation every five years by the Scientific Advisory Board.

In 2025 the Euro-BioImaging Node landscape expanded and consolidated, with the addition of two new Nodes (MAdMiC and FLI) and the merger of five Dutch Nodes into the new coordinated Advanced NL Microscopy (see Impact Section). In addition, we launched the first round of Euro-BioImaging Node evaluations along with our Scientific Advisory Board. These pages provide a glimpse at life at our Nodes.

730+

FTE staff work at
Euro-BioImaging Nodes,
as reported by Node
coordinators



Our Nodes are active in general public outreach. Here, European Researchers Night in Coimbra - with Portuguese BIN Node and our Scientific Ambassador Vanessa Coelho-Santos.



A user at the Experimental Biophotonics Facility, part of the Multimodal Imaging Brno Node.



Dr. Dmitry Molotkov in front of the new intravital multiphoton microscope Leica Stellaris 8 DIVE FALCON at FiBI Node.



SPOTLIGHT ON THE EXPERTS

In 2025, our Scientific Ambassadors captured the expertise of Euro-BioImaging Node staff in a series of interview articles. These articles demonstrate the diversity of imaging core facility staff profiles, while highlighting the career choices that led our colleagues to the jobs they do today. In addition to telling important individual stories, these interviews are inspiring testimonies to the excellent career opportunities available in imaging core facilities.



Rob Lees at the bench in Harwell, UK.

Rob Lees - Microscopy Specialist, OCTOPUS Facility, UK Node

Robert Lees is an expert in multiphoton and light-sheet microscopy. With a collaborative mindset and deep practical expertise, he joined the facility in 2022. He plays a vital role in shaping user-focused innovation - bridging biological research and cutting-edge technology in ways that have lasting impact. *“What I enjoy most is solving problems and helping other people get the data they need by fitting all the pieces together as smoothly as possible. That’s what keeps this job exciting.”*

Irma Mahmutovic Persson - In Vivo Imaging Specialist, Lund Biolmaging Centre (LBIC), Swedish NMI Node

Irma is a trained molecular biologist. A frequent user of LBIC during her post-doc, she became a staff researcher there in 2021. Today, Irma plays a central role in coordinating *in vivo* imaging studies and supporting researchers throughout the experimental workflow. She particularly enjoys working with MRI and PET imaging. She encourages early-career scientists and technicians to pursue imaging regardless of their academic background. *“It does not matter if you come from the biology field and aim to learn the technologies or the physics, or the other way around. If you think it is possible, make sure to try and do not give up the first time someone tells you it is impossible.”*



Irma Mahmutovic Persson in the lab at Lund, Sweden.





Pavla Francová in front of the Magnetic Particle Imaging machine at CAPI.

Pavla Francová, Senior Imaging Scientist & Project Coordinator, CAPI Node

Pavla Francová has been part of CAPI almost since its foundation and has played a central role in shaping the facility's development, evolving from a newly established infrastructure into a growing, highly specialised preclinical imaging centre. Trained as a biomedical engineer, today Pavla works closely with CAPI's leadership as a project coordinator, supporting everything from project preparation and facility operations to long-term strategic planning. Her advice? *"Do what you love."* She remains optimistic about the future of imaging infrastructures and the opportunities they offer for those willing to combine technical expertise, curiosity, and adaptability.

Cristiano di Benedetto, Microscopy specialist, Core Facility for Integrated Bioimaging (CFIB), Danish BioImaging Node

With a background in biology and a career spanning marine biology, glioblastoma research, and advanced electron microscopy, Cristiano brings a wealth of experience and a unique perspective to his role at CFIB, where he supports user projects, predominately in Electron Microscopy. But Cristiano's role is not limited to imaging. He also trains users — from clinical researchers to PhD students — in sample preparation and microscope operation. *"I enjoy teaching. It's rewarding to see users become confident and independent. And it's a good way to stay challenged and avoid routine."*



Cristiano di Benedetto checks out images at CFIB facility in Copenhagen, Denmark.



Read more
Node
interviews

TRAINING

With advances in imaging technology, more and more new technologies are available to users, making training in the correct use of the technologies and the connected sample preparation and data analysis crucial. That's why Euro-BioImaging Nodes offer an ever-expanding range of training opportunities.

Training opportunities at Euro-BioImaging Nodes cover the full spectrum of technologies available as well as sample preparation/handling, and image data analysis. Courses are taught both in person and in hybrid or virtual format to increase their accessibility. Available to users, students and facility staff, they are open for anyone to apply to. As a general rule, the courses combine theory and hands on learning.



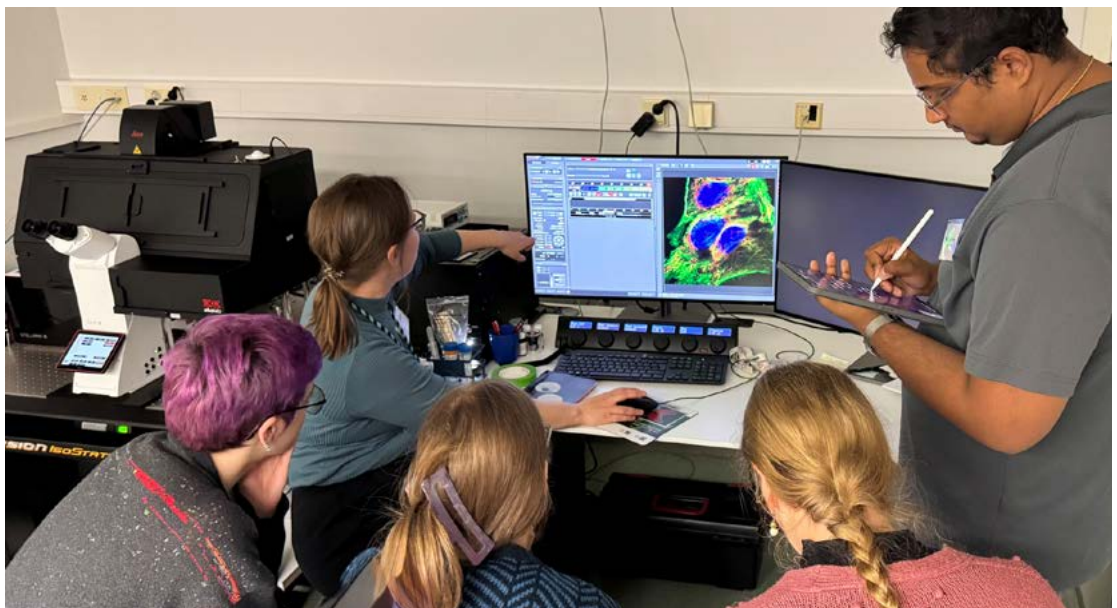
Our PPBI Node organised its annual QuPath hybrid course in May 2025. This course involved a combination of online lectures with onsite resolution of exercises that took place in 7 PPBI sites simultaneously. Here, a photo from the CNC-University of Coimbra.

402

training courses were organised by our Nodes for external participants

~7,750

people trained in imaging and image analysis techniques at Euro-BioImaging Nodes in 2025



In October 2025, FiAM Node ran a Practical Super-Resolution Microscopy Course in Turku, pictured above. In addition, FiAM staff were active in organising and teaching in several international imaging symposiums, courses, and schools, including the GloBIAS Training school and conference in Kobe, Japan, the Euro-BioImaging Train-the-trainer course: Empowering trainers across Europe, and the 4th BioImage Informatics Finland Network symposium, Seili, Finland. Photo by Irina Belaia.

JOB SHADOWING

Via immersion at Euro-BioImaging Node sites, the EVOLVE job shadowing programme provides valuable skill-building opportunities and gives experts the opportunity to learn through observation. With 28 job shadowing pairs in 2025, including four from industry, the programme proved how useful it is to train experts and create lasting relationships between Euro-BioImaging Node staff and industry partners.



Virginia Pierini, Service Manager at the EMBL Imaging Centre, part of Euro-BioImaging's EMBL Node, travelled to Bordeaux, France, to exchange with Caroline Thiriet, Administrative Director of International Affairs at France-BioImaging. Her objective was to learn how the Node manages user access, internal communication, and administrative processes across its extensive network.

Dr. Mohesh Moothanchery from the UK Node did a job shadowing visit to the Center for Advanced Preclinical Imaging (CAPI) Node in Prague, where he focused on Magnetic Particle Imaging (MPI), optical imaging standardisation, and Doppler ultrasound workflows. Beyond technical training, the visit strengthened collaboration between the UK and Czech Nodes, opening opportunities for follow-up comparative studies, joint benchmarking initiatives, and potential engagement with industrial partners.



André Quinkertz and Konrad Winkler from Leica Microsystems, members of the Euro-BioImaging Industry Board, were hosted by Katy Schmidt at the CIUS Imaging Unit at the University of Vienna, Austria, as part of the EVOLVE industry job shadowing pilot. The idea was to better understand industry roles and processes and explore market potential. Fostering industry/academia partnerships is central to Euro-BioImaging's mission and drives innovation.



Co-funded by
the European Union

Read the full stories on our website:
eurobioimaging.eu/jobshadowing

NODE MILESTONES



The IIS La Fe in Valencia, host of the Euro-BioImaging Radiology and Medical Imaging Valencia Node, inaugurated a new medical imaging-focused High Performance Computing (HPC) Data Center to enable advanced use of artificial intelligence in clinical practice and biomedical research.

The BNMI network, which brings together Nordic imaging facilities including Euro-BioImaging's Nordic Nodes (NorMIC, Swedish NMI, DBI, and FiAM), was awarded a new 5 year grant (2026-2031) from the Nordic Research Council, Nordforsk. The grant supports training, facility staff exchanges, and researcher mobility. Pictured right, the successful BNMI Symposium in Gothenburg in 2025.



In 2025, Czech-BioImaging, the national infrastructure that brings together three Euro-BioImaging Nodes (Advanced Light & Electron Microscopy Prague, Multimodal Imaging Node Brno, and CAPI), celebrated 10 years. Pictured on the left together with Pavel Hozák, Director of Czech BioImaging, all three Euro-BioImaging directors attended the celebrations. Photo courtesy of Tony Danilov.

NODE MILESTONES

In 2025, the UK Node received an £1.8 million strategic funding award from UKRI-BBSRC and UKRI-MRC to expand access to cutting-edge imaging technologies for UK researchers and to include medical imaging facilities in the Node. Photo by McCoy Wynne and the Centre for Cellular Imaging at the University of Liverpool.



The Elettra Sincrotrone Trieste - the host of Euro-Biolmaging's Phase Contrast Imaging Flagship Node - is undergoing a massive upgrade that will significantly enhance the brilliance and coherence of the X-Ray source. The beamline will reopen in 2027. Photo by Fabio Mazzolini, Elettra Sincrotrone Trieste.

Euro-Biolmaging Finland, the Finnish national infrastructure (Finnish Advanced Microscopy Node (FiAM), the Finnish Biomedical Imaging (FiBI) Node and several other Finnish imaging facilities), was awarded €28 million to renew equipment and invest in the future. It also became a "Lighthouse" on the national infrastructure roadmap.



AUSTRIA

Austrian BioImaging/CMI

Node contact: Baubak Bajoghli

Website: www.austrian-bioimaging.at



FACILITIES

 **21**

EXTERNAL USERS

 **>150**

USER PUBLICATIONS

 **71**

REMOTE USERS

 **<10**

TRAINING COURSES ORGANISED

 **1**

STAFF INVOLVED

 **>60**

- The Plant Phenotyping core facility was the 3rd most requested service out of 147 in AgroSERV.
- The Node was involved in the IMAGINE project for validation of new imaging technologies.
- Austrian BioImaging has launched a research study to develop a strategic marketing approach to strengthen visibility and stakeholder engagement in research infrastructures.

BELGIUM

Flanders Bioimaging (FLABI)

Node contact: Sebastian Munck, Chiara Rossi

Website: www.flandersbioimaging.org



FACILITIES

 **9**

EXTERNAL USERS

 **222**

USER PUBLICATIONS

 **80**

REMOTE USERS

 **25**

TRAINING COURSES ORGANISED

 **10**

STAFF INVOLVED

 **25**

- The microscopy facilities underwent an important upgrade in equipment, with 9 new microscopes ranging from new spinning disk/confocal, to light sheet and additional systems for super resolution. The preclinical and clinical facilities also acquired new PET/SPECT/CT equipment for preclinical/clinical imaging technologies.
- The Node was awarded 3 international and 4 national grants for research and equipment upgrades
- Via a collaborative grant with the Flemish supercomputer (VSC), the Node has free access to the national HPC for data storage and analysis and a harmonized data management platform for collaborative projects and international users, with a simplified and safer framework for transnational and trans-center data transfer.
- Technology developments include: Laser Micro-dissection set up developed by VIB-KUL in collaboration with Proteomics; intelligent image-informed molecular characterization methodology developed by ACAM-Antwerp; and smFRET benchmarking and advancements and Spectral RICS development by AOMC-Uhasselt.
- The Node was awarded funding through the EVOLVE project for the organisation of 2 events in 2026 (Networking 2026, BMIC symposium).

BULGARIA

Sofia BioImaging Node

Node contact: Stoyno Stoynov

Website: www.eurobioimaging.eu/nodes/sofia-bioimaging-node-advanced-light-microscopy-node-sofia-bulgaria



FACILITIES



1

EXTERNAL USERS



6

USER PUBLICATIONS



4

REMOTE USERS



0

TRAINING COURSES ORGANISED



0

STAFF INVOLVED



9

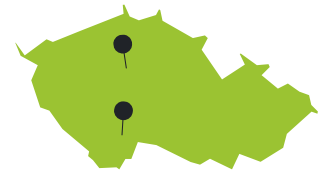
- The Node developed new tools for image analysis - Facilitated Segmentation and Tracking of Chromosomes in Mitosis Pipeline (FAST CHIMP) and Pyfix for fixing errors in 3D time-lapse videos.
- The Node has a highlight publication in Nature Cell Biology - doi: 10.1038/s41556-025-01637-6
- National Roadmap for Research Infrastructures awarded Sofia Euro-BioImaging Node a grant of 150,000 Euros (D01 104 Grant).

CZECHIA

Advanced Light and Electron Microscopy Node Prague

Node contact: Aleš Benda

Website: www.czech-bioimaging.cz/prague-node-eubi/



FACILITIES



7

EXTERNAL USERS



397

USER PUBLICATIONS



138

REMOTE USERS



18

TRAINING COURSES ORGANISED



23

STAFF INVOLVED



~35

- There were many new technology acquisitions, system upgrades and workflow developments across the Node, including Raman microscope, Brillouin microscope, high-throughput and light-sheet systems, plant phenotyping, and cryo-fluorescence imaging.
- Participated in INFRA-TECH projects - joined the IMAGINE consortium for technology validation and partnered in PRIM-TECH3R project for technology development.
- Involved in national Open Science I and II project under national EOSC activities.
- Image analysis tool development for nanoparticle detection (iLabels), FLIM (FLOPA), 4D dendritic spine detection (Irbis), quantification of EM immunolabeling (Pattern).
- Standout User publication in Nature on ancient eukaryotic supergroups using TEM analysis of organelles - <https://doi.org/10.1038/s41586-025-09750-0>

CZECHIA

Multimodal Imaging Node Brno

Node contact: Michal Mikl

Website: www.eurobioimaging.eu/nodes/advanced-light-microscopy-and-medical-imaging-node-brno-cz



FACILITIES



6

EXTERNAL USERS



115

USER PUBLICATIONS



64

REMOTE USERS



14

TRAINING COURSES ORGANISED



16

STAFF INVOLVED



~35

- Preclinical and human MR scanners were upgraded and the Q-Phase holographic microscope was expanded with a fluorescence module. Other acquisitions include a new device for non-invasive brain stimulation with focused US and new laser scanning and spinning disc confocal microscope.
- Correlyze grant was awarded - Unlocking Deep Insights into Materials, Devices, Cells, and Tissues through Correlative Data Analysis.
- National projects were awarded for the development of sensors for patient monitoring in MRI and for the implementation of national data repositories.
- The Biophotonics facility developed software for easier correlative workflows of holographic Q-Phase and confocal microscopes and an all-metal-design observation chamber with ultimate stability for holographic imaging.
- Developed an automatic data sharing platform, inhouse tools for human and preclinical data management, processing, analysis and quality check (e.g. PerfLab and jMRUI). Implemented an automatic offload to nationwide data storage linked to our booking system, with support for lab book protocols.

CZECHIA

Center for Advanced Preclinical Imaging (CAPI)

Node contact: Ludek Sefc

Website: www.capi.lf1.cuni.cz/en/address-capi



FACILITIES



1

EXTERNAL USERS



44

USER PUBLICATIONS



16

REMOTE USERS



0

TRAINING COURSES ORGANISED



3

STAFF INVOLVED



10

- New technologies include: Acquisition of a preclinical spectral CT system (MARS Bioimaging) and a light-sheet fluorescence microscope (Miltenyi Biotec), and upgrades of the existing preclinical MPI scanner (Bruker) and 7T MRI system (MR Solutions).
- Two national projects awarded, for developing SLK-grade production technology for MBTA non-cellular tumour immunotherapy substances and substituted iron oxide nanoparticles for Magnetic Particle Imaging (MPI) respectively.
- Organisation of the MPI Summer Training School.
- Best Poster Award in the category "Own AIR research data" received at the National EOOSC CZ Conference 2025 "Long Live Research Data."
- Developing a new optical molecular and anatomical tomograph based on SWIR light

DENMARK

Danish BioImaging Infrastructure

Node contact: Thomas Hartig Braunstein, Sonia Diaz Houbak

Website: www.dbi-infra.eu



FACILITIES

 **6**

EXTERNAL USERS

 **346**

USER PUBLICATIONS

 **>100**

REMOTE USERS

 **>20**

TRAINING COURSES ORGANISED

 **>20**

STAFF INVOLVED

 **25**

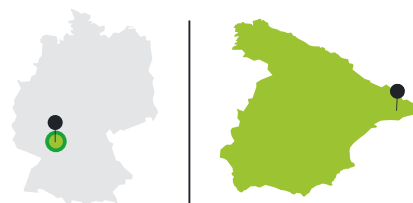
- The Danish Bioimaging Infrastructure has been selected as part of the Danish National Roadmap for Research Infrastructures 2025-28 by the Ministry of Higher Education and Science.
- The Center of Advanced Bioimaging (CAB) facility celebrated its renewal and new focus on analytical imaging in June 2025.
- CFIB opened the new IntraVital Facility with new equipment, other facilities also saw major equipment upgrades, including laser-speckle imaging system, cryo-ET and vEM systems.
- Many Node staff members participated in EVOLVE Train-the-trainer course and EVOLVE job shadowing programme.
- The Node was very active in teaching, particularly at Masters' and PhD level, and also participated in many conferences.

EMBL

Euro-BioImaging EMBL Node

Node contact: Rachel Mellwig, Virginia Pierini, Jim Swoger, Stefan Terjung

Website: www.eurobioimaging.eu/nodes/advanced-light-microscopy-facility-embl



FACILITIES

 **4**

EXTERNAL USERS

 **136**

USER PUBLICATIONS

 **80**

REMOTE USERS

 **39**

TRAINING COURSES ORGANISED

 **10**

STAFF INVOLVED

 **19**

- New instruments and services - plasma-FIB-SEMs to support correlative light and electron microscopy workflows; custom-built Brillouin and oblique plane microscopes enabling new live-cell and intravital imaging applications
- Highlight user publication in Nature: Using MINFLUX to understand nuclear import and export pathways; doi: 10.1038/s41586-025-08738-0
- Method development for spatial transcriptomics in C3PO project; <https://doi.org/10.1101/2024.03.12.584578>
- Workflow development on cryo-super-resolution and correlative cryo-CLEM workflows.
- Hosted the 25th International meeting of the European Light Microscopy Initiative (ELMI).
- Publication in Cell on nuclear pore complex asymmetry highlighting the EMCF: <https://pubmed.ncbi.nlm.nih.gov/40829587/>

FINLAND

Finnish Advanced Microscopy Node (FiAM)

Node contact: Irina Belaia

Website: www.eurobioimaging.fi/FiAM



FACILITIES



8

EXTERNAL USERS



140

USER PUBLICATIONS



175

REMOTE USERS



25

TRAINING COURSES ORGANISED



21

STAFF INVOLVED



29

- Euro-BioImaging Finland (FiAM and FiBI) awarded national infrastructure funding and the prestigious “Lighthouse” status on the Finnish Research Infrastructure Roadmap 2025–2028.
- New instruments include EM, super-resolution, high-content screening systems and a drone.
- ERDF funding for the development of new drone imaging capabilities and connected image analysis solutions enabling new services for agriculture and environmental research.
- Technology development includes: Custom optical tweezer set-up, near infrared spectroscopy (NIRS) as an intravital sensing technology, light-sheet imaging solutions, and an imaging and in vitro microfluidics platform for measuring blood flow.
- FiAM runs an international MSc programme in Biomedical Imaging (BIMA), which in 2025 celebrated its 15th anniversary.

FINLAND

Finnish Biomedical Imaging Node (FiBI)

Node contact: Tiina Saanijoki

Website: <https://eurobioimaging.fi/FiBI/>



FACILITIES



5

EXTERNAL USERS



59

USER PUBLICATIONS



304

REMOTE USERS



9

TRAINING COURSES ORGANISED



16

STAFF INVOLVED



190

- The Node contributed to development of lipid-based chemical tools for the radiolabeling of liposomes and lipid nanoparticles that will be offered through custom synthesis by a University of Helsinki spinout company.
- The collaboration with Industrial partner Orion resulted in novel fMRI markers for pain responses in preclinical models.
- The Node acquired a new Leica Stellaris 8 DIVE FALCON multiphoton & confocal FLIM-capable intravital microscope and a 9.4 T Maxwell cryogen-free magnet (Bruker).
- The Node was awarded Infra Roadmap/Lighthouse funding from the Research Council of Finland which will be used to develop new imaging technologies and services as well as AI methods.
- Development of a low-brilliance phase contrast X-ray tomography method for label-free imaging of rodent kidneys; Silent fMRI system for main pre-clinical MR platforms; development of multicoil transcranial magnetic stimulation (mTMS) technology.

FRANCE

France-BioImaging Node (FBI)

Node contact: Caroline Thiriet

Website: www.france-bioimaging.org



FACILITIES

 **33**

EXTERNAL USERS

 **474**

USER PUBLICATIONS

 **399**

REMOTE USERS

 **24**

TRAINING COURSES ORGANISED

 **94**

STAFF INVOLVED

 **299**

- Normandie & Rhone-Alpes sub-nodes officially joined Euro-BioImaging, significantly expanding the scope and excellence of the French Node of Euro-BioImaging.
- The BIOGEN project, dedicated to equipment upgrades and new technologies, allowed the acquisition of five microscopes in 2025, including TauSTED, Two-photon light-sheet microscope, Laser multiphoton microscope for microscopy combined to electrophysiology, dual-color miniscope, and multiphoton for live deep-imaging.
- France-BioImaging has initiated a collaboration with China, anchored in the creation of an International Research Network (IRN), a five-year programme officially submitted and validated by the CNRS, called BioImage, with a focus on advanced optical imaging, including the design of fluorescent probes, super-resolution microscopy, deep tissue imaging and AI-driven image analysis.

HUNGARY

Cellular Imaging Hungary

Node contact: János Szöllősi, György Vámosi

Website: www.eurobioimaging.eu/nodes/cellular-imaging-hungary



FACILITIES

 **5**

EXTERNAL USERS

 **60**

USER PUBLICATIONS

 **35**

REMOTE USERS

 **0**

TRAINING COURSES ORGANISED

 **4**

STAFF INVOLVED

 **21**

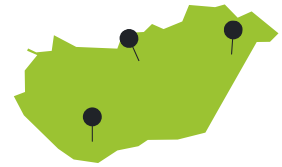
- New instruments include: micromanipulation microscope, a Revvity Operetta CLS High-Content Analysis System at the BRC Szeged sub-Node, and SSTEDYCON, which was on lease at the University of Debrecen in 2025.
- The Femtonics sub-Node received national funding dedicated to R&D&I and market entry support for digital economy players for the development of AI-based software package for Femtonics' two-photon microscopes.
- The Node contributed to development and testing of new hardware and software solutions to enable reliable, fast image acquisition and data processing pipelines with high automation for FRET imaging of whole slides, as well as the ImageJ FRET plugin for analysis.
- Node sites are involved in a total of 10 EU projects including JPND project on Parkinson's disease, and support projects on neuro-immunotherapy biology, translational ageing research, and post-COVID syndrome, antimicrobial therapy, and stroke models.
- Hosted Dr. Veronika Huntošová of the Center for Interdisciplinary Biosciences, Technology and Innovation Park at UPJŠ, Slovakia and her team as part of a canSERV user project, studying changes in the endomembrane system of breast cancer cells, using FLIM to monitor them after treatment by DARPIn proteins that specifically bind to HER2 receptors of these cells.

HUNGARY

Medical and Preclinical Imaging Hungary

Node contact: György Trencsényi (Head of Node), Viktoria Arató

Website: www.eurobioimaging.eu/nodes/medical-and-preclinical-imaging-hungary



FACILITIES



5

EXTERNAL USERS



15

USER PUBLICATIONS



1

REMOTE USERS



5

TRAINING COURSES ORGANISED



15

STAFF INVOLVED



21

- The Node submitted an IMPD related to 13N-NH_3 production.
- Staff from the Node engaged with the general public at the Campus Festival, promoting imaging technologies and highlighting research supported by Euro-BioImaging.
- The Node received funding from the New National Excellence Programme of the Ministry for Culture and Innovation and from the programme of the Ministry for Innovation and Technology.
- The Node collaborated with Pharma companies in clinical research programmes.
- The Node is involved in various projects involving preclinical imaging applied to study bones, inflammation, odontology, obesity.

ISRAEL

Israel BioImaging

Node contact: Natalie Elia

Website: www.eurobioimaging.eu/nodes/israel-bioimaging



FACILITIES



7

EXTERNAL USERS



64

USER PUBLICATIONS



118

REMOTE USERS



0

TRAINING COURSES ORGANISED



12

STAFF INVOLVED



19

- The Node acquired 11 new imaging systems - ranging from spinning disk/confocal to widefield to AFM to a cryo-EM Tomography system.
- The Node was awarded national funding for equipment upgrades that totaled more than 5.5 M USD.
- Ben-Gurion University (BGU) celebrated the opening of its new state-of-the-art facility with the University's President and Vice President for R&D.
- A spotlight publication using a custom ImageJ-based pipeline developed within Bar Ilan Facility: "Dural ectopic lymphatic structures accumulate during aging and exhibit dysregulation in neurodegenerative diseases." <https://doi.org/10.1073/pnas.2425081122>
- An Israel Research Core Facilities (IRCF), funded collaboration between HTS, Bioinformatic and Light Microscopy unit, is developing a deep learning pipeline to uncover organelle-specific drug effects from Cell Painting images.
- Members of the Weizmann Cell Observatory Unit Facility contribute to the educational programme of the new Weizmann School of Medicine, providing expertise and training in advanced imaging technologies.

ITALY

Advanced Light Microscopy Italian Node

Node contact: Seetharaman Parashuraman

Website: www.eurobioimaging.eu/nodes/advanced-light-microscopy-italian-node/



FACILITIES



5

EXTERNAL USERS



68

USER PUBLICATIONS



69

REMOTE USERS



12

TRAINING COURSES ORGANISED



8

STAFF INVOLVED



~29

- The Node was active in a large number of European Union-supported projects with a focus on neuroscience and brain health.
- The Node benefitted from technical developments, training, and user access enabled by the SEELIFE project for Strengthening the Italian Infrastructure.
- New instruments include: Spinning Disk implementation with a triggering system for fast acquisition and third-order sum-frequency-generation microscope.
- The Node developed a range of image analysis tools, including for single molecule tracking analysis, for MDS displacement analysis, for single molecule co-localisation analysis, and for fibre orientation analysis for cellulose fibers studies in A Thaliana.
- The Node maintained strong collaborations with other infrastructures on the national level, particularly with EBRAINS.

ITALY

Digital Imaging Multimodal Platform Neuromed - DIMP NEUROMED

Node contact: Lorenzo Carnevale

Website: www.neuromed.it



FACILITIES



1

EXTERNAL USERS



1

USER PUBLICATIONS



0

REMOTE USERS



0

TRAINING COURSES ORGANISED



0

STAFF INVOLVED



9

- The microscopy facility was expanded with a new confocal microscope equipped with Airyscan module to enable super-resolution acquisition.
- The facility has been granted by the "RNA&GeneTherapy Foundation" a project titled "Establishment of a large-scale mouse disease models and phenotyping center for the dissection of the underlying cardio-neuro-metabolic pathogenic mechanisms and for the screening and validation of innovative diagnostic and therapeutic procedures."
- Neuromed is involved in the "INNOVA" project, financed by the Italian Ministry of Health, for developing a pipeline for advanced neuroimaging analysis in humans.

ITALY

MMMI - Multimodal Molecular Imaging Italian Node

Node contact: Enzo Terreno

Website: www.mmmi.unito.it



FACILITIES



9

EXTERNAL USERS



31

USER PUBLICATIONS



30

REMOTE USERS



12

TRAINING COURSES ORGANISED



2

STAFF INVOLVED



~26

- The Node acquired 2 egg incubators for preclinical use, software Imalytics and AI for MRI, bed and coil for simultaneous MRI acquisition of four mice.
- Two facilities were involved in the ILLUMINATE project; three national funding grants were awarded and MMMI facilities are involved in more than 10 ongoing projects.
- The G. Monasterio Foundation has recently installed a Photon Counting CT scanner and is actively involved in developing this new imaging technology.

ITALY

Phase Contrast Imaging Flagship Node Trieste

Node contact: Giuliana Tromba

Website: www.eurobioimaging.eu/nodes/phase-contrast-imaging-flagship-node-trieste



FACILITIES



1

EXTERNAL USERS



21

USER PUBLICATIONS



20

REMOTE USERS



0

TRAINING COURSES ORGANISED



0

STAFF INVOLVED



2

- Major upgrade of the Elettra beamline including the development of a new hard X-ray imaging beamline ('SYRMEP_LS') dedicated to research in the Life Sciences. The new beamline should be available in 2027.
- The flagship project of the new beamline is the programme of clinical trial of low dose phase contrast lung CT on selected patients (Collaboration with Trieste University, Goettingen and Heidelberg Medical University).
- The Node is developing multiscale imaging protocols for virtual histology.
- Elettra is part of the MSCA Training Network GAP: image-Guided computational and experimental Analysis of fractured Patients.
- The Node offers full personalised training for all users of the beamline.

NETHERLANDS

Dutch High Field Imaging Hub

Node contact: Dennis Klomp

Website: www.highfieldmri.nl



FACILITIES

 **5**

EXTERNAL USERS

 **12**

- The Node has received funding for the realisation of a MRI scanner with 2 metre bore-diameter to study the body under physical exercise.
- The Node was involved in various projects funded through Eurostars, ECR grants and national funding.

USER PUBLICATIONS

 **56**

REMOTE USERS

 **0**

TRAINING COURSES ORGANISED

 **2**

STAFF INVOLVED

 **5**

NETHERLANDS

Facility of Multimodal Imaging - AMMI Maastricht

Node contact: Marc A.M.J. van Zandvoort

Website: www.eurobioimaging.eu/nodes/facility-of-excellence-in-imaging---alm-and-molecular-imaging-node-maastricht



FACILITIES

 **3**

EXTERNAL USERS

 **30**

- The Node acquired a Multiphoton Endoscope (mobile), a Multiphoton Microscope Evident FV4000MPE with SRS-CARS, Xenium (10x Genomics), and MALDI-MRT (Waters).
- The Node received various national fundings including AMICE funding for acquiring a new preclinical MRI system.
- The Node is involved in seven national and international projects.
- New instruments and services: Vitrojet for cells, Vitrobot light, deep learning for EM and cryoFIBSEM of organoids, Transmission mode MALDI source, Microscope mode Mass spec imaging.

USER PUBLICATIONS

 **0**

REMOTE USERS

 **20**

TRAINING COURSES ORGANISED

 **4**

STAFF INVOLVED

 **11**

NETHERLANDS

Preclinical Imaging Centre (PRIME) - Molecular Imaging Dutch Node

Node contact: Amanda Kiliaan, Wilma Janssen

Website: www.radboudumc.nl/en/research/radboud-technology-centers/imaging/preclinical-imaging-center



FACILITIES



8

EXTERNAL USERS



5

USER PUBLICATIONS



13

REMOTE USERS



0

TRAINING COURSES ORGANISED



2

STAFF INVOLVED



7

- The Node purchased new IAnalytics software for image analysis.
- The Node was involved in a number of facility visits. In total 140 researchers, students, RadboudUMC employees visited PRIME in 13 organised tours in 2025. The Node also hosted Alessandra Viale and Linda Chaabane of the Euro-Biolmaging Med-Hub (see photo below).



NETHERLANDS

Population Imaging Flagship Node Rotterdam

Node contact: Jon Bregman, Stefan Klein

Website: populationimaging.eu



FACILITIES



1

EXTERNAL USERS



244

USER PUBLICATIONS



6

REMOTE USERS



244

TRAINING COURSES ORGANISED



4

STAFF INVOLVED



8

- The Node was awarded three international projects (SHAIPED, supporting implementation of the EHDS regulation; AFRICAI-RI, aiming to strengthen biomedical imaging and AI capabilities in Africa; IHI PROBE, to use a big data approach to improve the care of people with knee osteoarthritis) and two Open Science NL grants.
- The Node contributed to development of a data management framework combining the current functionalities into a single, versatile tool.
- The Node participated with Health-RI on the preparations of the Netherlands for EHDS and involvement in the writing group for the NWO Large-Scale Research Infrastructure National Roadmap 2026-2031.
- The Node contributed to further developments in interoperability between Galaxy and XNAT: a Galaxy tool to transfer data between Galaxy and XNAT, updated versions of XNATpy to better support data download and upload from Galaxy and a Galaxy workflow for ST analysis of Xenium data also including a tutorial.

NETHERLANDS

Advanced NL Microscopy Node

Node contact: Laura Manca, Eric Reits

Website: eurobioimaging.nl



FACILITIES

 **10**

EXTERNAL USERS

 **43**

USER PUBLICATIONS

 **250**

REMOTE USERS

 **11**

TRAINING COURSES ORGANISED

 **42**

STAFF INVOLVED

 **34**

- The Node was active in many projects and collaborations - including GreenTE gravity programme, Onco Institute, X-omics roadmap, collaborations with Delmic and confocal.nl for technology development.
- The Node's digital learning tool: laser scanning confocal simulator in FIJI (SCiF) is now publicly available as a FIJI update site "SCiF Confocal Simulator."
- The Node was active in teaching through FEBS course and master's courses.
- Developed the BIOMERO framework which allows the running of (FAIR) bioimage analysis workflows directly from OMERO on a high-performance compute (HPC) cluster, remotely through SSH.
- EU-supported projects OSCARS project BIOCODES is bringing new developments for image data authentication and FAIR analysis.

NETHERLANDS

Grand Challenge Node

Node contact: Miriam Groeneveld

Website: www.grand-challenge.org



FACILITIES

 **1**

EXTERNAL USERS

 **~130K**

USER PUBLICATIONS

 **18**

REMOTE USERS

 **0**

TRAINING COURSES ORGANISED

 **3**

STAFF INVOLVED

 **6**

- The Challenges platform was extended to facilitate extended multimodality and foundation model benchmarking, addressing the increased need for transparent and trustworthy comparisons of AI performance.
- The Node adopted AWS HealthImaging, allowing the direct use of DICOM files throughout the platform.

NORWAY

NorMIC Oslo - Advanced Light Microscopy Node Oslo

Node contact: Oddmund Bakke

Website: www.mn.uio.no/ibv/english/research/infrastructure/facilities/life-science/imaging/normic



FACILITIES



1

EXTERNAL USERS



75

USER PUBLICATIONS



24

REMOTE USERS



0

TRAINING COURSES ORGANISED



3

STAFF INVOLVED



6

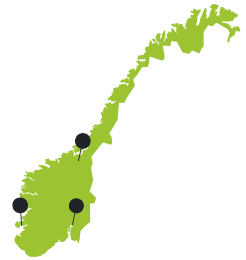
- The BNMI network was awarded a very competitive 5 year grant (2026-2031) from the Nordic Research Council, Nordforsk, supporting the Nordic imaging platforms and users to collaborate on the use of facilities and interchange between the Nordic countries.
- The Node implemented a previously developed and published method for extended focus in structured illumination super-resolution in new Nikon Eclipse Ji, where it improves performance significantly. doi: 10.1242/jcs.258884.
- New instruments: Incucyte SX5 including metabolism optical module, Cell migration kit, A range of Analysis software (AI Cell Health, AI Nuclei detection, Spheroid, Scratch wound, ATP Analysis), and a new Nikon Eclipse Ji.

NORWAY

NORMOLIM, Norwegian Molecular Imaging Infrastructure

Node contact: Lili Zhang, Jin Li

Website: www.normolim.w.uib.no



FACILITIES



3

EXTERNAL USERS



23

USER PUBLICATIONS



18

REMOTE USERS



2

TRAINING COURSES ORGANISED



2

STAFF INVOLVED



~6

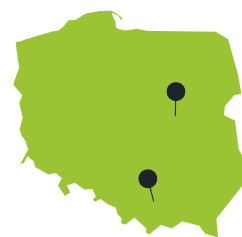
- The Node developed a self-gated MR elastography sequence that eliminates the need for ECG preparation, gluCEST method for detection and mapping of glutamate in rodent models, and ⁶⁴Cu based PET tracers for glioma imaging.

POLAND

Advanced Light Microscopy Node Poland

Node contact: Jędrzej Szymański

Website: www.amf.nencki.edu.pl



FACILITIES



3

EXTERNAL USERS



48

USER PUBLICATIONS



16

REMOTE USERS



0

TRAINING COURSES ORGANISED



0

STAFF INVOLVED



8

- The Node significantly expanded their portfolio with new LM and EM systems, including: STED and 2D Minflux (Mirava Polyscope), confocal (LSM 990 with Airyscan and Lightfield 4D), Lattice Light-sheet (InVi SPIM Lattice Pro), HCS system (Opera Phoenix Plus), Spinning Disk (SpinSR with SoRa), slide scanner (VS200 with SILA) and electron microscope FEG (S/TEM).
- The funding programme from the Ministry of Education and Science of the Republic of Poland (MEiN) (2022/WK/05) continued, allowing for access funding to external users through open competition.
- The Node's key project was: "Biological and Biomedical Imaging Infrastructure - Bio-Imaging Poland" co-financed from the National Plan for Reconstruction and Increasing Resilience of Research Potential of the National Plan for Reconstruction and Enhancement of Resilience (Contract No. KPOD.01.18-IW.03-0017/23).
- The facility's involvement in science popularisation events was recognised by institutional leadership.

PORTUGAL

Brain Imaging Network (BIN)

Node contact: Miguel Castelo-Branco

Website: www.eurobioimaging.eu/nodes/brain-imaging-network-bin



FACILITIES



13

EXTERNAL USERS



5

USER PUBLICATIONS



110

REMOTE USERS



4

TRAINING COURSES ORGANISED



3

STAFF INVOLVED



7

- The Node was awarded a CAIXA IMPULSE project to develop Brain Computer Interface based on NeuroImaging Data.
- The Node has a new preclinical imaging derived patent for nanomedicine delivery systems for glioblastoma.
- The Node was awarded one ERC starting grant to set up a 2-photon imaging facility, two new national fundings and was active in two projects on clinical trials involving imaging tasks.
- The Node was involved in development of a novel high resolution PET detector for brain imaging, now moving to clinical trial phase.
- The Node is involved in production of a new radiopharmaceutical (Tau marker for Dementia) not available in Portugal previously.

PORTUGAL

Portuguese Platform of BioImaging (PPBI)

Node contact: **Luisa Cortes**
 Website: www.ppbi.pt



FACILITIES

 **14**

EXTERNAL USERS

 **242**

USER PUBLICATIONS

 **112**

REMOTE USERS

 **11**

TRAINING COURSES ORGANISED

 **27**

STAFF INVOLVED

 **~39**

- New instruments: confocal system Stellaris 8 with white light laser, IVIS Lumina LT, FV5000 Confocal, AxioObserver with Apotome plus, motorised inverted widefield microscope (IX81), Planktoscope.
- The Node was very active in training, including organisation of advanced microscopy and image analysis courses - QuPath hybrid course, Advanced Quantitative Fluorescence Microscopy Course, plus teaching in Master and PhD programmes.
- Node coordinator Luisa Cortes was elected Coordinator of the National Council of the Coordinators of the Research Infrastructures from the Portuguese RI Roadmap.
- The Node was involved in many EU projects and international collaborations including FOCUS-4R – Fostering Outermost Regions Capabilities in Research and Innovation and Upgrading Skills complying with 4R principles; RI-Hubs project for EU Latin American collaboration on research infrastructures; PRECORMIDEL project for AI data analysis tools development.

SLOVENIA

SiMBION

Node contact: **Primož Pelicon**
 Website: www.eurobioimaging.eu/nodes/simbion-node



FACILITIES

 **16**

EXTERNAL USERS

 **11**

USER PUBLICATIONS

 **13**

REMOTE USERS

 **3**

TRAINING COURSES ORGANISED

 **6**

STAFF INVOLVED

 **~9**

- The Center for Advanced Optical Microscopies is developing a home-built combination of Structured Illumination Microscopy (SIM), 2.5D Microscopy and Quantitative Phase Imaging (QPI) for high-throughput and automatic imaging.
- The Node is Involved in EU-funded Twinning project GeneH and national funded ARIS project, providing technical support & expertise on fluorescence microscopy and microscopy image analysis on studies of Listeria biofilm formation and development of prevention strategies.
- New instruments: Cell sorter, GATAN 3View[®]2 XP System, Low-voltage high-contrast (BSED) BSE detector for high and low vacuum mode imaging, FEI Quanta 250 FEG Scanning Electron Microscope.
- Standout paper: Pušnik et al, Fascicle differentiation of upper extremity nerves on high-resolution ultrasound with multimodal microscopic verification. Scientific reports. 2025
- The Node developed a fork of open source ImSwitch software that currently integrates SIM and 2.5D microscopy and is also expected to have QPI integrated in the future.

SPAIN

Barcelona Live and Intravital Node

Node contact: Maria Calvo, Julien Colombelli, Nadia Halidi

Website: www.eurobioimaging.eu/nodes/barcelona-live-and-intravital-node



FACILITIES



3

EXTERNAL USERS



250

USER PUBLICATIONS



32

REMOTE USERS



20

TRAINING COURSES ORGANISED



8

STAFF INVOLVED



10

- New instruments: Automated Widefield Microscope Leica Thunder. Evident IXplore SpinSR with FRAP and FLUCS.
- Featured user publication: Mitochondria from Huntington's disease striatal astrocytes are hypermetabolic and compromise neuronal branching López-Molina et al. Molecular Neurodegeneration 2025 <https://doi.org/10.1186/s12964-025-02341-6>
- Node is developing software integrated microfluidics into live-cell imaging experiments and robotic multiplate high-content screening automated live-cell imaging experiments.
- Node set up the OMERO Image based data management software.
- Node is active in teaching in Master and PhD programmes through the delivery of courses and modules on imaging techniques and image analysis; outreach to high school institutes; and community workshops at SPAOM.

SPAIN

Barcelona Mesoscopic Imaging Node

Node contact: Julien Colombelli, Pablo Loza-Alvarez

Website: www.eurobioimaging.eu/nodes/barcelona-mesoscopic-imaging-node



FACILITIES



2

EXTERNAL USERS



13

USER PUBLICATIONS



5

REMOTE USERS



3

TRAINING COURSES ORGANISED



3

STAFF INVOLVED



10

- The Node is currently developing a new TIRF-SOSPIM, and is duplicating a LSFM for fast volumetric imaging (FVI) based on an old, home-made LSFM. The old system is being enhanced.
- The Node provides access to Oblique Plane Microscopy (OPM), a custom system transferred by the inventors of the technique (Dunsby team, Imperial College) and funded (Accelerator Grant) by CRUK and AECC 2019-2025. The collaboration yielded the following publication: High content 3D imaging by dual-view oblique plane microscopy. Sparks H, et al. PNAS Nexus 4(112), pgaf370. DOI: 10.1093/pnasnexus/pgaf370
- Highlight user publication: In-depth 3D exploration of autosomal dominant polycystic kidney disease through light sheet fluorescence microscopy; Delgado-Rodríguez P, et al. Sci. Rep. 15, 40843 (2025). DOI: 10.1038/s41598-025-24473-y

SPAIN

Barcelona Super-resolution Light and Nanoscopy Node

Node contact: Pablo Loza-Alvarez, Nadia Halidi

Website: www.eurobioimaging.eu/nodes/barcelona-super-resolution-light-and-nanoscopy-node



FACILITIES



2

EXTERNAL USERS



34

USER PUBLICATIONS



4

REMOTE USERS



0

TRAINING COURSES ORGANISED



5

STAFF INVOLVED



7

- New technology development includes TIRF-SIM system and integrated microfluidics in a SMLM for exchange-PAINT.
- Teaching at the BIST MMRES and Photonics Masters programme, and BIST Winter School on Microscopy, Nanoscopy and Imaging Science. Running community workshops at SPAOM. Standout user publication: Maudes, Estibaliz, et al. "Neuro-immunobiology and treatment assessment in a mouse model of anti-NMDAR encephalitis." *Brain* 148.6 (2025): 2023-2037.
- Involvement in COST innovation project "Predictive AI imaging for stem cell and organoids" aiming to establishing and disseminating gold standards in pluripotent stem cell research across Europe.
- Abbelight SAFe MN360 for single molecule localisation microscopy, equipped with environmental control and a software integrated microfluidics system.

SPAIN

Bilbao Node

Node contact: Artur Escalada

Website: www.eurobioimaging-spain.es/about-us/bilbao-node



FACILITIES



3

EXTERNAL USERS



29

USER PUBLICATIONS



8

REMOTE USERS



21

TRAINING COURSES ORGANISED



0

STAFF INVOLVED



8

- Grants for new equipment under the National Call for Research Infrastructure Equipment (EQC) and for existing equipment upgrades (FAS2025).
- New instruments or instrument updates for High Throughput Screening, Cell Sorting, and live cell imaging.
- Development of the CellShaper tool for the morphology analysis of hippocampal stem cells and ProMoJ for Process Motility in ImageJ – <https://www.achucarro.org/downloads/>
- Highlighted user publication in *Science*: Evolutionary convergence of sensory circuits; doi: 10.1126/science.adp3411.
- In April 2025, the Node participated in a workshop organised by Achucarro Basque Center for Neuroscience, where it showcased the advanced capabilities of the center's microscopy equipment to support innovative approaches in neuroscience research to the local research community.

SPAIN

Radiology and Medical Imaging Node Valencia

Node contact: Aikaterini Vraka, Paula Doria

Website: www.eurobioimaging.eu/nodes/population-imaging-valencia



FACILITIES



6

EXTERNAL USERS



15

USER PUBLICATIONS



0

REMOTE USERS



0

TRAINING COURSES ORGANISED



1

STAFF INVOLVED



47

- Opening of the new High Performance Computing Data Centre (HPCD).
- Acquisition of a portable PET helmet for Alzheimer research
- Generation of AI-algorithms for improving cancer prediction, validation of portable-MRI prototypes and coils, generation of new phantoms.
- The Node hosted Alejandro Da Silva from the Finnish ALM Node for a job shadowing visit.
- The Node is involved in over 30 international and national projects, five of which have been awarded in 2025 (CANDLE, AIRE, KEPLER, FORTIFY, VALENTINA) for building federated data infrastructures, implementing the EHDS, AI algorithms and improving imaging protocols.

SWEDEN

Swedish National Microscopy Infrastructure

Node contact: Hjalmar Brismar, Julia Fernandez-Rodriguez

Website: www.nmisweden.se



FACILITIES



6

EXTERNAL USERS



187

USER PUBLICATIONS



133

REMOTE USERS



48

TRAINING COURSES ORGANISED



14

STAFF INVOLVED



36

- New instruments: UNITY ultra-low field MRI clinical studies using a 0.064T Hyperfine Swoop scanner in collaboration with King's College London and funded by the Bill & Melinda Gates Foundation; MR-guided focused ultrasound under development.
- Technology and workflow development in hydrogels for EM, clock-chemistry for expansion microscopy, smart microscopy, intravital microscopy stabilisation equipment, and new 17Lu-treatment methods for prostate cancer on MRI.
- Node facility at KTH supported diagnostic start-up company Magnephy.
- New instruments and upgrades including Nikon A1R confocal, Scios DualBeam FIB-SEM upgrade with e-beam lithography system, cryo FIB-lamella preparation on Aquilos 2, new BioAFM systems, 9.4T preclinical MRI electronics and software upgrade.
- A master student in art at Umeå Institute of Design worked with Node staff at UCEM Nils Hauff to create the smallest Dalahorse in the world, with a FIB-SEM instrument, gaining national news attention for the project and the technique of FIB milling.

UNITED KINGDOM

The UK Node

Node contact: Georgina Fletcher

Website: www.eurobioimaging-access.eu/nodes/the-uk-node



FACILITIES

 **13**

EXTERNAL USERS

 **186**

USER PUBLICATIONS

 **214**

REMOTE USERS

 **59**

TRAINING COURSES ORGANISED

 **20**

STAFF INVOLVED

 **70**

- Technology and workflow development on Expansion Microscopy, FLIM, Spatial Frequency Domain Imaging, beta-testing and demo-sites for new instruments with various companies.
- Active in knowledge sharing and staff exchange, including via EVOLVE mentoring and job shadowing programme, RMS RTP job shadowing programme, and Imaging 4 All.
- Image analysis tools development including collaborations on QuPath and Piximi, development of CellPhe, and setting up HPC for faster image analysis.
- Supporting a large number of nationally-funded research grants with facilities as co-applicants, plus UKRI Equipment grant funding for new instruments.
- Range of new instruments: Lattice Light-sheet, Super-resolution spinning disk, Raman, ToF ICP-MS, Zeiss Gemini FEG-SEM with Volutome and Array Tomography, Lumicks C-TRAP, Miltenyi Macsima, VisiTECH iSIM.

NODE LIFE

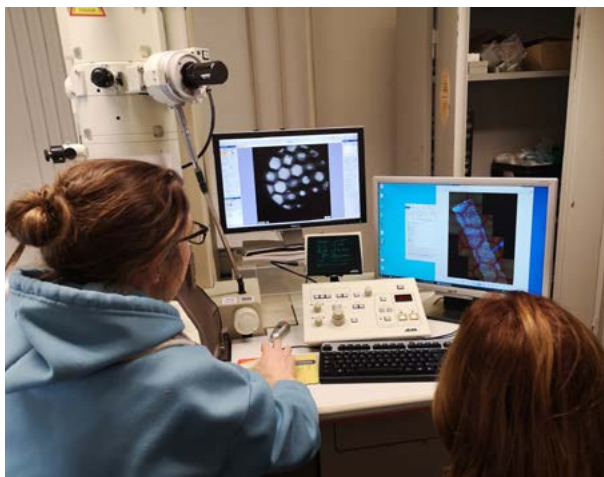
How to best capture the diversity of Euro-Biolmaging Nodes and their activities? Here's a selection of photos taken in 2025 that show Euro-Biolmaging Nodes in action.



PPBI (left) joined the global campaign to raise awareness about proper acknowledgement of imaging facility contributions in scientific research, launched by the Royal Microscopical Society and Global Biolmaging. Here, Paula Sampaio and Maria Azevedo display the new Acknowledgement Guidelines poster in Portuguese and in English. Image courtesy of PPBI Node.



With EVOLVE funding, Marko Radanović, **SIMBION Node** (left and above), attended the Cryosectioning and Immuno-Electron Microscopy + CLEM Training course, organised by the Cell Microscopy Core, UMC Utrecht, NL-Biolmaging Node. Marko's training covered the full workflow from tissue preparation to correlative microscopy. Here are some impressions.



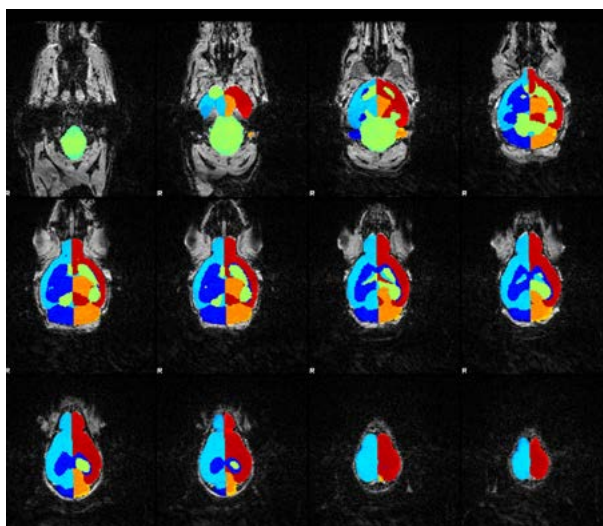


As part of its international strategy, **France-Biomedicine** has initiated an ambitious collaboration with China, anchored in the creation of an International Research Network (IRN), a five-year programme officially submitted and validated by the CNRS, called Biomedicine. Pictured here: France-Biomedicine delegation at NBIC (Beijing) during the Third Sino-French Joint Meeting on Biomedicine (November 2025) - Image courtesy of France-Biomedicine.

Pushing the limits of image data processing & analysis is common at Euro-Biomedicine Nodes. Here (right), T1 weighted high-resolution volumetric acquisition of a mouse brain acquired a 9.4 T fused with a brain parcellation in 37 structures obtained using an automated atlas-based segmentation algorithm. Image courtesy of **MMMI Node**.



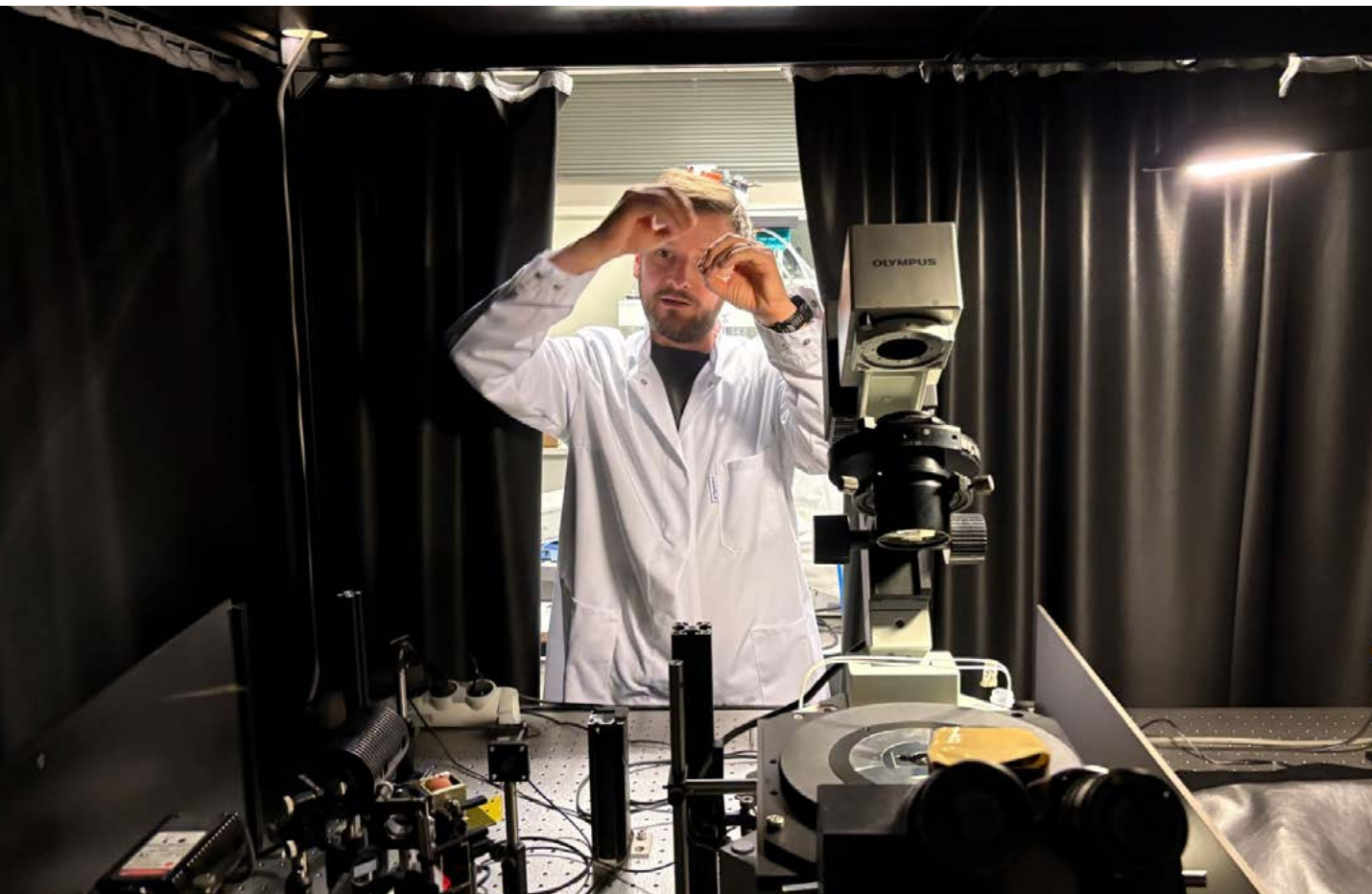
Our Nodes gladly open their doors to visitors. Above, Euro-Biomedicine staff meets Zsuzsanna Helyes and Ádám István Horváth, part of the staff working at the Preclinical Imaging Platform (**Medical and Preclinical Imaging Hungarian Node**) at Pécs University.



Our Nodes actively organise events for their national communities. Here, the Dutch Microscopy Days 2025. Photo courtesy of **NL-Biomedicine**.



Above, staff from **Finnish Biomedical Imaging Node**, Euro-Biomedicine Finland, Euro-Biomedicine ERIC, and the European Marine Biological Resource Centre during a visit to the Turku PET Centre facilities. Photo courtesy of Irina Belaia.



Hands-on demo on one of the FlaBI microscopy spearpoints, smFRET at UHasselt. Photo courtesy of **Flanders BioImaging Node**.



Jan Valečka, specialist in confocal and widefield techniques, high-content microscopy, and image analysis (Fiji, Imaris) at the IMG Open House 2025, **Advanced Light & Electron Microscopy Node Prague**.

THIS ANNUAL REPORT IS A PUBLICATION OF EURO-BIOIMAGING

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Many thanks to all our colleagues
and friends, at the Nodes and beyond,
who contributed time, texts, images and
more to this document!

Front cover:

Top left: *Extraterrestrial neurons* by Ciarán Butler-Hallisey, Aix Marseille Université, INP, France. Neurons showing microtubules (blue) and dendrite and cell body marker MAP2 (orange). Fluorescence microscopy super-resolution.

Top right: Kirstin Vonderstein, Finnish Advanced Microscopy Node (FiAM), University of Helsinki, Finland. *Summer's Hidden Glow: Autofluorescence of Cosmos bipinnatus*. Unstained *Cosmos bipinnatus* stamens showing natural autofluorescence. Stereomicroscopy.

Bottom left: Jake F Watson, IST Austria. *Untangling the Brain, one neuron at a time: amongst the cerebellar folds*. Image of a neuron within the cerebellum.

Bottom right: Tomáš Figura, Czech Academy of Sciences, Institute of Botany, and Charles University. *Is This What a Fern Looks Like?* Fertile frond of *Schizaea fluminensis* (curly grass fern). Colourised scanning electron microscopy image.

Back cover:

Claudia Victoria Benke, Phase Contrast Imaging Flagship Node, Trieste, Italy. *Winter's Anatomy: When Lungs Become Trees*. Synchrotron phase-contrast CT of a human lung, acquired at the SYRMEP beamline, Elettra Synchrotron.



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