

# Euro-BioImaging ERIC

THE EUROPEAN RESEARCH INFRASTRUCTURE  
FOR BIOLOGICAL & BIOMEDICAL IMAGING

BiolmagingUK Annual Community Meeting - 5 July 2021

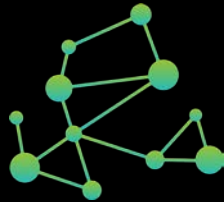
Johanna Bischof, Scientific Project Manager

# EURO BIOIMAGING



**17**

ERIC MEMBERS  
(16 COUNTRIES & EMBL)



**33**

NODES



**137**

SITES



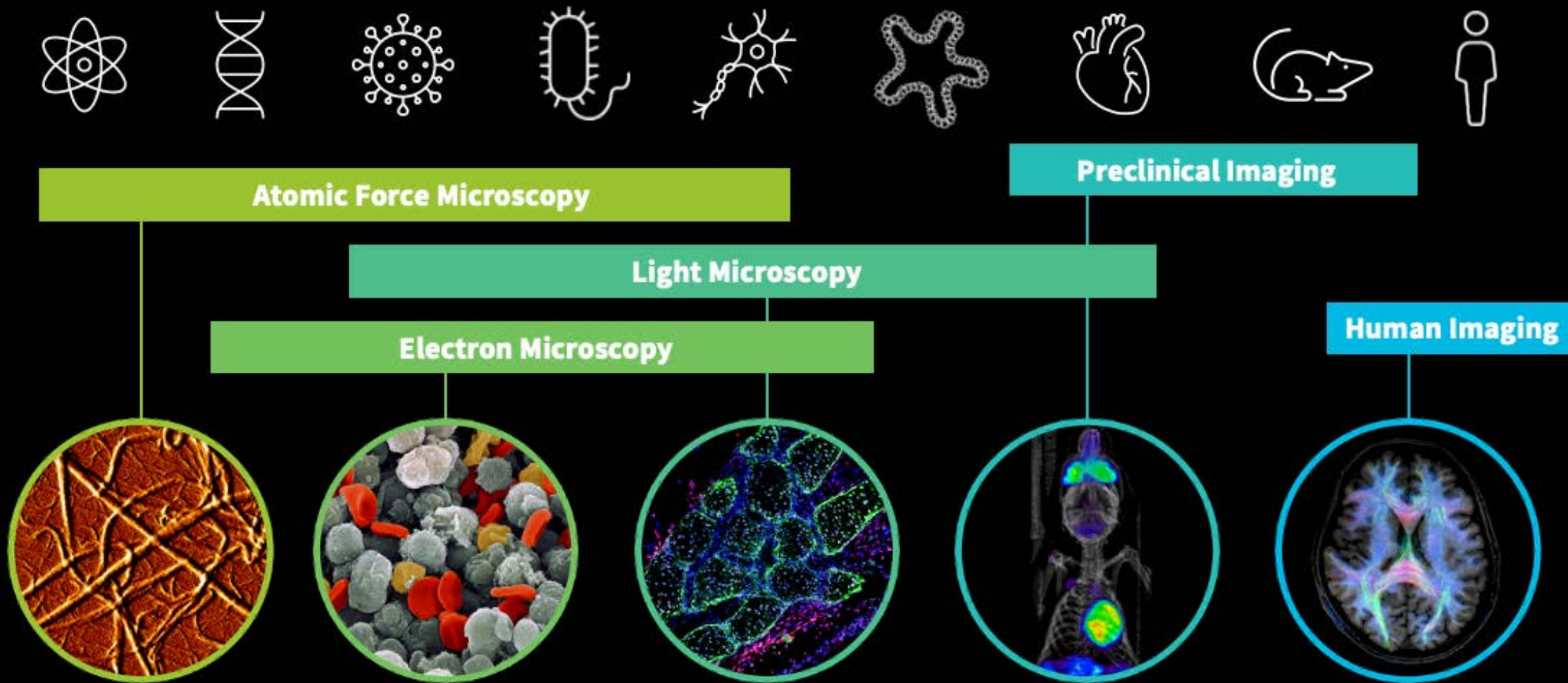
**45+**

TECHNOLOGIES



# The Euro-Biolmaging technology portfolio

Imaging across scales, from molecules to man





# Euro-BioImaging Services

USER HAS A PROJECT OR A QUESTION / BUT MISSING  
TECHNOLOGY, SKILLS OR DATA

[www.eurobioimaging.eu](http://www.eurobioimaging.eu)



TECHNOLOGIES ▾

TRAINING ▾

DATA ▾

ABOUT US & MORE ▾

> LOGIN

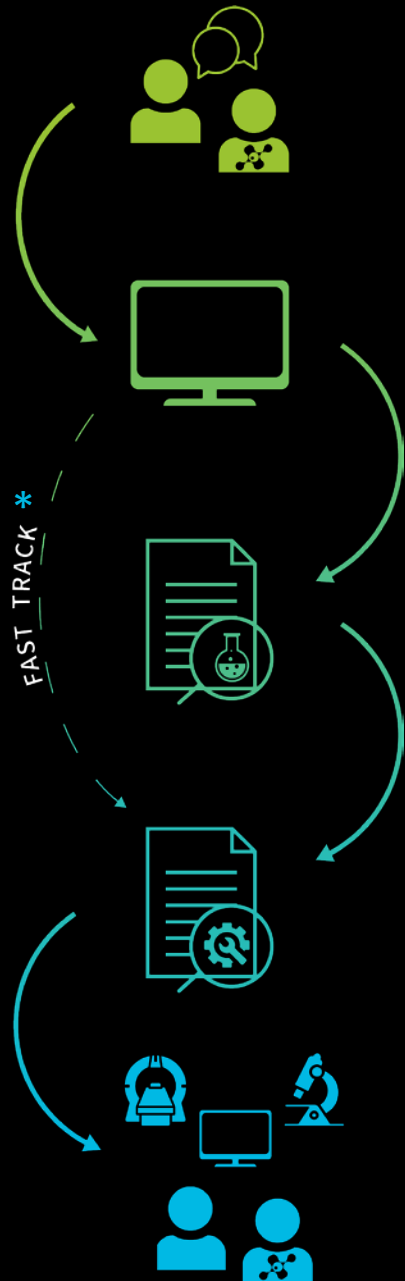


Image life, discover the future

Euro-BioImaging is a research infrastructure that offers open access to imaging technologies, training and data services in biological and biomedical imaging. Euro-BioImaging consists of imaging facilities, called Nodes, that have opened their doors to all life science researchers.



# User Access Procedure



INITIAL CONSULTATION

ACCESS REQUEST

SCIENTIFIC ADVICE

TECHNICAL ADVICE

SERVICE PROVISION



\* **Fast-track** processing of applications that were previously reviewed

# Funding User Access To Imaging Facilities



Information about available instruments to cover travel costs and access fees:

[www.eurobioimaging.eu/about-us/funding-user-access](http://www.eurobioimaging.eu/about-us/funding-user-access)



## International funding instruments

Funding instrument	Funder	For whom	For what (travel expenses, access fees, both)	Expiry date	Additional information
Mobility Grants for Short-Term Scientific Missions (STMS)	COST Action COMULIS (Horizon 2020 – European Commission)	Researchers in <a href="#">COST member &amp; cooperating countries</a> (including all European countries) performing a scientific project that involves more than one imaging technique (multimodality). Transnational access required.	<ul style="list-style-type: none"><li>Travel, meal and accommodation costs</li><li>Lump sums up to 3500 Euros in total provided</li></ul>	The COST action COMULIS ends in November 2022	Costs will be covered for visits from 1 week up to 6 months
EMBO Short Term Fellowships	European Molecular Biology Organization (EMBO)	Researchers coming from and going to <a href="#">EMBC countries</a> , associated EMBC countries (India, Singapore) and cooperation partners (Taiwan, Chile)	<ul style="list-style-type: none"><li>Travel costs</li><li>Daily rate (based on Continuous program country of visit)</li></ul>		Costs will be covered for visits from 1 week up to 3 months



Example: Users travelling from and to **Italy** can benefit of a contribution of the Italian Ministry for Universities and Research



Euro-BioImaging users can request their access and travel costs in their grant proposals in many EU countries

# The **BioImage Archive**



stores, indexes and makes available  
**BioImage data**  
from  
**all modalities**  
to enable

## Reproducibility

Open data for a clear audit trail  
Allow reanalysis

## Reference

Support wide use resources, e.g. cell atlases  
Establish community standards

## Research

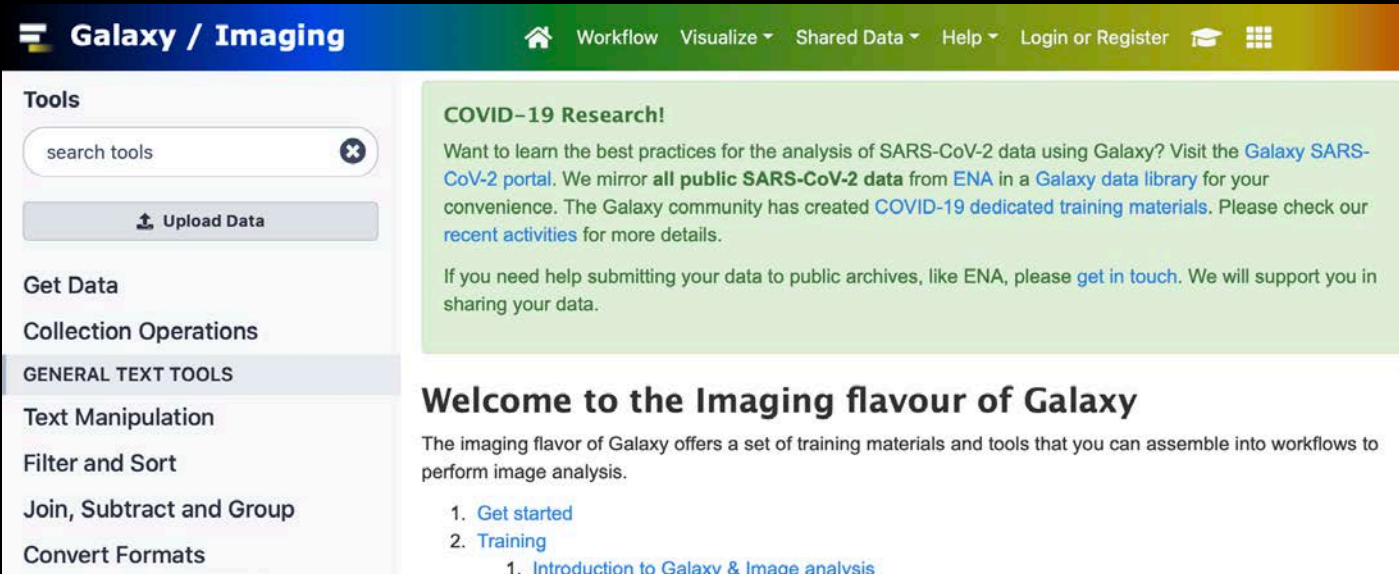
Drive new image analysis development  
Offer benchmark data

## Re-use

Derive new results from existing data  
Support integrated analysis

<https://www.ebi.ac.uk/bioimage-archive/>

# Euro-BioImaging projects in EOSC-Life provide cloud tools for the biological and preclinical imaging communities



The screenshot shows the Galaxy / Imaging web interface. The top navigation bar includes links for Workflow, Visualize, Shared Data, Help, Login or Register, and a user icon. The left sidebar contains a 'Tools' section with a search bar and an 'Upload Data' button, followed by 'Get Data', 'Collection Operations', and 'GENERAL TEXT TOOLS' (which is highlighted). Under 'GENERAL TEXT TOOLS', there are links for 'Text Manipulation', 'Filter and Sort', 'Join, Subtract and Group', and 'Convert Formats'. The main content area features a 'COVID-19 Research!' announcement, a 'Welcome to the Imaging flavour of Galaxy' message, and a list of links: '1. Get started', '2. Training', and '1. Introduction to Galaxy & Image analysis'.

## Pilot project: Image Repositories and Scalable Mining

- Connected public data repositories, such as IDR, with Galaxy
- Brought image analysis tool suite CellProfiler into Galaxy
- Allows the development of workflows in the cloud to reanalyse screening data sets

Find out more (including training resources):  
<https://galaxyproject.org/use/imaging/>



# Benefits for researcher

- ✓ Get high-quality image data
- ✓ Explore a new area of research
- ✓ Establish new collaborations
- ✓ Support multi-disciplinary research
- ✓ Learn from the experts

# Benefits for Nodes

- ✓ Encounter new knowledge, new challenges and push their systems to new frontiers
- ✓ Strong networking of facilities
- ✓ Increase international visibility, also with funders
- ✓ New industry collaborations

# Highlighting new technologies

- ✓ Platform to raise awareness within imaging community
- ✓ Showcasing to interested users
- ✓ Proof-of-Concept studies (PCS) to validate open access
- ✓ Outreach for technologies under showcasing and PCS



# Weekly virtual Pub meetings

**800+**  
Cumulative  
attendees

4 <sup>th</sup>	<b>Molecular imaging of cardiovascular diseases</b> Alkystis Phinikaridou King's College, Department of Biomedical Engineering St Thomas' Hospital
11 <sup>th</sup>	<b>Life beyond the pixels: deep learning methods for single cell analysis</b> Peter Horvath Biological Research Centre, Szeged and Institute for Molecular Medicine Finland, University of Helsinki
18 <sup>th</sup>	<b>Visualisation of nano-structures in human cells using expansion microscopy</b> Ana Agostinho SciLifeLab
25 <sup>th</sup>	<b>Principles and potential applications of the spectral photon-counting CT technology : to go beyond the current CT limitations</b> Salim Si-Mohamed Université Claude Bernard Lyon/Laboratoire CREATIS



**WATCH MORE ON YOUTUBE**



**Join us every Friday @ 13:00 CET!**

# SUMMER CALENDAR



## July 2021

<b>July 9th</b> 13.00 CET	<b>“Bionic Tracking for cell tracking in virtual reality”</b> Ulrik Günther, Center for Advanced Systems Understanding Görlitz and Center for Systems Biology Dresden
<b>July 16th</b> 13.00 CET	<b><i>Correlated Imaging Series with COMULIS</i></b> <b>“Is High accuracy CLEM at room temperature the best approach for you?”</b> Ori Avinoam, Department of Biomolecular Sciences, Weizmann Institute of Science
	SUMMER BREAK

## August 2021

	SUMMER BREAK
<b>August 20th</b> 13.00 CET	<b><i>Corelated Imaging Series with COMULIS</i></b> <b>“Cryo-CLEM”</b> Petr Chlanda, BioQuant/Heidelberg University Hospital
<b>August 27th</b> 13.00 CET	<b>“Welcome to our Swedish Node”</b> Swedish NMI



**Join us!**  
Fridays @  
13.00 CEST



# Thank you

QUESTIONS?  
Contact us:



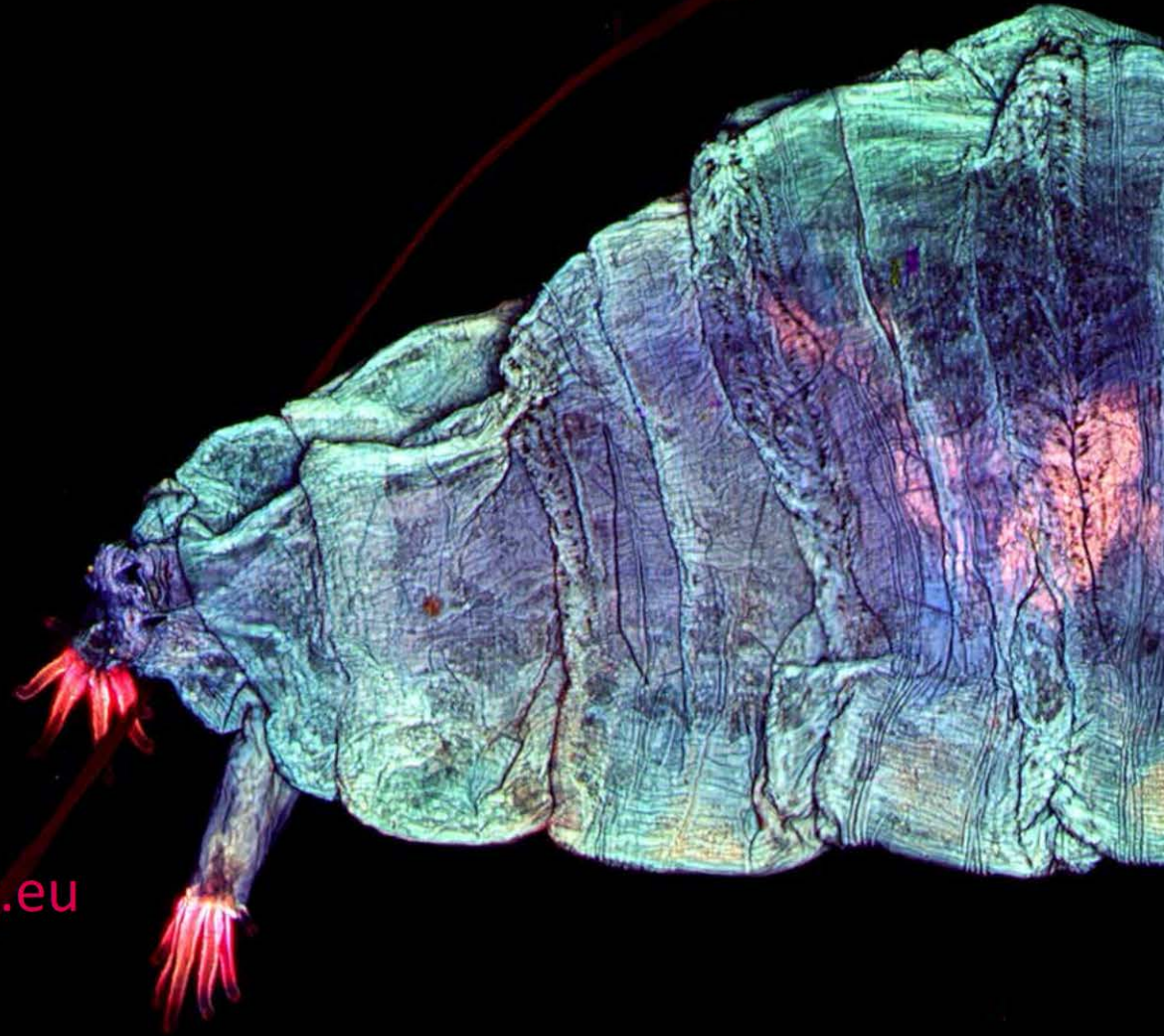
[www.eurobioimaging.eu](http://www.eurobioimaging.eu)



[info@eurobioimaging.eu](mailto:info@eurobioimaging.eu)



[@EuroBioImaging](https://twitter.com/EuroBioImaging)



# What makes a successful Node?

- ✓ Well-defined service offer – specific technology, surrounding expertise, image data analysis, user support, training etc.
  - ✓ Why would a user get on a plane to come to your facility?
- ✓ Attracting international users requires communicating the service offer
  - ✓ Website and Social Media
  - ✓ Support from the Euro-BioImaging Hub team
- ✓ For multi-sited Nodes – good central coordination and communication between the sites



**EURO  
BIOIMAGING**  
Image life, discover the future

# Access at Nodes

- ✓ Offer access to their unique imaging facilities
- ✓ Provide user training and image data services
- ✓ Are hosted by Euro-Biolmaging member countries and EMBL



# Special Events: TechExchange & Speed Pub together with the Industry Board

Let's talk about: Multi-modal Imaging!

TECH EXCHANGE

**FRIDAY**  
March 26<sup>th</sup>, 2021  
at 14:00 CET

EURO BIOIMAGING

INDUSTRY BOARD  
EURO-BIOIMAGING

Multimodal Imaging with Biochemical, Biophysical and Molecular Contrast using Stimulated Raman Scattering, Harmonic Generation and Fluorescence

**Volker Schweikhard**

Leica Microsystems

Leica  
MICROSYSTEMS

When Cell Biology meets Structural Biology: Imaging in the near-to-native state with ZEISS Correlative Cryo Workflow

**Alexandra Elli**

Zeiss

ZEISS

Seeing beyond

Photoacoustic Imaging for deep tissue imaging

**Dieter Fuchs/Jithin Jose**

VisualSonics

FUJIFILM  
VISUALSONICS

Workflow for Correlative Multi-modal Imaging

**Ali Chirazi**

Thermo Fisher Scientific

ThermoFisher  
SCIENTIFIC

**SPEED**

in biological and biomedical imaging

Tell us your stories!

Friday, April 16<sup>th</sup>, 2021 @ 13:00 CEST

Prize awarded for the best Flash talk!

INDUSTRY BOARD  
EURO-BIOIMAGING

The Virtual Pub

EURO BIOIMAGING

80+

Attendees

6

Academic talks

6

Industry talks



# Euro-BioImaging Industry Board

- ✓ Create a platform for cross collaboration
- ✓ Understand the needs of the research user community and strengthen communication between providers and user
- ✓ Cooperate with research infrastructure to develop and test novel technologies
- ✓ Participate and contribute to training activities
- ✓ Create "one voice" activities to promote importance of imaging
- ✓ Identify opportunities for pre-competitive research collaborations



Chair: Martin Tewinkel, Olympus  
Vice-Chair: Herbert Schaden, ZEISS  
Coordinator: Claudia Pfander, EMBL



[industry\\_board@eurobioimaging.eu](mailto:industry_board@eurobioimaging.eu)