
UK Nodes for Bioluminescence?

Jason Swedlow

Univ of Dundee

MMC, Manchester

July 1, 2019

**1st Open Call for
Euro-BioImaging Nodes**

1st Open Call: Jan - Apr 2013

- **1st Call** focuses on technologies that will provide **physical open access** to biological and medical imaging technologies. Also calls for Nodes for Data Infrastructure (Challenges) and Population Imaging (Data Sharing and Archive)
- **Applicants have to meet** the general eligibility and will be reviewed by technology specific node **criteria**
- **Additional imaging technologies** will be added in **regular calls** following the Euro-BioImaging technology identification process (user need, infrastructure model, feasibility/PCS, open call)

Principal(s)	Institution	Facility Name	Flagship or Multi-Modal?	Technology
Dave Clarke	Rutherford Appleton Laboratory/ STFC (Research Complex at Harwell)	Central Laser Facility	Multi-Modal	Octopus Facility: Single molecule (including Bayesian single particle tracking), FRET-FLIM, MP, LSCM, SHG imaging, image correlation microscopy, Super-Resolution (TIRF, PALM, STORM, SIM), optical trapping including combined TIRF-tweezers
Josh Rappoport/Tim Self/Kees Straatman	Birmingham/Nottingham/Liverpool	Midlands Cytoskeletal & Membrane Imaging	Multi-Modal	Imaging of cytoskeletal and imaging protein dynamics (LSCM, SDCM, HCS, TIRF, FCS, STED, etc.)
Paul Verkade/Peter O'Toole/Lucy Collinson	Bristol/York/LRI	UK Correlative Imaging Strategic Alliance	Flagship	Routine CLEM; HPF-CLEM; SLEM; live-CLEM; SR-CLEM; Cryo-CLEM; 3D-CLEM; CLXM; cryo-CLXM; IITEM; ILSEM etc.
Martin Spitaler/Paul French/Cristina Lo Celso	Imperial College London	FILM Imaging Facility/Photonics Group	Multi-Modal	Timelapse and HT FLIM on 96-well plates; 4D intravital microscopy; OPT w/ FLIM
Euan Brown/Rory Duncan	Heriot Watt/University of Edinburgh	ESRIC	Flagship	PALM, STORM, SIM, GSDIM, sptPALM, gSTED, FCS, FCCS, FLIM, FLCS
Jason Swedlow/Sam Swift	University of Dundee	CLS Light Microscopy Facility	Flagship	OMX 3DSIM fixed and living samples
Ian Dobbie/Ilan Davis/Christian Eggeling	University of Oxford	Micron/Nano/Wolfson Imaging Centre Oxford	Flagship	Super-resolution: OMX 3DSIM fixed and live, PALM, STORM, STED
Tim Hawkins	University of Durham	DCBT/DCCIT/BSI	Multi-Modal	SDCM, LSCM, WF/Decon, EM, FLIM, FCS, FCCS, SPIM, TIRF, Laser Capture
Sebastien Ourselin/Dave Hawkes	University College London	Centre for Medical Image Computing	Multi-Modal	Data Analysis/Challenges
Rafael E. Carazo Salas	University of Cambridge	Gurdon Institute Imaging Facility	Flagship	High-throughput/high-content microscopy based phenotypic cell screening
Marco Marcello/Bennett/Sée	University of Liverpool	Centre for Cell Imaging	Multi-Modal	RICS (Raster Image Correlation Spectroscopy), SOFI (Superresolution Optical Fluctuation Imaging), FLIM FRET

1. **Euro-BioImaging Node EOI call** initiated without approval from funders.
2. **BBSRC took lead** on providing Letters of Support for UK EOI applications.
3. **UK Node Eois:**
 - a. Highly rated and commended by Euro-BioImaging IRB
 - b. No direct additional funding
 - c. Substantial increase in awareness and consideration of open resources.

European life scientists as users

HUB

Web-access portal
provides virtual access

Image Data
Storage and Analysis

IMAGE
TOOL RESOURCE

Repository &
access point for
software tools
(user friendly and
interoperable)

EuBI PP II / GBI

CLOUDs...
Deployable
Portable

IMAGE DATA
REPOSITORY

Repository for
reference image
data sets
(for sharing and re-use)

EuBI PP II



1. UK has officially submitted a letter of commitment and is in support of the EuBI application.
2. UK has strong, regular funding routes for technology development and provision
 - a. BBSRC: BBR, TRDF, ALERT, ...
 - b. Wellcome: Shared Equipment/Biomed Resource
 - c. MRC Capital Awards
 - d. CRUK and several other charities
3. UK has world class technology and capabilities that are unique in Europe
 - a. super-resolution
 - b. Photonics
 - c. Correlative LM/EM
 - d. Image informatics and Data Resources
4. Use BioImagingUK Community Meeting to define Node Candidates?
 - a. Run Community-based Nominations, regardless of Brexit
 - b. In concert with BBSRC, Wellcome, etc (but no initial direct funding commitment)