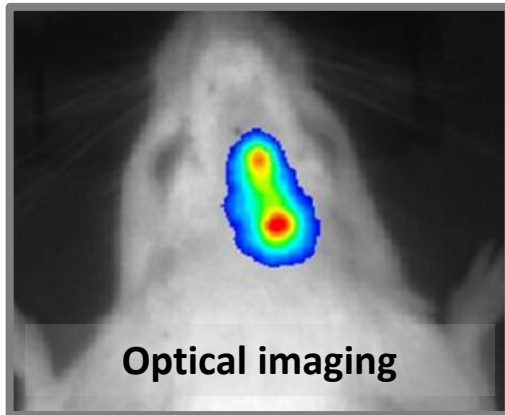
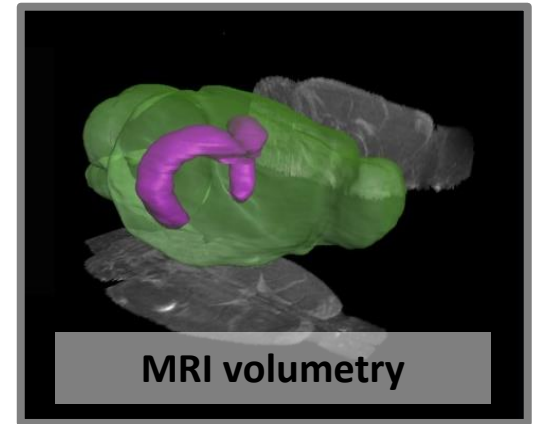
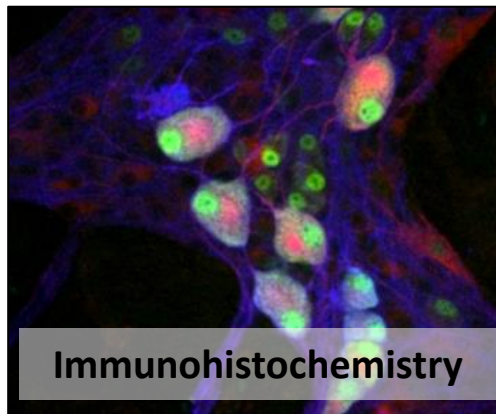
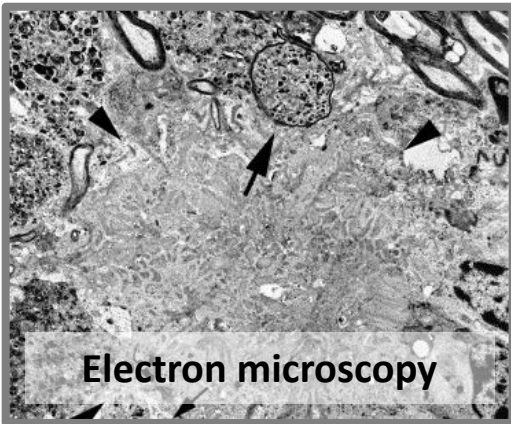




Introduction to EGAMI

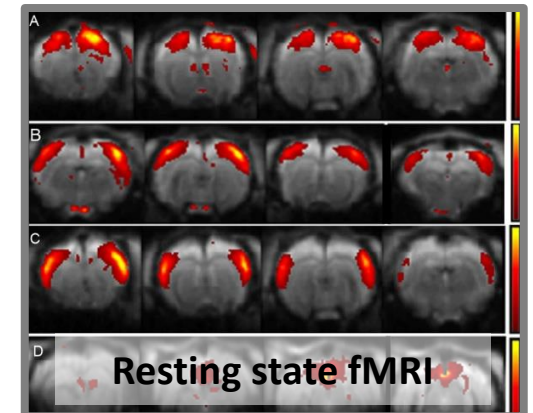
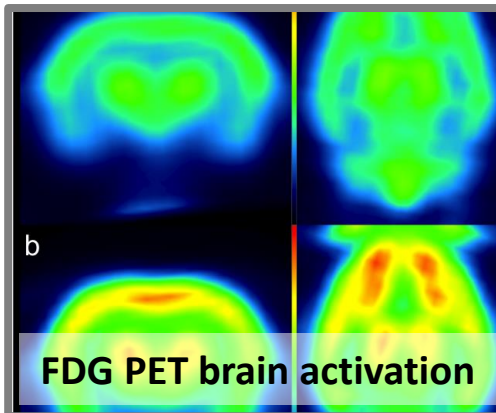
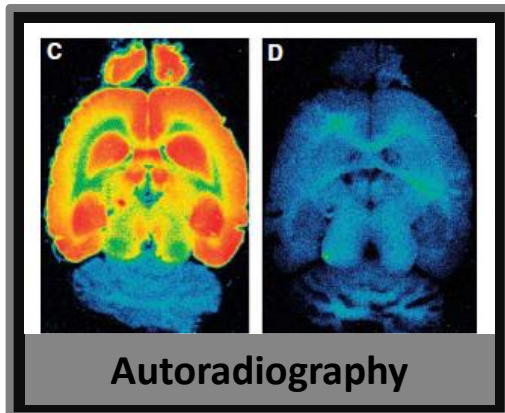
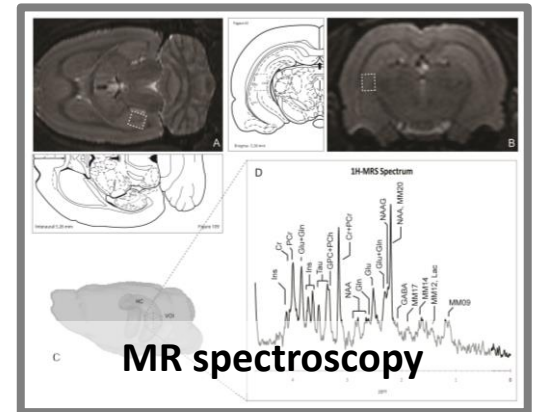
Expert Group Antwerp Molecular Imaging

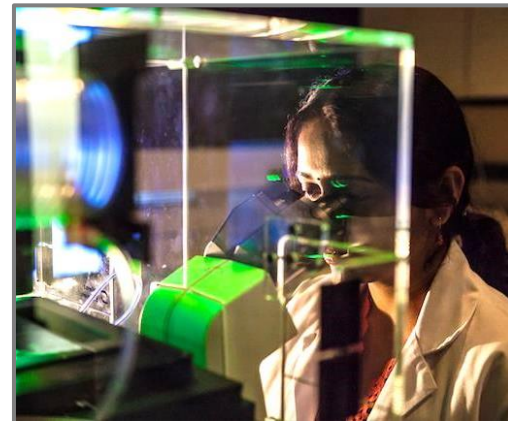
1. Multi-modal imaging platform
2. Composition of EGAMI
3. Expertise overview per partner



Multi-Modal Imaging

University of Antwerp





Multi-Modal Imaging University of Antwerp


Expert Group Antwerp
Molecular Imaging



Cell Biology and Histology

Advanced
Microscopy



Bio-Imaging Lab

MRI and optical
in vivo imaging



Radiopharmacy

Radiotracer
development

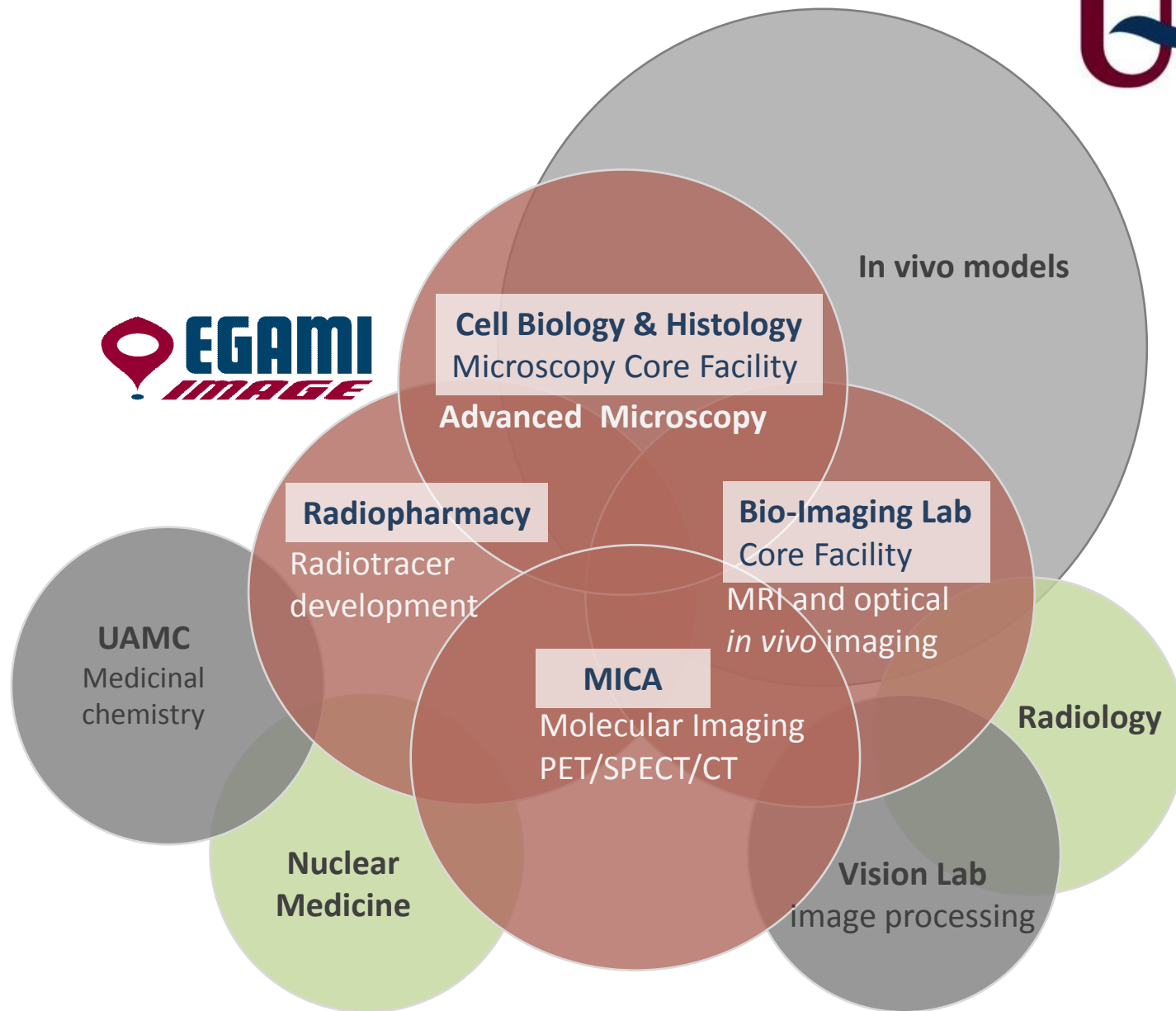


 **EGAMI**
IMAGE

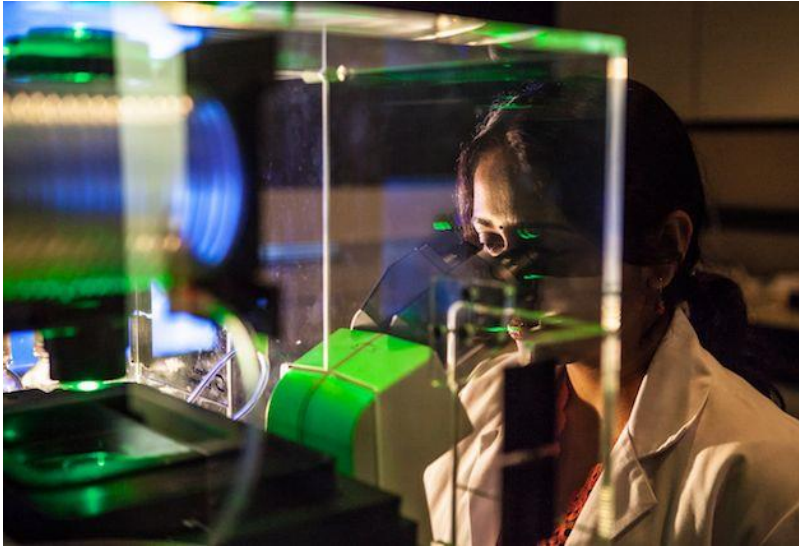
MICA

Molecular Imaging
PET/SPECT/CT





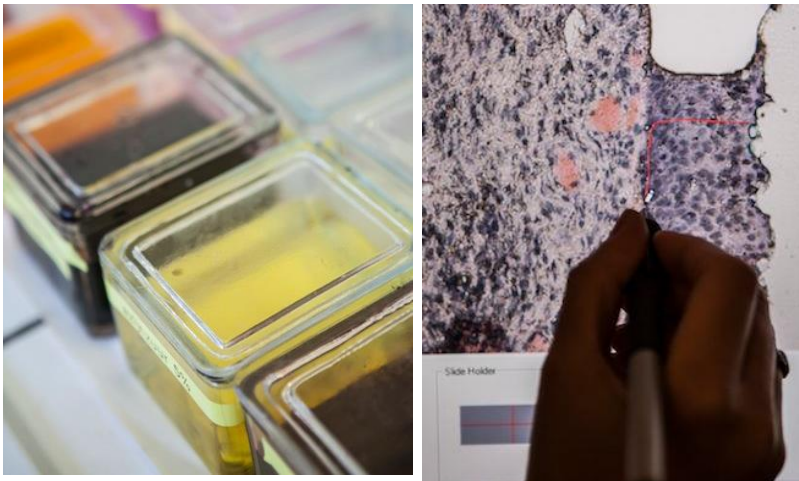
Laboratory for Cell Biology and Histology



Confocal imaging
Live cell imaging
Electron microscopy

- ✓ Cryo EM tomography
- ✓ 3D visualizations

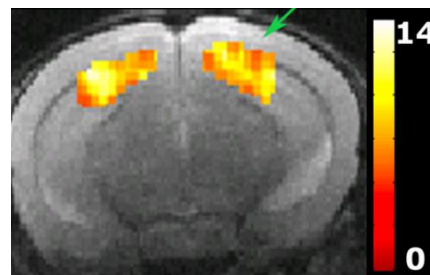
Laser capture dissection
Molecular Biology



Applications

- ✓ Central nervous system (Alzheimer)
- ✓ Enteric nervous system (lung, gut)
- ✓ Core facility
 - ✓ Autophagy, oncology, infectious disease,...

Bio-Imaging Lab



Magnetic Resonance Imaging

- ✓ Anatomical imaging
- ✓ Functional MRI (fMRI, rsfMRI, ASL)
- ✓ Spectroscopy (MRS)

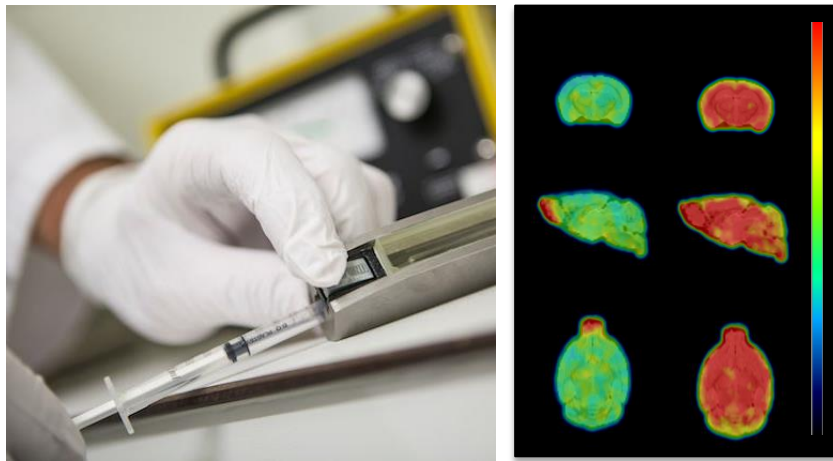
Optical imaging

- ✓ BLI (luciferase)
- ✓ FLI probes

Applications

- ✓ Neuro-degeneration (Alzheimer, Multiple Sclerosis)
- ✓ Neuro-regeneration (stem cells)
- ✓ Neuroplasticity (song birds)
- ✓ Core-facility

Molecular Imaging Center Antwerp (MICA)



Molecular Imaging

- ✓ PET/SPECT/CT (MRI co-registration)
- ✓ Dynamic kinetic modelling
- ✓ Metabolite profiling

Applications

Neuro-research

- ✓ Alzheimer Disease research
- ✓ Drug screening and receptor binding
- ✓ Transcranial Magnetic Stimulation (TMS)

Oncology

- ✓ Tumor heterogeneity
- ✓ Treatment evaluations / mechanism of action

Inflammation (collaborations)

- Colitis in mice, rheumatoid arthritis in mice

Radiopharmacy



PET/SPECT radiotracer portfolio

- ✓ ^{18}F FDG, FLT, FET, FMISO, AV45, PBR111, CP18
- ✓ ^{11}C Raclopride, PIB, ABP688
- ✓ ^{89}Zr Herceptin, mAbs, polymers
- ✓ $^{99\text{m}}\text{Tc}$ duramycin, (multiple clinical SPECT tracers)
- ✓ ^{111}In : uPA tracer, (clinical octreotide probe)
- ✓ ^{90}Y : SIRS (selective internal radiation spheres, clinical only)
- ✓ ^{15}O : water (brain perfusion in clinical setting)

Applications (pre-clinical research)

- Metabolism (^{18}F -FDG)
- Amyloid imaging
- Receptor imaging (TSPO, mGluR5, D2)
- Enzym (activity) imaging (PDE7, uPA)
- Oncology (proliferation, hypoxia, cell death)

Access to disease models



Neuro research

- Alzheimer
- Multiple sclerosis
- Huntington
- Mild chronic stress model (depression)
- Schizophrenia (pharmacologically induced)
- Transcranial Magnetic Stimulation (rTMS)
- Epilepsy
- Primary hippocampal cultures
- Drug screening

Oncology

- Tumor models
 - Orthotopic breast cancer, orthotopic colorectal, neuro-endocrine subcutane xenografts
- Cell lines
 - SKBR3, JIMT-1, HCC1569 (breast); Colo205; H727, H209, QGP1

Inflammation

- Experimental IBD (TNBS, T-cell transfer,...)
- Schistosoma-induced chronic inflammation
- LPS-induced lung inflammation



Need more information?

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