

# cmmi

Center for Microscopy and Molecular Imaging



**Preclinical imaging facility: microscopy & small animal imaging**



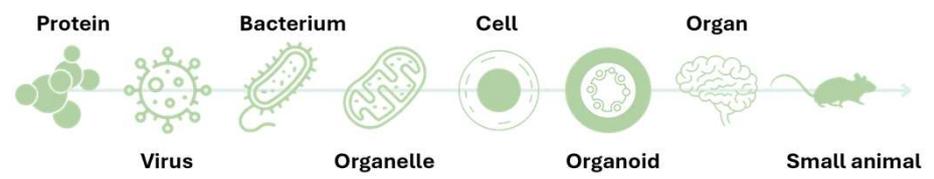
**Sponsored research & collaborative projects**



**Services & training to academic & industrial partners**

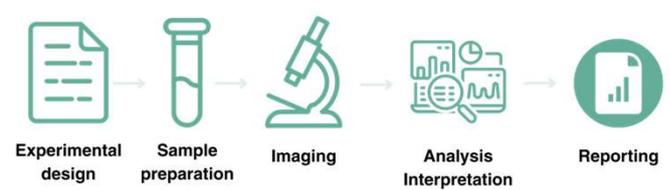
## Multiscale analysis

From protein to small animal



## Comprehensive workflow

From experimental design to Images analysis & reporting



**State-of-the-art equipment**

**20 committed experts**

**Academic ecosystem > 150 scientists**

**IMAGING PLATFORM CREATED JOINTLY BY ULB AND UMONS IN 2011**



Rue Adrienne Boland, 8  
6041 Gosselies, Belgium

800 m<sup>2</sup>  
dedicated labs

# Our services



**cmmi**  
excellence in preclinical imaging

## MICROSCOPY

**Fluorescence microscopy** (live and fixed samples)

- High-throughput, wide-field
- Confocal, super-resolution
- Fluorescence Lifetime Imaging (FLIM)

**Electron microscopy**

- Scanning electron microscopy (SEM)
- Transmission electron microscopy (TEM, ultrastructure and immunolabelling)
- Cryo-TEM

**Fourier Transform Infrared (FT-IR) microscopy**

## DIGITAL IMAGE ANALYSIS IN PATHOLOGY

**Histological and cytological sample processing**

**Biomarker characterization & validation**

- Immunohistochemistry
- Multiplexed immunofluorescence
- Chromogenic in situ hybridization

**High-throughput whole slide imaging** (brightfield and fluorescence)

**AI-based image processing & quantitative analysis**

## IN VIVO IMAGING

**Integrated animal facility**, animal models implementation & development

### NUCLEAR AND X-RAY MOLECULAR IMAGING

**Positron Emission Tomography** ( $\mu$ PET)

**Single Photon Emission Computed Tomography** ( $\mu$ SPECT)

**High resolution Computed Tomography** ( $\mu$ CT)

**Autoradiography**

### NON-IONISING MOLECULAR IMAGING

**Design & manufacturing of contrast agents & fluorescent dyes**

**Magnetic Resonance Imaging** (MRI)

**MultiSpectral Optoacoustic Tomography** (MSOT)

**Bioluminescence, Fluorescence & Cherenkov Imaging**

## MULTIMODAL IMAGING PROCESSING

**AI-driven object detection, segmentation & classification**

**Multi-scale & multi-dimensional imaging** (2D, 3D, time-lapse)

**High-throughput quantification & statistical modeling**

**Custom pipelines**

## SPATIALLY RESOLVED BIOLOGY

**High resolution imaging mass spectrometry** (DESI-TOFMS, desorption electrospray ionization – Time Of Flight Mass Spectrometry)

**Mass cytometry** (CyTOF, cytometry-TOF)

- Tissue imaging
- Cell analysis

**COMING SOON**



LE FONDS EUROPÉEN DE DÉVELOPPEMENT RÉGIONAL ET LA WALLONIE INVESTISSENT DANS VOTRE AVENIR



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