

UGENT - INFINITY LAB



INFINITY is one of the expertise centres of Ghent University with a focus on non-invasive in-vivo imaging of small animals. As a core imaging facility, INFINITY is providing multi-modality imaging services to several departments of Ghent University, other universities, the Flanders Institute for Biotechnology (VIB) and the industry.

Research axes & Expertise

INFINITY houses a wide range of state-of-the-art pre-clinical imaging devices for non-invasive in-vivo imaging of rats and mice. The following imaging technologies are available: positron emission tomography (PET), single photon emission computed tomography (SPECT), computed tomography (CT), magnetic resonance imaging (MRI), ultrasound (US), and optical imaging (bioluminescence and fluorescence). Next to these imaging modalities, INFINITY also houses an image-guided high-precision small animal radiotherapy device, a cryosectioning unit, and autoradiography.

Application fields

The major research domains are:

- cancer imaging including target expression, angiogenesis, tumor metabolism and tumor environment;
- multi-modality imaging for the evaluation of pathophysiology in neurological diseases;
- the visualization of neuroplasticity and neuroreceptor expression;
- in-vivo quantification of hepatobiliary transport;
- the development of theranostic approaches, with treatment based on small animal radiotherapy.

Major projects/partnerships/collaborations

INFINITY is part of the Medical Image and Signal Processing (MEDISIP) research group that forms a part of the Institute of Biomedical Technology (IBiTech), where two research groups work closely together for the development and optimization of medical technologies and applications. INFINITY is also part of the Innovative Molecular Imaging and Therapy (IMIT) consortium that involves four partners from four different faculties: the Laboratory of Radiopharmacy from the Faculty of Pharmaceutical Sciences, the MEDISIP research group from the Faculty of Engineering and Architecture, the veterinary imaging department from the Faculty of Veterinary Medicine, and the Nuclear Medicine department from the Faculty of Medicine and Health Sciences. The major goal of the IMIT consortium is to combine five different fields of expertise all related to molecular imaging and therapy, namely: the development on new nuclear imaging probes, small animal imaging, veterinary imaging, clinical imaging, and image quantification and system design.

Key figures

INFINITY was founded in 2008.

Total funding: 4 million euro.

Number of researchers: more than 20 PhDs and/or PostDocs.

Contact

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