TURKU BIOIMAGING

{ More than you can imagine }

See it for yourself

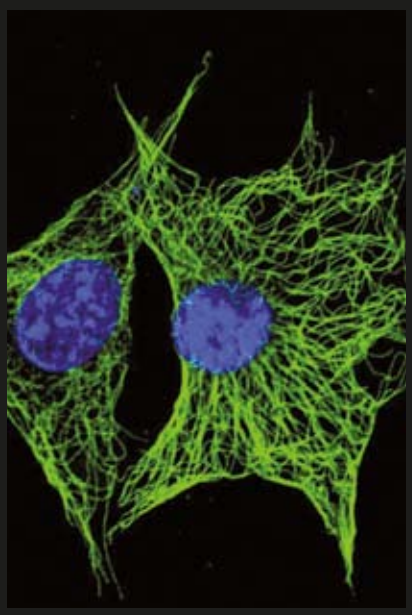
Turku BioImaging (www.bioimaging.fi) represents state-of-the-art imaging technologies in the bioscience community in Turku. It is highly interdisciplinary, encompassing all areas of imaging, from molecular to cellular to whole animal imaging, as well as high-throughput screening. The initiative also includes proteomics, systems biology, and computational modeling of cellular processes as their own specific modalities of bioimaging.

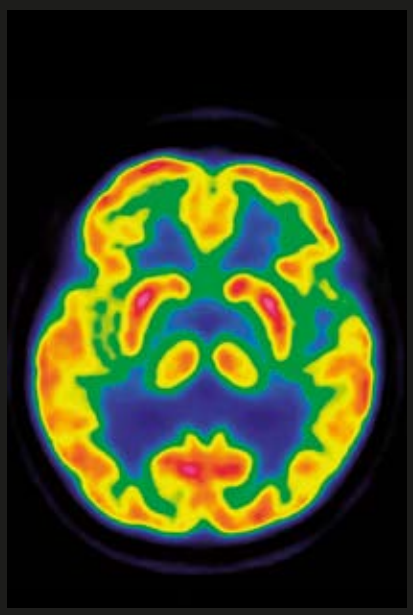
Turku BioImaging, which is a joint effort of the University of Turku and Åbo Akademi University, integrates also closely with the National Imaging Infrastructure of Biocentre Finland. In a recent international infrastructure evaluation, Turku BioImaging was included among the 24 most important national research infrastructures in Finland.

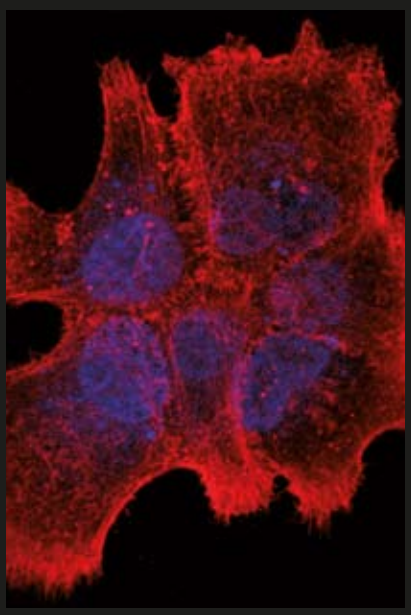
Master's Degree Programme

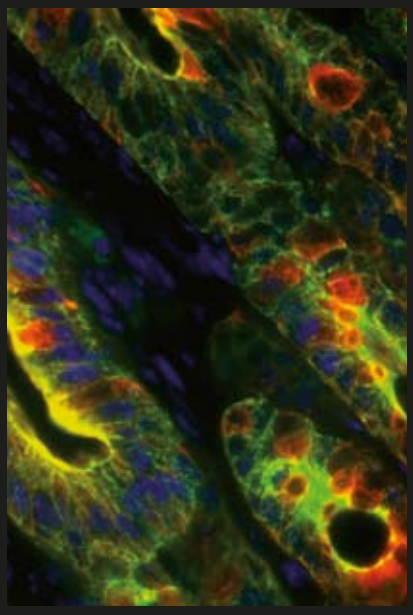
Turku BioImaging has initiated a new international Master's Degree Programme in Biomedical Imaging, which aims to produce young professionals with a thorough understanding of diverse imaging technologies along with practical skills in a wide range of imaging methods and technologies.

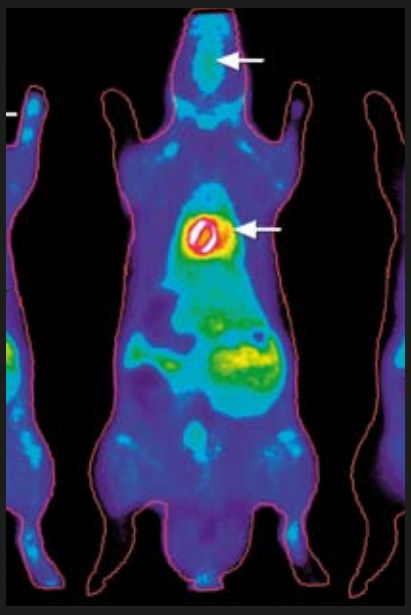
The programme will start in the fall of 2010











Turku Cell Imaging Core

(CIC) • http://cic.btk.fi

Imaging modalities:

- transmitted light microscopy with DIC optics
- wide-field fluorescence microscopy for multicolor specimens, fixed and live cell
- fluorescence stereo microscopy for macro imaging of model organisms, embryos, plants etc.
- microinjection
- laser microdissection for isolation of tissue sections, single cells or subcellular structures
- high resolution confocal microscopy with spectral imaging
- ultra-high resolution STED microscopy unit (Leica TCS STED)
- high-content confocal microscopy unit with bioinformatics capacity (Leica TCS SP5 Matrix)
- reference site for Leica TCS STED and Leica TCS SP5 Matrix
- atomic force microscopy coupled to confocal laser scanning microscopy

Advanced flow-cytometry equipment, including cell sorting service

Consultation on experimental design and image analysis

Hands-on-training and workshops

Laboratory of Electron Microscopy

(EM core facility) • www.med.utu.fi/em

Nanoscopic imaging:

- transmission electron microscopy
- scanning electron microscopy
- atomic force microscopy
- scanning tunneling microscopy
- immunocytochemistry
- element analysis and localization by combined x-ray spectrometry

Full service and consultation for experiments

Turku PET Centre

www.pet.fi

Human and animal PET

Cyclotrones and generators for production of PET probes

Applied in:

- drug discovery and development
- linking pathophysiology with the disease

Partnership agreement with Turku Imanet Oy (GE Healthcare Medical Diagnostics)

Turku Centre for Disease Modelling

(TCDM) • www.tcdm.fi

Expertise in disease modelling in experimental animals

Techniques available:

- *In vivo-in situ* imaging, bio-luminescence and fluorescence
- MRI imaging
- PET (in cooperation with Turku PET Centre)
- Ultrasound imaging
- X-Ray imaging

Imaging of tissues, cellular and subcellular structures in basic histology and in immunohistochemistry (in cooperation with the Institute of Microbiology and Pathology)

*Turku BioImaging is among the most important national research infrastructures in Finland.**

* National-level research infrastructures. Present state and roadmap. Summary and recommendations. Publications of the Ministry of Education, Finland 2009:4

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ÅBO AKADEMI UNIVERSITY

ACADEMIC EXCELLENCE IN LIFE SCIENCE AND MEDICINE

TURKU
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