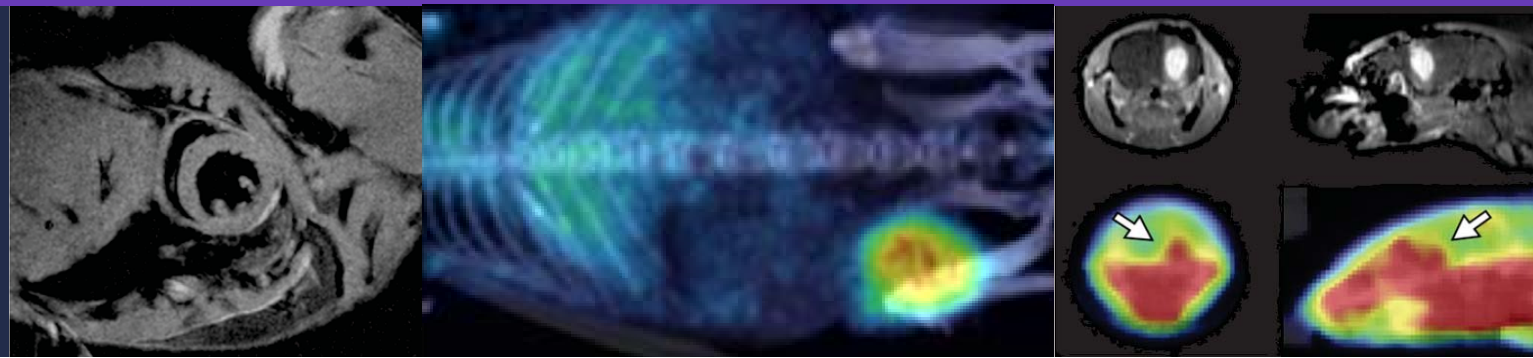
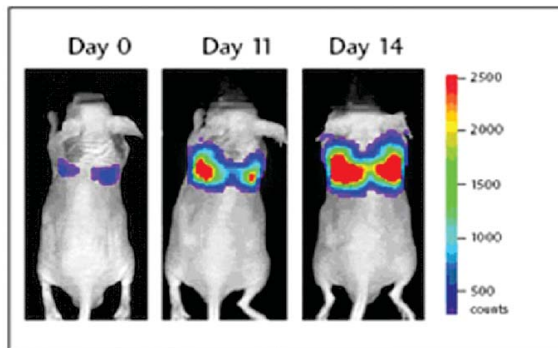


# Molecular Imaging Core



## About Us

The UVA Molecular Imaging Core Lab (MIC) provides state-of-the-art tools and expertise in imaging small animals and samples with a variety of modalities depending on the investigator's needs. These modalities include MRI, X-Ray CT, PET, SPECT, luminescence, and fluorescence. MIC has approximately 2000 sq ft in the Sheridan G. Snyder Translational Research Building and another 1000 sq ft in the nearby Medical Research (MR4) Building at the University of Virginia.



## Our Services

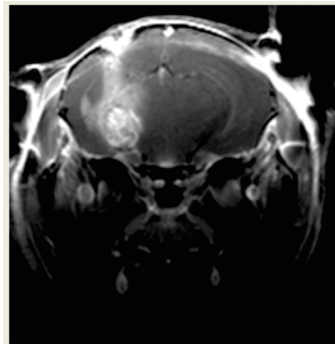
- **Magnetic Resonance Imaging (MRI)**
  - Anatomic imaging
  - Tumor detection and sizing
  - Cardiac function
  - Tissue perfusion
- **Positron Emission Tomography (PET)**
  - Imaging of molecular imaging agents
  - Metabolic imaging
  - Dynamic imaging for rate uptake calculation
- **Single-Gamma Emission Tomography (SPECT)**
  - Imaging agents labeled with radiometals
- **X-Ray Computed Tomography (CT)**
  - Anatomical imaging for PET and SPECT
  - Bone imaging
  - Attenuation correction
- **Fluorescence (FLI)**
  - Imaging fluorescent dyes
  - Imaging fluorescent proteins
- **Bioluminescence (BLI)**
  - Firefly luciferase reporter gene imaging
- **Planar X-Ray**
  - Anatomic overlay for FLI and BLI

## Instrumentation

- **Magnetic Resonance Imaging**
  - 9.4 T Bruker BioSpec system
  - 20 cm clear bore
  - Bruker gradient and shim coil
  - 660 mT/m, slew rate 4570 T/m/s
  - Wide range of RF coils
- **PET/SPECT/CT**
  - Bruker Albira Si trimodal PET/SPECT/CT scanner
  - High-sensitivity 3-ring PET detectors
  - SPECT 2 rotating camera design with single and multi-pinhole collimators
  - X-Ray CT fully calibrated in Hounsfield units, automatic fusion with PET and SPECT images, used for attenuation correction
- **Luminescence/Fluorescence/X-Ray**
  - Spectral Instruments Lago X scanner
  - Revvity/PerkinElmer IVIS Spectrum scanner
  - High throughput (up to 10 mice at once)
  - 25 cm field of view
  - 2048 x 2048 pixel resolution
  - LED fluorescence excitation - 360 - 805 nm
  - 20 emission filters - 490 - 870 nm

*The MIC provides tools and expertise for*

*imaging live rodents and specimens*



**Enhancing Research,  
Rigor and Reliability**

## Our Team

**Maurits Jansen, PhD** - Director  
Research Professor of Radiology and  
Medical Imaging (left)

**Brent A. French, PhD** - Faculty Advisor  
Professor of Biomedical Engineering (right)



## Contact

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[med.virginia.edu/molecular-imaging-core/](http://med.virginia.edu/molecular-imaging-core/)

Request services on:  
[uva.corefacilities.org/account/login](http://uva.corefacilities.org/account/login)

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