

Imaging Services

Discovery is a critical stage in the drug development process. Utilizing customized imaging to maximize the power of in vivo testing facilitates effective go/no-go decisions during your early and late lead candidate selection. Through Molecular Imaging's services, your preclinical program can benefit from the unparalleled expertise and support of industry-recognized drug discovery leaders and state-of-the-art imaging services.

Integrated Imaging, Drug Discovery and Therapeutic Area Expertise

Molecular Imaging scientists work side-by-side with therapeutic area and disease model experts, collaborating on protocol implementation, optimization and validation. Our imaging labs are contiguous with vivariums to maximize biosecurity and create the most efficient interface between imaging and pharmacology. Imaging studies are designed and executed through multi-disciplinary collaboration to ensure data quality and meaningful interpretation of results.

Broadest and Most Experienced CRO *In Vivo* Imaging Program

Expert teams at Molecular Imaging combine imaging with pharmacology across a range of therapeutic areas. We provide the broadest, most experienced industry platform available today for validated imaging protocols in standard and emerging models. An extensive historical database for model behavior and standard agent response provides a foundation for optimal imaging study design.

Imaging Capabilities Include:

POSITRON EMISSION TOMOGRAPHY (PET)

- Metabolic Imaging [^{18}F -FDG]
- Imaging of Cellular Proliferation [^{18}F -FLT]
- Imaging of Bone Remodeling [^{18}F -NaF]

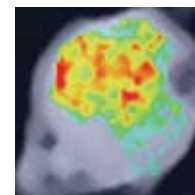
MAGNETIC RESONANCE IMAGING (MRI)

- Anatomical Imaging
 - Tumor burden in metastasis, orthotopic and transgenic models
 - Disease burden in CNS models
 - T2-weighted and contrast-enhanced protocols
 - Respiratory gated protocols
- Dynamic Contrast-Enhanced (DCE) MRI
- Diffusion MRI
- ^1H Magnetic Resonance Spectroscopy (MRS)
- ^{31}P MRS
- ^{19}F MRI (e.g., biodistribution, cell tracking, imaging of macrophages)
- Novel Contrast Agents (e.g., Gd, FeOx, ^{19}F)
- Imaging of Medical Devices
- Medical Device Safety with MRI



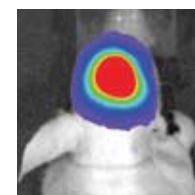
COMPUTED TOMOGRAPHY (CT)

- Skeletal Imaging (e.g., arthritis models, bone metastasis)
- Soft Tissue Imaging
- Novel CT Contrast Agents (e.g., iodine, gold)
- *Ex Vivo* Imaging



BIOLUMINESCENCE AND FLUORESCENCE

- License from Xenogen/Caliper
- Tumor Burden and Distribution
 - Orthotopic models
 - Metastasis models
 - Systemic tumor models
- Exogenous fluorescent Molecular Reporters
 - activatable agents (eg. cathepsins, MMPs, renin)
 - targeted agents (hydroxyapatite, $\alpha\nu\beta3$)
 - vascular pooling agents
- Gene Expression/Pathway Imaging
- Target Modulation
- Biodistribution Using Fluorescent Tags
- Optical Reporter Transgenics



DUAL ENERGY X-RAY ABSORPTIOMETRY (DEXA)

- Bone Mineral Density
- Body Composition (e.g., obesity)

FMT

- 3D Tomography
- Follow disease progression
- Functional read outs of target activity
- Tracking of metastasis and disseminated disease

2D RADIOGRAPHY

- High-Throughput Traditional 2D X-ray Imaging
- Bone Imaging (e.g., bone metastasis, arthritis)

High Throughput

Through streamlined imaging protocols and image post-processing, we generate and analyze high-quality images in a rapid and cost-effective manner. Strong attention to workflow and automation over many years has allowed the company to push the limits of throughput while maintaining data quality and statistical power.

Reporting

Weekly data updates during studies keep you informed of study progress, and full detailed reports, including graphics and statistical analyses, are issued within five weeks of study termination. Clients receive all raw pharmacology and image data from studies, including image viewing and analysis software.