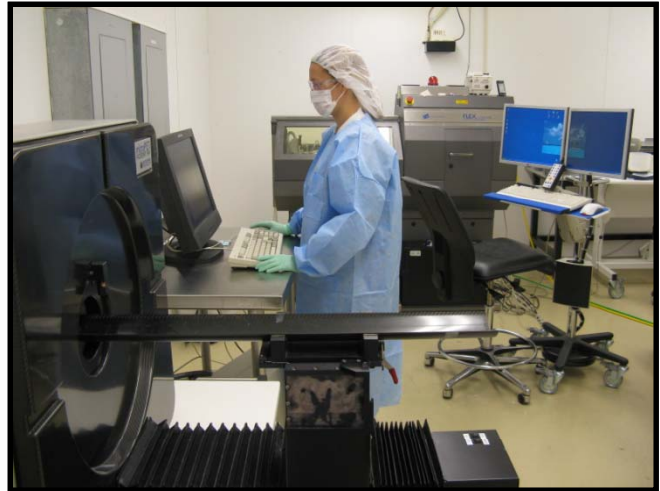
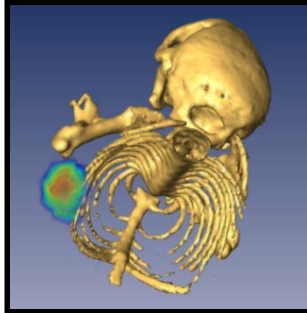


SMALL ANIMAL PET IMAGING

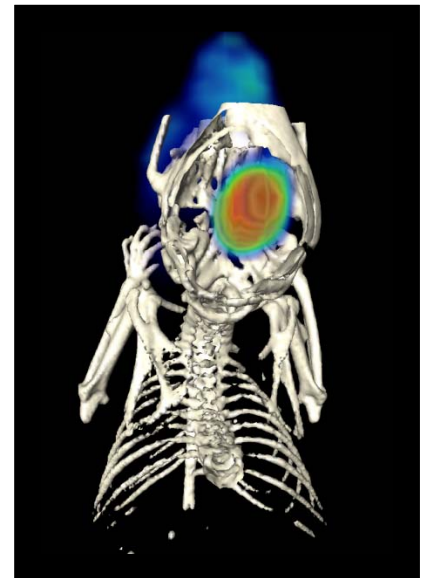
MIR owns and operates two high resolution preclinical PET systems on site:

- Gamma Medica PET/CT
- Siemens R4 MicroPET



MIR is the leading CRO for preclinical in vivo PET

- 4 years experience using 18-FDG and 18-FLT PET in a broad panel of tumor models
- over 30 studies successfully performed
- optimization of throughput (40+ animals per day)
- optimized uptake procedures to maximize statistical power
- automation for logging and tracking fasting, dosing, uptake and image acquisition
- automatic dose corrected SUV calculation
- skilled, highly-trained imaging scientists undertake studies



FLT PET in intracranial tumor



**Innovation in Drug
Evaluation**

MIR Preclinical Services



Small Animal PET Technology

Positron emission tomography (PET) is increasingly used to study disease states *in vivo* for preclinical drug discovery. The current industry demand for 18-FDG and 18-FLT PET biomarkers in tumor models is seeing unprecedented levels.

PET radioisotope tracers are commonly used to measure glucose metabolism ($[^{18}\text{F}]$ -fluorodeoxyglucose, FDG), cellular proliferation ($[^{18}\text{F}]$ -fluoro-thymidine, FLT) and hypoxia ($[^{18}\text{F}]$ -fluoromisonidazole, F-MISO). Tumor detection and therapy monitoring using preclinical PET takes advantage of differential uptake of these tracers in tumors that changes in response to a successful therapy.

A broad spectrum of new PET-based isotopes are under development for future use as clinically translatable biomarkers.

Clinical Translation and Biomarkers Validation

PET is used heavily in clinical trials to track disease progression and response in oncology (primary tumors as well as metastases), cardiovascular disease, CNS, inflammation. MIR uses clinically translatable protocols that can be used for clinical validation as well as preclinical efficacy testing. The information obtained in preclinical research can be used to make decisions on clinical trial design, before taking a compound to the clinic. This can save millions in clinical costs.

Preclinical PET Experience

MIR has four years of experience in design, execution and data analysis in *in vivo* PET imaging. The company has run studies for a variety of large and small pharmaceutical companies in a broad spectrum of tumor models. MIR imaging protocols, data analysis and statistical comparisons are designed for maximal clinical translatability. MIR know how in optimization of animal imaging throughput and data reproducibility has been key to the success of the companies' *in vivo* PET imaging program.

Client Based Focus and Data Ownership

Most contract research organizations that offer preclinical PET services do so through academic collaboration where throughput, priorities and intellectual property rights are major issues. MIR owns and operates its equipment on site. The company does not perform its own drug discovery research, does not service its own grants and derives all of its revenues from client studies. Therefore, MIR is completely devoted to the client. Further, clients completely own all of the results generated from their experiments. For validated models, MIR fully guarantees the scientific integrity of its studies.

Reports

MIR issues weekly updates on study progression and strives to issue fully detailed final reports within 5 weeks of the end of the *in vivo* portion of a PET study. In addition, clients receive all of the raw pharmacology and image data from studies.

