

Preclinical Research and Development Facilities

Overview

Developed through the Atrial Fibrillation Innovation Center at the Cleveland Clinic, and now operated as a program by the Global Cardiovascular Innovation Center, the GCIC preclinical research and development facilities provide state-of-the-art interventional and surgical resources for testing the next generation of devices and procedures.

Featuring two large procedure suites each equipped with the latest in imaging, surgical, monitoring and recording equipment, along with conscious testing and telemetry capabilities for on-site extended follow-up, the facility is ideal for a wide range of cardiovascular applications. The two large procedure rooms are complemented by four additional surgical stations for conducting studies on large and small subjects. A surgical preparation room, a conference room, and videoconferencing capability for observing procedures remotely, provide convenience and flexibility.



Research

This research and development facility offers a unique opportunity for industry partners to work with researchers, clinical investigators, interventionalists and surgeons at one of the premier and innovative cardiovascular healthcare institutions in the world, whether it be for early stage research, product development, or physician training on new devices or procedures.

Research initiatives being conducted include:

- Developing new catheter-based and surgical instrumentation and techniques.
- Conducting basic science and translational studies into biochemical, cellular and genetic approaches to diagnosing and treating cardiovascular disease.
- Specific initiatives directed towards Atrial Fibrillation, Heart Failure, Cardiac Assist, Cardiac Neurostimulation, Regenerative Medicine Therapies and Heart Valve Therapies.

Equipped with State-of-The Art Technology

Two spacious preclinical surgical suites capable of hemodynamic and electrophysiology studies plus four smaller microscope-equipped surgical stations can support diverse preclinical research and development featuring:

- Large and small subject models
- Housing and care capable of supporting six month or longer chronic studies in addition to acute studies
- Telemetry and conscious testing capability
- Experienced staff ensures efficient and productive studies
- Video conferencing with the ability to record and view live procedures –ideal for information exchange and training.

Equipment Highlights

IMAGING

- Philips BV Pulsera® single plane fluoroscopy imaging
- Siemens DynaCT® – rotational angiography with X-Leonardo image reconstruction capability
- Siemens Acuson Sequoia® ultrasound imaging system w/ transthoracic, transesophageal echo (TEE) and Intracardiac echo (ICE) imaging capability
- GE Vivid 7® ultrasound imaging system

ANESTHESIA AND MONITORING

- Anesthesia machines, ventilators and monitoring systems to accommodate all large model species
- GE Prucka® EP System – for monitoring ECG, BP, and measuring ablation catheter parameters
- Data Sciences Ponemah® ECG and biopotential monitoring/data collection system

ELECTROPHYSIOLOGY STUDIES

- St. Jude ESI® cardiac electrical mapping system (NavX)
- Biosense Webster Carto® cardiac electrical mapping system

ROBOTICS

- Intuitive Surgical DaVinci® surgical robot

Other equipment can be made available for specified studies with advance notice. Please call for specific equipment needs.



Post Study Sample Analysis

Full service pathology lab, including:

- Gross and fine histological sample prep and analysis
- Tissue staining and analysis
- Photomicrography
- Tissue analysis

Quality Assurance

- Professionally staffed and managed by full time employees of the Cleveland Clinic
- Compliance with Public Health Service and institutional policies
- Institutional committee reviews and approves all study protocols
- Procedural control and review of data
- Procedural record keeping and data storage
- State of the art quality control practices to ensure highest study integrity
- Study data generated in the labs are routinely used to support regulatory submission

Contact Us

For more information about the Preclinical Investigation Facility or partnership opportunities, please contact Laura Konczos, Program Coordinator, at 216-445-7006 or konczol@ccf.org.



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