

UM / SYLVESTER Comprehensive Cancer Center



Shared Resources 2007

MILLER
SCHOOL OF MEDICINE
UNIVERSITY OF MIAMI

UMSylvester
Comprehensive Cancer Center

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FLOW CYTOMETRY CORE FACILITY

Core Leader: Richard Riley, Ph.D.

Description /Purpose: The purpose of the resource is to provide Cancer Center investigators, in support of their peer-reviewed funded research, with methods for analysis and preparative sorting of normal and tumor cells, and to train investigators in the use of flow cytometry for their research.

EQUIPMENT:

- FACScan
- LSR I Flow Cytometer
- LSR II Flow Cytometer
- FACS Aria
- Zeiss Fluorescent Microscope

SERVICES AVAILABLE:

- Laser excited flow cytometry for analysis of cell surface antigens expressed in complex cell mixtures. Up to 8 different fluorescent parameters and light scatter parameters (forward and side scatter) can be analyzed simultaneously.
- Laser excited cell sorting (up to 8 parameters) for isolation of selected cell populations from heterogeneous mixtures.
- DNA content analysis via both visibly excited dyes (propidium iodide) and UV excited dyes (Hoescht dyes) with pulse processing or doublet discrimination.
- High efficiency, high speed sorting, and sorting of large particles via the MacroSort system.
- Training in the use of the FACScan analytical flow cytometer, computer programs for data analysis, and data storage. Consultation in the procedures for cell preparation, data analysis, and preparative sorting are also provided.

LABORATORY CONTACT: James Phillips, Res. Associate
(305) 243-5571

LOCATION: Rosenstiel Medical Science Building
1600 N.W. 10 Avenue
Room 3061

**ADVANCE NOTICE
REQUIRED:** Call for scheduling

SERVICE CHARGES:	SCCC Member	Non-Member
Analysis	\$52.50/hr	\$95/hr
Sorting	\$60.70/hr	\$110/hr

ANALYTICAL IMAGING CORE FACILITY

Core Leader: George McNamara, Ph.D.

Description / Purpose: To provide our investigators at the Cancer Center with access to state-of-the-art instruments and methodologies for cellular and tissue imaging as well as molecular analysis of pathology specimens. Since its inception the core has greatly enhanced the ability of our investigators to perform and expand their research, which ultimately should result in improved ability to compete for research funding. The core also offers training and personalized assistance to investigators, fellows, graduate students and technical staff in the use of these sophisticated techniques and instruments. Training is offered individually but classes and hands-on demonstration will be implemented as well.

EQUIPMENT:

- Zeiss LSM-510 Confocal Laser Scanning Microscope (CLSM)
- Zeiss Apotome Imaging System
- Laser Scanning Cytometer (LSC)
- MetaMorph Imaging System (MIS)
- Laser Capture Dissection Microscope (LCM)
- Leica DMIRB Inverted Microscope (fluorescence, phase contrast, light microscopy, etc)

SERVICES AVAILABLE:

- Confocal Microscopy
- Non-laser based, real-time confocal microscopy
- Standard fluorescence and pathology microscopy
- Fluorescent imaging and quantitation of tissue sections on a microscope slide
- Laser Capture Dissection (LCM)
- In-vivo Imaging

FACILITY CONTACT:

George McNamara, Ph.D.

243-8042

LOCATION:

Diabetes Research Institute
1450 NW 10th Ave – 6th Floor

ADVANCE NOTICE REQUIRED:

Scheduling is based on a first-come first serve basis through core personnel. A web-based scheduling system is currently being developed.

SERVICE CHARGES:

CLSM (Confocal Microscopy)	\$ 25.00/hour
CARV (Video Confocal)	\$ 25.00/hour
LSC (Laser Scanning Cytometer)	\$ 30.00/hour
MIS (image analysis using MetaMorph software) with assistance	\$ 25.00/hour
MIS (image analysis using MetaMorph software) without assistance	\$ 5.00/hour
LCM usage (Laser Capture Microscope)	\$ 20.00/hour
FM (Fluorescence Microscope)	free of charge

TRANSGENIC ANIMAL CORE FACILITY

Core Leader: Thomas R. Malek, Ph.D.

Co-Manager: Wayne Balkan, Ph.D.

Description / Purpose: The primary objective of the facility is to efficiently produce transgenic mice and targeted-mutant mice, and to provide support for investigators using this technology for application to their research. These technologies are powerful tools to study the function of genes in-vivo.

SERVICES AVAILABLE:

- Set-up breeding of donor and recipient mice and to subsequently check plugs to confirm mating.
- Perform vasectomies of male mice for the recipient colony.
- Collect fertilized eggs or blastocytes.
- Sort and culture eggs.
- Prepare microinjection needles.
- Microinject eggs with DNA or blastocytes with cells.
- Inject donor and recipient mice with hormones.
- Perform microsurgery to reimplant eggs or blastocysts.
- Provide investigators with tissue biopsy to screen for transmission of transgene.

FACILITY CONTACT: Thomas Malek, Ph.D. (305) 243-5627
Wayne Balkan, Ph.D. (305) 243-5890
Martiza (Gutierrez) Inza, Res. Associate (305) 243-5890

LOCATION: Gautier Building
1011 NW 15 St
Room 638

SERVICE CHARGES: Transgenic mice: \$2,800 per construct (at least 2 Founder Animals).
Gene knockout mice: \$650/injection day.
Mouse re-derivation: \$450
Other Services: Embryo freezing and storage.

ONCOGENOMICS CORE FACILITY
Core Leader: Toumy Guettouche, Ph.D.

Description / Purpose: The Oncogenomics Core has been created to provide UM/Sylvester investigators with access to the latest in technology, chemistries and expertise for the detection, quantification and characterization of genes and gene products. The Core employs multiple platforms and chemistries for the design, development, optimization and validation of real-time PCR applications including analysis of a limited sample set as well as high-throughput solutions for screening. In addition, this core facility offers high quality, expandable throughput, capillary-based DNA sequencing of plasmids and PCR fragments, universal sequencing of genomic DNA inserts and DNA fragment analysis. The Core houses both solid-phase and liquid-phase array technology to study gene expression levels, perform whole genome scans, target SNP genotyping and DNA methylation detection in a large number of samples. Standardized manual and automated methods are employed for nucleic acid isolation from research and clinical specimens to ensure the highest quality of data generated using these advanced molecular platforms. Finally, the personnel at the Oncogenomics Core Facility offer consultation to users for chemistry and platform selection, assay or tool development and subsequent test validation to help investigators achieve their research aims.

SERVICES AVAILABLE:

- Technology Consultation
- Assay Design and Optimization
- Biomarker and Assay Validation
- Biomarker Characterization
- Standard Testing Menu
- Standardized RNA and DNA Purification
- Standardized Plasmid Production and Purification
- Data Analysis and Publication Preparation

INSTRUMENTATION:

The Oncogenomics Core Facility is equipped with the following technologies:

- 1700 Chemiluminescent Microarray Analyzer (Applied Biosystems)
- 7900HT Fast-Real-Time PCR System (Applied Biosystems)
- 3130xl Genetic Analyzer (Applied Biosystems).
- Illumina BeadStation 500GX (Illumina).
- 9800 Fast Thermal Cycler (Applied Biosystems).
- LightCycler 2.0 and 480 (Roche).
- Tecan Robotics Platform (Tecan Genesis).

FACILITY CONTACT: Toumy Guettouche, Ph.D. 243-8410

LOCATION: SCCC / Pap Building
1550 N.W. 10th Avenue
Room 518

SERVICE CHARGES: No Charges during development period

CLINICAL RESEARCH SERVICES

Core Leader: Joseph Lucci, M.D.

Executive Director: Jim Hanlon, RN

Description / Purpose: The Clinical Research Services resource was organized as a core supported Shared Resource in 1982 and has been in continuous operation since that time. This resource provides Cancer Center members with broad-based support for their clinical research activities.

The purpose of this resource is:

- To provide support services for screening, evaluating, recruiting, tracking, and protecting and maintaining patients on clinical protocols.
- To assist investigators with protocol development by providing consultation in protocol design, access to other needed resources, and assistance with reporting requirements and other federal regulations.
- To assure compliance with guidelines for investigational drug use and toxicity reporting.
- To support national cooperative group activities and interact with Cancer Center affiliates.
- To develop, operate, and maintain a computerized protocol data management system.

SERVICES AVAILABLE:

Protocol Office: This office provides support for activities involving activation and execution of clinical trials. These services include preparation of documents and presentation to both the SCCC Protocol Review Committee and the UM IRB, and distributing active protocols throughout the clinical areas on the medical campus. The office provides financial services for clinical trials including contract negotiation and budget construction and performs quality assurance and internal audits. This office provides lists of active clinical trials and assistance with quality control procedures.

Business Office – Contract development and negotiation. Please contact Paige Dunion at 305-243-2450.

Quality Assurance Office – Please contact Nancy Triplett at 305-243-4970.

Data Management Office: This office provides lists of all active clinical trials and assistance with quality control procedures.

Research Pharmacy: This pharmacy is responsible for investigational drug accountability and inventory, as well as, providing drug information for medical, nursing, and pharmacy staff.

RESOURCE CONTACT: Jim Hanlon (305) 243-4903
Paige Dunion (305) 243-2450

LOCATION: SCCC / Fox Building
1550 N.W. 10th Avenue
5th Floor

SERVICE CHARGES: Please contact office for scheduled fees. There are various rates for research nursing and data managing, along with appropriate processing fees for IRB and protocol activation.

HISTOLOGY RESEARCH LABORATORY CORE FACILITY

Core Leader: Carol K. Petito, M.D.

Description / Purpose: In collaboration with the department of pathology, UM / Sylvester has recently supported the establishment of a core Histology Research Lab to make histology services available to UM / Sylvester researchers in support of their peer-reviewed funded research.

SERVICES AVAILABLE: The facility provides basic services such as:

- processing of fixed material into paraffin blocks
- tissue sectioning for routine hematoxylin-eosin stains
- tissue sectioning for immunohistochemistry

LOCATION: SCCC / PAP Building
 1550 N.W. 10th Avenue
 4th Floor – Rm. 418

RESOURCE CONTACT: Dr. Carol K. Petito, Core Leader (305) 243-3584
 Ms. Mariana Nunez, Staff Associate (305) 243-3824
 neuropathology@med.miami.edu

SERVICE CHARGES: Paraffin blocks \$2.60
 Re-embedding paraffin block \$1.30
 Slides/cut, unstained \$1.30 first one; \$0.65 each additional
 Slides/H&E stain only \$1.95
 Slides/PAS stain only \$2.60

Available supplies for investigators include plastic cassettes and formalin-containing storage bottles. A small user's fee will be charged to SCCC investigators to assist in cost-recovery for supplies.

PHARMACOKINETICS CORE FACILITY

Core Leader: M. Abdul Mian, Ph.D.

DESCRIPTION/PURPOSE

The Pharmacokinetics Core Laboratory was established in 2004 to provide pharmacology research facilities for the UM/Sylvester Comprehensive Cancer Center (SCCC). The Pharmacokinetics Core Laboratory, which is located in 450 square feet of laboratory space in the Rosenstiel Medical Science Building, supports preclinical and clinical pharmacology needs for the UM/SCCC scientific research programs.

SERVICES AVAILABLE

- quantitation and identification of drugs, metabolites, and other endogenous products in biological matrices
- PK and PD analyses of anticancer agents
- provide accessible consultations with investigators in the design of studies involving PK or PD modeling
- pharmacokinetic/pharmacodynamic interaction assessment in support of basic and clinical UM/SCCC scientific research programs
- the detection of EX wavelength, EM wavelength, gain, and attenuation.
- wavelength scan functions include excitation spectra and emission spectra measurement. Difference spectra can be determined from measured spectra.

EQUIPMENT

- **HPLC System:** Beckman Coulter System Gold 508 autosampler, 166 diode array UV detector, and state of the art 32 Karat software to analyze chromatograms either at fixed wavelengths or at a wavelength scan from 190-700nm
- **FP-2020/2025 Fluorescence Detector:** Monochromator with holographic concave diffraction grating, 150 W Xenon lamp and a wavelength range of 220 ~ 700nm (for EX and EM wavelengths)

CONTACTS: Dr. Abdul Mian, Ph.D. (305) 243-6271
Caihong Mou, Ph.D. (305) 243-6271

LOCATION: Rosenstiel Medical Science Building
1600 NW 10 Avenue
Room 7014
Miami, FL 33136

ADVANCED NOTICE REQUIRED: Yes

SERVICE CHARGES: There is no charge for Cancer Center investigators at present in order to promote the use of the resource.

DISPARITIES AND COMMUNITY OUTREACH CORE

Core Leader: Erin Kobetz, Ph.D.

DESCRIPTION/PURPOSE

The Disparities and Community Outreach (DCO) Core is a shared resource that provides support for disparities-focused, biobehavioral, epidemiologic, and cancer prevention and control research at the University of Miami Sylvester Comprehensive Cancer Center (UM/SCCC). The DCO Core provides services to help investigators identify specific communities at increased risk of adverse cancer outcomes. These services include providing descriptive population data, as well as cancer incidence and mortality data at the national, state, county and census tract/block levels.

SERVICES

Pre-award services (no charge to investigators):

- Data Services
- Community Advisory Board (CAB)
- Other Pre-Award Services

Post-award services:

- Grant-Specific Community Advisory Board (CAB)
- Outreach and Recruitment
- Post-award Data Services
- Project Management
- Study Materials Development
- Training and Education

CONTACTS: Erin Kobetz, Ph.D. 243-6185
Dorothy Parker, MHS 243-1120

LOCATION: Clinical Research Building, Room 1077B
1120 NW 14 St.
Miami, FL 33136

ADVANCED NOTICE REQUIRED: Yes

SERVICE CHARGES: There is no charge for Cancer Center investigators at present in order to promote the use of the resource.

BIOSTATISTICS
Core Leader: Charles Anello, PhD

DESCRIPTION/PURPOSE

The Division of Biostatistics provides statistical expertise in the study, design, and data analysis for UM/Sylvester members. Statisticians in the unit collaborate on developing protocols for clinical trials, work together on research proposals for laboratory-based investigations, and conduct epidemiologic studies. They also perform statistical analyses and substantively interpret their results, as well as author or co-author papers for publication. Biostatistics is committed to applying statistical and computational methods to improve the means by which clinical trials and translational research are conducted within UM/Sylvester and to developing statistical methodology that aids cancer research.

SERVICES

- **Collaboration:** Biostatistics seeks to establish enduring collaborations with UM/Sylvester investigators to advance the center's programmatic research. Such collaborations develop statisticians' knowledge of specific areas of cancer-related investigation and ensure the statistical considerations are adequately incorporated throughout the course of ongoing research programs. Priority is given to collaborative work, not consulting.
- **Consulting:** In contrast to collaborations, which involve long-term collegial relationships in planning studies or analyzing data from them, statistical consulting generally entails statistical advice or analysis with little involvement in the studies themselves and no co-authorship of publications. Consulting, however, is sometimes a preliminary step to collaborative research where biostatistics plays a significant role.
- **Study design:** Biostatistics formulate study objectives and endpoints in terms that are appropriate for statistical analysis, recommend alternative study designs, determine the sample size needed to address study objectives at an appropriate level of significance and power, and develop and write plans for statistical analyses.
- **Data Analysis:** After study, biostatisticians provide graphical and tabular reports of the results as well as a substantial interpretation of the findings.
- **Clinical Trial Applications:** Biostatisticians contribute to the design and statistical analysis of investigator-initiated phase I and phase II oncology clinical trials; clinical epidemiology studies; evaluation of novel diagnostic tests; clinical investigations of cancer therapy; basic-science studies of cancer mechanisms; and translational studies of immunologic therapy, chemotherapy-modifying agents, and radio-sensitizing drugs.

CONTACTS: Charles Anello, Ph.D. 243-2618
Gail Walker, Ph.D. 243-2865

LOCATION: Clinical Research Building, Room 1041B
1120 NW 14 St.
Miami, FL 33136

ADVANCED NOTICE REQUIRED: Yes

SERVICE CHARGES: There is no charge for Cancer Center investigators at present in order to promote the use of the resource.

Non UM/Sylvester Resources – Special Partnerships

MIAMI INSTITUTE OF HUMAN GENOMICS – CENTER FOR GENOME TECHNOLOGY

<http://mihg.med.miami.edu/x42.xml>

Description / Purpose: The Center for Genome Technology (CGT) is a state-of-the art genomic research and resource facility created to provide genomic research support to the MIHG and the University of Miami. The Center includes highly trained molecular biology and molecular genetics faculty and staff personnel. The CGT presently consists of 4 Core facilities: Genotyping; Sequencing and Variant Detection; Gene Expression and Arrays; and Technology Development with a fifth Proteomics and Metabonomics Core planned to open within the year. The CGT resource facility is presently located in approximately 4000 square feet in Building A at the South Campus of the Medical Center.

Resources Available:

- **Genotyping**
 - The Illumina system is the CGT's main high-throughput genotyping platform and is fully operational. The main Whole Genome Association (WGA) platform currently consists of two Illumina stations that include auto-loaders, Tecan robotics, computer and IT support apparatus for two complete Beadstation setups to be used for WGA, Golden Path, and potentially gene expression. Expansion of the facility to four Illumina stations is presently underway. The CGT is fully capable of supporting any Illumina based genotyping.
- **Sequencing**
 - Current ABI sequencing equipment includes: a) one 3730xl 96 array capillary high-throughput sequencer and one 3130 xl intermediate through-put capillary sequencer and a total of 10 ABI 9700 and 20 ABI 9800 PCR machines. A sequencing center has been set up in room 143 A bldg on South campus and sequencing will be carried out using CGT personnel.
 - Plans are currently underway to purchase the Solexa (Illumina) ultra-High-throughput sequencing system, which should be available late fall of 2007.
- **CNV**
 - Initial screening for copy number variants can be derived from analysis of the Illumina WGA SNP data. Deletions and/or duplications (in/del) can be detected by signal intensity variation from individual SNPs.
 - For greater resolution the CGT has purchased a Nimblegen CGH (CNV), splicing, methylation, and sequencing hybridization platform with two mani stations. For the detection of CNV the Nimblegen platform relies upon hybridization to isothermal 50-70bp oligonucleotides. The oligos can be derived and generated from anywhere in the known genome with the primary limitation of the approach being that the sequence of the oligo's must be unique and not contain repeats.
- **Gene Expression**
 - For gene expression studies the CGT possesses two primary platforms: the Affymetrix Gene Chip 3000 complete genotyping and expression platforms and a complete Agilent array system provided by the Miller School of Medicine DNA Microarray Core Facility. All forms of expression array, etc. analysis can be supported by these two platforms. In addition and as outlined above, the CGT is capable of supporting, through existing platforms, both Nimblegen and Illumina gene expression studies.
- Spotfire Application Suite (Decision Site, Decision Site Statistics, Functional Genomics, Developer, Analytics Server)
- GeneSprin GX - for desktop expression analysis

FACILITY CONTACT:

John Gilbert, PhD

243-2282

LOCATION:

Rosenstiel Medical Science Building
1600 N.W. 10 Avenue
Room 6064 and 6056

Wallace H. Coulter Center for Translational Research

<http://coultercenter.med.miami.edu>

DESCRIPTION: The Wallace H. Coulter Center for Translational Research at the University of Miami is a technology development center with an emphasis on applied biomedical technology that has significant clinical and commercial impact on the socio-economic wellbeing of the public.

The Center seeks out promising technology within UM and provides support in research, development and commercialization of biomedical innovations.

RESOURCES/SERVICES: The WHCC occupies 5000 sq-ft in the FOX Building. The space was designed to meet the demands of investigators whose work in translational research could involve the use of animal and/or human cells, cellular and molecular techniques, and who might utilize specialized equipment, systems and technologies. To that end, the space includes a designated gene lab, dedicated rooms for animal and human cell culture, and private laboratories for UM investigator-initiated start-ups, accessible to project personnel exclusively. This space houses the WHCC Biological Modifiers Core Facility.

The Biological Modifiers Core Facility is fully equipped and includes the following state-of-the-art instruments.

- Phase contrast upright and inverted microscopes (w/cameras)
- Accusyst Cell Maximizers growth chambers
- Chromatography Systems (LPLC and FPLC)
- Plate reader and plate washer
- Imaging Systems

Users will have access to dedicated biosafety cabinets, incubators, refrigerators, freezers, cryogenic storage unit, high/ultra speed centrifuges, spectrophotometer, darkroom, dedicated space for radioisotope usage, glass-wash and autoclaving facility, walk-in cold-room, multifunction fax/copy/scan device and minor equipment, and additional equipment will be ordered as needed (e.g. HPLC, RT-Thermocycler).

The WHCC cGMP facility occupies 11,000 square feet in the Diabetes Research Institute (DRI) on the medical campus of the University of Miami and is co-shared with the DRI. The space was designed to meet the demands of investigators whose endeavors in translational research require compliance with current Good Manufacturing or Good Tissue Practice (cGMP or cGTP) regulations.

The facility is equipped with cGMP/cGTP compliant human cell processing laboratories that are staffed with dedicated personnel who undergo continuous training. A Quality Assurance program is in place to monitor and verify compliance with regulations and to ensure consistent product quality. The laboratories are equipped to process human cells and tissues, including cadaveric pancreata (to harvest islets) and hematopoietic cells (vertebral body marrow, mobilized peripheral blood, cord blood, iliac crest aspirates, and mesenchymal stem cells). A renovation of the WHCC cGMP/cGTP Cell Processing Facility (cGMP/cGTP Facility) is nearing completion, thereby providing space for the performance of 4 cell based procedures at any given time. Procedure rooms are class 10,000, positive pressure, laminar flow, temperature regulated clean rooms designed for human tissue processing and equipped for cell separation, purification, culture and cryopreservation.

FACILITY CONTACT: Ratna Bailey 243-8091

LOCATION: The WHCC is located in two buildings:

- Fox Cancer Research Building
1550 N.W. 10 Avenue
Suite 200
- Diabetes Research Institute
1450 N.W. 10 Avenue

Non UM/Sylvester Resources – Other Resources

DIVISION OF COMPARATIVE PATHOLOGY

www.cpl.med.miami.edu

Description / Purpose: The Division of Comparative Pathology maintains a full service reference laboratory for samples from research animals and is directed by Norman Altman, VMD, DACVP. The laboratory is committed to offering the highest quality clinical pathology services. Routine hematology and biochemistry testing is available as well as specialized tests in ELISA and RIA formats. The laboratory specializes in working with small volume samples. Test services which are not part of the routine test offerings can be performed as needed for special projects. Consultation is available for experimental design, sample collection, and data interpretation.

EQUIPMENT:

- Hemavet Analyzer (hematology)
- Ortho Vitros 250 Chemistry Analyzer
- Kodak DT-60 Chemistry Analyzer
- Beckman Paragon Electrophoresis System

SERVICES AVAILABLE:

- Routine hematology including CBC and platelet counts
- Routine chemistry panels
- Specialized hormone assays
- Serum protein electrophoresis
- Infectious disease testing

FACILITY CONTACT:

Carolyn Cray, Ph.D. 243-6700

LOCATION:

Rosenstiel Medical Science Building
1600 N.W. 10 Avenue
Room 7101A

ADVANCE NOTICE REQUIRED:

For routine testing of a few samples, no advance notice is required but contact the lab to ensure proper sample collection. For submission of larger number of samples at a single time, please contact the lab.

SERVICE CHARGES:

Refer to website for current charges on routine tests. Price quotes are available upon request for batching of samples and for specialized testing not part of the routine test menu.

Institutional Resources

Core Resources & Instrumentation	Sponsorship	Location(s)	Contact Person	Services	Website
Electron Microscopy Core Facility	Research Administration (formerly under Cell Biology & Anatomy)	Rosenstiel Medical Science Building 4119	Anna Gomez 243-9774	TEM and SEM usage and associated services sample processing like embedding, sectioning, critical point drying, sputter coating, etc.	http://chroma.med.miami.edu/cellbio/graduate_facilities.html
Small Animal MRI	Radiology	Batchelor 8th floor	Pradip Pattany 243-3920	Small animal MRI services using a Bruker 4.7 T, 30 cm bore MRI. Includes multinuclear capability. Full time engineer on staff.	In Development
Large Animal MRI	Cardiology & Radiology	Trailer behind Batchelor	Joshua Hare 243-1998	Large animal MRI services using a 1.5 T whole body Siemens Sonata equipped with Syngo software and dedicated coils and peripherals.	In Development
Miami Vascular Biology Institute laboratories – Echo In-Vivo Imaging Lab	Miami Vascular Biology Institute	Rosentiel Medical Science Building Room 1044C	Keith Webster 243-6779	The scientific laboratories of the Vascular Biology Institute include 10,000 square feet of laboratory space fully furnished and equipped for modern basic, translational, and clinical research. The labs are located in the Rosenstiel Medical Sciences Building on the medical school campus. The complete facility includes core facilities for modern imaging, transgenic mouse production, cell biology, vascular biology, angiography, cardiology, histology, gene transfer technology, and animal models.	http://vascularbiologyinst.med.miami.edu/x46.xml
Phosphoimager Instrument	Cell Biology & Anatomy	Rosenstiel Medical Science Building 4014A	Mary Lou King 243-5628	Imaging and analysis of radioactive samples on a STORM 840. Chemiluminescence and visible imaging services also available. A self service Phosphoimager is also located on the 2nd floor of Gautier opposite the Biochemistry Library.	http://chroma.med.miami.edu/cellbio/graduate_facilities.html
Macromolecular X-ray Crystallography Lab	Biochemistry & Molecular Biology	Gautier 105	Arun Malhotra 243-2890	Instrumentation & expertise to determine 3-D structures of protein and other macromolecules. Services include protein crystallization, x-ray characterization of crystals, data collection, structure determination, molecular modeling, and protein purification.	http://structure.med.miami.edu/
Laboratory for Clinical and Biological Studies	Psychiatry & Behavioral Sciences	FOX 118	Deshratn Asthana 243-2010	clinical and reference laboratory testing in the area of neurosciences, alcohol and substance abuse, aging, Alzheimer's disease, neurological and neuropsychiatric disorders, and infectious diseases in particular, HIV/AIDS; STDs. Services and support are also provided in the areas of immunology, serology, biochemical measures, virology and molecular diagnostics.	In Development
Viral Vector Core Facility	The Miami Project to Cure Paralysis	Lois Pope Life Center Rooms (different rooms)	V. Lemmon 243-6793	Develop and supply virus vector stocks for investigators and Collaborators at The Miami Project. Future services may include siRNA and shRNA libraries and related resources and services.	http://www.miami-project.miami.edu/

Core Resources & Instrumentation	Sponsorship	Location(s)	Contact Person	Services	Website
High Content Screening Instrumentation	The Miami Project to Cure Paralysis	Lois Pope Life Center, 4th floor	V. Lemmon 243-6793	Instrumentation (Cellomics KineticScan Reader) and expertise are provided to investigators and Collaborators at The Miami Project.	http://www.miami-project.miami.edu/
Imaging Facility	The Miami Project to Cure Paralysis	Lois Pope Life Center, 4-10	Beata Frydel 243-8042	Confocal microscopy, image analysis. Instrumentation and expertise are provided to investigators and Collaborators of The Miami Project.	http://www.miami-project.miami.edu/
Electron Microscopy	The Miami Project to Cure Paralysis	Lois Pope Life Center Room 5-18	Peggy or Ana 243-8942 call for room #	TEM usage and associated services sample processing like embedding, sectioning, critical point drying, sputter coating, etc. Instrumentation and expertise are provided to investigators and Collaborators of The Miami Project.	http://www.miami-project.miami.edu/
Histology	The Miami Project to Cure Paralysis	Lois Pope Life Center Room 4-10	Beata Frydel 243-8042	Spinal cord injury specific histology services. Instrumentation and expertise are provided to investigators and Collaborators of The Miami Project.	http://www.miami-project.miami.edu/
Experimental Surgery	The Miami Project to Cure Paralysis	Lois Pope Life Center Room 6-45	Alexander Marcillo 243-7166	Animal SCI surgeries (rats/mice). Instrumentation and expertise are provided to investigators and Collaborators of The Miami Project.	http://www.miami-project.miami.edu/
Behavioral Testing Facility	The Miami Project to Cure Paralysis	Lois Pope Life Center Room 6-50 & 6-59	Alexander Marcillo 243-7166	Sensory, motor and cognitive testing (rats, mice). Instrumentation and expertise are provided to investigators and Collaborators of The Miami Project.	http://www.miami-project.miami.edu/
Clinical Trials Core	The Miami Project to Cure Paralysis	Lois Pope Life Center Room 2-30	Dr. Dalton Dietrich 243-62297 Barth Green 243-3562	Clinical studies and Trials for SCI and TBI. Instrumentation and expertise are provided to investigators and Collaborators of The Miami Project.	http://www.miami-project.miami.edu/