Research Centers in Minority Institutions (RCMI)
PROGRAM DIRECTORY

(Sorted by State)
TUSKEGEE UNIVERSITY
Tuskegee, Alabama
Grant No: G12 MD 07585
URL:
http://www.tuskegee.edu/academics/colleges/caens/caens_research_centersprograms/center_for_bio medical_researchrcmi.aspx

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RCMI Goals
- Support and expand Biomedical Research Functions of the University
- Attract and retain minority scientists with a passion to help underserved communities
- Expand biomedical research infrastructure to ensure development of program goals
- Mentor, guide evaluate and steer promising junior scientists into independent academics paths
- Support training for biomedical sciences graduate programs, in particular the Integrative Biosciences PhD program
- Promote mechanisms to institutionalize the Center for Biological Research (CBR) RCMI program
- Engage the community where the center is located, to disseminate information with potential for reducing health disparities in the black counties of Alabama

Areas of Investigation
- Cancer
- Computational Epidemiology
- HIV/AIDS
- Immunology
- Health Disparities
- Bioinformatics
- Signaling
- Autoimmunity
- Toxicology

Center Resources, Special Instruments, and/or Services
- Cell Culture and Molecular Biology Facility
- Flow Cytometry Facility
- Digital (Wide-field and Confocal) Microscop
- InVivo Imaging
FLORIDA A&M UNIVERSITY
Tallahassee, Florida
Grant No: G12 MD 07582
URL: www.pharmacy.famu.edu/bluepill.php?sect=includes/researchcenters/rcmi/home

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RCMI Goals

- Govern and oversee activities and shared resources: Drug Discovery, Biotechnology Resource Investigational and Molecular Genetics Cores and program personnel and expertise of FAMU RCMI Pharmaceutical Research Center.
- Establish a Research Collaboration Program
- Maintain Faculty Professional Development Program
- Establish a Pilot Projects Program
- Recruit and Hire Additional Faculty
- Maintain the Biotechnology Research Investigational Core (BRIC)
- Strengthen and Increase the Drug Discovery Core (DDC)
- Establish Molecular Genetics Core (MGC)
- Provide grant administration support for researchers through the one-stop proposal preparation process.
- Provide professional growth opportunities for RCMI administrative staff and faculty.
- Evaluate the RCMI program proficiency, progress and outcomes for defined specific aims and goals.
Areas of Investigation

- Computer-assisted molecular design of agents targeted to specific receptors.
- Delivery of polymeric nanoparticles to target vascular diseases.
- Development of most optimal delivery route for skin cancer therapy.
- Elucidation of the mechanism of estrogen induced cancer.
- Enhanced permeation of thermosensitive liposomal nanoparticles into solid tumors.
- Evaluation of natural products for their chemopreventive properties.
- Identify plant derived human LDH-A inhibitors as a new target for cancer therapy.
- Metabolic abnormalities of cancer cell energy pathways.
- Multifunctional nanoprobe to diagnose and treat Alzheimer disease.
- Natural products for anti-mitotic effects breast carcinoma cells.
- Identification of natural human monoamine oxidase B inhibitors, novel therapy for Parkinson’s disease.
- Oral delivery of taxotere for triple negative breast cancer.
- Identification of putative biomarker and therapeutic target for pancreatic, prostate and lung cancers.
- Proteomic analysis of growth inhibition by SERM in prostate cancer cells.
- Solutions for racial and ethnic health disparities through enhancement of the professional workforce engaged in provider expertise and unique skills development.
- Synthesis and evaluation of novel antipsychotic agents
- Synthesis and evaluation of potential anti-cancer agents.
- Synthesis of potent and safe anti-inflammatory steroids.
- Thermosensitive liposomes loaded gold nanoparticles as tumor radiosensitizers.
- Understanding mechanism of gene changes in prostate cancer of African American.
- Uptake and clearance of Alzheimer’s disease A beta protein.

Center Resources, Special Instruments, and/or Services

- AAALAC Approved facility for small laboratory animals
- Cellular imaging
- Confocal microscopy
- DNA microarray
- Drug Development Laboratory
- Flow Cytometry
- Gene delivery
- MALTI TOF TOF Mass Spectroscopy for proteomic analysis
- Molecular neuroimaging,
- Proteomics Analysis
- PCR analysis
RCMI Goals

- Enhance infrastructure for basic cancer research via the establishment and operation of the Center for Cancer Research and Therapeutic Development
- Establish and maintain core research support facilities
- Recruit additional scientists in cell and molecular biology and biochemistry, and other sciences relevant to basic cancer research with focus in prostate cancer
- Expand research portfolio to include social and behavioral aspects of cancer treatment and/or prevention
- Enhance productivity of all scientists
- Provide additional technical support for center scientists

Areas of Investigation

- Cancer genomics
- CXCR4-mediated metastasis
- bHLH transcriptional network in prostate cancer
- Prostate cancer health disparities
- Recombinant antibodies against prostate cancer antigens
- Snail transcription factor signaling in prostate cancer
- TGFb signaling in prostate cancer cells

Center Resources, Special Instruments, and/or Services
• Bioinformatics
• Collaborative Cancer Genomic Center
• Histology
• Mammalian Cell Culture Facility
• Molecular Biology Research Laboratory
• Proteomics
• Structural Biology

MOREHOUSE SCHOOL OF MEDICINE
Atlanta, Georgia
Grant No: G12 MD 07602
URL: http://www.msm.edu/research/research_centersandinstitutes/RCMI.aspx

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RCMI Goals

• Support a culture of collaboration between institutional units and between institutions
• Enhance research development in multidisciplinary biomedical and translational science
• Provide a robust research infrastructure/training environment fostering innovative, multidisciplinary biomedical/translational research
• Synergize research support and core technology mentorship to enhance research training/career development
• Expand the intellectual property portfolio at MSM

Areas of Investigation

• Cardio Metabolic Disease
• Cancer & Reproduction
• HIV/AIDS and Infectious Diseases
• Neuroscience
• Mentoring Academy

Center Resources, Special Instruments, and/or Services
UNIVERSITY OF HAWAII
Honolulu, Hawaii
Grant No: G12 MD 7601
URL: http://rcmi.manoa.hawaii.edu/

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RCMI Goals

- Enhance overall competitiveness for mainstream extramural funding by strengthening the research infrastructure for biomedicine and health
- Establish research excellence in biomedical imaging and bioengineering, bioactive nutrients, and tropical infectious disease detection and prevention
- Expand capabilities in MR image processing, microscopy and imaging, molecular pathology and histology, microarray analysis, and pathogen reference and reagents
- Enhance the biostatistics and data management core facility, and augment services provided by the computer network support facility

Areas of Investigation

- Effects of Dietary Selenium on the Development of Asthma
- Molecular Evolutionary Pathogenesis of Dengue Virus
- Preclinical Studies on the Anti-breast Cancer Function of Bamboo Extract
- Targeted High-Frequency Ultrasound Contrast Agent Imaging

Center Resources, Special Instruments, and/or Services
• Biostatistics and Data Management Facility
• Computer Network Support Facility
• Microarray Core
• Microscopy and Imaging Core
• Molecular Pathology and Histology Core
• MR Image-Processing Core
• Pathogen Reference and Reagent Core

XAVIER UNIVERSITY
New Orleans, Louisiana
Grant No: G12 MD 7595
URL: http://www.xula.edu/rcmi/index.php

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RCMI Goals
• Strengthen Internal and External Collaborations and Partnerships Particularly Those That Promote Health Disparities and Translational Research
• Enhance Critical Core Laboratory Services
• Increase Xavier’s Pool of Competitive and Productive Cancer and Health Disparities Researchers Who Participate in the “Translational Research Pipeline”
• Establish a New Pilot Project Program (PPP) for Cancer/Health Disparities Research
• Provide Targeted Administrative Services in Support of RCMI Investigators
Areas of Investigation

- Cancer
- Health Disparities

Center Resources, Special Instruments, and/or Services

- Cell, Molecular, and Bioinformatics Core Laboratory
- Major Instrumentation Core Laboratory
- Drug Discovery and Delivery Core Laboratory

JACKSON STATE UNIVERSITY
Jackson, Mississippi
Grant No: G12 MD 7581
URL: www.jsums.edu/cset/rcmi/index.htm

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RCMI Goals

- Strengthen the capacity to conduct environmental health and health disparities research at Jackson State University
- Further enhance the environment for conducting cutting-edge environmental health and health disparities research
- Increase the overall research productivity of faculty in the area of environmental health as measured by the number of publications, patents and presentations, and the number of grants submitted and funded by NIH and/or other agencies
- Continue to foster opportunities for T1 and T2 translational research.
- Increase the number of investigators conducting research in addressing environmental health and health disparities issues
Areas of Investigation

- Proteomics-based identification of differentially abundant proteins from human keratinocytes exposed to arsenic trioxide
- Cytogenetic assessment of toxicity of environmental contaminants
- Molecular mechanisms of the therapeutic action of Trisenox against acute promyelocytic leukemia cancer
- Pre-clinical investigations of *V. amagdalina* extracts in the treatment of breast cancer and other neoplasms
- Thioamide-based sensors for anions of environmental and biomedical relevance
- Toxicology of thiol-Capped quantum dots and nanomaterials
- Impacts of climate stressors on the environment and public health
- Novel tri-coculture model to study carbon nanofiber lung fibrotic potential
- Polyphenols: Molecular targets and their role in protein homeostasis
- Investigation of heterocyclic core structures as estrogen receptors agonists/antagonists
- Nanotechnology development and application for cancer detection and treatment
- GIS Applications for environmental health assessment and human disease investigation

Center Resources, Special Instruments, and/or Services

- Analytical Core Laboratory
- Animal Care Facility
- Bioinformatics and Biostatistical Core Laboratory
- Cellomics and Toxicogenomics Core Laboratory
- Electron Microscopy Core Laboratory
- Molecular and Cellular Biology Core Laboratory
- Molecular Magnetic Resonance Core Laboratory

CITY COLLEGE, CUNY
New York, New York
Grant No: G12 MD 7603
URL: www.ccny.cuny.edu/rcmi/

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Natasha Turner
RCMI Goals

- Program’s expansion into Behavioral Research, Community Engagement and Health Disparities
- Develop state-of-the-art core facilities
- Committed to recruiting, training and the development of underrepresented minority students to participate in biomedical and/or health behavior research
- Hire and provide start-up support for new faculty

Center Resources, Special Instruments, and/or Services

- FACS Facility
- Mass Spectrometer
- NMR Facility
- Tissue Culture Facility

HUNTER COLLEGE, CUNY
New York, New York
Grant No: G12 MD 7599
URL: http://ctbr.hunter.cuny.edu/

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Program Manager
RCMI Goals

The long-term goal of the Center for Translational and Basic Research is to enhance the research infrastructure to support basic, translational/clinical and community engagement research and thereby address health disparities and improve health outcomes.

Our approach is to enhance our capacity to conduct targeted research on Cancer, Neuro/Behavior and Disease Prevention through collaborations with our clinical research partners. Telehealth strategies will facilitate serving underserved populations. Our research addresses diseases that disproportionately afflict minority populations, and success should reduce health disparities.

Our programs:
- support investigators so they become more successful in obtaining extramural support in biomedical/behavioral research, particularly on diseases that disproportionately impact minority populations
- foster professional development in the biomedical sciences especially in the areas of Cancer, Neuro/Behavior and Disease Prevention

Areas of Investigation

Our Cancer research focuses on prostate and breast cancers and involves:
- Detection and therapeutics
- Innovation in treatment

Our Neuro/Behavior research focuses on:
- Addiction and neuroprotection
- Diagnosis of stress disorders

A new research area, developed collaboratively with the Clinical Translational Science Center (CTSC) at Weill Cornell Medical College, involves promoting disease prevention using telehealth e-platforms and through community engagement research projects for the underserved.

Center Resources, Special Instruments, and/or Services

- Animal Care Facility
- Digital Bio-Imaging Facility
- Flow Cytometry Facility
- Genomics Facility
- Nanoscale Analytic Facility
- Nuclear Magnetic Resonance Facility
- Video-Collaboration Facility
- X-Ray Diffraction Facility
PONCE SCHOOL OF MEDICINE AND HEALTH SCIENCES
Ponce, Puerto Rico
Grant No: G12 MD 7579
URL: http://rcmi.psm.edu/

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RCMI Goals

- Continued development of human research infrastructure to enhance capability to approach problems associated to health disparities in Hispanic populations
  - Hiring new faculty in key areas (cancer, HIV/AIDS, neuroscience, infectious disease)
  - Junior faculty mentoring and development activities
  - All faculty development activities to increase minority health and health disparities research
  - Retention and promotion/career development of existing faculty in key areas

- Development of the facilities and technology (physical research infrastructure) to support RCMI and institutional research in minority health and health disparities research
  - Provide support to improve and strengthen PSM RCMI cores: RCMI research cores: AIDS Research Infrastructure Program (ARIP), the Molecular and Genomics Core (MAGIC), and the Behavioral Research and Integrated Neuroscience (BRAIN) core

- Enhancement of the research capabilities of junior faculty through support of pilot research projects

- Recruitment of well-trained and competent research faculty in the targeted areas according to the Institutional Strategic Plan for Research; neurosciences, cancer, HIV/AIDS, cardiovascular/hypertension, human/molecular genetics

Areas of Investigation
Dr. Yasuhiro Yamamura, PhD.
Title: “AIDS Research Infrastructure Program (ARIP) Core”

Richard Noel, Ph.D.
Title: “Molecular Biology and Genomics (MAGIC) Core”

James Porter, Ph.D.
Title: “PI Behavioral Research Integrated Neurosciences (BRAIN) Core”

Annelly Torres Reveron, PhD
Pilot Project Title: “Modulation of morphine withdrawal conditioned place aversion by sex hormones”

Mary S. Rodriguez-Rabasa, PsyD
Pilot Project Title: “Relationship among inflammation, depression, anxiety and executive functions in chronic alcohol users”

Nuria Sabate, MD
Pilot Project Title: “Clinical prevalence and genetic correlates of PTSD in children/adolescents in PR”

Center Resources, Special Instruments, and/or Services

- Animal Research Facilities
- Cell Sorting Facilities
- Cell/Tissue Culture Facility
- Equipment and Facilities for behavioral neurosciences
- Facilities for electro-chemistry
- Facilities for Protein Purification and characterization
- Immunology/Virology Laboratory
- Optical Imaging Facility
- Retrovirus Isolation Facility

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UNIVERSIDAD CENTRAL DEL CARIBE
Bayamón, Puerto Rico
Grant No: G12 MD 7583
URL: http://rcmiucc.org/

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RCMI Goals

- To continue developing an Administrative Leadership Core consisting of a mentoring program, a Scientific Research Development Unit, and a Data Management and Statistical Research Support Unit.
- Strengthen the existing research centers: Retrovirus, Neuroscience and Cancer.
- Provide support and leadership to existing and new Research Resources areas and core facilities that have proven to be indispensable for basic and clinical research enterprise.
- Establish an RCMI evaluation plan to monitor the progress and verify research productivity.

Areas of Investigation

- HIV/AIDS
- Cancer
- Proteomics
- Neuroscience

Center Resources, Special Instruments, and/or Services

- Administrative Office
- Behavioral and Testing Facility
- Scientific Resources Development Unit
- Cancer Research Unit
- Neuroscience Research Center
- Biomedical Proteomics Facility
- Common Instrumentation Area and Service
- Data Management and Statistical Research Support Unit
- HIV and Substance of Abuse Laboratory Core
- Immunocytochemistry Laboratory
- Neuronal and Glial Cell Culture Facility
- Optical Imaging Facility
- Protein & Nucleic Acid Core Facility
- Transmission Electron Microscopy Laboratory
- Animal Resources Facility
- Cell and Molecular Biology Center
• Cell & Tissue Culture Facility
• Informatics, Internet, Remote Access Service & Videoconference
• Laser Confocal Microscopy Unit
• Retrovirus Research Center

UNIVERSITY OF PUERTO RICO, MEDICAL SCIENCES CAMPUS
San Juan, Puerto Rico
Grant No: G12 MD 7600
URL: http://rcmi.rcm.upr.edu/

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RCMI Goals
• Develop infrastructure and provide support services to facilitate the conduct of multidisciplinary collaborative research in health disparities
• Target specific areas of research and provide initial funding for developing these research activities
• Promote the professional development of early-stage investigators

Areas of Investigation
• AIDS and emerging infectious diseases
• Cancer
• Neurological Disorders
• Health disparities
• Cardiovascular and Metabolic Disorder (Diabetes)
• Information Technology and Telecommunications
• Genomics
• Proteomics
• Neurogenetics
• Bioimaging Pharmacogenomics

Center Resources, Special Instruments, and/or Services
MEHARRY MEDICAL COLLEGE
Nashville, Tennessee
Grant No: G12 MD 7586
URL: www.mmc.edu/research/comm-engage-program-grants/rcmi/

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RCMI Goals
- Expand and improve the capacity for women's health research
- Increase the number of investigators submitting and acquiring financial support
- Support core and bioinformatic facilities

Areas of Investigation
- Brain and Behavior (Neuroscience)
- Cancer
- Cardiovascular Disease
- Community Engagement
- Diabetes
- Environmental Health and Toxicology
- Health Disparities
• HIV/AIDS and Infectious Disease
• Women’s Health

Center Resources, Special Instruments, and/or Services

• Female Tissue Acquisition Core
• Micro Array and Bioinformatics
• Molecular and Cellular Analysis Core
• Molecular Biology & BL3 Cytometry Core Facility

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TEXAS SOUTHERN UNIVERSITY

Houston, Texas
Grant No: G12 MD 7605
URL: http://www.tsu.edu/academics/colleges__schools/College_of_Phar_{macy_and_Health_Sciences/Research_Centers_in_Minority_Institutions/default.php

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RCMI Goals

- Upgrade research infrastructure to enhance the university’s biomedical research capacity and help promote a research rich environment
- Enable investigators to become more successful in obtaining competitive extramural support for the conduct of biomedical research, particularly on diseases that disproportionately impact minority populations
- Foster vibrant environments conducive to professional development in biomedical sciences

Areas of Investigation

- Cellular and molecular targets of environmental toxicants
- Epigenetic strategies for prevention of atherosclerosis
- Interaction of PPARα and nitric oxide in the regulation of blood pressure
- Molecular targets in cerebral vascular dysfunction
- Pharmacokinetics and pharmacodynamics of novel drug candidates
- Drug development and delivery of novel anticancer and anti-infectious diseases
- Role of genetic and epigenetic mechanisms in the etiology of atherogenesis
- Role of PPARs in cardiovascular and cerebral vascular diseases, angiogenesis and cancer
- Transcriptional regulation of renal function and blood pressure
- Transcriptional regulation of various genes in vascular smooth muscle cells

Center Resources, Special Instruments, and/or Services

- Molecular Biology Core Facility
- Pharmacology Core Facility
- Environmental Toxicology Core Facility
- Automated image analysis system for proteomic studies
- Dynamic light scattering system for particle size analysis
- Flow cytometry system
- GC/MS/Spectrometer
- High throughput system with multimode detection capabilities
- Instrumentation for fluorescence and phosphor imaging of gels, blots and arrays
- Instrumentation for microarray analysis
- QTRAP 4000 LC-MS/MS
- Luminex® 200TM total multiplexing platform for immunoassays, enzyme functions, receptor-ligand interactions, genotyping, and HLA typing
- Molecular Biology and Tissue Engineering Core Facility
- Small Animal Care Facility
- Thermal cycler and real-time PCR detection system
- ChemiDoc Documentation System
- ICP-MS
THE UNIVERSITY OF TEXAS, EL PASO
El Paso, Texas
Grant No: G12 MD 7592
URL: http://research.utep.edu/bbrc

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RCMI Goals

- Expand the Border Biomedical Research Center to enhance and sustain a biomedical research program focused on border health problems
- Recruit new faculty including senior level biomedical sciences faculty to reach a critical mass in the areas of infectious diseases, toxicology, and neurological and metabolic disorders
- Provide graduate degree opportunities in biomedical sciences for underrepresented, primarily minority students
- Enhance the research infrastructure to provide faculty the support required to achieve competitive excellence in border biomedical sciences research needed to successfully address targeted biomedical issues critical to improving human health on Texas-Mexico border

Areas of Investigation

- Environmental toxicology
- Etiology of cancer
- Etiology of disease processes
- Host-parasite interactions
- Infectious diseases and Immunology
- Metabolic and neurological disorders
- Physiological research on metabolic disorders
Center Resources, Special Instruments, and/or Services

- Analytical Cytology Core Facility
- Bioinformatics Core Facility
- Biomolecule Analysis Core Facility
- Cell Culture and High-Throughput Screening Core Facility
- DNA Analysis Core Facility
- Statistical Consulting Laboratory

UNIVERSITY OF TEXAS AT SAN ANTONIO
San Antonio, Texas
Grant No: G12 MD 7591
URL:
www.utsa.edu/crts/rcmi/index.html

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RCMI Goals

- Enhance health research at UTSA by establishing state-of-the-art research cores in the area of imaging, protein biomarkers, computational systems biology, and nanotechnology and providing faculty access and training.
- Provide educational activities and opportunities for collaboration by organizing and sponsoring a joint seminar series between UTSA and the University of Texas Health Science Center at San Antonio (UTHSCSA).
- Provide scientific and administrative mentoring and career development for early stage RCMI investigators to ensure their progress toward establishing independently-funded biomedical research programs.
- Provide mid-career investigators with training and access to cutting-edge technologies to promote the development of their health research programs toward A Shared Vision: UTSA 2016 and national and international competitiveness.
- Long-term program goal is to focus research efforts on the study of diseases that disproportionately affect minorities and health disparities research.

Areas of Investigation
• Cancer
• Multiple Sclerosis
• Autoimmune Diseases
• Health Disparities
• Protein Biomarkers
• High-performance computing infrastructure
• Nanoparticles
• Alzheimer’s Disease

Center Resources, Special Instruments, and/or Services

• Biophotonics Core
• Computational Systems Biology Core
• Nanotechnology and Human Core
• Protein Biomarkers Core

HOWARD UNIVERSITY
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RCMI Goals

• To provide efficient and increased support of computationally biology and bioinformatics research by expanding the resources of the Center for Computational Biology & Bioinformatics. Areas of support include database development and virtual ligand screening, computational proteomics, and quantum ab initio calculations
• To expand the resources of the magnetic resonance imaging and spectroscopy facility to include the existing in vivo optical imaging and electron microscopy imaging facility currently in the College of Medicine to yield a single Biomedical Imaging Core Facility
• To develop Core Laboratory resources to support proteomic research at Howard University
• To provide assistance in the development of a critical mass of faculty whose research impact RCMI-targeted areas of computational biology & bioinformatics, imaging, and proteomics
Areas of Investigation

Areas of investigation in computational biology and bioinformatics include:
- Bioinformatics and statistical genetics
- Computational chemistry
- Computational proteomics and methods development
- Macromolecular analysis and simulation
- Virtual ligand screening and database development

Areas of investigation in imaging include:
- Development of nanoparticles for targeted drug delivery
- Ex vivo cell imaging and image processing
- Electron microscopy for neuroscience imaging and pharmacological applications
- Molecular imaging probe design In vivo MRI and optical imaging of small animals with cardiovascular, neurodegenerative, and musculoskeletal diseases, as well as breast, prostate, and head and neck cancers
- Non-invasive MR spectroscopy study of biochemistry of localized tissues, drug metabolism, and pharmacokinetics in live animals
- Study the efficacy of developmental drugs

Areas of investigation in proteomics research include:
- Estrogen receptors in breast tumors
- Methylation profiling and risk of colorectal cancer
- Molecular profiling of cancer in African American population
- Proteomic evaluation of imido-substituted naphthoquinone derivatives as inhibitors of kinases of the RAS-MAPK signaling cascade
- Pulmonary hypertension and the hypoxic response in sickle cell disease
- RAS and IGF-1 during cardiac hypertrophy
- Role of protein phosphatase-1 in hypoxic response and HIV-1 transcription
- Signal transduction pathways in lymphatic vessels development

Center Resources, Special Instruments, and/or Services

- Administrative Support Core
- Center for Computational Biology and Bioinformatics (CCCBB)
- Howard University Biomedical Imaging Core Facility
- Proteomics Core Facility