CORE FACILITIES

**Advanced Computing Center for Research & Education (ACCRE)**
http://www.accre.vanderbilt.edu/
Offers computing resources flexible enough to enable High Performance Computing applications in a wide variety of research and education areas. Researchers from thirty campus departments and four schools use ACCRE for their computation needs.

**Antibody and Protein Resource**
https://www4.vanderbilt.edu/vapr/home
Provides services for generation, purification and characterization of monoclonal antibodies, polyclonal antibodies, and recombinant proteins. The core’s mission is to make state of the art antibody and protein technologies cost effective and readily available to Vanderbilt Investigators. Additionally, the facility provides access to many related technologies such as protein:protein affinity measurement, protein:small molecule affinity measurement, CHO cell expression optimization, cell line sub cloning, and recombinant antibody generation and expression. The facility also serves as a low cost center for purification, quality control and distribution of useful antibodies to researchers inside Vanderbilt.

**Biomolecular NMR Facility**
http://structbio.vanderbilt.edu/nmr/
The facility currently operates four Bruker spectrometers: One Avance AV-III 500, two Avance AV-III 600, one Avance AV-III 800 and one Avance AV-III 900. Each of these spectrometers is fully equipped with hardware for all modern multi-nuclear experiments including cryoprobes, gradients and the capability for multi-channel pulsing with deuterium decoupling. Training, including basic, advanced and special topics, is offered by facility experts.

**Biomolecular Crystallography Facility**
http://structbio.vanderbilt.edu/xray/
The facility exists to make structural analysis by crystallography available to researchers on the Vanderbilt campus by providing state-of-the-art equipment and instrumentation, training, software, and support for all aspects of crystal structure solution. The facility is also available to train and support researchers wanting to learn crystallography as a valuable research tool. Vanderbilt crystallographers have excellent access to macromolecular beamlines at SER-CAT and LS-CAT, which are routinely available to Vanderbilt researchers for on-site and remote data collection and for mail-in data collection.

**Biophysical Instrumentation Core Facility**
http://structbio.vanderbilt.edu/wetlab/instrumentation.php
The core maintains a variety of instruments for studying the conformation and stability of macromolecules and for measuring the affinity and thermodynamics of biomolecular interactions. These include the Jasco J810 Circular Dichroism Spectropolarimeter, MicroCal VP-Differential Scanning Calorimeter, Horiba Jobin Yvon Fluoromax Fluorometer, and MicroCal VP-Isothermal Titration Calorimeter.

**Biostatics Collaboration Center (BCC)**
http://biostat.mc.vanderbilt.edu/wiki/Main/BCC
Provides, enhances, and/or facilitates statistical collaborations involving the design, conduct, analysis or publication of biomedical research at the university. The BCC is comprised of biostatisticians and computer systems analysts from the Department of Biostatistics who are available to work with faculty on a variety of projects. They offer a wide range of highly trained experts with unique expertise for almost any collaboration. The BCC has considerable expertise in the design, conduct, and analysis of large scale clinical trials and research design for basic biomedical research. Varying levels of expertise are also available for consultation, from bachelor’s and master’s level trained biostatisticians and computer systems analysts to full professors.
BioVU – Vanderbilt DNA Databank  
Provides enabling resource for exploration of the relationships among genetic variation, disease susceptibility, and variable drug responses, and represents a key first step in moving the emerging sciences of genomics and pharmacogenomics from research tools to clinical practice. A major goal of the resource is to generate datasets that incorporate de-identified information derived from medical records and genotype information to identify factors that affect disease susceptibility, disease progression, and/or drug response.

Cell Imaging Shared Resource (CISR)  
http://www.mc.vanderbilt.edu/cellimage/  
Supports the full range of modern microscopy and digital imaging capabilities in order to enable and accelerate research that would otherwise be reduced in quantity and quality. Currently over 200 research groups use the facilities and services of the Resource, which maintains an active development program to keep the instrumentation and systems current, functional, accessible, and easy to use. CISR currently provides facilities for both optical and electron microscopy; there are six confocal microscopes, one line-scanning microscope, two 2-photon-excitation microscopes, and four advanced wide-field microscopes as well as a Phillips CM-12 120keV Transmission Electron microscope system. The laboratory is fully equipped to carry out numerous aspects of “routine” as well as specialized electron microscopy. Included in the specialized services available through the resource are: 1) preparative techniques, such as embedding and sectioning, critical point drying, high-resolution low angle and rotary shadowing, and cryo-EM; 2) research techniques, such as immuno- and enzyme-cytochemistry, autoradiography, and whole-mount microscopy; and 3) analytical techniques, such as on- and off-line microcomputer based systems for image processing, pattern analysis, and 3-D reconstruction.

Center for Human Imaging  
http://www.vuiis.vanderbilt.edu/resources.php  
Provides structural and functional MR Imaging and Spectroscopy at 3 and 7 Tesla, MRI/MRS protocol development support, fMRI experimental design support, Quantitative imaging of cancer, subject preparation and pre/post testing facilities, structural and functional image analysis, and training on image analysis techniques and tools.

Center for Small Animal Imaging  
http://www.vuiis.vanderbilt.edu/resources.php  
Provides in vivo and ex vivo imaging capabilities of small animals and tissue samples via magnetic resonance imaging, x-ray/X-ray CT, Positron emission (PET) and single photon emission and bioluminescence/fluorescence imaging. The center also provides training for users on ultrasound and optical imaging, and provides expert instrument operators for other modalities. It also provides expert support/training for data/image analysis.

Center for Molecular Probes – Radiochemistry  
http://www.vuiis.vanderbilt.edu/resources.php  
In conjunction with the VUIIS synthetic chemistry laboratories, the Radiochemistry shared resource is comprised of a total of four distinct laboratories are currently setup for the exclusive purpose of radiochemical and radiopharmaceutical preparations.

Center for Quantitative Sciences  
http://www.vicc.org/biostatistics/about.php  
Provides consultative services for VICC investigators in the statistical design, conduct, and analysis of studies; collaborates in funded research efforts initiated by VICC laboratory and clinical investigators, by providing statistical expertise in study design, power and sample size analysis; data analysis; interpretation of results; and writing of manuscripts; provides relational database design, data tracking, forms, queries, and reports for investigator-initiated clinical trial databases or laboratory study databases; and develops and evaluate statistical methods for experimental design and data analysis.
**Chemical Synthesis Core**
http://www.vanderbilt.edu/syncore/
Supports the Vanderbilt community in all aspects of medicinal and organic synthesis. The primary focus of the core is to facilitate biology-orientated projects within the medical center and the university by assisting with the chemistry aspect of the project. The core works independently or in collaboration with the VICB High Throughput Screening Center on the synthesis of literature-cited compounds (including patented ones) as well as full scale lead optimization of a compound.

**Computational Genomics Core**
http://chgr.mc.vanderbilt.edu/page/computational-genomics-core
Provides the hardware and software support, along with expertise for programming, database development, systems administration and bioinformatics as they relate to any aspect of genetics. It harbors all the necessary programs for genetic statistical analysis, including both linkage and association analysis, and also hosts the Celera Genomics Databases.

**Division of Animal Care**
https://www4.vanderbilt.edu/acup/
Provides procurement, husbandry, and healthcare for experimental animals, as well as scientific/technical support for VU researchers.

**Flow Cytometry Core**
http://www.mc.vanderbilt.edu/root/vumc.php?site=flowcytometry
Provides flow cytometry services to faculty, staff, and students in the VUMC and to other investigators on a fee-for-service basis. The staff maintains all instruments and provides the following services: Data acquisition, both by facility staff and qualified users, sorting, instruction in performing data analysis, instruction on instrument use (analytical machine), consultation on experimental design, sample handling, and staining protocols, education on basic principles of flow cytometry through seminars, lab meetings, and course work.

**Genetics Studies Ascertainment Core**
http://chgr.mc.vanderbilt.edu/page/genetics-studies-ascertainment-core
Responsible for identifying, ascertaining and collecting samples from patients and families participating in genetics studies. The core provides appropriate counseling, blood and buccal smear collection, and obtains clinical data and biological samples from distant participants.

**High - Throughput Screening Facility**
http://www.vanderbilt.edu/hts/index.htm
Provides services for consultation in assay design and development, assay validation, high-throughput screening (HTS) and automated data analysis. Its compound collection can be accessed independently of screening, and the facility offers HTS compatible supplies for testing and validation. Training services are also provided to allow for walkup use of state-of-the art instrumentation.

**Hormone Assay & Analytical Services Core**
Assists investigators in the measurement of amino acid profiles and hormones in biologic fluids as related to diabetes and endocrine and metabolic research. The core provides space, equipment, and personnel for sample analysis and method development.

**Immunology Core**
https://www.mc.vanderbilt.edu/root/vumc.php?site=immunocore
Provides a wide-range of support and assays to assist investigators in their research with a primary interest in assessing cellular immune responses during clinical trials. The Core assists investigators with sample processing, storage, shipping, documentation, assay design, assay development and evaluation of immune responses.
Mass Spectrometry Core Laboratory
http://www.mc.vanderbilt.edu/root/vumc.php?site=msrc/mass_spectrometry_core_lab
Provides instrumentation for structural analysis of biological molecules and qualitative and quantitative assays of chemotherapeutic agents and metabolites in physiological fluids. The instrumentation facilities consist of a variety of mass spectrometric and high-pressure liquid chromatographic systems.

Molecular Cell Biology Resource Core
http://thecore.vanderbilt.edu/
Provides custom DNA and RNA synthesis as well as custom cell culture media at a fraction of the cost of commercial sources. The supply arm of this resource stocks freshly prepared bacteria growth plates with or without antibiotics, transformation competent bacteria, and commercial kits and reagents for molecular biology research. The Bioanalytics Facility houses state-of-the-art instrumentation for imaging and quantitation of fluorescent, radioactive, luminescent, and chemiluminescent signals from gels, membranes, or multiple well plates. Gels and membranes stained with visible dyes or ethidium bromide can also be analyzed. Digitized images can be saved to transportable storage for further analysis in the lab or prints can be made on site. This facility also has two “real-time” PCR instruments available on a sign-out basis.

Mouse Metabolic Phenotyping Center
http://www.mc.vanderbilt.edu/root/vumc.php?site=mmpc
Provides novel experimental tools to the scientific community for phenotyping mouse transgenic models of diabetes and related disorders.

Murine Neurobehavioral Laboratory
http://www.vandymouse.org/
Offers fundamental behavioral testing services for the assessment of a variety of physiological and psychological processes, and provides training and consulting for investigators in the analysis of behavioral phenotypes in mice.

Neurochemistry Core Laboratory
http://www.vandyneurocores.org/
Offers services for neurochemical profiling of brain, peripheral tissues and body fluids. The core provides analytical services for the quantitation of multiple biogenic amine neurotransmitters (e.g. dopamine, norepinephrine, serotonin, acetylcholine), biogenic amine metabolites, amino acids and amino acid neurotransmitters (e.g. glutamate, GABA). Analyses on vertebrate and invertebrate (e.g. Drosophila, C. elegans) preparations are available. Investigators provide primary tissue samples or extracts stabilized for analysis. Customized HPLC services are also available. The Core also oversees tools for neurotransmitter release from brain slices, neurotransmitter receptor quantitation, scintillation spectrometry, and gamma counting.

Proteomics Core
http://www.mc.vanderbilt.edu/root/vumc.php?site=msrc/proteomics_core
Provides state-of-the-art instrumentation and expertise in analytical proteomics, proteome profiling, and imaging to Vanderbilt researchers. Instrumentation is available for protein and peptide separations by 2D-gel electrophoresis and multidimensional high performance liquid chromatography (LC). Proteins and peptides of interest are processed and subjected to mass spectral (MS) analysis, and protein identifications are made based on a comparison of MS data with sequence information from genomic, protein, and EST databases. Proteome profiling and imaging in frozen tissue sections are done by matrix-assisted laser desorption ionization-time-of-flight (MALDI-TOF) MS. Proteomics Laboratory staff provide consultation on experimental design and sample preparation.
**Rat Neurobehavioral Laboratory**  
https://medschool.mc.vanderbilt.edu/rat_core/?q=node/2  
Provides equipment, training and consulting for Vanderbilt personnel who are interested in studying rat models of both neurological and psychiatric disorders. Examples of assays available for research in rats include models of anxiety, depression, drug abuse, learning and memory, cognition, attention, social interaction, pain, motor activity and coordination. Investigators can employ the latest technology in video capture and software-based analysis of behavior.

**Sleep Research Core**  
http://www.mc.vanderbilt.edu/root/vumc.php?site=sleepcore  
Offers two hard-wired sleep systems with synchronized video-polysomnography and 21 channels of EEG, with dedicated registered sleep technologists. A sleep core/sleep reading center manager and the core director (Dr. Beth Malow) assist investigators with protocol development. It offers polysomnography, titrations with continuous positive airway pressure, multiple sleep latency testing, and wrist actigraphy (wireless devices that measure sleep-wake patterns non-intrusively based on accelerometers that measure activity vs. rest). The core provides for centralized scoring of polysomnography and actigraphy data for multicenter trials. In addition to the scoring component, emphasis is placed on the quality of the sleep recordings at the individual sites with close communication among the individual site technologists and the sleep core manager.

**Tissue/Serum Proteomics Core**  
http://www.mc.vanderbilt.edu/root/vumc.php?site=msrc/tissuecore  
Offers a variety of services in order to determine the proteomic profiles of tissue, serum, and other biological fluids using MALDI mass spectrometry. Investigators work closely with Core personnel in order to design the experiment that will best answer the scientific questions being posed. The typical study involves examining protein changes between two experimental groups; e.g., control vs. diseased or treated vs. nontreated. The services offered by the Tissue/Serum Proteomics Core include tissue profiling, tissue imaging, 1D and 2D robotic biofluid fractionation and protein profiling, and multidimensional LC-MS/MS “shotgun” proteomics analysis of biofluids and tissue homogenates. In addition, various biocomputational services are offered in conjunction with data acquisition, including biostatistical comparisons of sample groups and image processing.

**Transgenic Mouse / ES Cell Shared Resources**  
http://www.vanderbiltresearch.org/community/profile/id/8  
Assists investigators in generating, maintaining and storing germline-altered mice. The services offered include gene targeting, pronuclear DNA microinjections, ES cell microinjection into blastocysts, assisted reproduction, embryo cryopreservation and long-term storage, and use of microinjection equipment.

**Translational Pathology Shared Resource**  
http://www.mc.vanderbilt.edu/root/vumc.php?site=tpsr  
Provides access to human tissue samples, histology services, and specialized equipment to researchers. Human tissues are collected prospectively from routine surgical resections and autopsies for use by investigators in basic, translational, and clinical research studies. Only remnant tissue samples not needed for diagnostic purposes are collected. These tissues are available fresh, snap frozen, or in a variety of fixatives as requested by the investigator. Normal, neoplastic, and other diseased tissues are available for study. Additional clinical information can be obtained without compromising patient confidentiality. The resource also provides tissue collection and storage services for several research groups. All of the tissue samples are organized and distributed utilizing relational databases designed by the Tissue Clinical Informatics Shared Resource.
**VANderbilt Technologies for Advanced GEnomics (VANTAGE)**
http://vantage.vanderbilt.edu/

VANTAGE provides advanced genomics technologies required to support the full range of biomedical research conducted at Vanderbilt. Experimental design, consultation, and novel methods development services are available. VANTAGE provides sample preparation services, including flow cytometry and automated nucleic acid extraction, as well as bio-banking services using an RTS SmaRTStore. In addition to multiple liquid handling, array processing and capillary sequencing platforms, the core is equipped with instruments to support next generation sequencing workflows, including an Illumina MiSeq, HiSeq2500, and HiSeq2000. The core also offers custom genotyping services on the ABI 7900 and OpenArray, the Sequenom MASSArray, the Illumina iScan, HiScan and BeadXpress. Expression services include both Illumina and Affymetrix platforms, as well as RNAseq. A unique feature of VANTAGE is the availability and customizability of numerous major genomics technology platforms, which offers exceptional flexibility in analytical approaches.

**VANderbilt Technologies for Advanced Genomics Analysis and Research Design (VANGARD)**
http://cqs.mc.vanderbilt.edu/vangard

The mission of the core is to consolidate the genomics data pipeline across the university and allow investigators to leverage the opportunities provided by next-generation sequencing and other genomics technologies. VANGARD operates in conjunction with VANTAGE, providing experimental design, quality assessment of data, analysis and results interpretation, and data storage to investigators, while VANTAGE provides technical services with a focus on next-generation sequencing including DNA-seq and RNA-seq. VANGARD also provides biostatistical and bioinformatics support for all genomic experiments that utilize BioVU specimens. For small-scale projects, VANGARD uses a fee-for-service model which includes basic experimental design and quantitative analysis for genomic data generated by VANTAGE as well as data storage and backup. Large-scale projects and those that require more complex and detailed analysis may be handled collaboratively.

**Zebrafish Aquatic facility**

The current zebrafish facility is composed of approximately 100 research tanks available for short and long-term studies, and a significant expansion project is underway. The facility enables investigator access to the unique advantages of the zebrafish model, which provides hundreds of mutant and transgenic zebrafish with unique properties suited for specific experiments. This core’s essential mission is to provide a reliable mechanism for incorporation and propagation of new and existing zebrafish lines into the core.
RESEARCH CENTERS

**Center for Human Genetics Research (CHGR)**
http://chgr.mc.vanderbilt.edu/

The CHGR houses three core facilities: the Computational Genomics Core (CGC), the DNA Resources Core, and the Genetic Studies Ascertainment Core (GSAC). Working in tandem, these cores support the software development, genotyping, and study design needs of investigators researching the genetics underlying human disease. Because of the long-standing and extensive expertise of these cores, this study has high likelihood of producing successful research.

**Center for Matrix Biology**
http://www.mc.vanderbilt.edu/cmb/

Vanderbilt scientists who work on extracellular matrix biology have come together at the Center for Matrix Biology. The Center fosters cohesive interactions and collaborations between scientists with interests in angiogenesis, biomaterials, diabetic complications, fibrosis, tissue regeneration, tumor microenvironment, and wound repair.

**Center in Molecular Toxicology**
http://www.toxicology.mc.vanderbilt.edu/

The Center in Molecular Toxicology aims to understand the toxic effects of environmental agents at the chemical and biochemical level. Faculty affiliates of the interdepartmental program are drawn from the Departments of Biochemistry, Chemistry, Medicine, Pathology, Pediatrics, and Pharmacology to apply their knowledge of chemistry and biochemistry to understand and develop preventative measures for human disease.

**Center for Structural Biology**
http://structbio.vanderbilt.edu/

Vanderbilt’s Center for Structural Biology is dedicated to enabling and proliferating research with the goal of determining the 3D structure of biological macromolecules at or near atomic resolution. Participating researchers have access to protein expression and purification, crystallography, NMR, and molecular graphics core facilities to aid in the determination of biomacromolecular structure.

**Diabetes Research and Training Center (DRTC)**
http://www.vanderbilthealth.com/diabetes/12496

The DRTC was established to conduct research and training in diabetes mellitus and related endocrine and metabolic disorders. Vanderbilt’s DRTC has 95 participating faculty members from 14 departments in two schools and three colleges of the University. Research interests of biomedical scientists in the DRTC include in vivo metabolism, signal transduction, etiology and complications, gene regulation, and beta cell function. DRTC investigators are supported by a Surgical and Analytical Services Core, and by the Cell and Molecular Biology Services Core.

**Digestive Disease Research Center (DDRC)**
http://www.mc.vanderbilt.edu/root/vumc.php?site=ddrc

The DDRC was developed to promote research of digestive diseases in an integrative, collaborative, and multidisciplinary manner. The Center brings together faculty whose research falls into several areas of interest: GI physiology and metabolism, maintenance of epithelial integrity, enteric neuroscience, or regulation of growth, proliferation, and apoptosis.

**Informatics Center**
http://informatics.mc.vanderbilt.edu/

Unique among academic health centers, Vanderbilt University’s Informatics Center is responsible for providing the essential information infrastructure for patient care, management, research, and education. By fusing scholarly research in biomedical informatics with the dissemination of knowledge to individuals, the Informatics Center has generated a number of internationally known products used to access and manage patient medical records.
John F. Kennedy Center for Research on Human Development
http://kc.vanderbilt.edu/kennedy/
The Kennedy Center mission is to improve the quality of life of persons with disorders of thinking, learning, perception, communication, mood and emotion caused by disruption of normal development. The Center brings together scientists and practitioners from the Medical Center, College of Arts and Sciences, and Peabody College to solve the mysteries of development and learning. Major research areas of Center faculty include communication and learning, developmental neurobiology and brain plasticity, mood and emotion, and family research.

Mass Spectrometry Research Center (MSRC)
http://www.mc.vanderbilt.edu/msrc/
The MSRC has developed into a world-class research facility with state-of-the-art technologies, highly-skilled personnel and an array of instrumentation not found in any other academic institution. The mission of the Mass Spectrometry Research Center is to bring cutting edge mass spectrometry expertise, methodology, and instrumentation to the research and clinical infrastructure of the Vanderbilt University Medical Center.

Program in Developmental Biology (details in other appended document)
http://www.mc.vanderbilt.edu/devbio
Over 300 researchers, postdoctoral fellows, graduate students, and support personnel have come together to form the Program in Developmental Biology. The Program sponsors courses, research seminars, journal clubs, and an annual retreat to pursue an understanding of pattern formation and cellular differentiation and morphogenesis during the developmental process.

Vanderbilt Brain Institute (VBI)
http://braininstitute.vanderbilt.edu/index.php
The VBI was founded in 1999 as a transinstitutional entity to oversee and facilitate the extensive neuroscience-related endeavors carried out on the Vanderbilt campuses. Its primary mission is to promote research, education and training in the brain-related disciplines here at Vanderbilt, with the stated goal of fostering excellence in each of these arenas. One of the primary responsibilities of the VBI is to administer the Neuroscience Graduate Program. The Program has two major emphasis areas: Cellular & Molecular Neuroscience and Cognitive & Systems Neuroscience, and offers research opportunities that span the breadth of contemporary neuroscience.

Vanderbilt Center for Stem Cell Biology
http://www.vanderbiltresearch.org/community/profile/id/3
The Vanderbilt Center for Stem Cell Biology aims to understand the biology of stem cells and the mechanisms for directing their differentiation to specific cell fates. It is home to the Beta Cell Biology Consortium, a group of scientists dedicated to learning how to make pancreatic beta, which are destroyed in Type 1 diabetes, from embryonic stem cells.

Vanderbilt-Ingram Cancer Center (VICC)
http://www.vicc.org/
The mission of the VICC is to alleviate cancer death and suffering through pioneering research, innovative clinical trials, evidence-based patient-centered care, prevention, education, and community activities. VICC is a matrix center within Vanderbilt University Medical Center that integrates the cancer-related expertise and resource of the School of Medicine, Nursing, Arts and Sciences, Engineering, Peabody School of Education and the fully integrated Veterans Administration Medical Center. Most facilities are located on one campus, which promotes interactions, sharing of resources and collaborations.
**Vanderbilt Institute of Chemical Biology (VICB)**
[http://www.vanderbilt.edu/vicb/index.html](http://www.vanderbilt.edu/vicb/index.html)

VICB research spans a broad range of interests and is characterized by interdisciplinary and cross-disciplinary approaches. Many VICB members have affiliations with other key institutes and centers at Vanderbilt, including the Vanderbilt Ingram Cancer Center (VICC), the Institute of Imaging Science (VUIIS), the Center for Structural Biology (CSB), the Mass Spectrometry Research Center (MSRC) and the Institute of Nanoscale Science and Engineering (VINSE). All investigators have access to VICB core facilities that provide chemical synthesis, high throughput screening, antibody production, and small molecule NMR services.

**Vanderbilt Institute for Clinical and Translational Research (VICTR)**
[http://www.mc.vanderbilt.edu/victr/pub/](http://www.mc.vanderbilt.edu/victr/pub/)

VICTR is Vanderbilt's virtual home for clinical and translational research. Supported by the Vanderbilt Office of Research and the NIH sponsored Clinical and Translational Science Award (CTSA), the mission of the institute is to transform the way ideas and research discoveries make their way from origin to patient care. This is accomplished using a multi-faceted approach: through collaboration with a wide variety of research partners; by training, nurturing and rewarding participating researchers; by funding research; by developing new and innovative ways to involve the community in research; by developing new informatics and biostatistical systems; and by making available the latest technologies and sound research results affecting patient care.

**Vanderbilt University Institute of Imaging Science (VUIIS)**
[http://www.vuiis.vanderbilt.edu/about.php](http://www.vuiis.vanderbilt.edu/about.php)

VUIIS supports advances in physics, engineering, computing and other clinical and basic sciences for the development and application of new and enhanced imaging techniques to address problems in biology and medicine, in health and disease. Faculty and trainees pursue research in developing new imaging methods and techniques, as well as in diverse applications. The addition of a 7 tesla magnet, one of only about eight in the United States, has enabled researchers to generate images down to the molecular level and will ensure Vanderbilt remains at the forefront of research in magnetic imaging. Some of the core areas of current interest are the development of methods for the assessment of structure, function, and metabolism including imaging in broad areas such as cancer, brain physiology, transgenic mice, cellular and molecular as well as research into the physics of imaging and spectrometry. The Institute also provides an exemplary training environment for postdoctoral fellow, graduate and medical students and undergraduates.