Facilities and Other Resources

Resources and other facilities are presented and organized under three headings: 1) CTSI Facilities and Other Resources (N=36), 2) UF colleges (N=16) and 3) other facilities and resources affiliated with the CTSI (N=60).

CTSIFACILITIES AND RESOURCES

- Academy of Research Excellence
- Accrual to Clinical Trials Project
- Biostatistics, Epidemiology and Research Design
- Biobehavioral Core
- Biomedical Informatics Program
- Center for Cellular Reprogramming
- Clinical and Translational Research Building
- Clinical Research Center
- Communications and Dissemination Program
- Consent2Share
- CTSI Biorepository
- CTSI Service Center
- CTSI Services and Providers
- Dental Clinical Research Unit
- Health IMPACTS for Florida
- HealthStreet
- Human Imaging Core
- Implementation Science Program
- Mentor Academy
- OneFlorida Clinical Research Consortium
- Pain Clinical Research Unit
- Research Coordinator Consortium
- ResearchMatch
- Scientific Advisory Committee
- Sentinel Network
- Simulation Center
- Social Network Analysis
- Southeast Center for Integrated Metabolomics
- Study Registry
- StudyConnect
- Training and Research Academy for Clinical and Translational Science
- UF Health Integrated Data Repository
- UF Health Personalized Medicine Program
- UF Research and Academic Center at Lake Nona
- VIVO

UF COLLEGES

- College of Agricultural and Life Sciences
- College of the Arts
- College of Dentistry
- College of Design, Construction & Planning
- College of Education
- College of Engineering
- College of Health & Human Performance
- College of Journalism and Communications
- College of Liberal Arts & Sciences
- College of Medicine
• College of Nursing
• College of Pharmacy
• College of Public Health & Health Professions
• College of Veterinary Medicine
• Levin College of Law
• Warrington College of Business Administration

**OTHER FACILITIES AND RESOURCES AFFILIATED WITH CTSI**

• Advanced Magnetic Resonance Imaging and Spectroscopy
• Animal Care Services
• Bureau of Economic and Business Research
• Cardiovascular Cell Therapy Center
• Cell & Tissue Analysis Core
• Center of Excellence for Regenerative Health Biotechnology
• Center for Health Equity and Quality Research
• Center for Movement Disorders and Neurorestoration
• Center for Precollegiate Education and Training
• Center for Translational Research in Neurodegenerative Disease
• Child Health Research Institute
• Click Commerce
• Clinical Research Network
• Department of Biostatistics
• Department of Epidemiology
• Department of Health Outcomes and Policy
• Department of Pediatrics
• Diabetes Institute
• Electron Microscopy Core
• Emerging Pathogens Institute
• Florida Innovation Hub
• Florida Neonatal Neurologic Network
• Harrell Medical Education Building
• HCV-TARGET
• Health Science Center Library
• High-Performance Computing Center
• Human Applications Laboratory
• Informatics Institute
• Institute for Child Health Policy
• Institute of Food and Agricultural Sciences
• Institute on Aging
• Institutional Review Boards
• Interdisciplinary Center for Biotechnology Research
• Interdisciplinary Program in Biomedical Sciences
• Jacksonville Health Equity Research Organization
• Junior Honor Medical Program
• Major Analytical Instrumentation Center & Particle Analysis Instrumentation Center
• McKnight Brain Institute
• MD-PhD Training Program
• Network for Pancreatic Organ Donors with Diabetes
• Office of Medical Education
• Office of Research
• Office of Technology Licensing
• Pain Research and Intervention Center of Excellence
• Powell Gene Therapy Center
• Research Administration and Compliance Program
• Science for Life
CTSI FACILITIES AND RESOURCES

Academy of Research Excellence  UF established the Academy of Research Excellence (ARE) in 2012 to develop and recognize exemplary investigators and research coordinators with a focus on promoting high quality, innovative clinical research and with the highest regard for research integrity, ethics, professionalism, and regulatory requirements. The ARE promotes a culture of professional collegiality and openness, including active role modeling and the mentoring of junior faculty, research coordinators, and health science students.

Since its inception, three investigator cohorts (totaling 40 graduates) and two coordinator cohorts (totaling 24 graduates) have completed the program. A third coordinator cohort will conclude in February 2015. Each cohort consists of 12 to 14 participants from across the UF’s colleges and departments and the North Florida/South Georgia Veterans Health System. Graduates become part of the ARE Leadership Council and are expected to promote excellence in clinical human subject research as role models and mentors.

Participation in the ARE program engenders new opportunities and leads to new collaborations and interprofessional engagements. Graduates agree their involvement in the ARE increases their confidence in the research environment, improves their collaborative opportunities, inspires them to become mentors, and expands their scope of possibilities. The ARE represents the continuing commitment of UF to excellence in health science research.

Accrual to Clinical Trials Project. The Accrual to Clinical Trial Project (ACT) initiative will create a CTSA Federated Network designed to significantly increase participant accrual to the nation’s highest priority clinical trials. To achieve this goal, ACT will leverage the widespread implementation of the electronic health record (EHR) and the extensive informatics and regulatory expertise within the CTSA network.

Early work will enable cohort exploration across the federated network. This will build upon the accomplishments of individual CTSAs and networks of CTSAs that have created informatics infrastructure, policies, and procedures that have successfully demonstrated the capacity to conduct EHR-driven cohort exploration. Initially, the most experienced sites will form the federated network. Additional sites will join every six months.

Biostatistics, Epidemiology and Research Design  The Biostatistics, Epidemiology and Research Design (BERD) program provides a central location for investigators seeking quantitative and qualitative research design and analysis support through the CTSI. BERD links investigators with multidisciplinary faculty members and experts in various methodological techniques including biostatistics, epidemiology, qualitative data techniques and measurement and evaluation in health-related research. This program also assists students and young investigators in accessing basic and advanced graduate classes in research design, data acquisition and management and data analysis that are applicable across the entire spectrum of clinical and translational research. BERD serves as an early point of contact for investigators to facilitate their research, whether standalone or multidisciplinary, with high quality research design and analysis assistance for their grant applications. Additionally, BERD acts as a liaison to ensure that the educational needs in both quantitative and qualitative methods are individually tailored to students’ and young investigators’ needs while developing and adopting new methodology as needed for specific clinical and translational research. Study design, database design, and data analysis are services available to Investigators through BERD. Investigators can also take advantage of Design Studios offered by BERD faculty.
Biobehavioral Core  The CTSI Biobehavioral Core facilitates translational research by providing research personnel trained to administer a core set of behavioral assessments; coordinating access to biobehavioral research resources across collaborating colleges; providing/facilitating training for the administration of core assessments; serving as a training site for pre- and postdoctoral trainees in the behavioral sciences; and providing consultation regarding potential assessment tools for both animal and human work. Identifying potential avenues for biobehavioral integration is a key role of the core. The core director and staff work with investigators to identify areas of potential integration. The core maintains a central library of behavioral and paper/pencil assessments often used in health-related research, including standard assessments of depressive and anxiety symptoms, reading skill (as an estimate of premorbid functioning), basic perceptual-motor, learning/memory and problem-solving tasks, and demographic information including family trees/pedigrees.

Biomedical Informatics Program  The CTSI Biomedical Informatics Program at UF works to enhance and extend informatics infrastructure for transforming and translating discovery; create and manage the Center for Advanced Data Capabilities; establish biomedical informatics as an academic discipline at UF; and further national collaboration to accelerate the multidirectional flow of informatics ideas, best practices, technologies, and standards. The Biomedical Informatics Program is supported by both the CTSI and the Department of Health Outcomes and Policy, which hosts and supports the program’s biomedical informatics graduate certificate.

Program faculty and staff have access to campus computing resources such as GatorVault, a private cloud for research data storage, and HiPerGator, Florida's most powerful high performance computer. Clinical and Translational Science Informatics and Technology (CTS IT), a CTSI informatics support unit with 21 employees and 3,645 square feet of office space, is part of the Biomedical Informatics Program. CTS IT staff offer design and development of custom software applications for research including RED-I, UF’s software application to move data from UF’s Integrated Data Repository, and other institutions’ EHR data, to REDCap. CTS IT also offers informatics consults, research system hosting in accordance with UF’s strategic plan for biomedical informatics, data workflow development and management of research software.

Center for Cellular Reprogramming  The Center for Cellular Reprogramming provides services and training for induced Pluripotent Stem Cell derivation and related cell reprogramming technologies. The center occupies approximately 1,600 square feet for all general laboratory activities, including storage and experiments. Major equipment includes five CO2 incubators, three tissue culture hoods, three liquid nitrogen cell storage tanks, refrigerated high-speed centrifuges, a BioTek Synergy 2 plate reader, a shaking incubator, a spectrophotometer, two thermocyclers (for PCR), an inverted fluorescent microscope with a digital camera system, an upright microscope, a surgical microscope, and all equipment needed for electrophoresis. The center also has a Seahorse Bioscience extracellular flux analyzer to measure mitochondrial bioenergetics, flow cytometers with sorters, ultracentrifuges, gel documentation systems, Gene-Pulsers for electroporation, real-time PCR machines, auto-DNA sequencers, confocal microscopes, a PerSpective Biosystems Voyager DE mass spectrometer, an oligonucleotide synthesizer, and a peptide synthesizer. In addition, the center has 100 square feet of space to maintain mice in a core animal facility with additional access to a common space for surgical procedures inside the facility.

Clinical and Translational Research Building  The UF Clinical and Translational Research Building opened in 2013. A 120K square foot, state-of-the-art facility for clinical and translational research, the Clinical and Translational Research Building includes patient-oriented research facilities, offices, and educational spaces. The building was designed to foster collaborations between groups involved in all aspects of research. The CTSI occupies the 80K square foot, five-story north wing of the Clinical and Translational Research Building, including the CTSI’s Administration team, UF Clinical Research Center, Service Center, Research Design and Analysis Program, Training and Professional Development Program, and team members from the Community Engagement and Research Program and the Personalized Medicine Program.

The north wing also houses the UF departments of epidemiology and biostatistics, implementation science faculty, and major clinical research groups studying diabetes, liver diseases, metabolic syndromes, muscular dystrophy, pain, and rare and genetic diseases. The UF Institute on Aging occupies the 40K square foot, three-story south wing.

Clinical Research Center  The CTSI’s Clinical Research Center (CRC) occupies 10K square feet on the first floor of the north wing of the Clinical and Translational Research Building (CTRB). The dedicated research space includes 10 exam rooms, four private exam rooms, an eight-bed infusion room, two procedure rooms, and a large exercise physiology room. The unit also includes administrative offices and is equipped for
complex exams such as bronchoscopy, liver biopsies, and gene therapy. Other available equipment includes pulmonary function equipment, dental chair, Bod Pod, Body Box, Basal Metabolic cart, Ultrasound machine, EKG machine, and blood pressure monitors. Located within the CRC are an investigational pharmacy, a conference room, work areas for nursing and study staff, and a sample processing lab which houses refrigerators, centrifuges and -80° freezers.

The CRC provides a highly trained research staff including registered nurses, a medical technologist, a research dietitian, and administrative staff. All staff is trained in Good Clinical Practice. Services include administration of investigational medications, specimen collection including pharmacokinetic sampling, monitoring of vital signs, administration of glucose tolerance tests, euglycemic clamp procedures, diet recalls, specimen processing, and exercise testing.

**Communications and Dissemination Program** The CTSI Communications and Dissemination Program (CDP) facilitates research collaborations among UF’s clinical and translational researchers and health communication researchers in the UF College of Journalism and Communications (CJC) and other UF departments involved in health communication research. The goal of the CDP program is to contribute to translational communication research and practice through theoretically informed and evidence-based health message design, dissemination, and evaluation. Specifically, the CDP supports the formation and development of interdisciplinary teams focused on improving communication with patients, caregivers, and community members.

Established in 2008, the CDP facilitates interdisciplinary, translational communication research by connecting scholars affiliated with the CTSI and CJC with similar interests. Since its inception, the program has grown to not only connect researchers with similar interests, but to also provide funds to support preliminary studies and offer seminars, workshops, and colloquia for faculty and students. Developing this critical infrastructure has resulted in successful collaborations on a range of topics, including cardiovascular disease, eating disorders, genetic testing, hospital falls, infectious diseases, smoking and alcohol use, sexual violence, and sickle cell anemia. Research collaborations among CDP faculty and students have resulted in over 30 peer-reviewed publications and conference presentations as well as several federally funded grants.

The program director, Janice Krieger, PhD, as well as several faculty affiliated with the CDP, have direct expertise in the area of patient participation and retention in clinical research and health inequities. The CDP research program in this area includes research on topics including message framing, physician-patient communication, family-patient communication, and community engagement as related to health inequities regarding research study participation. This background, coupled with extensive experience working in interdisciplinary, federally-funded research teams, will support the development of theoretically informed and evidence-based interventions to promote recruitment and retention of research participation as described in the current proposal.

The CDP has a number of resources in place to support continued success in collaborative efforts. One is significant commitment of effort by the director to actively participate in the proposal. Another is a PhD level research assistant who is available to consult (under the direct supervision of the director) with CTSI researchers about communication issues related to research participant recruitment and retention. Finally, the CDP has access to resources and dedicated space associated with the STEM-H Translational Communication Research program located within the CJC. Resources include half-time administrative personnel, office space, and a meeting room with top of the line technology for conducting interviews and focus groups.

**Consent2Share** The Consent2Share initiative was launched to develop, pilot, and expand a consent process at UF Health that would facilitate the collection and use of medical records in health research. The goals and objectives for this initiative include the development and implementation of common practice appropriate consent processes by which patients can provide and remove informed consent for research contact as they wish. Additionally, the initiative seeks to develop and implement information systems to track consent status associated with research contact while providing patients with an easy way to agree to be notified about future research studies for which they may be qualified. Project participants include the CTSI Biorepository, Internal Medicine & Medical Specialties, UF Health Compliance and Legal, UF Health Information Technology, and the UF Privacy Office, among others. Senior leadership includes Peter Lafrate, PharmD, Chairman of the UF Institutional Review Board, and Gigi Lipori, Senior Director of UF Health Planning and Analysis.

**CTSI Biorepository** The CTSI Biorepository is one of only five CTSI-affiliated biorepositories accredited by the College of American Pathologists. The services provided by the CTSI Biorepository include procurement of high quality biospecimens for research (fresh, fresh-frozen, formalin-fixed, paraffin-embedded tissue, DNA, RNA, plasma, serum, buffy coat); retrospective and prospective biospecimens collection and distribution; biospecimen
processing (tissue, whole blood, urine, cerebrospinal fluid); a centralized, secure, and highly monitored biospecimens storage facility, via CO2-backed-up freezers and independent, around the clock virtual-monitoring systems; nucleic acid extraction and quality assessment services; comprehensive clinical trial sample management, which includes kit creation, sample receipt, storage and distribution; regulatory assistance, including Institutional Review Board documents when applying for UF CTSI Biorepository specimens and services; and comprehensive pathology services, including diagnosis confirmation by board certified pathologists.

The total sample capacity is approximately 500K samples stored in nine -80°C freezers. The current storage inventory exceeds 208K samples including approximately 11K biorepository “library” samples that are available to researchers and nearly 197K samples collected by investigator-directed research projects, which include multi-center clinical trials. Examples of large scale trials currently using the CTSI Biorepository include the “Lifestyle Interventions and Independence for Elders Study” (LIFE), the “Hepatitis C Therapeutic Registry and Research Network” Study (HCV-TARGET), the UF’s “Sepsis and Critical Illness Research Center” (P50 grant, Departments of Surgery, Anesthesiology, Medicine, Physical Therapy, Aging and Geriatric Research), and the UF/Orlando Health “Joint Oncology Project” (JOP).

CTSI Service Center The CTSI Service Center facilitates rapid activation of research for investigators performing translational research across the UF campus and provides a range of research services and resources, including biostatistical and regulatory support, data support through the Clinical and Translational Science-IT and Research Electronic Data Capture (REDCap) teams, and facilities to conduct research through the UF Clinical Research Center. Through the Regulatory Knowledge and Support (RKS) program, the Service Center provides access to a Research Subject Advocate, informed consent expertise, IND and IDE assistance, ClinicalTrials.gov assistance, ethics consults, data safety monitoring assistance, and Standard Operating Procedure development. RKS can also provide Good Clinical Practice, Good Laboratory Practice and Good Manufacturing Practice training. The CTSI Service Center’s Research Navigators advise research teams on available resources and help them navigate research-related processes. Navigators are well versed in IRB application preparation, protocol development, Good Clinical Practice guidelines, and NIH research rules and standards for the design, conduct, performance, monitoring, data collection, management, analysis, and reporting of clinical trials. Through consultation, Navigators help investigators assemble research teams to conduct studies, provide budget reviews, oversee study management, assist with recruiting and aid in the timely completion of the study. The CTSI Service Center also links investigators to other CTSI resources and core facilities. The CTSI Service Center works closely with investigators, the UF Institutional Review Boards, the UF College of Medicine Research and Compliance office, and numerous service providers across the CTSI and the university.

CTSI Services and Providers The following services are available through CTSI facilities and resources:

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<tr>
<th>Service</th>
<th>Facility/Resource</th>
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<tr>
<td>Biobehavioral Study Consults</td>
<td>Biobehavioral Core</td>
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<td>Biorepository Services</td>
<td>CTSI Biorepository</td>
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<td>Clinical Research Center Services</td>
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<td>Clinical Simulation Development</td>
<td>Simulation Center</td>
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<td>ClinicalTrials.gov Assistance</td>
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<td>Data Analysis</td>
<td>Biostatistics, Epidemiology and Research Design</td>
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<td>Database Design</td>
<td>Biostatistics, Epidemiology and Research Design</td>
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<td>DSMB Assistance</td>
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<td>Ethics Consults</td>
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<td>GCP Training</td>
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<td>Global Metabolomic Mass Spectrometry</td>
<td>Southeast Center for Integrated Metabolomics</td>
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<td>GLP Training</td>
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Dental Clinical Research Unit  The facilities of the CTSI Dental Clinical Research Unit (DCRU) enable performance of state-of-the-art clinical research in the field of oral and craniofacial clinical and translational research, and foster collaborative research with areas of biomedical research. Examples of investigational research include fundamental clinical studies funded by the NIH exploring the etiology and pathologies of oral infectious diseases and translational research that evaluates the efficacy of anti-inflammatory products, growth factors in periodontal regeneration, systemic and locally delivered antibiotics, other antimicrobials and antirotective agents, and newly developed health care products or devices. The DCRU also assists with in vitro studies of antimicrobial compounds and susceptibility studies and evaluate diagnostic methods and procedures.

The DCRU has the capability to direct phase I, II, and III trials complete with microbiological analysis. Investigators affiliated with the DCRU may perform clinical trials within the DCRU facility located at the UF College of Dentistry and/or within other facilities associated with the DCRU or the CTSI. DCRU clinical and laboratory staff are knowledgeable and experienced in clinical trials involving pharmacology, immunology, microbiology, periodontology, and hypersensitivity and are willing to explore new areas of collaborative research. Facilities and resources within the DCRU include six enclosed private dental operatories, office space, dental laboratory, wet lab space for processing of samples, first aid emergency kits, radiography, and
secure individual storage space.

The DCRU provides advice, assistance, design, and/or direction to short- and long-term clinical/translational research projects. Services offered include protocol reviews, assistance with budgets, calibration of equipment, subject recruitment, staffing, scheduling assistance, assistance with regulatory issues, diagnostic methodology project closures, safety and efficacy testing, claim support, and pharmacokinetic testing. Assistance with data collection, management and analysis is also available. Data systems are subject to continuous quality control. Standard and electronic chairside data entry is available as well as clinical and microbial integration. Assistance is available for specialized reports such as the final report for corporate sponsors, ADA or FDA submissions, or preparation of scientific abstracts.

Available equipment includes six Adec dental chairs utilizing Optima MX2 high speed/low speed handpiece adapters and high/low volume evacuators and air/water syringes; two Isolite Illuminated Dental Isolation systems; four Dentsply Cavitron Plus units; Gendex Expert x-ray machine; Air Technologies Scan X Digital Imaging System; Scotsman Touch Free ice machine; -80° Thermo Scientific freezer; M11 Ultraceave; Gestetner DSM 622 copier; two Dell 3110cn color desktop laser printers; dental instruments (restorative kits, prophy kits, surgical kits); and clinical supplies (cover gowns, gloves, mask, safety goggles, dental unit barrier covers).

Health IMPACTS for Florida  Health IMPACTS for Florida is a research effort that combines Florida State University’s strength in community-based medical education with UF’s expertise in clinical and translational science research. The statewide network of facilities affiliated with the two universities connects local communities with teams of clinical scientists, physicians, and physicians-in-training, creating new opportunities to conduct clinical and public health research. In addition to benefiting the state’s 19M residents, the universities will create new opportunities and advances for physicians, scientists, and medical students while exploring the causes, prevention, diagnosis, and treatment of diseases. This research initiative presents opportunities for affiliated physicians to participate in projects that are of potential benefit to their current and future patients.

HealthStreet  HealthStreet Gainesville is a concept and a site for community-engaged research at UF. HealthStreet is a one-stop portal for linking and navigating underrepresented populations to social services (food pantry, housing, criminal justice, etc.), medical and psychiatric services (MDs, nurse practitioners, drug treatment, blood pressure, glucose screenings, etc.) services, and research opportunities It is located in southwest Gainesville and includes about 10K square feet of space for faculty, staff, students, and volunteers. The HealthStreet suite also includes a lobby, a community center, a conference room, multiple meeting spaces, several interview rooms, two kitchen facilities and handicap accessible restrooms and shower facilities. HealthStreet relies on Community Health Workers (CHWs) for engagement and owns two seven-passenger vans that are used by Community Health Workers to drive to outreach locations and to provide transportation to community members. HealthStreet also collaborated as part of the Sentinel Network, which will grow from five sites to 18 sites with Our Community, Health. HealthStreet has an active Community Advisory Board which is available to consult with Investigators.

The Gainesville location is complementary to HealthStreet Jacksonville, which is housed on the campus of Edward Waters College, the first historically black college/university in Florida. HealthStreet is in the new Center for the Prevention of Health Disparities. Located at the center of Jacksonville’s urban core, the 2,500 square foot facility provides space for community-engaged programs designed to reduce health disparities, such as HealthStreet Jacksonville and the New Town Success Zone. The new center features a lobby area, designated office space for program administration, a community room equipped with kitchen facilities, and handicap accessible restrooms and entrances. The centrally located Center for the Prevention of Health Disparities offers easy access to the greater Jacksonville area, and HealthStreet Jacksonville is also working in the community through rented vehicles.

Human Imaging Core  The CTSI Human Imaging Core provides infrastructure and support for research and educational activities using Magnetic Resonance Imaging (MRI) technology, with particular emphasis on translational MRI research in humans. The Core is open to UF researchers as well as academic and industrial researchers from outside UF and operates with three professional staff members, including one MRI scientist and two radiological technologists. The Core began in June 2012 as a strategic component of the CTSI to advance MRI research in humans. Since its inception, the Core has successfully facilitated growth in MRI research in UF, evidenced by the fact that the number of UF PIs conducting human MRI research has doubled from 26 to 52 as of October 2014. To meet the fast and ever-growing needs of the human MRI research
community at UF and beyond, UF is in the process of purchasing a second research-dedicated, whole-body human MRI system that is expected to be installed during summer 2015.

The Core is located on the ground floor of McKnight Brain Institute (MBI). The centerpiece of the Core is a 3.0 Tesla, 32-channel Philips whole-body human MRI scanner dedicated to research, the only research-dedicated human MRI scanner in the state of Florida. The scanner is equipped with a series of coils for imaging human organ systems, including a 32-channel head coil for neuroimaging applications with significant gains in signal-to-noise ratio and acquisition speed. The newest addition is a transmit/receive whole brain 31P/1H coil that allows imaging and spectroscopy of metabolism. An ESys® system by Invivo is available for presenting video and audio signals including functional MRI task paradigms to the subjects during scanning. In conjunction with two higher magnetic field magnets (4.7T and 11T) for imaging animals and/or tissue samples in the AMRIS Facility, which is housed on the same floor in the MBI and is the biological arm of the DoE- and NSF-funded National High Magnetic Field Laboratory, the CTSI Human Imaging Core is a state-of-the-art facility for cutting-edge translational MRI research in human health and diseases.

The CTSI Human Imaging Core capabilities include performing structural, functional, and metabolic MRIs, developing methods and protocols for MRI data acquisition, teaching investigators data acquisition and analysis techniques, and assisting researchers in designing experimental protocols and developing advanced MRI imaging and spectroscopy methodologies. Image quality assurance and quality control as well as image acquisition, transfer support, and archiving support are available through the CTSI Human Imaging Core.

Implementation Science Program  Created in 2013, the CTSI Implementation Science Program strengthens the capacity of UF Health as a learning health system and advances implementation science across the state. Implementation science emphasizes outcomes that consumers, practitioners, and communities value and thus takes a participant- and community-centered approach. The Implementation Science Program is positioned to build on the model of the CTSI-led UF Health Personalized Medicine Program, which develops and pilots implementation strategies at UF Health and then adapts and tests them for use in other healthcare settings. The program offers Implementation Science Studios to Investigators who wish to incorporate implementation science into their research. The program collaborates with the CTSI’s statewide research partners and networks, including the Health IMPACTS for Florida practice-based research network.

Mentor Academy  The CTSI Mentor Academy, supported by UF Health, the UF College of Medicine, and the CTSI, was launched in June 2013 to promote the development of the next generation of clinical and translational scientists by promoting a culture of support for mentoring and by providing training in optimizing mentoring relationships for mentors and mentees at all levels of career development. Roger Fillingim, PhD, leads the academy with support from Marian Limacher, MD, Director of the CTSI Training and Professional Development Program and Senior Associate Dean for faculty affairs and professional development in the UF College of Medicine.

Currently, the academy offers a Master Mentor program structured around a yearlong seminar series on topics relevant to successful mentor-mentee interactions. Topics from the current schedule include ethics and professionalism, dealing with conflicts, benefits and challenges of diversity, tracking success, and transitioning from mentor to colleague. UF faculty members who attend at least eight sessions are inducted as members of the CTSI Mentor Academy. The first cohort of members consisted of nine faculty, many of whom are active in CTSI initiatives. These Master Mentors continue to participate in sessions and serve as role models for junior faculty who are developing mentoring skills. Planning is now under way to develop training programs for early career mentors as well as for mentees, including junior faculty, postdoctoral fellows, and graduate students.

OneFlorida Clinical Research Consortium  The CTSI’s OneFlorida Clinical Research Consortium is a collaborative statewide network that seeks to improve health research capacity and opportunities in the State of Florida through the facilitation of clinical and translation research in communities and health care settings. Central to the statewide vision for the OneFlorida Clinical Research Consortium is the collaborative development of an enduring research infrastructure serving all Floridians and Florida health researchers. Infrastructure components supported by the OneFlorida Consortium include Shared Governance Structure; Cooperative Institutional Review Board; Community Research Facilitator Program; Community Engagement Program; Consent2Share Program; Information Technology Resources (collaborative portal – ResearchACTS software for study management, data collection and point-of-care risk assessments); Data Analytics Warehouse; Training and Education Programs (community clinician-, patient- and caregiver-as-scientist programs, pragmatic trials and implementation science minority education program); and Statewide Biorepository Capability.
Pain Clinical Research Unit  The CTSI Pain Clinical Research Unit (Pain CRU) is a component of the Pain Research Center of Excellence, which provides a patient-oriented research venue designed to facilitate and foster clinical and translational pain research at UF. The Pain CRU’s primary facility consists of four examination rooms located in the Clinical Research Center in the north wing of the Clinical and Translational Research Building (CTRB). Satellite locations of the Pain CRU are available on the second floor of the Dental Tower at the UF Health Science Center and in the Institute on Aging Geriatric Clinical Research Facility. Altogether, the Pain CRU comprises nine fully equipped quantitative sensory testing (QST) units and several flexible-use examination rooms. The Pain CRU is staffed by well-trained research staff, including an advanced registered nurse practitioner, a phlebotomy-trained research coordinator, a lab manager, multiple research technicians and numerous trainees, including undergraduate, graduate and professional students, post-doctoral fellows and junior faculty members.

Research Coordinator Consortium  The CTSI supports the Research Coordinators Consortium (RCC), which provides a forum for networking, educating, and resource sharing to assist research staff in navigating their professions while prioritizing and ensuring optimal human subject protections. As a network for all allied research professionals, the RCC presents an opportunity for research professionals to share best practices and discuss common issues and concerns. RCC Research Coordinator Training initiatives integrate and align resources across the enterprise, tapping the Institutional Review Board and Research Administration Compliance programming, as well as content from national research professional organizations.

The RCC works to raise awareness of human subject protections and to assist navigation across the clinical trials life cycle. The RCC hosts webinars from the Association of Clinical Research Professionals (ACRP) conference library, and facilitates a web presence on the CTSI website with a mentorship contact list, articles of interest, certification options and other resources. The RCC offers online resources for informed consent training intended to give research team members certain skills when designing, constructing and obtaining an informed consent, and reviews the process for teaching, training and supervising those who will be responsible for obtaining informed consent.

The RCC hosts Research Coordinator Certification Study Groups. These are facilitated study groups run for clinical research professionals seeking national certification in a professional organization. The RCC produces short-course GCP training for annual GCP training documentation for research staff, PIs and coordinators. The RCC also offers a Training Overview of Human Subjects Research Coordination directed towards novice coordinators and addressing common research-navigation concerns.

ResearchMatch  ResearchMatch is a national volunteer research registry that brings together researchers and willing volunteers who want to get involved in research studies. This national registry, developed by institutions affiliated with the Clinical and Translational Science Awards (CTSA) program, provides a secure, web-based approach to address a key barrier to advancing research: finding research participants. The goal of ResearchMatch is to better connect volunteers with potential study opportunities.

Scientific Advisory Committee  The Scientific Advisory Committee (SAC) provides a scientific review for protocols submitted to the CTSI for support. The SAC meets monthly and is composed of experts from a cross-section of the basic and clinical sciences from the Colleges of Medicine, Pharmacy, Dentistry, Engineering, Veterinary Medicine, and Agriculture and Life Sciences. Reviews provided by SAC aid in determining CTSI Pilot RFA funding and utilization of the resources of the CRC.

Sentinel Network  The Sentinel Network is a collaborative effort across two community-focused national organizations and six CTSA sites, including Washington University in St. Louis, University of California-Davis, University of Michigan, Albert Einstein College of Medicine, University of Rochester, and UF. The Sentinel Network develops procedures to increase community participation in research, build the capacity of Community Health Workers to expand their role in research by increasing the rigor of health evaluation metrics in the field, and establish a sustainable network, the Sentinel Network, to provide ongoing, real-time assessments of top health and neighborhood needs, concerns and research perceptions. The data can then be shared with researchers and local communities to increase the representativeness and relevance of research by facilitating community participation. In addition to continuing to collect health data, the Sentinel Network includes the provision of medical, social service, and research referrals appropriate to the assessed health needs and concerns of community members.

Simulation Center  The Simulation Center, formally named The Center for Safety, Simulation & Advanced Learning Technologies (CSSALT), is a 2K square foot simulation lab that houses three METI/CAE mannequin
human patient simulators: adult, pediatric, and infant; a bronchoscopy part task trainer; a transthoracic/transesophageal echocardiography simulator; and two Virtual Humans developed at the UF Department of Computer & Information Science & Engineering. Part task trainers address central venous access trainers, regional anesthesia, seven airway trainers, a central venous cannulation trainer, IV placement foot and arm, and a spinal injection trainer. Medical equipment includes three anesthesia machines, an ICU ventilator, an ultrasound machine, state-of-the-art physiological monitors and gas analyzers, an array of airway devices, a defibrillator, a 62” touch-sensitive display with two 42” accessory displays, a Polycom video conferencing system, piped medical gases, clinical supplies, and two calibrated mechanical lung models. Other development equipment includes a wearable optical display, a virtual reality device, a 3-D printer, and microcontrollers. Simulation activities, including R&D and teaching, happen in the simulation lab while engineering development activities occur in a nearby 1K square foot workshop.

The simulation lab features multiple in-ceiling and handheld cameras as well as a personal microphone transmitting system for real-time use and video debriefing and web-authoring software. Ceiling-mounted IR tracking cameras in the simulation and engineering labs and magnetic tracking systems enable mixed reality applications. The simulation center also encompasses the Virtual Anesthesia Machine website, which hosts a portfolio of web-enabled transparent reality simulations and PK/PD models developed by CSSALT personnel and used worldwide. CSSALT works closely with the UF Institutional Review Board and has access to undergraduate psychology and medical students undergoing their compulsory anesthesia rotation as well as anesthesia residents and fellows.

Social Network Analysis  Social Network Analysis (SNA) is used to assess the impact of the CTSI on academic collaboration at UF and exploring how SNA might be used to strengthen UF’s scientific collaboration network. The Bureau of Economic and Business Research (BEBR) examined CTSI activities from 2008 to 2012 and found that the CTSI network of investigators increased in both size and as a proportion of the total UF network, the CTSI network increased cohesion and diversity of the UF network, and the CTSI's pilot award program created new collaborations and brought new researchers into the network. Uses of SNA include creating a strategy for increasing scientific collaboration in targeted areas and collaborating with other areas of the university to conduct SNA. BEBR staff are available to provide Network Science consults to UF Investigators.

Southeast Center for Integrated Metabolomics  The Southeast Center for Integrated Metabolomics (SECIM) offers services in mass spectrometry (MS) and nuclear magnetic resonance (NMR) -based metabolomics and is developing a fully integrated platform for analytical measurements and statistical analysis. SECIM offers untargeted global metabolomics using NMR and liquid chromatography–mass spectrometry (LC-MS) and targeted assays using LC-MS on amino acids, organic acids, acyl-carnitines, acyl-CoAs, and NAD metabolites through partners at Sanford Burnham Medical Research Institute in Orlando. Biomarkers are identified by state-of-the-art NMR and MS. SECIM is developing new methods for de novo structure prediction with the Brüschweiler lab at The Ohio State University and also joint NMR/MS analysis with the Nicholson lab at Imperial College. SECIM users are able to conduct isotopic ratio outlier analysis (IROA) experiments to measure global metabolomic changes in response to external perturbations or mutations using LC-MS through our partnership with IROA Technologies and Thermo Fisher.

SECIM technical cores include: Mass Spectrometry Services for global and targeted metabolomics (Garrett and Gardell, Co-PIs); Nuclear Magnetic Resonance for global metabolomics and biomarker identification (Edison, PI, Walter, Co-PI); Advanced Mass Spectrometry for biomarker identification, imaging mass spectrometry and IROA (Yost, PI); and Bioinformatics for SECIM pipeline development and analysis (McIntyre, PI). Additionally, the Promotion & Outreach Core utilizes the technical cores’ activity by expanding the user base and providing education and training in SECIM capabilities.

Study Registry  The CTSI Study Registry project is a comprehensive dataset with consistently defined data elements for all research studies involving human subjects that have been approved by the UF Institutional Review Board (IRB) since 2008. This registry expands access to information about UF’s actively enrolling research studies and improves the University's ability to understand, promote, and strengthen UF’s portfolio of human-subjects research. Data collected for this registry will be posted on the UF StudyConnect website as a searchable database of actively enrolling studies seeking participants. Additionally, the data collected for the registry will be used by the CTSI and other stakeholders to analyze UF’s human-subjects research portfolio in new ways by, for example, looking at studies’ translation stages.

StudyConnect  In collaboration with the four UF Institutional Review Boards (IRBs), UF Health and UF
research teams, the CTSI maintains and promotes UF StudyConnect as a central resource for listing UF clinical research studies seeking volunteers. In addition to being displayed on UF StudyConnect, the study listings appear on UFHealth.org Research Studies & Clinical Trials.

As part of its ongoing Study Registry project, the CTSI has a team of trained individuals collecting data about human research studies approved by the four UF IRBs since 2008. This team identifies studies that may be enrolling participants for inclusion on StudyConnect. In addition, UF research teams can request that listings for IRB-approved studies be added, modified, or removed from the site at any time.

**Training and Research Academy for Clinical and Translational Science** The Training and Research Academy for Clinical and Translational Science (TRACTS) is a two year, tuition-funded, mentored training program for faculty and senior fellows at UF who have a passion to pursue clinical/translational research in the health sciences as a major component of their careers. TRACTS is designed to provide clinicians with sufficient research experience, didactic knowledge, and publishable research outcomes to be competitive for a K-level (NIH) mentored research award or equivalent. Scholars develop and conduct, with the guidance of their mentor(s), a research project that is patient-oriented, human-subject-related, and translational in nature.

Candidates are clinician junior faculty with a full-time appointment within a UF department, or a fellow or post-doc who will be appointed to a full-time faculty position at the UF upon completion of training. TRACTS Scholars receive tuition for core coursework and up to 30 credit hours total (including core courses) toward a Master of Science with a concentration in Clinical/Translational Science (MS-CTS). Participants in TRACTS also receive oversight of course and research progress by the TRACTS Advisory Committee, pre-review of their grant applications, statistical support through the CTSI’s Biostatistics, Epidemiology and Research Design (BERD) program and opportunities for collaboration with other research scholars. TRACTS Scholars are allotted 20 hours per week dedicated time from their departments/divisions to pursue M.S. coursework and conduct the approved research study, and to attend other CTSI multidisciplinary workshops and seminars. They are expected to submit and publish at least two manuscripts based on the TRACTS research project by the end of year two, in addition to presentation at the annual CTSI Research Day. The Advisory Committee works with the scholar to identify the best research mentor team, to support and advise the scholar, oversee the scholar’s research efforts, and monitor progress in didactic coursework, publications and grant applications.

**UF Health Integrated Data Repository** The UF Health Integrated Data Repository (IDR) was created to serve as a common source of information to be used by clinicians, executives, researchers, and educators. The IDR enables new research discoveries as well as patient care quality and safety improvements through a continuous cycle of information flow between the clinical enterprise and research community. The IDR is a collection of disparate data organized in a manner that lends itself to understanding the relationships between data elements to answer questions. The UF Health IDR currently consists of a clinical data warehouse that aggregates data from the various clinical and administrative information systems, including the Epicare electronic medical record. The clinical data warehouse contains demographics, inpatient and outpatient clinical encounter data, diagnoses, procedures, lab results, medications, select nursing assessments, co-morbidity measures, and select perioperative anesthesia information system data. The IDR’s clinical data warehouse is HIPAA-compliant and can be accessed using i2b2, a web-based query and analysis tool. IDR staff offer cohort discovery and honest broker services to Investigators.

**UF Health Personalized Medicine Program** The UF Health Personalized Medicine Program (PMP), part of the CTSI, partners with health professionals and patients at UF Health and across the state to develop, implement, study, and refine methods that allow genetic information to be used routinely as part of patient care. The program’s initial focus is on pharmacogenetics. PMP is led by faculty from the UF College of Pharmacy and brings together a large and multidisciplinary team that provides complementary clinical, informatics, laboratory medicine, and administrative expertise required to implement genomic medicine. The program has launched three drug-gene implementations and performed clinical pharmacogenetic tests for more than 1400 patients. The Personalized Medicine Program is currently focused on expanding evidence-based genomic medicine to other inpatient and outpatient settings throughout Florida, leveraging existing OneFlorida partnerships.

**UF Research and Academic Center at Lake Nona** The UF Research and Academic Center at Lake Nona houses multidisciplinary teams of researchers, clinicians, teachers, and students with the goal of providing effective therapies and improving health for patients. Built in 2012, the 100K square foot facility has two functions: academic study and research.
The facility has several distinct areas. It houses a new UF College of Pharmacy campus, expanding the UF professional PharmD Program from 200 to 280 students over four years. It houses the College of Pharmacy’s Center for Pharmacometrics and Systems Pharmacology, which adapts sophisticated mathematical modeling and computer simulations to mimic clinical trials of new drugs. The Center for Pharmacometrics and Systems Pharmacology educates and trains doctoral students and post-doctoral fellows in the discipline of drug development and regulatory science.

Also housed in the facility is the College of Pharmacy’s Medication Therapy Management Communication and Care Center. This Center provides telephone-based communication service through experiential training in comprehensive medication reviews for Medicare patients and their health care providers. The facility houses the Institute for Therapeutic Innovation, which focuses on developing and testing new treatments and cures for a variety of infectious diseases caused by drug-resistant pathogens.

Clinical research facilities, including equipped exam rooms, specimen processing area, interview rooms, a conference room and office space for study staff and monitors are available in the Lake Nona facility. The Center’s close proximity to research facilities at Sanford Burnham and to other Orlando Healthcare entities fosters collaboration and allows Floridians from the surrounding Orlando area to take part in clinical and translational research studies.

**VIVO** VIVO is a scholarly networking and discovery tool that enables understanding and collaboration among all disciplines. VIVO represents scholarship using the VIVO-ISF ontology and its data is publicly available in Resource Description Framework (RDF), a World Wide Web Consortium (W3C) standard. Thirty-six CTSA institutions provide data using the VIVO data standard. In 2012, the CTSA network recommended all CTSA to provide data regarding their scholarship using the VIVO data standard. This was the first, and to date the only, network-wide recommendation. At UF, VIVO is automated to collect person contact and employment data from Human Resource Services, grant data from the Division of Sponsored Programs, papers and other publications from BibTeX exports from Thomson Reuters Web of Science, and teaching data from the Office of the University Registrar. Data is updated weekly. Individuals may sign on to VIVO using their GatorLink username and password to edit their profile information. The SPARQL query language is used to extract data for ad hoc reports, standardize website content and provide data for CTSI operations, including evaluation, governance, network science and training programs. VIVO provides a comprehensive view of the university and its scholarship. As of October 1, VIVO at UF contains information on 13,052 organizations, 182,913 people, 56,737 publications, 22,651 grants, 8,051 courses, and 87,268 course sections. Originating at Cornell, VIVO was further developed as the result of an NIH ARRA award (2009-2011) to UF and a consortium of six schools (Cornell, Weill Cornell Medical College, Indiana University, Washington University at St. Louis, Scripps Research Institute, and Ponce Medical School in Puerto Rico). VIVO is an open-source, sponsor-supported software project managed by Duraspaces, a not-for-profit corporation dedicated to the representation and presentation of the academic record. VIVO is now used by more than 100 organizations worldwide, including the USDA and the American Psychological Association.

**UF COLLEGES**

**College of Agricultural and Life Sciences** The College of Agricultural and Life Sciences (CALS) administers the academic degree programs of the UF Institute of Food and Agricultural Sciences (UF/IFAS). With 21 undergraduate majors, more than 50 areas of specialization, and 23 graduate majors, CALS is an educational leader in the areas of food, agriculture, natural resources, and life sciences. CALS' mission is to provide undergraduate and graduate students with high quality education that results in knowledge and skills for gainful employment and additional education, productive citizenship, and lifelong learning in the areas of food, agriculture, natural resources, and life sciences as they relate to human resources, the environment, individual communities, and a global society. CALS is one of the largest colleges of its kind in the nation, serving nearly 5K students in programs ranging from horticultural sciences to geomatics and resource economics. CALS has 597 state-funded faculty and 313 county-funded faculty in extension offices throughout Florida.

**College of the Arts** The UF College of the Arts, previously known as the College of Fine Arts, is one of the 16 colleges and more than 150 research centers and institutes at UF. The current College of the Arts evolved from the School of Architecture, which was established in 1925. In 1975 the previous College of Architecture and Fine Arts was divided into two colleges, the College of Architecture and the College of Fine Arts. Many programs, however, have flourished since the University's earliest days. The UF Band Program got its start in
1913, and the Men’s Glee Club was founded in 1907. The painting and drawing programs began in 1929 and became the basis for the School of Art and Art History. In May 2014, the college changed its name to the College of the Arts. In 2015 the college will celebrate its 40th anniversary.

The College of the Arts offers baccalaureate, master’s and PhD degree programs in its three schools, the School of Art and Art History, School of Music, and School of Theatre and Dance. The college is home to the Center for Arts in Medicine, Center for World Arts, Digital Worlds Institute, University Galleries, and the college program of the New World School of the Arts in Miami. More than 100 faculty members and approximately 1,200 students work together daily to engage, inspire, and create. The college achieves the university’s mission by training professionals and educating students as artists and scholars, while developing their critical thinking and inspiring a culture of curiosity and imagination. The college hosts more than 300 performances, exhibitions, and events each year. Faculty and students also exhibit and perform at other local, national, and international venues.

College of the Arts faculty members are active and productive researchers, scholars, and creative artists who engage in basic and applied research within the arts and across disciplines. Faculty research focuses on and occurs within the specific arts discipline and across sub-disciplines within their respective fields. Interdisciplinary and multidisciplinary research brings arts researchers together with colleagues in other fields to create new areas of study that bring the complementary strengths of the arts to those fields. In each of these processes, both traditional and unique arts methodologies inform and enhance research across disciplines, and the results of this work contribute significantly to strengthening the human condition and improving quality of life.

Faculty researchers disseminate their work in multiple ways — books, articles, conference presentations, recitals, exhibitions and productions — both in print and electronically. This combination of traditional and unique arts delivery systems is a dynamic component of arts research, allowing all individuals multiple access points to the results of research activity in the college.

**College of Dentistry** The College of Dentistry consists of nine departments. The college’s 120 faculty, who attract $10M in external grants and contracts for research per year, are housed in the 173,179 square foot dental tower building, which includes dental clinics, teaching facilities, offices, laboratories, and classrooms. Roughly 35K square feet of the dental tower is dedicated to research, with much of this space classified as wet laboratory space. More than 90 percent of preclinical instruction is done in the simulation laboratory, which now has 98 patient simulators. The college has 269 dental operatories chairs at its Gainesville location and more than 52,452 square feet dedicated to clinical operations. DMD clinical instruction also occurs in the nine-chair Oral Surgery Clinic, in the Pediatric Dental Clinic with six DMD student chairs, in the Endodontic Clinic with six DMD student chairs, and in the Orthodontics Clinic where there are 15 DMD student chairs available. College-owned clinics in Naples, Hialeah, and St. Petersburg have 20, 23, and 17 chairs, respectively. The college is home to the UF Health Periodontology and Prosthodontics Dental Center. This center, which houses 25 dental chairs and state-of-the-art surgical suites, represents the final step in consolidating all specialty clinics on the first floor, facilitating ease of patient access, and streamlining interdisciplinary care between dental specialties. In addition, students participate in clinical rotations in the department clinics of Oral & Maxillofacial Surgery, Orthodontics, and Pediatric Dentistry.

The College of Dentistry’s Dental Clinical Research Unit performs state-of-the-art clinical research in the field of oral care as well as collaborative research in all other areas of health care. The Dental Clinical Research Unit also assists with in vitro studies of antimicrobial compounds and susceptibility studies and test diagnostic methods and procedures.

**College of Design, Construction & Planning** The College of Design, Construction & Planning is engaged in a wide array of applied research. Focus areas include sustainable design and construction, including green infrastructure; evolving design and construction technologies; health and the built environment; transportation planning; planning for a balance in human and natural systems; and the creation, application, and dissemination of geospatial information

Much of the college’s research is conducted under the umbrella of 10 established research centers, the oldest of which is the Geoplan Center. Geoplan works with the Florida Department of Transportation (FDOT) to help streamline long-range transportation planning. Using an online tool for geospatial evaluation, Geoplan staff are able to evaluate alternative transportation corridors for environmental, fiscal, and cultural factors that would render an alternative transportation planning. For example, Geoplan works with FDOT to examine the potential impacts on
the state’s highway infrastructure from sea level rise. Geoplan’s Florida Geographic Data Library is a comprehensive collection of Florida geospatial data that is used by state agencies, academic institutions, and private consultants.

Other centers in the College of Design, Construction & Planning with robust project portfolios include the Center for Landscape Conservation, which focuses on ecological networks and reserve design; the Center for World Heritage Research and Stewardship, which is dedicated to the protection of significant structures, monuments, and landscapes; the Center for Advanced Construction Information Modeling, which promotes the use of 3-D modeling technologies in the construction industry; the Powell Center for Construction Environment, which focuses on sustainable construction, including net zero energy; and the Shimberg Center for Housing Studies, which maintains data on Florida’s housing stock and supports efforts to address the challenge of affordable housing in communities across the state.

College of Education  The College of Education (COE) consists of three schools, six research centers, and the P.K. Yonge Developmental Research School. Enrolling nearly 1,700 students on campus in 32 bachelor’s and advanced degree programs within nine academic specialties, and nearly 4K students in 161 online courses, 14 online degree programs, and six online certification programs, the college’s educator preparation programs have been accredited by the National Council for the Accreditation of Teacher Education since 1954. The college faculty members engage in innovative research and public scholarship that enhance student readiness and achievement, whole school improvement, and leadership development in all education professions.

The college’s Education Library is a branch library within the UF library system, which forms the largest information resource system in the state of Florida. The Education Library currently houses approximately 130K books and more than 11K journals, and maintains current subscriptions to more than 700 journals. An online computer catalog and interlibrary loan system allow access to materials from libraries around the state, as well as to ERIC and other databases. The college’s Office of E-learning, Technology, and Creative Services has full-time staff available to assist faculty with their research projects, including programmers, instructional designers, and graphic artists who can quickly and efficiently collaborate with project personnel to meet technology needs. The COE has ample space to support research projects and staff. These spaces are equipped with state-of-the-art computer equipment and are suitable for meetings and group work.

College of Engineering  The College of Engineering is the largest professional school, the second largest college, and one of the top three research units at UF. With eight departments and the Engineering School of Sustainable Infrastructure and Environment as well as more than 20 centers and institutes both within the college and across disciplines, the College of Engineering offers students many career choices as one of the largest and broadest colleges of engineering in the country. Among public institutions, the college ranks 23rd in the nation in graduate engineering programs, 20th in undergraduate engineering programs according to U.S. News & World Report, and continuously places in the top 10 nationally for total numbers of both MS and PhD degrees granted across a large and diverse student body with approximately 8,600 students, which is composed of 6K undergraduate students and 2,600 graduate students.

The college is home to more than 260 tenured or tenure-track faculty members who attract a total of $60M annually in extramural research awards and contracts. The college hosts a number of new interdisciplinary research centers and institutes including the Institute for Networked Autonomous Systems, the Institute for Cell Engineering and Regenerative Medicine, the Institute for Computational Engineering, the UF Transportation Institute, and the Center for Manufacturing Innovation. College of Engineering faculty members are also national leaders, translating the results of their research into the marketplace. Since 2009 the College of Engineering has produced 558 invention disclosures, 986 U.S. and foreign patent applications, 206 technology licenses and options, and 35 start-up companies.

The Major Analytical Instrumentation Center (MAIC), the Particle Analysis Instrumentation Center (PAIC), and the Nanoscale Research Facility (NRF) comprise the Research Service Centers (RSCs) in the College of Engineering. These are multiuser materials characterization, fabrication, and analysis facilities that provide service to all faculty and students at UF, research universities, and the industrial and commercial community. These facilities have provided teaching, training, and services for more than 30 years together and continue to be the largest and most successful hands-on, multiuser facilities at UF.

College of Health & Human Performance  The College of Health & Human Performance conducts research focused on assisting individuals, families, and communities in promoting health and preventing disease as well
as enhancing the quality of life of Floridians. The college’s three departments (Applied Physiology and Kinesiology; Health Education and Behavior; and Tourism, Recreation, and Sport Management) contribute to the goals of improving human health by investigating applied physiology and kinesiology; improving health behaviors and health status of individuals and communities through research, education, innovation, and collaboration; and understanding the psychosocial factors that lead individuals, families, and industry to value and benefit from tourism, recreation, parks, and sport.

The college houses three multidisciplinary research centers that facilitate research endeavors by undergraduate and graduate students, post-doctoral researchers, and faculty. Principal investigators in the Center for Exercise Science are pursuing questions about the cardiovascular system, skeletal muscle, heat stress, space flight, movement biomechanics, movement variability in the elderly, and human brain impairments that cause movement disorders. Faculty in the Center for Digital Health and Wellness are exploring ways to revolutionize health behavior and healthcare with information and communication technology. Members of the Eric Friedheim Tourism Institute pursue tourism, travel, and hospitality research questions focusing on the long term sustainability of Florida and global communities.

**College of Journalism and Communications**  The College of Journalism and Communication (CJC) is ranked in the top 10 for all communication disciplines taught at CJC, which include advertising, journalism, public relations and telecommunications as well as the science/health graduate track. The college is a home to several research programs focused on message dissemination, persuasion, and translation, and has several state-of-the-art facilities that support communication research.

CJC established the STEM-H Translational Communication Research Program as a strategic, university-wide preeminence initiative. The program aims to create a research partnership between the public, the communication process, and science/health investigators. Communication is vital to the STEM-H disciplines for translation and dissemination of consequential science and health knowledge to individuals and stakeholder groups. Needed communications research about these areas can generate understanding of how people come to know science and health and its associated benefits and risks and how people make informed decisions about science and technology areas that affect their health, security, and the environment.

The Innovation News Center (INC) is a real-world, working newsroom producing content for the UF’s seven broadcast and affiliated digital properties, including our PBS and NPR public media stations. The two-story, 14K square foot INC facilities include almost 100 seats for student reporters, producers, and editors, breakout rooms for team meetings, tablet publishing, television, and radio editing rooms, audio booths, and a mini-studio (or “live-shot area”) to create video content for broadcast and online streaming. The Summer Journalism Institute is a weeklong camp at the UF CJC for high school students. Started in the 1960s, the camp immerses the participants into the INC where they work with faculty and professionals on news stories and broadcasting on our multiple television and radio stations and WUFT.org.

The CJC Shared Research Lab comes equipped with digital recording devices and 22 research stations to provide the tools for conducting both quantitative and qualitative research. The college provides access to the web-based Qualtrics Research Suite, a comprehensive research system that can be used to design and conduct surveys, polls, and experimental studies.

The Agency is an integrated, strategic communications initiative that enables Advertising and Public Relations students to develop and test messages and communication campaigns by working in a professional environment with external customers. The Agency has more than 2K feet of dedicated space equipped with computer workstations, collaborative workrooms, and meeting space.

The Science Communications Academy offers scientists an opportunity to develop the core skills they need to explain the significance of their work to policymakers, journalists, and potential collaborators from other disciplines. Through a six workshop series, scientists learn to create compelling and visual presentations, engage the news media, and work with policymakers.

**College of Liberal Arts & Sciences**  The College of Liberal Arts & Sciences (CLAS) is one of the largest and among the first of the 16 colleges to be established at UF. CLAS forms the intellectual core of the University and is home to the humanities, the social and behavioral sciences, and the natural sciences and mathematics. The college's 600 faculty members are responsible for teaching the university’s core curriculum to more than 35K students each year. CLAS has more than 10K undergraduate students pursuing a variety of disciplines through its 42 majors and minors. Additionally, close to 2K graduate students pursue advanced degrees in the college and work with faculty to advance the frontiers of knowledge.
Faculty in CLAS rank among the best in the nation and have received a variety of national and international awards, including Guggenheim Fellowships, Senior Fulbright Awards, National Science Foundation Fellowships, Presidential Young Investigator Awards, and National Endowment for the Humanities Fellowships. They hold memberships in the National Academy of Science, the Nobel Prize Committees, the Swedish Royal Academy of Sciences, and the Royal Societies of London and Edinburgh. The college's external research funding profile CLAS amounts to $30M per year.

Scientists in the college are engaged in a wide array of world-class research efforts spanning diverse topics and fields. For example, UF physicists participated in the discovery of the Higgs particle using the Large Hadron Collider at CERN, and maintain a high profile involvement with the National High Magnetic Field Laboratory. Chemistry department research includes developing methods for the nanofabrication of the next generation of electronic devices and developing more sensitive techniques for diagnosing and treating cancer. CLAS biologists focus on the ecology, evolution, systematics, genetics, and molecular biology of plants and animals. Astronomers search for earth-like planets outside our solar system using UF’s share of the Gran Telescopio Canarias, the world’s largest telescope. Members of the mathematics department apply their modeling skills to issues such as reducing the wait times in hospital emergency rooms and controlling the effects of citrus greening on Florida’s agricultural industry. Researchers in geological sciences study the changes that have occurred over the past 4.6B years in order to meet the challenges the earth is experiencing today. Research efforts in the psychology department focus on human health and techniques to improve it.

Faculty in the humanities publish books with leading presses and in leading journals and have garnered grants from a number of prestigious foundations, as noted above. All of these examples provide ample evidence for the breadth and depth of the research enterprise in the College of Liberal Arts & Sciences.

**College of Medicine** The UF College of Medicine (COM), founded in 1956, encompasses 26 clinical and basic science departments staffed by 1,050 faculty on the Gainesville campus and 320 faculty on the UF Health Science Center’s urban campus in Jacksonville. The college attracts nearly $200M in external grants and contracts for research per year and is the leading educator of outstanding physicians, physician assistants, and biomedical scientists for the state of Florida. Through UF Health, COM physicians provide cutting-edge care to residents of Florida and patients around the world who travel to Gainesville and Jacksonville for specialized care.

More than 1,500 students, residents, and fellows receive education and training at the COM each year. In addition to the medical degree, the college offers a variety of educational opportunities, including the Interdisciplinary Program in Biomedical Sciences, which leads to a PhD or an MS degree, and joint programs for both MD and PhD degrees. Also part of the COM is the School of Physician Assistant Studies. The college plays an important role in the continuing education of resident physicians and fellows through its collaboration with UF Health.

Patient care occurs at two principal locations, Gainesville and Jacksonville, and at more than 40 clinical practices. Its clinical strengths are in cancer, neurosciences, aging, gene therapy, psychiatry, addiction medicine, transplantation, and children’s services. In Gainesville, patient care is provided by UF Health, the Malcom Randall Veterans Affairs Medical Center and several community healthcare sites and other affiliated hospitals in Florida. The UF Health Shands Hospitals serve a variety of inpatients, including those receiving diagnostic and therapeutic oncology care and emergency and trauma services. The UF Health Florida Proton Therapy Institute, located in Jacksonville, is one of only five proton therapy treatment centers in the U.S., delivering a highly precise and effective form of radiation to destroy tumors with little or no damage to adjacent healthy tissues.

The COM has attained national leadership in research related to the brain and spine, cancer, diabetes, drug design, genetics, and organ transplantation. Collectively, the faculty are responsible for nearly half of UF’s total extramural research awards. The college has more than 350K square feet of research laboratory space in more than 20 buildings on campus, including the Cancer & Genetics Research Complex (2006), one of the largest research buildings in Florida. The college is home to the CTSI, which operates with funding from the National Institutes of Health.

**College of Nursing** The College of Nursing (CON) is recognized nationally and internationally for innovative education, dynamic programs of research, and creative approaches to practice. Approximately 70 faculty members, the majority of whom are prepared at the doctoral level, are involved in regional/national research and in practice throughout the state. The CON graduates the largest number of baccalaureate-prepared RNs in the state and is consistently ranked in the top 10 percent of all baccalaureate and graduate degree-awarding
nursing schools in the nation. Currently the average GPA for BSN graduates is between 3.5 and 3.6, and 70 percent of these students pursue graduate education within three years of earning the BSN. The CON also offers, in conjunction with the UF Graduate School, a Doctor of Philosophy (PhD) degree with a major in nursing. CON enrollment currently consists of approximately 700 undergraduate students and 370 graduate students in three departments: Adult and Elderly Nursing; Health Care Environments and Systems; and Women's, Children's and Family Nursing. Nursing students have an opportunity to learn and work with students from other Health Science Center colleges in collaborative healthcare teams. The college maintains and participates in nursing and interdisciplinary clinics for women, children, adults, and elders in a variety of settings with special emphasis on medically underserved and rural areas.

The CON is located within the 173,133 square foot HPNP complex, which provides educational, administrative, and research space for the CON, the College of Public Health and Health Professions, and the College of Pharmacy. More than 1,500 square feet of research space are available in the CON, located in close proximity to the offices of the associate dean for research. A large conference room and space to house 10 research assistants complete the area. Additional space in the HSC is available to faculty with funded grants to house their research staff.

**College of Pharmacy** Founded in 1923, the College of Pharmacy (COP) consists of five clinical and basic science departments (Medicinal Chemistry, Pharmaceutics, Pharmacodynamics, Pharmaceutical Outcomes and Policy, and Pharmacotherapy and Translational Research) staffed by 96 faculty. The college’s research programs reside on two campuses in Gainesville and Orlando. The college attracts approximately $10M in external grants and contracts for research per year. The largest pharmacy educator in the state of Florida, the college is nationally and internationally recognized for its professional and graduate programs. As a UF Health college, the COP clinical faculty serve as a part of interprofessional teams in community health care clinics and at UF Health Shands Hospital for residents of Florida who travel to Gainesville and Jacksonville for specialized care. The college’s Medication Therapy Management Communication and Care Center serves more than 150K Medicare patients nationwide.

More than 1,600 students receive professional degree education and training leading to the doctor of pharmacy (PharmD) degree. The college offers graduate programs to more than 100 students leading to a PhD or an MS degree in one of five areas: medicinal chemistry; pharmaceutics/ pharmacometrics; pharmacoepidemiology/pharmacoeconomics; pharmacodynamics; and clinical pharmaceutical sciences/pharmacogenomics. The college also provides MS training in one of 11 online programs in specialized areas of pharmaceutical science to more than 800 students worldwide. Students in the online MS programs usually work in a clinical or applied science field while gaining their advanced education. The college also offers numerous continuing education programs for pharmacists, residents, and fellows.

Patient care occurs at UF Health Shands hospitals in Gainesville and Jacksonville and other clinical pharmacy locations around the state of Florida. Clinical strengths are in ambulatory care, diabetes, infectious disease, patient safety, and medication therapy management.

The college has 109K square feet of space for education, administration, and research in the UF Health Science Center in Gainesville and at the UF Research and Academic Center at the Lake Nona medical community in Orlando. Both the specialized and the multidisciplinary research space at these sites support nationally and internationally recognized research programs in drug discovery, drug development, pharmacokinetics/pharmacometrics, pharmacoepidemiology, and pharmacogenomics/personalized medicine.

Faculty from across campus conduct research within one of three active interdisciplinary research centers in the college, the Center for Pharmacogenomics (CPG), the Center for Natural Products Drug Discovery & Development (CNPD3), and the Center for Pharmacometrics and Systems Pharmacology (CPSP). The CPG is recognized for its translational research, teaching, and service focused on genetically guided drug therapy decision-making. The CPG also houses the UF Health genotyping core laboratory. The CNPD3 provides both drug discovery expertise and the infrastructure to screen for novel therapeutic targets and chemical entities that modulate target activity. The CPSP uses a systems biology approach to study drug activities, their targets, and clinical effects to support and advance translational research and improve the process of bringing new drugs to market for improved patient therapies, including personalized medicines.

**College of Public Health & Health Professions** The College of Public Health & Health Professions (PHHP) is one of the largest and most diversified health education institutes in the nation. Today, PHHP is one of six colleges that comprise the UF Health Science Center. The college has nine departments: Behavioral Science
and Community Health; Biostatistics; Clinical and Health Psychology; Environmental and Global Health; Epidemiology; Health Services Research, Management and Policy; Occupational Therapy; Physical Therapy; and Speech, Language and Hearing Sciences. The college offers a bachelor of health science, seven masters programs, eight doctoral programs, and two professional degree programs with 155 faculty teaching a total of 2,168 students. Additionally, the college’s research funding has more than doubled during the last decade, with nearly $20M in external grants and contracts for research per year. PHHP faculty work collaboratively with many investigators across UF and on research projects locally, nationally and globally on a diverse range of topics.

The PHHP's home is in the Health Professions, Nursing, and Pharmacy (HPNP) building, completed in 2003, and includes 11 classrooms, four lecture halls, one auditorium, and a distance learning room for a total of 7,783 square feet. The college also includes the PHHP Research Complex, which is located in the Dental Wing (Ground Floor) of UF Health and totals 15,690 square feet of dedicated research space.

PHHP has 452 affiliation agreements that allow students to participate in site visits and to be placed at various organizations to complete internships, clinical rotations, supervised research, and other practical experiences. The agreements include 147 with health departments, hospitals, health centers, and Veteran's Administration facilities, 275 with clinics and private practitioners, and 30 with other universities/educational institutions.

**College of Veterinary Medicine**  Florida's only veterinary college, the UF College of Veterinary Medicine (CVM) is presently home to 132 full-time and 13 part-time faculty, 390 DVM students, 44 residents, 12 interns, more than 120 PhD and MS students, 16 post-doctoral associates/fellows, and 276 staff members. Clinics, research space, offices, and teaching rooms in the college occupy a total of 352,808 square feet of space, including 71,760 of research space. The college attracts nearly $10M in external grants and contracts for research per year. The Veterinary Academic Building houses a large portion of the basic science faculty in CVM as well as a number of laboratory facilities, including BSL3 Research Laboratories. The college is organized into six functional and administrative units: College Administration; the Department of Large Animal Clinical Sciences; the Department of Infectious Diseases & Pathology; the Department of Physiological Sciences; the Department of Small Animal Clinical Sciences; and the UF Veterinary Hospitals.

CVM, fully accredited by the American Veterinary Medical Association Council on Education, offers a four-year DVM program and a joint DVM/MPH program in addition to masters and doctoral degrees in Veterinary Medical Sciences. The more than 2,400 graduates of its professional degree program are active throughout Florida, the United States, and overseas in areas ranging from in-depth scientific research to traditional small and large animal practice, zoological and aquatic medicine, public health, epidemiology, and the military. Through Veterinary Extension, a part of UF’s Institute of Food and Agricultural Sciences, CVM provides scientific knowledge and expertise to Florida residents on aquatic animals, equine research, beef and dairy cattle, and poultry. Additionally, the UF Large Animal Hospital and Small Animal Hospital offer cutting-edge veterinary medical services and facilities to the community.

**Levin College of Law**  The Levin College of Law, founded in 1909, offers students strong fundamentals and a diverse range of specializations and interdisciplinary options through the 70-plus courses and 15 to 20 seminars it offers each semester. In addition to the JD, the school offers: an LLM in taxation, SJD in taxation, and LLM in international taxation; LLM in environmental and land use law; and LLM in comparative law for foreign lawyers. The school encompasses centers for Governmental Responsibility, Children and Families, Criminal Justice, and Study of Race and Race Relations as well as the Institute for Dispute Resolution. Many of its 50-plus tenured/tenure-track faculty members have written treatises, casebooks, or major books used by law schools and practitioners throughout the nation as well as articles in law reviews and specialty journals.

State-of-the-art facilities include two three-story education buildings and the two-story Martin H. Levin Advocacy Center, which features a fully functional trial and appellate courtroom, audience gallery, and bench for seven judges. The Lawton Chiles Legal Information Center, one of the largest academic law libraries in the Southeast, offers comfortable study areas, reading and reference rooms, computer training labs, and multimedia workstations.

**Warrington College of Business Administration**  The Warrington College of Business Administration has six undergraduate majors, six minors, seven specialized master’s programs, five Ph.D. programs, and two doctorate degrees. The college has more than 100 faculty members across four departments conducting vital research in the fields of finance, information systems and operations management, management, and marketing. In addition to their teaching and research duties, Warrington scholars are also extremely active in
professional service. Our professors have served as reviewers, editors, and in leadership positions on the
torial boards of some of the world’s elite academic publications.

The college’s expansive research agenda also includes 11 research centers that are dedicated to producing
studies and examinations that provide thought leadership to academic, business and governmental
organizations globally. Warrington’s research centers include entrepreneurship, international business,
business communication, supply chain management, retail, ethics, human resources, accounting and auditing,
real estate, economics and teaching, and learning and assessment. The studies, conferences, workshops, and
academic and professional programs these centers produce make significant and tangible impacts in their
respective fields.

Warrington’s business education offers a blend of traditional classroom instruction with innovative experiential
learning opportunities, Warrington’s curriculum challenges students to think creatively and generate solutions.

**OTHER FACILITIES AND RESOURCES AFFILIATED WITH CTSI**

**Advanced Magnetic Resonance Imaging and Spectroscopy** Advanced Magnetic Resonance Imaging and
Spectroscopy (AMRIS) is a state-of-the-art nuclear magnetic resonance (NMR) facility located on the ground
floor of the McKnight Brain Institute at UF. AMRIS was developed in part through a grant from the Department
of Defense. The National High Magnetic Field Laboratory supports an External Users Program in AMRIS
through funds from the National Science Foundation. All AMRIS systems are available to UF researchers and
external academic and industrial scientists.

AMRIS currently offers users nine NMR spectrometer systems with different magnetic fields and configurations
for a full spectrum of magnetic resonance experiments including high resolution solution NMR, solid-state
NMR, microimaging of biomolecular systems and tissues, animal imaging, and human imaging. AMRIS has
nine professional staff members to assist users, maintain instrumentation, build new coils and probes, and help
with administration.

Several of the AMRIS instruments offer users unique capabilities: the 750 MHz wide-bore provides outstanding
high-field microimaging for excised tissues and small animals; the 11.1 T horizontal MRI is the largest field
strength magnet in the world with a 400 mm bore; the 600 MHz 1.0 and 1.5 mm HTS cryoprobes are the most
mass-sensitive NMR probes in the world for 1H and 13C detection, respectively, and are ideal for natural
products research; and the 3T human whole body has 32 channels for rapid parallel imaging and is the only
whole body instrument in the state of Florida dedicated to research. Most recently (2013) AMRIS added a 5T
Dynamic Nuclear Polarization (DNP) polarizer with helium cryostat. These systems support a broad range of
users with tasks from natural product identification to solid-state membrane protein structure determination to
cardiac studies in animals and humans to tracking stem cells and gene therapy in vivo to functional MRI in
humans.

**Animal Care Services** Animal Care Services (ACS) serves nearly 600 UF faculty and approximately 1,400
animal care and use protocols in various research and teaching programs. The UF animal care program has
been continuously accredited by the Association for the Assessment and Accreditation of Laboratory Animal
Care International since 1966 and is registered with the United States Department of Agriculture as a research
site. ACS manages 12 animal housing facilities totaling approximately 200K square feet that include
environments ranging from ABLSL3 to rodent barriers, which are essential to the development and
maintenance of unHarique transgenic rodents and the conduct of experimental protocols.

The housed species range from mice and other rodent species to large animals such as pigs, sheep, horses,
cattle, and nonhuman primates. The ACS has a veterinary staff that consists of eight board-certified
veterinarians and ten veterinary technicians primarily involved in providing or supervising veterinary care,
protocol review, surgical services, pathology services, diagnostic laboratory services, training of investigators,
and investigator staff and compliance. ACS has a total staff of approximately 130 employees who provide daily
animal husbandry and veterinary care.

**Bureau of Economic and Business Research** Founded in 1929, the Bureau of Economic and Business
Research (BEBR) is an applied research center in the UF Warrington College of Business Administration. Its
primary missions are to produce, collect, and tabulate economic and demographic data for Florida and its local
areas; conduct economic, demographic, and public policy research on topics important to the state of Florida;
and distribute data and research findings throughout the state and the nation. BEBR seeks to conduct
academically sound research that is directly relevant to public and private decision makers in Florida.

BEBR plays a number of roles within the state, the college, and the university. It conducts research that helps decision makers understand Florida's rapidly changing economic and demographic climate. In addition to BEBR's 4 faculty and 9 staff members, BEBR provides employment and training for numerous graduate students and more than 300 undergraduate students and part-time employees each year. It generates revenues by obtaining research contracts and grants and by selling data and publications. It creates favorable publicity for the college and the University through its publications, presentations, reference services, and contributions to public policy. Its staff members teach several courses each year. BEBR activities thus fall within the University's traditional functions of teaching, research, and service, but the impact of those activities spreads far beyond campus boundaries.

BEBR occupies 9,703 square feet in two adjacent suites. The facilities house staff offices, a 93-station telephone survey lab and an open collaboration work bench with computers.

**Cardiovascular Cell Therapy Center** The UF Cardiovascular Cell Therapy Center is a collaborative effort of basic and clinical researchers from the Health Science Center who are dedicated to adult stem cell research in order to improve the outcome of patients with diseases of the heart and cardiovascular system. This collaborative team is also part of the Cardiovascular Cell Therapy Network and has been sponsored and funded by the National Heart, Lung, and Blood Institute of the National Institutes of Health since 2006. This network is composed of physicians, scientists and support staff from institutes and universities across the country, including the Minneapolis Heart Institute Foundation, the University of Minnesota, the Texas Heart Institute Stem Cell Center, the University of Louisville, the Vascular and Cardiac Center for Adult Stem Cell Therapy, the UMIami and Stanford University.

**Cell & Tissue Analysis Core** The McKnight Brain Institute's Cell & Tissue Analysis Core (CTAC) consists of two facilities that provide the UF research community with a wide array of imaging modalities as well as basic histology equipment for tissue sample preparation. The CTAC Imaging facility maintains instrumentation for both in vitro and in vivo imaging experiments.

Microscopes for in vitro imaging include laser scanning and spinning disk confocal systems, an automated live-cell time-lapse and tile-mapping system, and standard wide field systems in both inverted and upright formats for fluorescent, bright field, and H&E projects. Instrumentation for in vivo experiments includes high resolution ultrasound, preclinical bioluminescent and fluorescent imaging, and an intra-vital laser scanning fluorescent microscope.

The imaging facility also has software available for image deconvolution, quantification, and 3-D rendering. The CTAC Histology Resource Lab provides researchers with access to cryostats, microtomes, microwave processing, paraffin embedding, laser capture micro-dissection, and other tissue-processing equipment. CTAC's skilled technical staff is available to train new users, assist, or operate each piece of equipment.

**Center of Excellence for Regenerative Health Biotechnology** Established in 2003 with a launch of operations in 2006, the UF's Center of Excellence for Regenerative Health Biotechnology (UF CERHB) is a biomedical translational research support center with the mission to stimulate promising research leading to commercialization of technologies that will create new companies and high-wage jobs, and develop the workforce talent to support the bioscience industry growth. UF CERHB functions at the intersection of academia and industry and is proximal to the cluster of biotechnology companies in the Gainesville/Alachua area. The center provides expertise, training programs, and biologics manufacturing services to the biotechnology industry and to biomedical research institutions.

One Innovation Drive is a 24K square foot building with dedicated biomedical product manufacturing and testing operation for therapeutic proteins (enzymes, antibodies, hormones), vaccines, gene transfer vectors, and cell banks and cell therapies using mammalian culture systems. This contract manufacturing operation (Florida Biologix) supports phase I and phase II human clinical trials from industry and academic clients requiring FDA and EMEA compliant manufacturing of their investigational drugs. Client sponsors currently include Florida companies, multi-national and foreign companies, and domestic private and public companies.

Two Innovation Drive is a 23K square foot building which houses the UF CERHB Education and Training Center (Biotility) and includes classrooms, conference areas, a cleanroom simulator, and wet labs outfitted with state-of-the-art equipment. Proximity to Florida's northeast bioindustry cluster facilitates student internships, incumbent employee training and retraining, pre-employment training, and participation of industry leaders as
teachers. Certificate short courses that integrate industry concepts and skills into traditional biomedical research are offered to undergraduate and graduate students, researchers and faculty, and companies throughout the state. Topics of focus include product and process development, biomanufacturing processes, analytical methods, quality systems, and regulatory compliance. Faculty also teach graduate level courses at the Education and Training Center as part of the UF College of Medicine master’s program in translational biotechnology. Due to Biotility’s commitment to preparing a pipeline of students for emerging industry needs, the U.S. Department of Education recognized Biotility for the development of Florida’s secondary program in industrial biotechnology, teacher training, and Florida’s industry-recognized “Biotechnician Assistant” credential.

**Center for Health Equity and Quality Research**  The Center for Health Equity and Quality Research (CHEQR) is an important research resource for the UF Community Based Participatory Research. CHEQR core faculty include a MD/MPH with a background in pediatrics, preventive medicine, and health services research, a cardiologist/epidemiologist, a PhD level biostatistician, five PhD researchers with training in health education and evaluation research, health services and outcomes research, and mental health services research, two master’s level biostatisticians, and six research coordinators. CHEQR faculty and staff are expert in the use of a wide range of research methods including community evaluation research, community-based participatory research, quality of care and outcomes research, clinical trials, and translational research. CHEQR provides the research infrastructure for UF Health Jacksonville by providing research design and analysis consultation services to faculty, residents and fellows, including help with IRB preparation and submission, development of protocols, grant development, data collection, data analysis, and report generation; assisting UF faculty in the development of research teams through collaborations with investigators from UF Gainesville and other institutions; providing data management and analytic support to quality management initiatives for the enterprise; providing education to faculty, residents, and fellows on biostatistics, research design, and epidemiology through annual lecture series and online courses; and providing mentoring on research and project management support for fellows to help develop the next generation of faculty at UF Health.

CHEQR is housed at the Jacksonville campus and occupies more than 2,300 square feet of office space. CHEQR currently has statistical software, robust internet medical library search capacity and access to electronic journals. Other data resources include Research Electronic Data Capture (REDCap), which is an internet-based data collection tool that can capture data into an IRB-approved secure system for surveys and longitudinal information-gathering.

**Center for Movement Disorders and Neurorestoration**  UF founded the Center for Movement Disorders and Neurorestoration in 2002 with the vision of creating a world class clinical research center to provide a single destination for patients, families, doctors, and leading edge scientists. The clinical research center has 13K square feet of dedicated space on the fourth floor of the UF Orthopedics and Sports Medicine Institute. The space for movement disorders and neurorestoration includes 21 dedicated patient exam rooms as well as tailored space for clinical trials, research, telemedicine, and one of the world’s largest movement-disorders databases with 8,200 enrolled patients.

The center possesses strengths in movement disorders neurology, neurosurgery, neuropsychology, psychophysiology, imaging (MRI, fMRI and others), technology development, psychiatry, biomechanics, PT, OT, and speech/swallowing. The movement disorders group has collaborative research projects with 40 faculty from more than 10 UF departments. The deep brain stimulation (DBS) program is one of the most productive and published in the country and has a track record of significant NIH funding.

The Center for Movement Disorders and Neurorestoration research laboratory occupies 1K square feet of space dedicated to clinical research, specifically deep brain stimulation (DBS) physiology research. Laboratories are equipped with several private rooms for study visits, and the center has access to a soundproof room for the administration of testing to prevent outside physiological interference. The laboratory houses an SQL server dedicated to the movement disorders database. The laboratory has a full-time data manager and a scannable data entry system. The laboratory also houses a Sun microsystems computer networked to the operating room which can be used for CT-MRI fusions, target planning and discussion, and postoperative lead locations. The space is also equipped with areas for full physical therapy, occupational therapy, speech therapy, and convenient in-building access to an MRI and swallow suite.

**Center for Precollegiate Education and Training**  Since 1995, the Center for Precollegiate Education and Training (CPET) has involved hundreds of faculty in offering content-rich, laboratory-based, professional
development programs for secondary school teachers coupled with school-year follow up. CPET collaborates annually with more than 300 faculty volunteers and hundreds of educators from around the state of Florida. CPET currently assists more than 30 researchers with the design and implementation of specific activities to broaden the impacts of their individual grants or pending proposals. CPET’s programs incorporate bridging activities that include teachers, researchers, and industry professionals in preparing and delivering effectual science education and career investigation from middle school through graduate school. Its instruction incorporates multiple research-based and novel teaching/learning strategies and is aligned with national and state education standards. CPET extensively interacts with graduate students across campus and actively solicits, coordinates, and oversees their voluntary or for-credit participation in precollege programs.

CPET programs are designed to expand the content knowledge, skills, resources, networking, and enthusiasm of teachers and to reengage them with the university community. Newly generated and published curricular materials, methods and modules, and increased involvement of teachers and their students in school-site, inter-school, and university campus research and career-related activities are used to measure success. Outcomes include rich curricula related to research and aligned with education standards that will be shared face-to-face and online as well as successful dissemination of UF research and recruitment of new “gators” and future STEM and health professionals. Outcomes also include increased funding and sustainability through leveraging for precollege education; broader impacts for research; exposure to STEM academic, health, and industrial careers (pipelines); and a growing culture of interest and experience in research teaching, outreach, and associated professional development in mentoring and science communication for graduate students and their research mentors.

Center for Translational Research in Neurodegenerative Disease  The Center for Translational Research in Neurodegenerative Disease (CTRND) occupies the entire fourth floor (10K ft2 of laboratory and 2100 ft2 of office space) of the Biomedical Sciences Building (163K ft2 total); a research facility which opened in November 2009. The laboratory is designed as a typical molecular biology or biochemistry laboratory with waist height benches.

The CTRND is well equipped, with more and newer equipment planned for purchase. There are six cell culture suites, including one dedicated to AAV production, each of which contains at least one biological safety cabinet and two incubators. There are several micro-centrifuges of varying capacities and capabilities, two super speed centrifuges, two floor ultracentrifuges, and three tabletop ultracentrifuges housed within the CTRND. The center houses several light microscopes; both upright and inverted, some with fluorescent capability, as well as a video microscope with both bright field and false color fluorescence. Additionally, the CTRND has both Aperio bright field and Aperio fluorescent digital slide scanners along with their associated analysis and storage server on site and operational. The center also has several plate readers, a plate washer, multiple thermal cyclers of PCR, and a Q-PCR machine. The CTRND is currently creating and equipping a histopathology suite with multiple cryostats, both sliding and rotary microtomes, paraffin embedding station, and an automatic tissue processor. Additional equipment purchases being evaluated for the histopathology suite include both standard and immunohistochemistry autostainers, and possibly a cover slipper and slide printer/labeler.

THE CTRND runs a brain bank which currently houses ~200 neuropathologically characterized brains with ongoing addition of ~20 brains per year. Tissue, both frozen and paraffin embedded, is available to all University investigators with proper regulatory approvals.

The CTRND Animal Facility is a state-of-the-art SPF rodent facility (~10K ft2) on the first floor of the BMS building, operated by University of Florida Animal Care Services (ACS). In addition it has ~1,500 square feet of space within the adjacent Communicore building for behavioral studies. It houses the equipment necessary for common motor and cognitive assessments of mice and rats.

The CTRND is well equipped with networked computers and servers to support the digital image analysis.

Child Health Research Institute  UF established the Child Health Research Institute (CHRI in 2006 to provide the environment necessary to focus on and develop a wide variety of unique research concepts and to support pilot research activities of faculty to obtain data necessary to submit research proposals to outside agencies. The CHRI creates support infrastructure and fosters collaboration between investigators and teams from various departmental specialty divisions, the College of Medicine departments, the Health Science Center colleges and the main campus departments. The institute also supports pediatric and pediatric sub-specialty fellows and residents during their required research rotation.
The institute was integral to establishing pre-eminent pediatric translational research programs with NIH-funded investigators, creating synergy with the Cancer Center, Brain Institute, Genetics Institute, Diabetes Research Center and Powell Gene Therapy Center. The institute fills an infrastructural gap, providing support for collaborative research across divisions of the Department of Pediatrics and Health Science Center, fostering interactions and collaborations among physicians, physician/scientists and basic scientists on campus.

**Click Commerce**  
UF implemented Huron’s Click Commerce IRB module for processing and managing human subject research submissions. UF’s implementation of this interactive web-based platform facilitates four major benefits: integration with other research units, in-line education, enhanced compliance, and improved efficiency to its human subject research enterprise. UF’s Click system integrates data capture, education, and real-time parallel review for multiple research related offices (e.g. billing compliance, radiation review, etc.) beyond just the IRB. Adaptive submission forms simplify the process for researchers and serve as a research enterprise roadmap by targeting instructions for relevant requirements. Facilitating navigation of the UF research enterprise maximizes researcher efficiency and improves compliance with all applicable requirements. Robust, integrated validations improve submission quality, thereby reducing submission rejections as well as insuring compliance oversight units comply with all applicable regulatory requirements.

**Clinical Research Network**  
The FSU College of Medicine Clinical Research Network (CRN) is a statewide, collaborative research network of faculty, community-based healthcare professionals and researchers that supports clinical and translational research. The Clinical Research Network serves many purposes. It enhances and promotes research collaboration and strengthens partnerships between multidisciplinary professionals who work with patients in the community via a formalized, structured, and integrated network. The CRN also it builds capacity for community-based research through education, collaboration and access to diverse and underserved patient populations, resulting in efficient dissemination and translation of findings to impact clinical practice. The existent infrastructure of regional sites across Florida allows immediate access to more than 2M Floridian patients from across the spectrum of health and illness, gender, age, and socioeconomic status, residing in rural, suburban, and urban communities.

**Department of Biostatistics**  
The Department of Biostatistics is dual-governed by the colleges of Public Health and Health Professions and Medicine and is primarily located in the Clinical and Translational Research Building (CTRB) where it occupies 6,700 square feet. The department has a secondary campus location in Dauer Hall, in the Center for Statistical and Quantitative Infections Diseases (CSQUID). In addition, 5,605 square feet of leased off-campus space houses personnel from the Children’s Oncology Group (COG). The department currently has 16 faculty members assisted by six full-time staff members who provide the academic and departmental functions. The department has two “smart” conference rooms, including a large digital flat-screen, a web-linked computer and conference phone as well as collaboration areas for informal research collaboration meetings.

The Department of Biostatistics offers three degree programs: the Master of Public Health Program (Biostatistics concentration); the Master of Science in Biostatistics Program; and the Doctor of Philosophy in Biostatistics Program. Faculty members are also dedicated to performing cutting-edge theoretical and applied research. Areas of expertise include clinical trials and epidemiology, study design, survey methodology, decision theory, generalized linear models, longitudinal data analysis, survival analysis, structural equation models, and diagnostic testing. Department faculty provide scholarship in biostatistics and partnership in research for colleges across UF and worldwide. They are widely published in academic journals and well-funded by numerous sponsors such as the National Institutes of Health, the St. Baldrick’s Foundation, Leukemia & Lymphoma Society, and the Department of Veterans Affairs.

**Department of Epidemiology**  
The Department of Epidemiology, formed in 2011, is dual-governed by the colleges of Public Health and Health Professions and Medicine. Four full-time staff members provide the academic and departmental functions alongside 12 full-time and five part-time faculty. Located in the new state-of-the-art Clinical and Translational Research Building, the department occupies 6,700 square feet of the fourth floor. HealthStreet, the community engagement arm of the CTSI, is also part of the Department of Epidemiology.

The department offers four academic programs, including a Master of Science in Epidemiology and a Certificate in Psychiatric Epidemiology. The epidemiology concentration in the Master of Public Health Program is typically the largest cohort within the program, and the PhD in Epidemiology Program is rapidly growing, now with eight graduates. The department is also home to two training programs: a National Institute
on Drug Abuse T32, UF Substance Abuse Training Center in Public Health, currently in its first year; and a Fogarty International Center D43, Indo-US Training in Chronic Non-Communicable Disorders and Diseases Across the Lifespan, with ten past and current trainees from India. The department is also home to the Southern HIV and Alcohol Research Consortium, which provides research infrastructure, training, and mentoring to improve health outcomes and reduce HIV transmission among the diverse range of populations affected by alcohol and HIV infection in the Southeastern United States.

Faculty are active in research, garnering about $4M in extramural funding yearly. Fields of expertise include community engaged research, public health surveillance, global health, methodology, healthcare safety and quality, violence and victimization, and areas within epidemiology such as psychiatric, behavioral, cancer, cardiovascular, environmental, and infectious disease. Epidemiology faculty engage in numerous collaborations throughout UF and across the country.

Department of Health Outcomes & Policy  The UF Department of Health Outcomes and Policy (HOP) is located in two on-campus buildings. The first is the 1329 Building, which neighbors UF Health Cancer Hospital and is directly across the street from the College of Medicine and UF Health Shands Hospital. The building is a modern research office space. The offices for the department’s faculty and professional staff are located in a convenient cluster on the 5th floor, including conference space to foster collaboration. The second is the new Clinical and Translational Research Building (CTRB). The CTRB serves as the headquarters for clinical and translational science at the UF and in the state. The building houses a range of clinical and health services research faculty, many of whom have extensive expertise in the area of children’s health, quality of care, and health outcomes.

The department’s 17 faculty members provide leadership in prevention science, health promotion, policy evaluation research, health disparities, and health outcomes studies. Areas of focus include health care outcomes and preventive interventions for low-income children and adolescents, risk behavior reduction, alcohol and drug abuse prevention, community intervention trials, community-engaged research, health care quality and outcomes for disadvantaged populations, cancer outcomes including health promotion related to the prevention and early detection of cancer and cancer survivorship, and health care economics and delivery system factors related to the quality and outcomes of cancer care. The 17 full time faculty members have joint appointments with the HOP and Institute for Child Health Policy (ICHP). There are also more than 60 professional and support staff. The extramural funding portfolio in HOP and ICHP is diverse and includes current funding from the National Institutes of Health, the Robert Wood Johnson Foundation, Health Resources and Services Administration – Maternal and Child Health Bureau, State of Florida, State of Texas and the National Cancer Institute. The current annual extramural funding is approximately $18M annually.

Department of Pediatrics  The UF Department of Pediatrics serves pediatric patients and conducts both laboratory and clinical research. State-of-the-art facilities and equipment coupled with distinguished faculty foster a collaborative and multidisciplinary patient care and research environment. With approximately 150 faculty members, the Department of Pediatrics is one of the largest departments within the UF College of Medicine. Extramural research funding for the Department of Pediatrics totals $10M annually. The Children’s Miracle Network provides an additional $1.25M to support the research efforts of the department. Departmental research is conducted in more than 15K square feet of dedicated research space within the Academic Research Building and the Cancer and Genetic Research Complex; both buildings are located in the UF’s Health Science Center. The research facilities are fully outfitted with the equipment necessary to conduct cutting-edge research.

The Department of Pediatrics is home to the Powell Gene Therapy Center (PGTC) as well as the Family Data Center (FDC). The FDC has a repository of historical data and operates statewide data collection systems. The range of work includes data analysis; statistical modeling and reporting; data warehousing; data merging (deterministic and probabilistic); data cleaning and profiling; database and data dictionary creation; development, hosting, maintenance, and operation of web-based data collection systems; and manual data entry. Data are linked, stored, and managed in a data warehouse with multiple levels of security. The FDC’s warehouse contains maternal and child health records from pregnancy through early childhood and education records from preschool through high school. Warehouse databases include Vital Statistics records, Healthy Start prenatal screening/service records, WIC, records of the Childhood Lead Poisoning Surveillance system, and the Florida Birth Defects Registry (Department of Health); hospital discharge and Medicaid eligibility/claims records (Agency for Health Care Administration); student course loads, grades, standardized test results, attendance, and behavior referrals (Department of Education).
The Department of Pediatrics is affiliated with UF Health, offering pediatric services at multiple sites in North Central Florida. Under the guidance of faculty, these sites also serve as the primary training locations for UF medical students and residents. The UF faculty physicians provide services in more than 40 satellite practices managed by Faculty Group Practice/UF Physicians throughout North Florida. Notable locations where pediatrics services are offered include UF Health Shands Children’s Hospital and UF Health Pediatric Specialties Clinic.

**Diabetes Institute**  The Diabetes Institute includes more than 100 investigators from multiple College of Medicine departments as well as investigators from the UF colleges of Engineering, Pharmacy, and Nursing, IFAS, the Institute on Aging, and the Genetics Institute. All are active collaborators and contribute to an atmosphere conducive to and supportive of comprehensive diabetes research. UF has led multiple studies on the pathogenesis and natural history of Type 1 diabetes, which involved the analysis of tens of thousands of individuals. UF has stored serum, plasma, and/or DNA samples (as well as associated clinical laboratory data) from more than 75K individuals (i.e., type 1 diabetes patients, their relatives, persons with other autoimmune disorders, healthy controls) throughout the U.S. as well as developed relationships with lay organizations (i.e., ADA, JDRF, Children with Diabetes) in order to aid investigators in terms of subject recruitment. UF serves as both the lead Administrative Unit and the Organ Procurement and Processing Core for the JDRF-funded Network for Pancreatic Organ donors with Diabetes (nPOD) program. It is the world’s largest repository of whole pancreata and lymphoid tissues from subjects with Type 1 diabetes, persons at increased risk for the disease, control subjects across a variety of ages, and those with other pancreatic disorders relevant to address questions about Type 1 diabetes.

The core research facilities for Type 1 and Type 2 diabetes measure in excess of 50K square feet, including modern laboratories. More than 20K square feet of laboratory space within the Biomedical Sciences Building is dedicated to molecular biology, immunology, and pathology core facilities. Equipment operated and owned by the Diabetes Institute include thermocycler, flow cytometers, scintillation and chemiluminescence counter gamma counter, ELISA readers, cell sorter, Coulter counter, photomicroscope, biosafety cabinets, incubators, centrifuges, automated cell harvester, DNA, RNA and protein purification system, and a qPCR system. In addition, the Diabetes Institute has access to two different confocal microscopes as well as a laser capture microscopy unit.

**Electron Microscopy Core**  The Electron Microscopy Core (EM Core) occupies approximately 1,800 square feet in the basement of the UF Academic Research Building. The facility is part of the Department of Medicine, but it also provides access, assistance, and services to researchers in other UF colleges as well as researchers outside of UF. The mission of the EM Core is fourfold: to provide investigators with access to instruments necessary for ultrastructural research; to teach faculty, staff, and students methods in ultrastructural research; to provide technical services; and to consult with faculty, staff, and students on projects and advise them regarding possible approaches to their research questions involving ultrastructural research.

The EM Core houses a transmission electron microscope and support equipment for light and electron microscopy sample preparation and image processing, plastic polymerization, cold processing, and vibratome sectioning, light microscopy sample processing, sample storage, and digital light microscopy. It also houses all necessary support equipment and technical expertise for ultrastructural morphologic, morphometric, and immunolocalization research. In addition to standard laboratory equipment and computers, the support equipment includes a Leica DM2000 microscope, a Nikon Labophot-2 microscope, four ultramicrotomes, a EM TP automatic tissue processor, fume hood for TEM tissue processing, microtome for sectioning polyester wax and paraffin embedded samples, two Lancer Vibratome sectioning systems for preembedding immunolocalization studies, a Pelco BiowavePro laboratory grade microwave with temperature regulated by a Pelco SteadyTempPro for microwave-assisted immunohistochemistry, antigen retrieval, and tissue processing; a cold room, and a Leica AFS automated freeze substitution unit for EM tissue processing at cold temperatures.

**Emerging Pathogens Institute**  The Emerging Pathogens Institute (EPI), created in 2006, provides a research environment to facilitate interdisciplinary studies of emergence and control of human, animal and plant pathogens. Major areas of research include Vector-borne diseases, influenza, tuberculosis, enteric and foodborne illnesses, plant pathogens and antibiotic resistance. In 2010 EPI is housed in an 88K square foot research building dedicated for institute use. The building includes 16 BSL3 laboratory modules as well as extensive BSL2 space and space for biomathematics; it has 50 faculty offices, 150 spaces for graduate
students and post-doctoral fellows, multiple conference rooms (including a 70-seat seminar room), and a large administrative suite. The building is immediately adjacent to the UF Genetics Institute and the UF Cancer Center. The Genetics Institute houses the Interdisciplinary Center for Biomedical Research, which includes substantial high-throughput sequencing capacity as well as the University proteomics laboratories and associated bioinformatics faculty and staff. The EPI building is connected directly to the campus High Performance Computing Laboratories, permitting immediate utilization of their high volume/high speed capabilities.

**Florida Innovation Hub**  The Florida Innovation Hub at UF is a 50K square foot, multiuse incubator that is currently home to over two dozen startups. Its mission is to provide an innovation ecosystem for connecting all the elements critical to creating and supporting technology-based companies. It is one of the only incubators in the nation to house a leading university technology transfer office, numerous service providers, and other partner organizations that nurture high-tech companies. It was built with an $8.2M grant from the Economic Development Administration and a $5M match from UF. It opened its doors in October 2011 and has already nurtured the creation of more than 400 jobs. It is located in Innovation Square, a unique 24/7 live, work, and play community located just blocks from campus and blocks from downtown Gainesville.

**Florida Neonatal Neurologic Network**  The Florida Neonatal Neurologic Network (FN3) is a long-term collaboration between Level III facilities in North and Central Florida designed to improve the outcome of babies with hypoxic-ischemic encephalopathy (HIE). A single care center cannot perform this research due to the small number of patients treated per year. Therefore, a collaborative network has been developed to impact outcomes. UF Health Shands Hospital serves as the hub. FN3 currently has a standardized hypothermia protocol with the same entry criteria, standardized systemic supportive care protocols, a centralized data repository for capturing patient demographics (REDCap), standardized MRI result reporting, a standardized developmental follow-up time line, and a serum sample repository located at UF Health. FN3 is reducing confounding variables for studying babies with HIE and improve outcomes by standardizing practices among the centers. FN3 currently consists of nine Level III NICUs in North and Central Florida including Gainesville (UF Health Shands), Tampa (Tampa General Hospital-USF, St. Joseph’s Hospital), Jacksonville (UF Health Shands – Jacksonville and Baptist-Wolfson Children’s Hospital), Orlando (Florida Hospital), Tallahassee (Tallahassee Memorial), Gulf Coast (Panama City), and Sacred Heart (Pensacola). The network has active on-line teaching, one annual meeting, and quarterly conference calls.

**Harrell Medical Education Building**  The Harrell Medical Education Building is a 94K square foot, four-story facility that will be the new home of medical student and physician assistant student education. The building is located in close proximity to the UF Health Hospital and to the Health Science building. It will feature state-of-the-art experiential learning theaters and facilitate the collaborative education of health sciences students at the UF College of Medicine. The building will be substantially completed by July 2015.

**HCV-TARGET**  Recognizing the issues and risks associated with the rapidly evolving HCV treatment landscape, in 2011 investigators at UF and University of North Carolina jointly established a large, real-world treatment registry, HCV-TARGET. HCV-TARGET is rooted in the infrastructure and collaborative network of the NIH Clinical and Translational Science Award (CTSA) and includes 27 CTSA-supported institutions among its participating academic (38 sites) and community (15 sites) centers in the U.S., Puerto Rico, Canada, and Europe. The network has grown into extensive partnership between academic and community centers, multiple pharmaceutical industry collaborators, HCV community advocate representatives and the FDA, all of whom share in common aims for data use and analysis. The HCV-TARGET Clinical Coordinating Center (CCC) is housed at UF (PI: David R. Nelson, M.D.) and Data Coordinating Center (DCC) at the University of North Carolina at Chapel Hill. UF has devoted staff resources, separate work space in the Clinical and Translational Research Building, and equipment to support HCV-TARGET CCC operations for managerial, contractual, fiscal, data entry, regulatory, protocol, and administrative oversight. This includes a full-time project manager and part-time regulatory director, both experienced in HCV treatment and clinical trial administration, a single contract negotiator from the UF Contracts and Grants office to negotiate all funding, collaborative, and sub-site agreements, and a 12-member team of data abstractors. DCC resources include three full-time data monitors, a data manager and statistical computation specialist, and weekly statistical and epidemiological consultation from two senior faculty members. Through these collaborative teams, HCV-TARGET developed standardized, centralized chart data abstraction methods coupled with risk-based data monitoring to increase the efficiency and quality of an observational registry cohort study while also minimizing costs typically associated with performing post-marketing clinical research. The network hosts CFR 21 Part 11 compliant REDCap databases with MEDRA adverse event and WHO drug dictionary coding standardization. The database is also CDISC
compliant, allowing the data to be shared directly with the FDA for analyses around safety and efficacy as part of a formal MOU (#225-13-0012) executed in 2013. This efficient infrastructure has enrolled more than 5K patients, generated greater than $30M in funding, is being leveraged for a PCORI pragmatic HCV trial, and has been utilized by industry partners for its value.

Health Science Center Library  The UF Health Science Center (HSC) Libraries are active partners in the education, research, training, and clinical needs of the HSC colleges, centers, and institutes, UF and the state. The HSC Libraries include two facilities – the main library on the Gainesville campus and the Borland Health Sciences Library on the Jacksonville campus – and are affiliated with the College of Veterinary Medicine Education Center Reading Room and UF Health Archives. The main HSC Library in Gainesville, founded in 1956 along with the College of Medicine, is a 55K square foot, technology-enhanced facility whose users may access 115 publicly available computers on all three floors of the library, including 19 big screen monitors. Free wireless access is available throughout the library, and patrons not affiliated with UF may request temporary access. In addition, seating and study space accommodating up to 720 patrons is available across three floors, including 95 seats in 32 study rooms (18 individual and 14 small group study) and 100 seats in the 24/7 Blue Room Study Area. The Gainesville Library is open an average of 97.5 hours per week and averages 32,168 visitors per month. Reference assistance and search help is provided at the Information Desk.

Library services include reference assistance, course-integrated library instruction, circulation, document delivery, Interlibrary loan, photocopy services, course reserves, lockers, and study rooms. Computer access to electronic databases, journals, and catalogs is available onsite and remotely to authorized users. Since 1999, the HSC Libraries have operated a Liaison Librarian program to facilitate partnerships with academic faculty and programs by assigning each HSC college or department a dedicated librarian who works closely with its faculty, staff, and students.

The HSC Libraries’ collection includes reference materials, journals, books, audiovisuals and electronic resources. As of June 30, 2014 the Libraries’ collection totaled 348,682 volumes with 322,414 available for immediate access, and 26,268 housed in the remote storage facility. Additionally, the libraries have 143,543 unique monograph volumes in all formats and 14,322 serial titles in all formats, and its users have access to 355 databases, 1,151,826 e-books (of which 47,335 are specifically health-related), and 154,946 electronic journals.

High-Performance Computing Center  (HPC) Established in 2011, UF Research Computing has a permanent staff of 10.25 FTE. Research Computing runs several clusters with about 21K cores in multi-core servers. Most of the servers are part of one of two distinct InfiniBand fabrics. The clusters share more than four PetaBytes of distributed storage via the Lustre parallel file system. In addition, the Research Computing houses about one PB of storage for the High Energy Physics collaboration of the CMS experiment. In Spring 2013, a new cluster (HiPerGator) was installed with 16K cores and 2.88 PB of raw storage to hold a fast, highly available, parallel Lustre file system for scratch data. A small cluster with 80 GPUs is also available for experimental and production research, as well as for training and teaching.

The HPC clusters are spread over two buildings. The machine rooms are connected by the 200 gigabit per second Campus Research Network (CRN), now commonly called Science DMZ. The CRN connects the HPC systems to the Florida Lambda Rail, from which the National Lambda Rail and Internet2 are accessible. UF meets all Internet2 Innovation Platform requirements, which implies the use of software-defined networking (SDN), the implementation of a Science DMZ, and a connection at 100 Gb/s to the Internet2 backbone. An upgrade of the CRN (Science DMZ) to 200 Gb/s has been operational since winter 2013.

Eleven universities in the state have joined forces in the Sunshine State Education & Research Computing Alliance (SSERCA) to build a robust cyber infrastructure to share expertise and resources. The current members are Florida Atlantic University (FAU); Florida International University (FIU); Florida State University (FSU); University of Central Florida (UCF); UF (UF); University of Miami (UMiami); and University of South Florida (USF). The affiliate institutions are Florida Agricultural and Mechanical University (FAMU); University of North Florida (UNF); and University of West Florida (UWF). The Florida Lambda Rail (FLR) provides the underlying fiber optic network and network connectivity between these institutions and many others.

Human Applications Laboratory  The Human Applications Laboratory is a state-of-the-art GMP facility used for manufacturing biologics for clinical trials that occupies 2,200 square feet in the McKnight Brain Institute. The facility consists of two fully independent manufacturing suites, each containing two Class 10,000, fully equipped production rooms and associated support rooms. Facility support areas, including manufacturing
preparation areas and raw material control areas, are also available. A central monitoring system monitors all equipment, room temperatures, and pressure differentials and automatically initiates staff notification when operating limits are exceeded. A Quality Control (QC) Laboratory support facilities and manufacturing (operations) and handles environmental monitoring as well as in-process and final product testing. An independent Quality Assurance Unit supports both operations and QC and is responsible for raw material and in-process and final product lot release in both audit and inspection of all procedures. The facility has operated since 2002 and has successfully produced multiple phase I/II clinical products.

**Informatics Institute** Information technology provides remarkable opportunities to create, collect, compute, and communicate huge quantities of data. Future research in a host of fields will depend on the ability to leverage access to these massive and complex data sets. One key application of these concepts in the future of health care is predicting disease and designing personalized treatments from a person’s genetic code.

To meet these challenges and create a campus-wide presence that is identifiable both internally and externally, the university has created the Informatics Institute (UIII) as a part of the UF Rising preeminence initiative. Its purpose is to facilitate leading edge informatics research in all sectors of the campus. The institute reports to the UF Vice President for Research.

The Informatics Institute consists of four interrelated thrust areas. Informatics Techniques and Technologies performs research into the hardware, software, algorithms, and mathematical approaches needed to develop the next generation techniques and technologies for Big Data. Biomedical and Life Science Informatics utilizes informatics to address the fundamental questions in genetics, genomics, biodiversity, environment, and agricultural science as well as its application for improved human health outcomes. Informatics for Engineered Systems and the Physical Sciences studies the application of intense computation and complex informatics to understanding and designing complex engineered systems, and for uncovering the fundamental nature of our physical world and universe. Informatics in Social Science, Humanities and Education addresses leveraging the explosion of data in understanding people, culture, political development, education, and human behavior.

Since its inception in August 2013, the UIII has successfully launched a seed funding program and a seminar series. Six teams of researchers were the recipients of the first round of seed funds. All the funded grants were characterized by interdisciplinary research relevant to the mission of the UIII. The UIII will also sponsor several educational programs starting in Fall 2015. Dr. George Michailidis was recently recruited to be the director of the institute.

**Institute for Child Health Policy** The Institute for Child Health Policy (ICHP) brings together multidisciplinary faculty from UF to conduct innovative and rigorous science to promote the health of children, adolescents, and young adults. ICHP, housed within the department of Health Outcomes and Policy in the College of Medicine, is particularly interested in examining factors that contribute to disparities in health and healthcare outcomes for minority and underserved children and youth. ICHP faculty focus on developing strategies to address these issues. ICHP goals include the development and evaluation of community-wide programs and policies affecting children and adolescents; conducting multidisciplinary research on health care financing and delivery systems with a particular focus on children with cancer and other chronic conditions; conducting innovative evaluation research on public programs and policies; training and mentoring students and new scientists in child, adolescent and young adult health research; providing leadership in interpreting and disseminating research results to policymakers and the public; and collaborating with state and federal agencies, non-profit organizations and foundations, and communities in research and policy change.

**Institute of Food and Agricultural Sciences** The UF Institute of Food and Agricultural Sciences (UF/IFAS) is an integrated unit with missions dedicated to teaching, research, and outreach. The research mission is pursued through the Florida Agricultural Experiment Station, where faculty conduct cutting-edge research in agriculture, natural resources, and life sciences through the Florida Agricultural Experiment Station in order to facilitate solutions in Florida, the country, and the world.

UF/IFAS conducts groundbreaking research in program areas vital to people and the environment such as sustainability, energy, climate change, water, food systems and human health, ecosystem health and services, and resource production. With nearly 500 faculty members with research appointments in 15 academic departments, UF/IFAS research is robust across disciplines. UF/IFAS scientists collaborate among departments and fields and with researchers at other UF colleges and institutions in the United States and abroad to address key issues in agriculture and natural resources.

UF/IFAS research is located throughout Florida, including 12 research and education centers, four research
and demonstration sites, a research forest, a biological field station, and a tropical fish hatchery. UF/IFAS has 10 members in the American Association for the Advancement of Science and three members in the National Academy of Sciences. UF/IFAS researchers receive more than $100M in contracts and grants annually.

The diversity and complexity of UF/IFAS research projects are astounding, from studying waterways in Florida’s backyard to researching how microbes grow on Mars. Among many other topics, UF/IFAS research projects encompass topics such as how to are contributing knowledge that will help breed tastier tomatoes, combat citrus greening, produce more efficient biofuels, create better pine forest management techniques, discover linkages between digestive tract bacteria and Type 1 diabetes, and grow rice in aerobic conditions using less water.

**Institute on Aging**  The Institute on Aging (IOA) exists to improve the health, independence, and quality of life of older adults by means of interdisciplinary teams in the areas of research, education, and health care. The overarching goal of the IOA is to develop interdisciplinary and dynamic research that spans public health, social, health services, behavioral, clinical, and basic sciences. The research focuses on mechanisms, etiology, and prevention of cognitive and physical disability. The IOA also focuses on maximizing the participation and life potential of older adults with disability and prevention of secondary disabilities.

The IOA is headquartered in the Clinical and Translational Research Building, a 120K square foot research complex. IOA clinical research facilities include office space, conference rooms, nine patient exam rooms, specimen processing area, a DEXA machine, and a GAITRite walkway.

The research program of the IOA focuses on the etiology and prevention of cognitive and physical disability. This focus is pursued using an interdisciplinary approach that traverses the entire spectrum of social and biomedical investigation, including molecular biology, in vitro and animal studies, clinical research, behavioral and social sciences, epidemiology, and health services research. The IOA initiated its major development phase in February 2005 with the creation of the new Department of Aging and Geriatric Research. The department serves as support infrastructure for the IOA and academic home for faculty members from diverse disciplines who wish to pursue a career primarily focused on research and education on aging.

**Institutional Review Boards**  In total, the Institutional Review Boards (IRBs) at UF oversee 3,500 research protocols. There are three on-campus IRBs and one contracted IRB. IRB-01, the largest IRB in the UF system, reviews and oversees biomedical research conducted on the Gainesville, Florida campus, for the North Florida/South Georgia Veteran’s Health System (NF/SG VHS), and for all of the hospitals and facilities owned by UF Health. IRB-03 reviews and oversees biomedical research on the Jacksonville, Florida campus. IRB-02 reviews and oversees social and behavioral research on the Gainesville, Florida campus. Several years ago, UF contracted with the Western IRB (WIRB) to offset some of the workload for IRB-01. UF faculty conducting multivascular drug or device protocols sponsored by industry are able to submit their protocols for review by the WIRB. Annually, WIRB reviews an average of 110 protocols a year, allowing the investigators who conduct industry-sponsored protocols to compete nationally due to faster review times.

Seventeen staff members at the three on-campus IRB offices provide investigator education, protocol design consultation as it relates to regulatory considerations, and compliance monitoring. No human subject protections issues have been identified during recent FDA audits, CTSI competitive grant renewal reviews, or AHCA VA licensure accreditation surveys. IRB-01 has had experience serving as the central IRB for the United States’ portion of a 150-site, multinational, 23K-subject research protocol.

All IRB-01 new study submissions are made through the electronic myIRB program. The electronic submission program will be implemented in the IRB-02 and -03 offices in the near future. IRB-01 provides a monthly newsletter on current topics and monthly educational presentations. IRB-01 meets twice a month and investigators are encouraged to attend so that changes can be made by the investigator during the meetings to facilitate rapid turnaround time. A robust IRB-01 website is available for investigators, which provides them with all current forms, educational bulletins, required standard language, IRB position papers on common topics, and links to frequently used web sites.

IRB-01 also serves as the Privacy Board for UF Gainesville Campus and the NF/SG VHS in accordance with the Health Insurance Portability and Accountability Act (HIPAA) and implementing its regulations. All waivers and any other HIPAA-related issues are provided as part of the IRB review.

**Interdisciplinary Center for Biotechnology Research**  The Interdisciplinary Center for Biotechnology Research (ICBR) is the major biotechnology science and instrumentation service provider at UF. Established in
1987 and leveraging strong state and University support, ICBR maintains a reputation for acquiring, housing, and providing access to state-of-the-art instrumentation and advanced services to all researchers at UF.

ICBR is organized into eight life science facilities offering extensive services ranging from visualizing microscopic structures to producing and analyzing small molecules and big data. ICBR also supports the education mission of the University with hands-on workshops, training, and seminars hosted by the core scientists. Most ICBR facilities are concentrated in 25k square feet of the Cancer and Genetics Research Complex with auxiliary laboratories in the Microbiology and Cell Science building and the McKnight Brain Institute. While highly centered on its more than $20M stable of instrumentation technologies, ICBR is devoted to engaged scientific services that are provided by 22 PhD-level scientists and 25 trained staff with more than 500 combined years of experience in biotechnology science. This provides UF researchers with access to both technical expertise and advanced instrumentation as well as informed interpretation of the resulting data with a concept-to-data workflow that enables scientists to actively propose, develop, and engage in advanced technologies, extending the scope of their individual laboratories.

ICBR organizational structure includes a center director who receives advice on core operations and direction from UF administration, especially through established faculty advisory groups that meet annually or biennially. ICBR organizational infrastructure provides its facilities with full administrative support for human resources, billing/payables, and compliance with federal cost standards. In addition, ICBR cyber infrastructure supports the scientific cores with computational capabilities for cutting edge analysis, data security, and data delivery to and through the high speed Campus Research Network.

The laboratory infrastructure and established research support programs at ICBR are recognized for providing the theoretical knowledge and practical expertise that make the instruments run at optimal capacity and at the limit of their expected sensitivities. These facilities are universally recognized for providing equal and fair access at low cost as well as for their commitment to excellence. It is the commitment of ICBR to support and maintain current and future instrumentation for its lifetime and to ensure highest performance and availability to all interested researchers according to a well-developed usage plan while charging fees to cover disposable or consumable reagents or components.

**Interdisciplinary Program in Biomedical Sciences** The Interdisciplinary Program in Biomedical Sciences is a predoctoral educational experience that trains experimentalists and scholars for a wide range of careers in biomedical science. The curriculum is designed to provide maximum flexibility for the training of biomedical research scientists. The educational goals are to promote biological literacy by providing core and advanced curricula covering key chemical, biological, and genetic principles using molecular, cellular, and physiological approaches; and to promote scholarship in biomedical science through mentored, original research.

**Jacksonville Health Equity Research Organization** Jacksonville Health Equity Research Organization's (JaxHERO) is a primary care practice-based research network that conducts community-based research in order to improve the quality of care and promote health equity for persons living in Northeast Florida and Southeast Georgia. JaxHERO is composed of 33 primary care centers from UF Health Jacksonville, 12 primary care centers from the Florida Department of Health – Duval, Mayo Clinic Jacksonville and the St. Vincent’s Family Residency program. This network of primary care centers serves more than 150K patients in five counties (Duval, Baker, Clay, Charlton GA, Camden GA), many of whom are disproportionately minority and poor with high rates of diabetes, hypertension, cancer and other conditions. This network is currently fielding or developing four investigator-initiated studies. JaxHERO administration and activities is supported by faculty and staff from the Center for Health Equity and Quality Research at the University of Florida College of Medicine – Jacksonville. JaxHERO provides the foundation for translational and evidence-based research focused on studying and reducing health disparities while building on institutional commitments to the underserved population. The Jacksonville Health Equity Research Organization enables the conduct of translational research in a wide range of settings, thereby bringing the benefits of medical innovation to our entire community.

**Junior Honors Medical Program** The Junior Honors Medical Program (JHMP) is an accelerated, seven-year BS/MD program offered by UF. Admission is open to all possible candidates who are United States citizens or permanent residents. The program is intended for undergraduate students who have demonstrated superior scholastic ability and personal development during their first two academic years of enrollment at a four-year accredited science degree-granting institution and who are dedicated to pursuing medicine as a career. When accepted to this program, students secure places in medical school at the UF College of Medicine as long as they complete JHMP requirements and maintain academic standards. This program has two pathways:
biomedical sciences for individuals with a primary focus on pursuing academic careers in medicine; and Rural and Urban Underserved Medicine (RUUM) for individuals with a primary focus on careers serving urban, rural, and medically underserved populations.

**Major Analytical Instrumentation Center & Particle Analysis Instrumentation Center**  The Major Analytical Instrumentation Center (MAIC) and the Particle Analysis Instrumentation Center (PAIC) are two of the Research Service Centers in the College of Engineering at UF. Both are multi-user materials characterization and analysis facilities established to provide service to the UF, the state university system (SUS) and the industrial and commercial community.

Most of MAIC instrumentation is concentrated at building Mechanical and Aerospace Engineering C with facilities also located at the Materials Engineering building. Techniques and instrumentation include scanning electron microscopy, transmission electron microscopy, electron probe microanalysis, energy dispersive spectroscopy, electron backscatter diffraction, X-Ray diffraction, Auger electron spectroscopy, X-Ray photo-electron spectroscopy, atomic force microscopy, focused ion beam, optical profilometry, and environmental scanning electron microscopy including a cryo-stage.

PAIC instrumentation is housed at the Particle Engineering Research Center building, and facilities include particle size analyzers, rheometer, Raman spectroscopy, UV-Vis spectroscopy, Fourier Transformed infrared spectroscopy, total organic content analysis, porosimetry, picometer, goniometer, ion couple plasma analysis, and zeta potential measurements.

Teaching and training are important aspects of the mission of the centers. The teaching component of the MAIC activities is accomplished through formal graduate courses offered by MAIC staff through the Department of Materials Science and Engineering. MAIC and PAIC staff also conduct individual and group training for all instruments and techniques. In addition, an online graduate certificate in materials characterization has been offered through the Engineering Delivery of Graduate Education (EDGE) program since Fall 2008.

MAIC and PAIC function on a user-fee structure that provides internal subsidized rates for the use of instrumentation. Thus, use rates are established based on the use of the instrument and expenses related to service contracts, maintenance and consumables of the system and are subsidized to render access to the use of instruments at rates comparable to peer centers and facilities. Rates are reviewed annually to accommodate changes on user base and operating costs.

**McKnight Brain Institute**  The McKnight Brain Institute (MBI) at UF is one of the nation’s most comprehensive and technologically advanced research and teaching centers, conducting integrated research in neuroscience, neurology, neurosurgery, psychiatry, cognitive science, and related areas. To aid research in these areas, the MBI operates several facilities that provide advanced (up to 17.5 tesla) magnetic resonance imaging and spectroscopy, cell and tissue analysis, flow cytometry, brain tissue banking, gene therapy, and more. The MBI has 300 faculty from 51 academic departments and 10 colleges, entailing research and educational programs in nearly all aspects of basic, clinical, and translational neuroscience. The College of Medicine departments of Neuroscience, Neurology, Neurosurgery, and Psychiatry along with the centers for Smell and Taste, Structural Biology, and Addiction Research and Education are housed together in the MBI to promote numerous interdisciplinary programs and projects, including facilitating more than 320 lectures and seminars each year involving the best scientists from around the globe. Many of these take place in the Lauretta & John DeWeese Auditorium, which offers over 2,300 square feet of space and stadium seating for 162, including wheelchair accommodations. Featuring a 10-foot by 15-foot screen, this room offers high definition video conferencing as well as live web-streaming and archival of lectures.

The MBI develops new therapies for nervous system afflictions. Some of the research initiatives comprising the MBI are the Advanced Magnetic Resonance Imaging and Spectroscopy Facility (AMRIS), the Cell and Tissue Analysis Core (CTAC) and CTAC Histology Resource Center, the Radiosurgery/Biology Research Lab, the Movement Disorders Center, the Age-related Memory Loss (ARML) Program, the Brain and Spinal Cord Injury/Stroke Program, and the Addiction Program. With a design theme of beyond the-state-of-the-art, the conceptual mission of the extramurally funded, $60M, 210K square foot MBI building is to serve as a catalyst and focal point for widely diverse but synergistic multidisciplinary research programs. Thus, in addition to an obvious emphasis on high technology, the strategic design of the MBI includes a strong emphasis on multiuser facilities within a research and clinical setting that includes highly dedicated and gifted basic science and clinical researchers.
**MD-PhD Training Program**  The MD-PhD program trains clinician-scientists for a career in academic medicine with the full expectation that these students will become future leaders at academic medical centers worldwide. The MD-PhD program takes a broad view toward the development of the entire spectrum of skill sets necessary to complete the “clinical translational mission” and essential for closing the gap in health disparities. Consequently, MD-PhD students are currently enrolled in four different colleges (Engineering, Health Professions, Medicine, and Pharmacy) for their graduate work.

The MD-PhD Training Program office, totaling 301 square feet, is located on the first floor of the Medical Science Building (MSB) and consists of a two-room suite that includes a conference space. It is adjacent to the Medical Admissions Office and directly across from the Office of Research Affairs of the College of Medicine. The program has ready access to conference rooms in the Department of Ophthalmology and the McKnight Brain Institute. The MD-PhD Training Program’s location within the College of Medicine provides scholars with access to a broad array of medical experts and allows it access to eight full-time faculty (executive committee members) to provide leadership in mentor selection, program policy assessment and MD-PhD candidate evaluations.

**Network for Pancreatic Organ Donors with Diabetes**  The UF is the primary coordinating center for the Juvenile Diabetes Research Foundation (JDRF) Network for Pancreatic Organ Donors with Diabetes (nPOD), a Type 1 diabetes research project dedicated to the study of the human pancreas. JDRF-nPOD supports scientific investigators worldwide by providing, without cost, rare and difficult to obtain tissues beneficial to their research. nPOD currently supports more than 120 research studies at several U.S. medical schools and sites in England, Finland, Canada and Australia. The JDRF provides nearly $3M annually in grant funding for nPOD-related studies. Projects have a broad scope including, but not limited to the immunopathology of T1D; beta cell physiology and dysfunction; pancreas development; beta cell regeneration; trans-differentiation and dedifferentiation; and environmental factors and imaging.

The main goals of nPOD are to obtain specimens from organ donors with T1D, (diagnosed or subclinical), and establish a research resource of pancreas and disease-relevant tissues, i.e. pancreatic lymph nodes, spleen, thymus, blood, and other tissues, from organ donors with T1Dobtained at any point after clinical diagnosis or during the pre-diabetes phase when islet autoimmunity silently leads to beta cell destruction (donors identified by screening for islet autoantibodies); to distribute specimens to JDRF-nPOD scientists anywhere in the world for comprehensive and diversified investigations of human T1D; and to promote collaboration by using tissue and real-time data sharing, by developing and managing synergistic project interactions, as well as focused working groups in order to facilitate a comprehensive understanding of human T1D.

**Office of Medical Education**  The College of Medicine Education Center serves several functions in the College of Medicine, including the coordination of all teaching activities as well as the selection and scheduling of the senior elective courses and clerkships for all four years of medical school. The office is responsible for the preparation of course syllabi, handouts and examinations. Information provided by course directors may be distributed during classes or through this office. Students may come to this office any time they have questions on any course materials. The office coordinates the evaluation of courses, faculty, and teaching programs within the College of Medicine. Office personnel compile and summarize data on the teaching programs including course and faculty evaluations. Course debriefings are also scheduled and conducted through this office. The debriefings are meetings held at the end of courses in which student representatives meet with course faculty and representatives of the College of Medicine Curriculum Committee and Dean’s Office. The sessions provide an opportunity for students to provide feedback and influence the future planning of the course as the strengths and weaknesses of each course are discussed. The Office of Medical Education coordinates the advisor program. Advisors are assigned through the office. They are then informed of students’ progress in academic course work. Any issues associated with the advisor program are also reported to this office.

**Office of Research**  The UF accounts for approximately 40 percent of sponsored research performed in the State University System of Florida. In FY2014, annual sponsored awards to UF eclipsed $700M for the first time. During the last 20 years, annual research funding to UF has grown more than 300 percent, consistently placing UF among the top 20 public research institutions. Led by Dr. David Norton, Vice President for Research, the Office of Research is committed to being a highly valued and effective organization whose leadership and service make the UF’s vision of being a top 10 university a reality.

The Office of Research is committed to providing necessary institutional leadership, infrastructure and service, ensuring accountability to regulatory agencies and stakeholders, and investing toward future opportunities and
challenges. The Office of Research is responsible for all proposal submissions, grant and contract negotiation and acceptances, and the execution of other research-related agreements. The Office of Research also manages and supports all research compliance obligations related to fiscal, human subject, animal use, export control, conflict of interest, responsible conduct of research, and research misconduct. The Office of Research invests in research programs by providing resources and overseeing internally funded seed programs and initiatives.

Support for faculty also includes identifying external funding opportunities, facilitating industry outreach, supporting complex proposal development, and connecting researchers to funding agencies. Through the resources and infrastructure within the UF Research Foundation and Office of Technology Licensing, the Office of Research facilitates technology transfer and economic development through patenting, licensing, startups, and business incubation. In FY2014, UF issued a record-setting 86 licenses and options and the Sid Martin Biotechnology Incubator was selected as the top biotech incubator in the world. In addition, the CTSI targets the translation of basic research into health care outcomes. The Office of Research manages research-centric shared resources that include Animal Care Services, the Interdisciplinary Center for Biotechnology Research, and various interdisciplinary centers and institutes whose cross-disciplinary missions include genomics, water, climate, informatics, smell and taste, and emerging pathogens. Using print, electronic, and social media, Research Communications promotes the UF research enterprise within the state and around the globe. Recent efforts include the formation of the Science Communications Academy, a collaborative effort between the College of Journalism, College of the Arts, and Office of Research, designed to assist scientists in refining their communications skills for a general audience.

**Office of Technology Licensing** The UF Office of Technology Licensing (OTL) has launched 157 biomedical and technology startups in the past 12 years, generating more than $1Bin private investment. This is a testament to the collaborative relationship between UF’s world-renowned faculty and OTL working to bring together the elements necessary to create successful startups. In addition, UF faculty generates an average of 300 new discoveries annually. A portion of these discoveries can be found on the OTL website, all of which are available for licensing. Additionally, users can sign up for free tech alerts for a specific technology of interest. UF also has several incubators, including the Florida Innovation Hub and the Sid Martin Biotech Incubator that are home to dozens of startups.

**Pain Research and Intervention Center of Excellence** The UF Pain Research and Intervention Center of Excellence (PRICE), a multi-college center of excellence, serves as the professional home for UF scientists, clinicians and trainees dedicated to improved understanding and treatment of pain. PRICE is affiliated with and supported by the CTSI, and receives strong support from the UF Institute on Aging and the UF Health Cancer Center. PRICE consists of more than 20 extramurally-funded investigators pursuing a broad range of studies. PRICE provides member investigators with several resources and services in order to facilitate clinical and translational pain research at UF.

PRICE maintains a registry of more than 1K potential research participants who have expressed interest in research participation and have provided permission for future contact. This registry includes individuals from several different patient populations as well as those who are generally healthy and can serve as control subjects. The registry is comprised of an ethnically diverse group of individuals between 18 and 85 years of age who were recruited via multiple methods, including print, radio and electronic advertisements, clinic-based recruitment, and word of mouth.

PRICE offers facilities and services to assist investigators with collection of pain assessment data in their research protocols via the Pain Clinical Research Unit (Pain CRU). Investigators can conduct their own studies in the Pain CRU or request that the Pain CRU staff collect the data for their protocol. In addition, PRICE coordinates training activities related to pain, including our T32 training grant in translational pain research, as well as journal clubs, seminar series and a monthly Pain Interest Group.

In early 2013, PRICE occupied its physical home in the new Clinical and Translational Research Building (CTR), a state-of-the-art research building that serves as the home for clinical and translational research at the UF. The CTR provides offices for the PRICE director and program manager as well as the director of the Pain Clinical Research Unit and several PRICE research staff members.

**Powell Gene Therapy Center** The Powell Gene Therapy Center’s (PGTC) mission is to provide institutional and external investigators with the expertise to support preclinical and clinical studies in gene therapy with an emphasis on the development of translatable protocols to facilitate clinical trials initiation. The Center has three
components; the Vector Core, the Human Applications Laboratory and the Toxicology Core.

The Vector Core, located in the Academic Research Building (ARB) and operated as an auxiliary, performs up to 400 research and GLP-grade rAAV preparations per year for individual investigators and program grants. Research-grade preparations support both in vitro and in vivo pilot phase studies for proof of principle. The core also manufactures FDA-approved test articles for toxicology and bio-distribution studies in compliance with GLP. An important research activity is dedicated to process and development of novel production and purification methods. Working together with the Human Applications Laboratory, methods are developed as translatable platforms in compliance with cGMP.

The Human Applications Laboratory, located in the McKnight Brain Institute (MBI), manufactures and releases clinical grade rAAV products and cell vaccines with a current track record of eight manufacturing campaigns for phase I/II trials. The production facility occupies approximately 1,900 square feet and consists of two suites designed to function independently. Production Suite A is dedicated to cell processing, cell banks and cell-based vaccines. Production Suite B is used for the purification, filtration and aseptic fill of viral vectors. The Quality Control Laboratory within the HAL operates independently and conducts product release testing and environmental monitoring. An independent Quality Assurance Unit of the CTSI oversees raw material as well as in-process and final product lot release with audits and inspections of all procedures.

The Toxicology Core conducts exhaustive FDA-reviewed GLP toxicology and bio-distribution studies for IND submission as well as intermediate proof of concept studies. It often operates in coordination with the Vector Core and HAL. To date, the core has contributed to the initiation of 14 clinical trials in man.

Research Administration and Compliance Program  The Research Administration and Compliance Program (RAC) provides fiscal review and approval for all intramural and extramural research proposals for the College of Medicine. In conjunction with Division of Sponsored Programs, RAC provides clinical trial contractual services and ClinicalTrials.gov PRS support for investigators. RAC develops and incorporates policies, processes and standards to guide investigators, research staff, UF and Shands employees and/or agents with regard to clinical services fiscal activities. RAC conducts fiscal review of clinical research study documents and, in partnership with the Institutional Review Board, provides the fiscal language for all HSC Informed Consent Forms for applicable clinical research promoting compliance with all federal and state regulations that concern clinical trials billing. RAC provides a robust research billing compliance based training program to investigators and designated staff to facilitate the successful and fiscally compliant conduct of research throughout UF Health Physician and Shands Hospital facilities. RAC also monitors billing compliance throughout all stages of a study from startup to study closure to assess compliance, identify potential noncompliance and provide a corrective action plan, as well as provide a mechanism for reporting suspected instances of possible billing noncompliance and investigate all allegations. RAC promotes appropriate, transparent relationships with industry collaborators while assisting faculty and the Institution to reduce or mitigate potential conflicts of interest.

Science for Life  The UF Howard Hughes Medical Institute (HHMI) Science for Life (SFL), program to foster early undergraduate student research involves the Science for Life Research Seminar, a course that provides new students with presentations from research-active faculty at UF as well as partner institutions throughout the United States, illustrating opportunities available for student research. The program also includes an undergraduate cross-disciplinary laboratory (X-Laboratory) which is a two-semester, inquiry-based laboratory curriculum focusing on major themes and concepts in biology, chemistry, and physics with modern and quantitative research. The SFL program engages teachers from high-poverty, low-performing urban schools in inquiry-based, content-rich, professional development in laboratory science through a series of UF Summer Science Institutes. High school teachers receive state-of-the-art training in biotechnology and bioscience experimentation. Teachers nominate outstanding students to attend the Summer Science Training Program (SSTP)

The SFL program administers six awards for students and faculty. The Intramural Undergraduate Research Award allows talented students at UF to get a rapid start in research and connect with outstanding faculty mentors at UF as early undergraduates. The Extramural Undergraduate Research Award allows outstanding undergraduates with previous research experience to get a significant off-campus research experience at dozens of locations around the world. The Undergraduate Publication and Travel Award allows students to conduct research in faculty laboratories early in their undergraduate careers that result in submissions to scientific journals or presentations at national conferences and meetings. The Graduate Student Award recognizes excellence in graduate students who are able to mentor their undergraduates to a point where the
undergraduates achieve co-authorship in peer-reviewed publications. The Distinguished Mentor Award recognizes faculty excellence in undergraduate mentoring. The Science for Life Ambassadors is a group of SFL awardees that have been chosen by the program to lead student activities. The Ambassadors organize many events throughout the year to promote the SFL Program.

**Sid Martin Biotechnology Incubator**  The Sid Martin Biotechnology Incubator (SMBI) expedites research and commercial development of promising biotechnologies in the context of viable, well managed startup companies. The incubator’s specialized complex, with BSL II labs, offices, vivariums, greenhouses, and $1M of shared scientific equipment is twenty minutes from the UF campus in Progress Park, in the city of Alachua, which is home to many of UF’s bioscience startups. Companies in this 204-acre private park may apply for Foreign Trade Zone status. The incubator’s relationships, services, and programs include introductions to investors, early recruitment of experienced leadership, networking opportunities, and seminars. By bringing together a critical mass of university and private sector specialists, the program is a magnet for scientific expertise, novel problem solving, and successful commercial ventures. The program is particularly interested in supporting companies which have established research relationships with the UF, or which have an interest in and potential for initiating such relationships. To date, companies have attracted over $1.2B in funding. Companies that successfully apply for admission are granted one-year terms with the chance of renewal subject to successful reviews by the program’s Biotechnology Advisory Committee and program management. In 2009, SMBI developed the Florida BioDatabase, an online searchable database of all Florida bioscience companies which is updated twice a year. The site provides address, website, founding date, a summary of a company’s technology, sector, research focus, whether they have products on the market, and publicly disclosed investors. SMBI tracks annual life science venture funding in Florida and issues periodic reports.

**Southeast Center for Research to Reduce Disparities in Oral Health**  The Southeast Center for Research to Reduce Disparities in Oral Health (SCRRDOH) is a multidisciplinary center at the UF College of Dentistry that aims to reduce disparities in oral health among Florida’s rural populations through community-based research and intervention projects. CRRDOH projects are based on community participation combined with the best science available. Local residents are involved in all phases of research projects, from designing projects to collecting data to publicizing results and influencing public policy.

**Survey Research Center**  The UF Survey Research Center (UF SRC) is a 93-station, computer-assisted telephone survey lab which operates as part of the UF Bureau of Economic and Business Research. The UF SRC conducts large-scale telephone, mail, web and face-to-face surveys, particularly focused on health care. Among the ongoing contracts is the cell phone module of the Behavioral Risk Factor Surveillance Survey. All telephone survey data collected by the UF SRC is stored on internal servers in a locked server room behind three locked doors. Survey software includes Wincati, Sensus and Qualtrics.

**UF Center for HIV/AIDS Research, Education & Service**  The UF Center for HIV/AIDS Research, Education & Service (UF CARES) is the only comprehensive pediatric and family-focused HIV and AIDS program in Northeast Florida and South Georgia. At UF CARES Rainbow Center (located on the third floor of UF Health Jacksonville’s Clinical Center building), clinicians provide primary, secondary, and tertiary care for HIV-exposed and infected individuals and families. In addition to basic medical care, the center provides medical case management, pharmacy services, health education, nutrition, and mental health counseling. UF CARES doctors are trained in general pediatrics and internal medicine with additional specialization in infectious diseases and women’s health. UF CARES employs a full time psychologist and part time psychiatrist and gynecologist who provide specialty services. UF CARES also works to provide services through collaborations and partnerships with Children’s Medical Services, a state sponsored program to provide health care to low income children with special needs.

In the last five years, the center has conducted 23 NIH-sponsored clinical trials, 11 pharmaceutical-sponsored studies and several investigator studies, serving more than 900 research subjects. The center actively collaborates with the Department of Obstetrics and Gynecology in Jacksonville and colleges of Medicine, Public Health and Health Professions, Veterinary Medicine, and Emerging Pathogens Institute in Gainesville. UF CARES is part of the AHRQ registered Community Based Research Network and collaborates with Investigators in Gainesville and Jacksonville.

**UF Center for Pharmacogenomics**  The UF Center for Pharmacogenomics (UFCPGx) has 2,033 square feet of renovated laboratory space (five laboratories) in the UF Health Sciences Center. The laboratories are divided based on workflow and for reasons of quality control. The Pre-PCR laboratory contains three Laminar flow hoods, a refrigerator, a -
Purifier Filtered PCR Enclosure, four Applied Biosystems (ABI) Verti fast Thermal Cyclers and one ABI GeneAmp 9700 PCR System Thermal Cycler, which can accept single tubes, 96-well plates or 384-well plates. It also contains QIAGEN QIAcube Automated RNA, DNA and Protein isolation instrument and a 96- and 384-well plate centrifuge, and two Eppendorf liquid handling/sample processing robots (Eppendorf epMotion 5070, and Eppendorf epMotion 5070 PC 96 qPCR system large robot). The clinical sample processing and DNA isolation laboratory has 96- and 384-well plate reader (Bio-TEK Synergy HT), NanoDrop (ND-1000, and ND-2000) Spectrophotometers, BioRad Criterion™ Protein Gel System and Blotter, BioRad large Protein Gel System, BioRad Gel Documentation System (Bio-Rad Gel Doc XR System PC) and a digital camera. The analytical laboratory contains extensive analytical equipment including three Vertical Gel Electrophoresis Systems, 10 Horizontal Electrophoresis Systems, Multichannel Pipetters and a pH Meter. General equipment shared between the labs includes a variable speed refrigerated centrifuge, variable and fixed speed microcentrifuges, two variable speed nonrefrigerated centrifuges, one 96 and 384-well plate centrifuge, a liquid nitrogen system, a controlled water bath, microwave oven and three computers. The analytical and genotyping laboratory is the largest laboratory and contains the major genotyping systems, including LifeTechnologies QuantStudio TaqMan-Based OpenArray Multiplex Genotyping System, Pyrosequencing high-throughput genotyping system (PSQ HS 96), Applied Biosystems (ABI Taqman 7900 HT Real Time) high-throughput genotyping system, and a liquid handling/sample processing robot (Packard Multi Probe II HT Systems). The sample processing laboratory contains liquid handling/sample processing robot (Packard Multi Probe II HT Systems), LabConco Purifier Class I Safety Enclosure, electrophoresis units, three 384-well PCR thermal cyclers, five 96-well PCR thermal cyclers, a computer and a - with three computers and an office for the laboratory manager. Labs are equipped with refrigerators, centrifuges (Eppendorf Microcentrifuge 5418 R, 5415 R, and Eppendorf Benchtop 5810 R centrifuge, and DAMON-IEC CRU-500 centrifuge), and standard lab equipment such as pipettes, glassware, etc. Departmental shared space includes a freezer room that contains additional freezers, including four – freezers and five – consists of Enterprise class Linux RHEL 6.5 and Microsoft Windows server 2008. User-level files are stored on two Dell R710 servers running Windows Server 2008 R2 Enterprise utilizing Distributed File System for redundancy. The labs’ web-based information services are running on Linux based Apache 2.4 servers running in a VMWare ESXi cluster utilizing 6 Dell R710s. The backend database is running on a Dell R620 using a Linux based MySQL. All differential backups are performed to disk storage nightly, Monday through Thursday, with a full backup running on Friday. Differentials and full backups are kept on disk storage for 90 days with a copy of the latest full backup put on tape monthly and moved to offsite storage. The UF Center for Pharmacogenomics offers pharmacogenomic consults to Investigators.

**UF Genetics Institute**  The UF Genetics Institute (UFGI) promotes genetics and genomics at the UF by building community, facilitating collaboration and creating opportunities for intellectual exchanges among investigators working in diverse taxonomic systems but with a common set of approaches in genetics and genomics; supporting recruitment and retention of outstanding faculty in the areas of genetics and genomics; supporting graduate education in the areas of genetics and genomics; and enhancing the ability of researchers at the UF to compete for multidisciplinary research grants in the area of genetics and genomics.

More than 240 UF GI faculty members represent seven different colleges and 49 different academic departments. Their research spans a broad array of organisms from prokaryotes to eukaryotes and a diverse collection of disciplines and approaches from strictly computational to laboratory and field studies. The UF G1 occupies one wing (approximately 60K square feet) of the Cancer & Genetics Research Complex, completed in 2006. Thirty-three UF GI faculty members are housed in UF G1 space, which provides a variety of shared equipment for molecular biology, biochemistry and genomics, as well as shared resources such as animal facilities, grow chambers for controlled environmental studies of plants, and a greenhouse facility.

**UF Health Cancer Center**  The UF Health Cancer Center (UFHCC) consists of more than 250 researchers and clinicians drawn from two campuses, 12 colleges, 72 departments, two major teaching hospitals (UF Health Hospital in Gainesville and Shands Jacksonville and the nation’s largest Veterans Administration hospital, the Malcom Randall VA Medical Center in Gainesville). The UFHCC is dedicated to providing state-of-the-art cancer treatment, prevention, control, and education to individuals of diverse races and ethnicities; conducting original scientific research aimed at discovering and comparing mechanisms of cancer-causing and normal cell growth; and fostering coordination and collaboration that facilitates clinical translation of novel research findings into new therapeutic, diagnostic or preventive trials.

The cancer research building houses laboratories for approximately 30 PIs and is equipped with workbenches,
shelves, sinks, centrifuges, refrigerators, -20°C and -80°C freezers, tissue culture hoods, tissue culture incubators, water baths, micro-osmometers, light microscopes, power supplies, electrophoresis apparatuses, PCR machines, real-time PCR machines, and flow cytometers. Laboratories provide technical expertise and advice in the areas of FACS analysis, protein sequencing, peptide synthesis, oligonucleotide synthesis, proteomics, mass spectrometry, transgenic mouse production, and gene expression. Each floor in these facilities has an autoclave, dark room, library, small and large conference rooms, and walk-in cold and warm rooms. The molecular laboratory for the UF Interdisciplinary Center for Biotechnology Research (ICBR) is in the research building and is available to all UFHCC members. The ICBR houses 12 partially subsidized facilities, including computing and bioinformatics, DNA sequencing, electron and confocal microscopy, flow cytometry, hybridoma production, protein chemistry, proteomics, mass spectrometry, microarray, and bioinformatics labs. The building also includes a vivarium on the fifth floor and has all the facilities necessary for animal care, procedures and irradiation. The UFHCC Research Laboratories and the ICBR are accredited by the American Association for the Accreditation of Laboratory Animal Care.

Three cesium-137 irradiators are available for total body or local irradiation of mice, with one located in the animal vivarium on the fifth floor of the CGRC and two located in the main animal facility which is in the Biomedical Sciences Building. The animal facility in the Biomedical Sciences Building also has an XRAD 320 X-ray source for small animal irradiation. A Varian Clinac 6/100C, located in Radiosurgery Biology Lab (RSB) in the McKnight Brain Institute, is dedicated for use with animal models (non-human use) and image-guided stereotactic radiosurgery procedures.

**UF Health Communications** A division of 80 communication professionals, UF Health Communications provides integrated communications support to all UF Health executive and administrative divisions, colleges, institutes, physician practices, and hospitals. With staff in Gainesville and Jacksonville, UF Health Communications mobilizes expertise across six specialized teams to meet UF Health’s full scope of internal and external communications needs. The Strategic Communications & Public Affairs team, which includes the CTSI strategic communications team, is responsible for strategic communications and public relations planning and execution; internal communications and employee-focused events; corporate communications; public affairs and government relations/advocacy communications; community health outreach and education programming; and issues and crisis management. The Creative Services team provides print layout and graphic design, creative consultation, video and audio production, voiceovers, multimedia design (including 3D animation), digital publishing, and photography. The Marketing team provides strategic marketing services for UF Health’s clinical lines and affiliate and joint venture partnerships, including marketing consultation, marketing plan development and implementation, production of advertising campaigns and marketing collateral materials, and website content development. The Advancement Communications team provides strategic planning and execution for public functions, alumni relations, and fundraising initiatives. The News & Publications team maintains relationships with local, regional, and national news media and provides expertise in publications, editing, science writing, media training, and news dissemination. The Web Services team offers full-service website design and hosting, web application development, website refurbishment, usability testing, search engine optimization, analytics and metrics, social media consultation, and email newsletters. In addition, UF Health Communications has a long-standing collaboration with the UF College of Journalism and Communications to produce Health in a Heartbeat, a national consumer health radio program that airs on public radio affiliates in 18 states and in Washington, D.C. The program features two-minute segments providing the latest news on medical research, patient-care breakthroughs, and health-care trends.

**UF Health Information Technology** UF Health IT manages four data centers in Gainesville and one in Jacksonville, collectively providing for approximately 8,500 square feet of data center space (73% for system use and 27% for electrical, cooling, and power infrastructure). All systems supporting clinical, education, and research functions utilize the data center resources at no extra direct costs to the projects. The HealthNet network engineering department operates a highly secure high-speed network that supports more than 24K networked workstations, servers, communications devices, and peripherals. Connections are switched 1K megabits per second with power over Ethernet (PoE). The HealthNet network has redundant design throughout and high-tech monitoring commensurate with a network that enables technology in operating rooms, emergency rooms, and intensive care units. The HealthNet network service has a self-sustaining funding model that assures technology refresh and modernization at 3-year and 5-year intervals depending on the equipment.

UF Health IT employs 450 experienced and highly skilled IT professionals in both Gainesville and Jacksonville who provide the wide range of IT services needed to run a major academic health center that supports clinical,
education, research missions, and administrative functions. Two departments in UF Health IT primarily carry out research technology services. The Clinical and Translational Research Informatics Program (CTRIPT) is a dedicated facility that provides research support for project collaboration, data collection, software engineering, database design, and data management. The Technical Services Department is a well-established, professionally managed, comprehensive, infrastructure-services provider of storage, systems administration, networking, and data center services in a highly available and secure environment.

The UF Health IT Storage and Disaster Recovery department manages 6K terabytes of primary network-attached storage (NAS) and storage area network (SAN) storage. The 10-gigabit enterprise, clustered, NAS is backed up locally and replicated between IT data centers and scalable to 16 petabytes. The team also manages a dual core 16Gbps SAN infrastructure extended between four IT data centers. Storage is virtualized and delivered by multiple storage arrays. The backup/recovery environment is located in a separate data center from the actual servers, which provides separation of data at the time of backups. All data is backed up to a 500-terabyte disk pool, providing a quicker recovery in the event of disaster. An additional copy of the data is replicated to tape for protection against a potential disk pool failure in another IT facility to provide an additional layer of data protection.

The UF Health IT Systems Software Support department provides systems administration, database administration, exchange administration, centralized endpoint protection services, desktop management, and management of UF Health IT’s incident, change, and knowledge management software. The department manages more than 450 physical servers and approximately 1K virtual servers. It supports Linux, UNIX, Windows Server and applications, and server and workstation virtualization platforms.

UF Health Jacksonville  UF Health Jacksonville, located in Northeast Florida, is an academic health center providing education for health professionals, a hub for clinical research, and a venue for patient care. With more than 5K faculty and staff, the academic health center in Jacksonville is the largest UF campus outside of Gainesville. At 37 clinical sites throughout Northeast Florida, UF physicians tallied more than 600K outpatient visits and more than 34K inpatient admissions in 2010. UF Health in Jacksonville consists of UF Health Jacksonville, a 695-bed academic health center; UF Health Science Center Jacksonville, which encompasses three UF colleges in Jacksonville (Medicine, Nursing, and Pharmacy); and UF Jacksonville Healthcare, Inc., a network of primary and specialty care centers offering patient care throughout Northeast Florida and Southeast Georgia.

UF Health Proton Therapy Institute  The UF Health Proton Therapy Institute, located on the campus of UF Health Jacksonville, is a radiation oncology facility offering proton therapy, stereotactic radiosurgery, and conventional radiation therapy for the treatment of cancer. The institute is staffed, situated, and structured as a major clinical research facility and serves as a center for multidisciplinary research involving all interests that touch cancer and its treatment. The UF Health Proton Therapy Institute was the first treatment center in the Southeast United States to offer proton therapy. The UF Health Proton Therapy Institute, the only proton therapy facility in the Southeast US, treats an average of 110 proton therapy patients daily and a total of 150 radiation therapy patients daily. Types of cancer that are treated at the facility include cancers of the eye, head, and neck, pancreas, pituitary, prostate, breast, lung, central nervous system, base of skull as well as sarcoma, Hodgkin lymphoma, and cancer in children.

UF Health Science Center  UF Health (HSC) is the largest comprehensive academic health center in the Southeastern United States. The HSC encompasses six colleges (Medicine, Dentistry, Public Health and Health Professions, Nursing, Pharmacy, and Veterinary Medicine). The UF’s 3.2M square foot HSC facility is home to over 2K full-time clinical and basic science faculty and approximately 8K students, including more than 4K graduate students. The HSC is a world leader in interdisciplinary research, generating 52 percent of UF’s total research awards. The HSC Gainesville campus houses several clinics and three major hospital facilities, UF Health Hospital, which includes the North Tower, home to the UF Health Shands Children’s Hospital; the Cancer Tower; and the neighboring Veterans Affairs Medical Center of Gainesville.

VA Geriatric, Research, Education and Clinical Center  The VA Geriatric, Research, Education, and Clinical Center (GRECC) consists of six full-time and four part-time staff who are engaged in translational research with an emphasis on improved patient care for older veterans. GRECC collaborates with UF’s Department of Aging and Geriatric Research to address major themes including function, prevention, healthcare quality, and safety.