

## **FACILITIES & OTHER RESOURCES – THE UNIVERSITY OF RHODE ISLAND**

**The University of Rhode Island (URI)** had humble beginnings as the state's agricultural school chartered in 1888. Today URI is a nationally recognized Land, Sea and Urban Grant public research institution, and the only public institution in Rhode Island offering undergraduate, graduate, and professional students. URI maintains a large focus on Allied Health programs including the College of Pharmacy, Nursing, and the new College of Health Sciences (2016) which brought together the previously individual schools of communicative disorders, health studies, human development and family studies, kinesiology, nutrition and food science, physical therapy, and psychology. Together the Allied Health expertise at URI in partnership with Brown's Alpert Warren Medical School, and School of Public Health, round out the health education and research expertise in the State.

URI has a long-standing collaboration with Brown University Medical School, Lifespan, Care New England, the Providence Veterans Affairs Hospital and other hospital providers in the state. URI has more than 16,000 undergraduate and graduate students who work side by side with more than 721 full-time, tenure-track teaching faculty, as well as with hundreds of dedicated lecturers, researchers, and adjunct faculty. URI has over 120,000 alumni globally. The main campus is in the historic, rural town of Kingston, just 30 miles south of the metropolitan city Providence and Brown University. There is also a Providence Campus that is home to biomedical sciences and the Centers of Biomedical Research Excellence (COBRE) for Immunology and Infectious Diseases near the Jewelry District and the Brown Alpert Medical School.

### **URI ACADEMIC COLLEGES**

**The URI Academic Health Collaborative (AHC)** was formally established in the summer of 2016 to bring together students, faculty, clinicians, and researchers in health sciences to educate thoughtful, skilled health professionals who understand the broad and multifaceted aspects of caring for communities and keeping them healthy. Interdisciplinary collaboration is the hallmark of the new college, as part of the Academic Health Collaborative, bringing together the College of Health Sciences and the colleges of Pharmacy and Nursing under one umbrella. In addition, within the Academic Health Collaborative is the newly formed Institute for Integrated Health and Innovation, which encourages cross-disciplinary research to improve health from the bench to the bedside and ultimately to the entire population. Collectively, the AHC comprises approximately 175 faculty and more than 5,000 students. The AHC fosters cross-cutting innovation in broad aspects of health education, research, and community engagement with a focus on inter-professional education, population health, health promotion and recognition and elimination of health disparities. The work of the Academic Health Collaborative includes preparation of contemporary health literate citizens and healthcare providers and individuals prepared to contribute to new kinds of health organizations and workforce opportunities, including promoting health in the community and state. The operational entity of the AHC is the recently established Institute for Integrated Health and Innovation focused on interdisciplinary academic programs, health services and analytics research, outreach programs that address the needs of communities, advancing health promotion, and promoting productive partnerships.

A new partnership with the Executive Office of Health and Human Services in Rhode Island affords the AHC a unique opportunity to participate in the health system transformation efforts in the state. This program supports efforts of the AHC to impact healthcare workforce development by supporting programs and initiatives to train the next generation of integrated healthcare teams while also retraining existing professionals. There is also a direct opportunity to aid in the administration of the Medicaid program in the state by serving as a resource for knowledge on health policy, health economics, clinical best practices, and other relevant topics. The University can conduct targeted research projects and analyze state data to assess needs, evaluate programs, and inform policymaking and program design. As a state agency, the University is also positioned to capitalize on federal financial participation in Medicaid and obtain a federal 50% match of funds expended in these efforts. This allows an opportunity to leverage foundation funds and private donations in very powerful ways to positively impact the well-being of residents in the state.

In March 2017, Citing their shared vision to improve population health, the University of Rhode Island and South County Health, a nonprofit health care provider based in South Kingstown, have signed a memorandum of understanding to enhance education for health professionals and advance the well-being of local communities. The purposes of the new partnership is: to design and implement student experiences that advance the education of health professionals while providing service to the community, to seek funding for innovative community health programs that build on collaboration among URI, South County Health and community partners, to enhance educational opportunities for South County Health employees seeking to gain skills and

knowledge in their health professions, and to identify and pursue funding for clinical research that engages South County Health patients and marshals the expertise of URI faculty. The Institute for Integrated Health and Innovation acts as the community engagement and research arm of the Collaborative and will implement joint efforts with South County Health, which operates South County Hospital and three other community health entities.

### **URI's College of Pharmacy**

The first pharmacy class in Rhode Island was held in the early 1870s. This program led to the creation of the Rhode Island College of Pharmacy and Allied Sciences that operated out Providence, RI through 1957. In 1955, the College's trustees and pharmacy leaders throughout the state felt an affiliation with the state university would be appropriate. In 1956, the Board of Trustees of State Colleges established the College of Pharmacy at URI, with final approval granted by the General Assembly. The school was transferred to the University of Rhode Island's (URI) Kingston Campus and opened the doors in 1957.

The college hosts a distinguished history of research and teaching in the departments of Pharmacy Practice and Pharmaceutical Sciences (pharmacology, pharmacognosy, toxicology, pharmaceuticals, pharmacokinetics, medicinal chemistry, pharmacoepidemiology, pharmacoconomics and the clinical sciences). Within these disciplines, the College offers bachelor's, master's and doctorate level degrees. Currently, there are ~800 Doctor of Pharmacy (PharmD) students, 190 Bachelor of Science in Pharmaceutical Sciences (BSPS) students and 45 Master and PhD students enrolled in one of four pharmaceutical sciences tracks. The College is an important component of the University's Academic Health Collaborative that fosters interdisciplinary health teaching, research and service.

- In 2012 the College of Pharmacy's \$75 million, five-story, 144,000 square-foot building became the largest academic building on the Kingston campus. This facility includes a 160-seat 3-D auditorium, 18 research labs with 54 research stations, simulation facilities, teaching wet labs, professional practice labs with patient assessment areas, a 3,000 sq.ft. instrumentation facility, molecular characterization facility, and a state of the art telepresence equipment to allow live video conferencing.
- In, 2014, Thomas M. Ryan, a 1975 pharmacy graduate and the former chairman, president and CEO of CVS Caremark, and his wife, Cathy, made the largest private donation in URI's history to establish the George & Anne Ryan Institute for Neuroscience. The Institute launches a new era in brain science teaching and research at the University and in Rhode Island.
- In 2016, the College of Pharmacy's research awards exceeded \$6.5 million, which was 8 percent of URI's total research dollars. In 2015, URI ranked 12th in NIH research funding among all U.S. colleges of pharmacy. The Pharmacy Building houses the *Institutional Development Award (IDeA) Network of Biomedical Research Excellence (INBRE)*, designed to support and develop talented individuals who are committed to research careers in Rhode Island. Key collaborative partners within College of Pharmacy are the Advance-CTR programs, George and Anne Ryan Institute for Neuroscience (GARIN) and the Institute for Integrated Health and Innovation (IIHI).

**Department of Biomedical and Pharmaceutical Sciences (BPS)** The mission of the Department of Biomedical and Pharmaceutical Sciences is to educate Doctor of Pharmacy and BS Pharmaceutical Science degree students in the pharmaceutical sciences, to train Master's and doctoral degree students in pharmaceutical and biomedical research, and to provide service in these disciplines at state, national, and international levels.

**Department of Pharmacy Practice (PHP)** The Department of Pharmacy Practice inspires and educates current and future pharmacists and pharmacy researchers, innovates teaching methods and clinical practice, and conducts research that improves the health of the people of Rhode Island and beyond. The Doctor of Pharmacy (PharmD) is a sole entry-level professional degree at the College. The graduate program trains students to conduct and advance health systems research. The faculty and graduate students initiate and collaborate in research focusing on the improvement of patient care and public health while incorporating current research findings into daily practice. Within the Department of Pharmacy Practice, the majority of faculty maintains research or clinical practice sites at local hospitals and clinics, and all of the community pharmacies throughout the state.

The College of Pharmacy offers a PharmD Program where students are admitted from high school into a relatively unique 0–6 (vs. 2–4) format that permits students to transition to college life without excessive

performance pressure in the first two years. There are less than 10 such 0–6 schools in the country that provide a competitive advantage for some of the best pharmacy students applying for entry into the profession. Their primary markets are the Northeastern and Mid-Atlantic states, although they attract students from across the nation, including Alaska, California and Washington, as well as several foreign countries. They draw some of the best and brightest students who desire pharmacy as a career, and admission to our seat-limited program is highly competitive. The average SAT for critical reading and math combined upon admission is approximately 1330 each year. The corrected GPA average is over 4.0, and students are involved extensively in extracurricular programs at some of the best high schools. The program attracts approximately 800 qualified applicants for each class of 130 students. They also have a focus on increasing diversity, and in the last two years greater than 20% of PharmD students self-reported being of color. After graduation, the typical pass rate for the national pharmacy boards (NAPLEX) is 94% (five-year average), and nearly all of the students are employed.

Additionally, the College of Pharmacy (COP) has sustained relationships with health care services, clinicians, researchers, and educators throughout the State of Rhode Island. There are several examples of where State wide Collaborative Research and Innovative Practice and Teaching exist. Some examples of current state-wide collaboration are listed below:

1. Brown Medicine. Currently, five members of the COP hold Adjunct Associate or Full Professor appointments at the Warren Albert School of Medicine, at Brown University. These faculty members teach in the Medical school's curriculum and lecture to medical residents and fellows in areas of their expertise that include Family Medicine, Cardiology, Infectious Diseases and Diabetes Management. Likewise, several physicians with faculty appointments at Brown teach pharmacy students in the foundations sections of the programs core therapeutics classes.
2. Brown School of Public Health. Several faculty for the department of pharmacy practice mentor and precept students, for independent study in research for Brown's Biology honors program, and the Masters of Public Health Program.
3. Rhode Island Geriatric Education Center. Three PHP faculty members have been active participants in the Rhode Island Geriatric Education Center, which is also linked to Brown and URI College of Nursing, as well as the colleges of nursing and social work at Rhode Island College.
4. The Board of Rhode Island Schools of Allied Health (BRISAH). BRISAH is a consortium of three college/universities of Clinical Laboratory Science (Medical programs and two Schools of Medical Technology in the state). The purpose of this consortium is to integrate individual teaching programs of the hospital School of Medical Technology into a coordinated didactic experience. The consortium also contains representation from the Cytology and Histology Programs in Rhode Island Technology.

**Community and Hospital Systems/ Affiliations** The following relationships exist and continue to be a core relationship for the Professional Program, as they serve as training site for Advanced Pharmacy Practice and Early Pharmacy Practice Experience (APPE, and EPPE respectively) students.

- **Care New England: Kent Hospital**. Clinical pharmacy practice faculty members with expertise in internal medicine, and pain management utilize this site for clinical practice experiences. Additionally, hospital and college jointly sponsor two postdoctoral pharmacy residency positions (PGY1). *Memorial Hospital of Rhode Island*. Clinical practice faculty members have affiliate medical staff appointments and provide clinical education in Cardiology and Family Medicine. This relationship has been in existence for over 25 years. In addition to traditional APPE rotations, pharmacy students in their fourth professional year serve as the student pharmacist on a monthly longitudinal diabetes group medical visit. Relatedly, they also participate in the interprofessional Family Medicine mini-group visits in diabetes and in interdisciplinary student teams in geriatrics, as well as in the Family Care Center. Woman and Infants Hospital. The College recently added a clinical faculty member in the area of oncology. APPE and IPPE students rotate through this facility on a regular basis.
- **Lifespan**: In addition to a long-standing practice site for serve as training site for Advanced Pharmacy Practice and Early Pharmacy Practice Experience pharmacy students. The COP partners and co-sponsors a pharmacy practice Postdoctoral Residency Program (PGY2) in Oncology and Ambulatory Care with Rhode Island Hospital one of the major Hospitals within the Lifespan System.
- **CharterCARE Health Partners: Roger Williams Hospital**. Two full-time clinical practice faculty with expertise in critical care / infectious diseases, and medicine/oncology maintain a clinical practice site at this

Providence Hospital. These faculties round with their specialty team year-round, and provide pharmacotherapy services to the medical teams and patients.

- **UMass Memorial Medical Center:** Currently, a clinical practice faculty member with expertise in pediatrics and infectious diseases maintains an active clinical practice at this center. This site serves as a location for Advance Pharmacy Practice Experiences for the fourth professional year pharmacy students.
- **Providence Veterans Affairs Medical Center (VAMC):** Currently, four full-time faculty are based in this institution and have been successful in establishing research, service, and teaching programs in infectious diseases, psychiatric pharmacy, cardiovascular disease reduction, and medicine. The faculty at the VAMC support and precept in the hospital's established residency program in pharmacy practice, and provides lectures and noontime conferences to medical students, residents and fellows. Additionally, the VAMC pharmacy residents complete a Drug Information rotation on site at the College as part of their required training and accreditation.
- **Ambulatory Care Clinics:** (Coastal Medical and Cambridge Health Alliance) The COP currently has a shared position (0.5 FTE) with Coastal Medical Group in Providence, and is developing and supporting an Ambulatory Care Career residency program that started in FY 2012. This was the first and one of the only pharmacy collaborative practice sites in RI. This site provides an opportunity for pharmacy students to participate in medication management in a physician's office.
- **Long Term Care Facilities:** Three full-time COP faculty members who specialize in geriatrics work closely with physicians, nursing and social workers at several Long-Term Care facilities throughout the state including Steer House, PACE, OmniCare and St Elizabeth's. This provides the students and opportunity to work with a multi-disciplinary team that provides all aspect of patient care in the elderly.
- **Community Practice:** Three faculty members who specialize in advanced community practice maintain community practice rotations at CVS Health, Rite Aid, Walgreens, and independent pharmacy sites throughout the state. In addition to direct teaching of professional students these faculty members facilitate relationships between the students and the practicing pharmacist at the retail outlets. Services such as medication therapy management, immunizations, and blood pressure monitoring are offered at these sites in conjunction with the pharmacy faculty. The community faculty members work with the site preceptor to ensure that the student is exposed to all aspects of community pharmacy such as communication with health care professionals, patient counseling, prescription drug utilization reviews, self-care advising, dispensing, reimbursement, pharmacy law, and pharmacy management and personnel. In addition, interested students can focus on entrepreneurial aspects of pharmacy ownership, a direct result of mentoring provided by independent pharmacy owners. These interactions allow for enhanced communication between the College of Pharmacy and its external alumni and preceptors.
- **Drug information Service:** Established in 2004, Drug Information Services is a resource to health care practitioners statewide that provides timely, evidence-based drug information to promote the safe, rational use of medications in response to complex pharmacotherapeutic inquiries. Drug Information Services has expertise and is available to assist in a variety of situations such as: pharmacy and therapeutic committee support, Medication use evaluation development and support and drug therapy guideline development. As part of its mission, DIS serves as a training site for training site for University of Rhode Island Doctor of Pharmacy students and post-doctoral residents, APPE rotation students as well as pharmacy practice residents from the VA Medical Center in Providence.
- **Department of Corrections (DOC):** Two Pharmacy faculty members also coordinate provision of pharmacy services to the DOC. This relationship has benefited the State of Rhode Island by providing substantial cost savings while promoting the safe and appropriate use of medications among state's correctional population.
- **Pharmacy Outreach Program:** The Pharmacy Outreach Program (POP) has been in existence at the University of Rhode Island, College of Pharmacy since 1988. The Pharmacy Outreach Program is committed to providing the Rhode Island community with the latest, most complete information regarding medications. They have built strong relationships with an extensive network of community practitioners, health service providers and community leaders. The POP pharmacists visit senior centers, senior housing, and community centers throughout Rhode Island to deliver services to seniors, minorities, and medically underserved populations (most notably Spanish speaking populations). The program is comprised of three distinctive components, each servicing a different aspect of the community's medication needs. Community Outreach Programs, traditionally called the "Brown Bag Program," the Pharmacy Outreach Program targets two underserved populations in Rhode Island: the elderly and Spanish-speaking. Pharmacy Outreach serves as an APPE rotation site for pharmacy students where counseling/education regarding drugs and disease states

occurs. The Pharmacy Outreach Program routinely participates in local health fairs to provide medication counseling and advice regarding appropriate medication therapy. Additionally, the Pharmacy Outreach Program participates annually in assisting the elderly in the state choose a Medicare Part D plan that best fits their needs.

- **CVS Caremark Interdisciplinary Health Delivery Laboratory (on campus location):** uses healthcare simulation to promote excellence in teaching, research, and healthcare delivery. The state-of-the-art hands-on simulation helps enhance student and group knowledge and responsiveness when practiced in realistic surroundings. These introductions to real-world situations help improve effective communication, collaborative teamwork, and situational management. The simulation lab provides students with an ideal platform for meaningful interdisciplinary collaboration, knowledge application, and skill development. The skill and commitment of numerous health professionals is required for optimal healthcare delivery in the United States. In many settings, improvements in patient outcomes and reduction of medical errors remain elusive. Alternative methods of educating students entering the health professions must be explored to ensure all health professionals embrace and deliver quality patient-centered care.

### Research Programs within the College of Pharmacy

- **Good Manufacturing Practice (GMP):** Rapid expansion in the markets for biologics and small molecule pharmaceutical products has created a critical demand for skilled professionals (from equipment operators to advanced technical and quality assurance personnel) and additional infrastructure to support drug development and manufacturing. The 7000 sq ft Good Manufacturing Practice (GMP) Facility at the University of Rhode Island (URI) will offer a state-of-the-art training, development and manufacturing facility for GMP production of solid oral dosage forms. The search for a Director of the GMP facility is on going (May 2017). This facility will support the University's continuing efforts to strengthen and expand its education, research and development capabilities and allows the limited production of pharmaceutical / biotechnology products for veterinary and human use. The facility's mission is to facilitate the development of new pharmaceuticals by researchers at URI and their academic and industry partners, engage private partners to enhance the economic development of the Rhode Island pharmaceutical and biotechnology industries. **GMP Equipment.** Varian 500 MHz NMR spectrometer: The Varian instrument is a 500 MHz three-channel VNMR5 NMR spectrometer with a 5mm, room temperature, OneNMR probe. The broadband channel is tunable from 15N to 31P under full automation. One and two-dimensional NMR experiments are routinely acquired on this spectrometer. This instrument primarily supports marine and plant natural product chemistry, and biophysical chemistry research. Bruker 300 MHz NMR spectrometer: The Bruker instrument is a 300 MHz two-channel Avance III nanobay NMR spectrometer with a 24-position sample changer, and a 5 mm room temperature SmartProbe. The broadband channel is tunable from 15N to 19F under full automation. One-and two-dimensional NMR experiments can also be acquired under full automation. This instrument primarily supports medicinal and synthetic chemistry research, and teaching.
- **The College's Health Outcomes:** Pharmacy faculty provide consulting and research support to government agencies and a variety of healthcare organizations and help to develop strategies that maximize the quality of care, improve strategic and operational efficiency and optimize the allocation of resources. The Health Outcomes program is in close proximity to INBRE offices, and includes multiple computer workstations, and data analysis rooms designed for secure access of datasets that include personal health information (PHI). The University's Information Technology Services (ITS) has an annual SAS and SPSS site license (SAS for Windows or Linux, SPSS for Windows, Linux, or MAC). These software packages provide tools for data management, data retrieval, report writing, file conversion, and statistical analysis.
- **Clinical Pharmacokinetics Research Laboratory:** is specialized in the areas of effect of disease states on drug disposition, pharmacokinetics and pharmacodynamics (PK/PD) modeling, and therapeutic drug monitoring (TDM). Located at the Kingston Campus of the University of Rhode Island, this laboratory is equipped with High Performance Liquid Chromatography (HPLC-UV, Hitachi) and ABI 3200 LC-Tandem Mass Spectrometry (LC-MS/MS, AB Sciex), a Xevo™ TQ MS (LC-MS/MS Waters), and a range of other instruments through RI-INBRE centralized core facility. The PK research laboratory has established and validated different analytical methods for determination of immunosuppressive agents (i.e. cyclosporine, tacrolimus, sirolimus and mycophenolic acid) and other medications (listed below). In addition, they specialize in the measurement of free (unbound) drug concentration, either in plasma or oral fluids (saliva), and have established methods for determination of contrast media agents, iohexol or iodixanol, useful for accurate estimation of Glomerular Filtration Rate (GFR).

- **Natural Product Drug Discovery Research Program:** is located within the COP, and brings together expertise of three BPS faculty and PHP faculty member who has a research laboratory. Together they evaluate antimicrobial activity of natural and synthetic products. This collaboration has resulted in several funded research grants, a funded NIH R15 (with faculty from College of Oceanography and Graduate Education), several original research publications and several abstracts.
- **Infectious Diseases Research Program:** A collaborative research program lead by URI faculty in collaboration with the Providence Veterans Affairs Medical Center, Brown Medicine and the Brown School of Public Health; the Antimicrobial Stewardship Outcomes Program focuses on the appropriate use of antimicrobial agents and prevention, treatment, virulence inhibition, and outcomes associated with drug resistant bacteria. The major focus of this program is research and education to the Rhode Island community in addition to train future pharmacist researchers in the two-year research fellowship. This Infectious Diseases research fellowship is 1 of 9 nationally recommended fellowships by the American College of Clinical Pharmacy (ACCP), the only ACCP recommended research fellowship in the VA and the only Antimicrobial Stewardship and Infectious Diseases training fellowship for pharmacists in the country.
- **Pharmacogenomics and Drug metabolism:** A collaborative research program lead by URI faculty in collaboration with the Providence Veterans Affairs Medical Center and Brown medicine have developed strong collaborations in the area of drug metabolism and in particular in the area of pharmacogenomics and drug metabolism.
- **Pharmacoepidemiology:** A collaborative research program lead by URI faculty in collaboration with the Providence Veterans Affairs Medical Center and Brown School of Public Health have existing research programs in studying the Pharmacoepidemiology of acute and chronic conditions such as infectious diseases, cardiovascular disease, diabetes, and geriatrics. Research relationships currently exist with healthcare professionals throughout the state to evaluate and harness the wealth of information contained within electronic medication history as a means to develop tailored patient education DVDs and print materials.
- **Pharmacoconomics:** Faculty members at the college of Pharmacy work with the state government to evaluate and select Quality Measures for the Medicare Prescription Drug Benefit.
- **Toxicology:** A number of the investigators in the College of Pharmacy study the consequences of exposure to environmental toxins. These investigators have particular interests in the relationships between the environment and Alzheimer's disease, fatty liver disease, obesity and kidney disease. Their work has led to significant advancements in our understanding of the environment's impact on the epigenome (factors that influence gene expression without changing the genetic code).
- **3d Facility for Biomedical Sciences: Animation, Visualization, and Printing:** The main objective of the "3D Center" is "Making Science Visible in 3D," helping students clearly conceptualize, visualize, and produce complex scientific ideas in 3D. Animation is an innovative hands-on teaching tool that adds to students' learning experience out-of-class. In 2003, the facility launched the "Teaching Animation Project" as a proof-of-concept project. Since then they have produced a number of teaching animation videos in pharmacy and related biomedical sciences. The quality of the pilot animations and their extensive use in classes and on the Internet attest to the enormous impact of the program on teaching and global outreach. To capitalize on this success, the "3D Center" has expanded capability to include 3D printing and established a new, highly innovative "3D Center for Biomedical Sciences." Showcase-3D-room-Poster. The "3D Center" not only helps produce teaching animations, but also promotes University-wide faculty/student collaboration. Students can animate, view, and print models—all in 3D. Animation, coupled with 3D visualization, greatly improves the effectiveness of teaching and the retention of scientific concepts difficult to understand. The "3D Center" places the University of Rhode Island among a select few leading higher institutions that use such cutting-edge technologies in the curricula and for research.

## URI's College of Health Sciences

The newly established College of Health Sciences (est. 2016) supports multidisciplinary collaborative health behavior change research. The mission of this College is to be a leader in education, research, and outreach in the promotion of optimal health and wellness across the life span. The overarching goal of this College is to better the health, well-being, and quality of life among members of the University community, the State of Rhode Island and beyond. The College of Health Sciences has over 85 faculty members, 2800 undergraduate students and 300 graduate students across seven degree programs: Communicative Disorders, Health Studies, Human Development and Family Studies, Kinesiology, Nutrition and Food Science, Physical Therapy, and Psychology.

**Communicative Disorders (BS, MS):** The mission of this program is to improve the health, well-being and overall quality of life for individuals with communication disorders and their families across the lifespan through the integration of teaching, research and clinical outreach. The department currently enrolls 50 graduate students and 240 undergraduate students who work with 10 different faculty (clinical and tenure-track). The Master's program seeks to develop clinically competent speech-language pathologists by providing students with a comprehensive curriculum and a broad array of clinical training opportunities that also offer opportunities for research. The Bachelor of Science program provides undergraduates with basic information on the biological, cognitive, social, cultural, and linguistic processes that underlie communication, and the nature of communication disorders.

The Department of Communicative Speech & Hearing Center of approximately 4800 square feet in Kingston, RI, and a satellite clinic in Pawtucket, RI. The clinic is currently adding six virtual therapy rooms to train students in telepractice. Along with individual services being provided to a diverse range of clients across the lifespan with speech, language and hearing impairments, there are also specialty clinics (staffed by graduate and undergraduate students, and supervised by faculty) that provide opportunities for the integration of clinical training and student/faculty research as follows:

- *The Aphasia Reading Group* provides language and literacy activities, pleasure reading included, for individuals with aphasia.
- *The Communication Coaching Program* is an interdisciplinary effort involving the Office of Disability Services that provides academic and socio-communicative supports for college students at URI who are on the autism spectrum.
- *The Gateway Café* provides cognitive, linguistic and social supports for adults with traumatic brain injury in an interdisciplinary setting that has involved the Departments of Kinesiology and Nutrition & Food Sciences.
- *The LENA Laboratory* provides training for students in the use of state-of-the-art software for transcribing and analyzing spoken language input, for purposes of assessing and treating clients, and for engaging in research.
- *The Reading Clinic* instructs students in the use of the Orton Gillingham approach to providing reading instruction for school-aged children.
- *LOUD CROWD* draws upon principals of neuroplasticity to provide services for adults with motor speech impairments that may occur with neurological conditions like Parkinson's Disease.
- *The Transgender Voice Clinic* is currently being added to the list of specialty clinics within the department and will support the gender-based communication style preferences of clients.

**Health Studies (BS):** The Health Studies program was launched in 2013 to addresses public health issues from an interdisciplinary perspective. It is an undergraduate interdisciplinary major that draws upon disciplines/departments from across the university to form the curriculum, which includes courses in the natural and social sciences, liberal arts, business, and pharmacy. In addition, there are three required Health Studies classes that are designed to introduce and reinforce students' knowledge of the determinants of health, health inequity, research methods, behavior change, and health policies. Students specialize in one of three areas: Health Promotion, Health Services, and Global & Environmental Health. There are about 420 majors, and in 2016, 47.5% of majors selected the Health Services Specialization and 36.6% selected Health Promotion, with the remaining students opting for the Global Health Specialization.

The Health Studies program is housed in the Kinesiology Department. Kinesiology has 12 faculty members, 5 lecturers, approximately 770 undergraduate students and 16 graduate students. The Kinesiology department has strong research focus on exercise science and behavioral health. The Department consists of approximately 6000 square feet and includes the Biochemistry Laboratory, Body Composition Laboratory, Bone Density Laboratory, Health Fitness Laboratory, and Motion Analysis Laboratory. All faculty have private offices which are equipped with state of art computers and all needed software. Health Studies has one lab that is approximately 200 square feet of space and houses computers with appropriate software to analyze data such as SPSS and MPLUS, iPads and study materials for data collection.

**Human Development and Family Studies (BS, MS):** The Human Development and Family Studies department is a multidisciplinary community of scholars, students, and practitioners dedicated to promoting the optimal development, health, and well-being of children, adults, families, and communities through scholarship, teaching, and outreach. The department consists of 14 faculty members, 2 lecturers, and 1.5 support staff, and is home to two fully accredited Child Development Laboratory Schools and the Couple and Family Therapy

Clinic, each of which have a full-time director. With over 440 undergraduates, the department offers a Bachelor's of Science degree, with an accredited track in Early Childhood Teacher Education, and a certificate in Family Life Education. Undergraduate courses are offered across both the Kingston and Providence campuses. The department has 55-60 Master's students who specialize in one of three areas: College Student Personnel, a fully accredited program in Couple and Family Therapy, and Developmental Science. The department partners with numerous state and local health and wellness agencies to place undergraduate and graduate students in internship and practicum settings, including the Child Life Program at Hasbro's Children's Hospital, the North American Family Institute, and Meeting Street. Department faculty engage in research and service in the following areas: sexual functioning, dating violence, child obesity, sleep and health, economic disparities, diversity and culture, healthy aging, financial health and well-being, and therapeutic processes.

- *Couple and Family Therapy Clinic*, is a full-time clinic available to clients from the local community and the URI community that also serves as a practicum and training site for Couple and Family Therapy graduate students. Services provided include mental health assessments, couple and family counseling, prevention services, and outreach to community partners. The clinic is staffed by a licensed clinician and by advanced graduate students in the Couple and Family Therapy Master's program that is accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE). The clinic consists of two therapy rooms, each of which has an attached observation room with one way mirrors. State of the art digital equipment record therapy sessions. The clinic also provides telehealth services to the Providence campus.
- *Child Development Laboratory Schools* are located on the Kingston and Providence campuses. Each school serves 30-36 preschool age children, and their families and both schools are accredited through the premier national agency, National Association of Educators of Young Children, and have received the highest state level rating from BrightStars. The lab school staff provide mentoring, supervision, and education to over 150 URI students each year through the many practicum courses that are offered through the department. Students from a variety of departments within the College of Health Sciences (e.g., Kinesiology, Communicative Disorders, Psychology) and across the University (e.g., College of Education and Professional Studies).
- *Early Intervention Recruitment and Retention Office* is an outreach and research program located within the department. Funded by the RI Executive Office of Health and Human Services, the program recruits early childhood professionals for positions in Early Intervention programs, which serve children from birth to age 3 who have or are at risk for developmental disabilities. The office conducts outreach to all Institutes of Higher Learning in Rhode Island, places undergraduate and graduate students at EI sites across Rhode Island, and provides evaluation expertise and services to the State's lead Early Intervention agency.
- *Rhode Island Geriatric Education Center* helps prepare current and future health care professionals to better meet the physical, functional, and psychosocial needs of older adults. RIGEC offers interdisciplinary education that spans workshops, clinical training, special lectures, academic courses, and faculty development programs trains health care professionals. Led by the director of the program of Gerontology, the Center also includes 3 full-time staff and representatives from all 3 colleges in the Academic Health Collaborative, the Care New England Health System, Rhode Island College, Brown School of Medicine, and Roger Williams Medical Center.

**Kinesiology Department (BS, MS):** Kinesiology explores all facets of human movement, and more importantly, how they relate to overall health. This department currently enrolls 769 undergraduate students and 16 graduate students who work with 20 faculty and staff. Kinesiology Laboratories within the Department of Kinesiology consist of approximately 6000 square feet and consists of six major laboratories: biochemistry, human performance, body composition, bone density, health fitness, and motion analysis. Resources and equipment available to the Rhode Island clinicians and researchers include:

- *Biochemistry Laboratory* is used to perform various chemical techniques and for tissue preparation. It is equipped with a ventilated hood, 2 centrifuges, 1 microcentrifuges, 2 analytical balances, a Kodak blood/urine analyzer, a spectrophotometer, two glucose/lactate analyzers (Yellow Springs Instruments) and an ultralow freezer (-80°).
- *Body Composition Laboratory*. This lab houses an air-displacement plethysmography device (BodPod, Life Measurements, CA), bioelectrical impedance analysis (RJL) and Lange skinfold calipers.
- *Bone Density Laboratory* has equipment to obtain bone density and body composition data via dual energy X-ray absorptiometry (DXA) with a GE Healthcare iDXA Bone Densitometer with direct-to-digital, fan-beam DXA densitometer with encore Windows

XP Professional based Software Platform. The Bone Density Laboratory also houses a Keiser A420 leg extension power machine with PC and software.

- *Health Fitness Laboratory* contains a full line of Cybex strength training machines, two power platforms, cardiorespiratory ergometers, small hand weights, medicine balls, mats, 9 cycle ergometers and approximately 1500 square feet of open space.
- *Human Performance Laboratory* is well-equipped to complete maximal and submaximal exercise testing with a Parvo metabolic cart for oxygen consumption measurements, indirect calorimetry, and pulmonary measures, two treadmills, one interfacing Corival Lodi cycle ergometer, and an exercise testing ECG monitor. Additional equipment includes an electronic floor scale, blood pressure equipment, tape measures and a stadiometer.
- *Motion Analysis Laboratory* is a shared facility for the Department of Kinesiology and the Department of Physical Therapy. Its focus is on analyzing human movement both in patients and athletes. Biomechanical analyses (kinematic and kinetic) of human movement are used to understand the mechanics of human movement and to improve its performance. This facility features a 3D motion capture system (SIMI Reality motion Systems) for kinematic analyses and a forceplate-instrumented, split-belt, treadmill (Bertec Corporation) for kinetic analyses.

**Nutrition and Food Science Department (BS, MS):** The Department of Nutrition and Food Sciences addresses a number of nutrition and food science issues related to disease outcomes and food sufficiency. The department has 7 faculty members, 2 full time instructors and 3 outreach specialists. Undergraduate students number about 200 and graduate students between 20 and 30. The Department offers a BS degree in Nutrition and Dietetics and MS and PhD degrees specializing in Nutrition. An accredited dietetic internship program is available in one track under the MS degree program. The department has strong research programs in Nutrition and Health, Marine Resource Utilization, and Food Safety and Quality. Food science graduate education and research are housed in the Food Science and Nutrition Research Center in West Kingston. The Department consists of approximately 3,700 square feet and includes four major laboratories: Community Nutrition, Lipid Lab, Nutrition Assessment Lab, and Energy Balance Lab.

The Lipid Lab at over 1000 square feet is well-equipped to measure anthropometric and clinical measures, process and analyze blood, and complete in-person dietary intake assessments as well as dietary assessments over the phone. The Food Science Lab is well-equipped to prepare foods for scientific evaluation as well as to complete food demonstrations. The Community Nutrition lab which has approximately 200 square feet of space. All of these labs computers have access to the internet, SPSS, SAS, referencing software, MS Office and graphing software. Multiple printers are available and all computers have access to data encryption software to protect stored data. All PCs are connected to APC network surge arrestors with critical equipment plugged into APC uninterruptible power supplies. The Lipid Lab has office space that can be devoted to research that can accommodate up to two graduate and three undergraduate students. NFS department has three assessment rooms for interviews and two conference rooms for larger study meetings.

**Physical Therapy Department Program:** at URI is a fully accredited Doctor of Physical Therapy degree program. Through an intensive three-year course of study, students learn basic sciences, evaluative and treatment theories, intervention techniques, professional issues analysis, and skills development to allow autonomous practice. The program accepts 30 to 32 new students each year. There are 9 full-time and 15 adjunct faculty members.

**Doctorate of Physical Therapy (DPT) Professional Degree Program:** at the University of Rhode Island is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). Accreditation by CAPTE is a statement that a physical therapist or physical therapist assistant education program meets the standards for quality set by the profession in areas including educational experiences, faculty, resources and student outcomes. Graduation from a CAPTE-accredited program is required for eligibility to take the national licensing exam. The University of Rhode Island has consistently been awarded the maximal accreditation level. The PT program offers unique opportunities to develop personal skills through experiences that go far beyond traditional settings. Through an intensive three-year course of study, students learn about basic sciences, evaluative and treatment theories, intervention techniques, and other clinical skills. The curriculum is designed to challenge students toward excellence in clinical practice, professional behavior, and service.

University Physical Therapy is a full-time outpatient clinic available to patients from the University and local community. The clinic is conveniently located in the Independence Square building. Services provided at the

clinic include: ergonomic work-station evaluations, work conditioning, return to sport programs, prevention/wellness group exercise classes for at risk clients and evaluation and treatment of orthopedic and neurologic conditions. Licensed Physical Therapy Department faculty staffs the clinic with advanced training in orthopedic and neurologic rehabilitation. Students are involved in the clinic in both voluntary and formal classroom-related experiences. **Equipment.** The University Physical Therapy is equipped with state-of-the-art rehabilitation tools, including but not limited to: Isotonic, free-weight and Isokinetic strengthening and testing devices, Balance Master, Work simulation equipment, Simi 2D motion analysis, GaitRite analysis of walking, EMG biofeedback, Cardiovascular equipment, Electrical, thermal and cryotherapeutic modalities, Real-time Ultrasound.

**Psychology Department:** Psychology (B.A., BS, MS, PhD) Within the College of Health Sciences is the Department of Psychology. The mission of this Department is to generate knowledge of basic psychological processes and contextual influences on psychological and physical functioning; apply knowledge to promote health and welfare in a pluralistic society by enhancing the functioning of individuals and social systems; translate knowledge into science-based programs, policies, and professional practices responsive to societal needs; transmit knowledge through educational programs that inform individual development, provide understanding of human behavior; and prepare scientist-practitioners to become future leaders and innovators.

The Psychology Department has 23 tenure-track faculty members, 3 research faculty members and a full-time Director of the Psychological Consultation Center. Support positions include 6 full-time staff positions. Psychology undergraduate students number about 780 and graduate students between 80 and 100. The Department offers both BA and BS degrees in Psychology, MA degree and PhD degrees in School Psychology, and PhD degrees in Behavior Science and Clinical Psychology. The School Master's and PhD programs are NASP and APA accredited and the Clinical PhD program is APA accredited. Clinical Psychology faculty are engaged in research and service provision within the following program areas: substance use, anxiety and depressive disorders, violence, sexuality and sexual risk, behavior change (e.g., substance use, diet, safe sex), efficacy of cognitive behavioral treatment, HIV/AIDS prevention, community prevention and health promotion, diversity and multiculturalism, decision-making, neuropsychology, and methodology. The Clinical Program is the largest doctoral program within the University of Rhode Island's Psychology Department, and is accredited by the American Psychological Association since 1972. The program has adopted the Scientist-Practitioner model, and provides generalist training in intervention, assessment, methodology, and the core areas of psychology. Doctoral students may specialize in one of five areas: Child and Family, Health, Multicultural, Research Methodology, or Neuropsychology. The department has strong research programs in health behavior and behavior change, substance use and related interventions, child mental and behavioral health, and research methods. Moreover, there are numerous collaborative research and training endeavors that exist within the Department, such as the Cancer Prevention Research Center, Psychological Consultation Center, and Behavior Change Research Center.

The Psychology Department offices and research space are housed primarily in the Chafee Social Sciences Center that includes the Behavior Change Research Center (BCRC). Additional department faculty are housed in the Cancer Prevention Research Center. The Psychology Department maintains two entire floors of the main eight-story tower of the Chafee Social Sciences Center Building for offices and research space. The Behavior Change Research Center, which houses the Psychological Consultation Center (PCC), faculty offices and lab space, occupies approximately 6000 square feet. Finally, office and research space in the Cancer Prevention Research Center adds approximately 6000 sq. ft. of research space to the total Psychology Department footprint. The Psychology Department is home to several research laboratories as well as the Psychological Consultation Center and the Quantitative Consultation Center.

### **URI's College of Nursing**

The College of Nursing is a progressive center for nursing education, knowledge development, and professional practice and service. Graduates are clinicians, leaders, researchers, and scholars who are highly competent, grounded in a sense of inquiry, and committed to human caring. The College of Nursing was founded in 1945. Currently, it enrolls approximately 950 undergraduate students, 80 master's degree students and 50 doctoral (DNP, PhD) students. The online RN-BS program enrolls more than 500 students. The College offers all levels of nursing education and is the only nursing program in Rhode Island to offer the PhD degree in nursing. The College is also committed to ongoing research and has graduate research and teaching assistants to support its mission.

**Bachelor of Science:** A baccalaureate program in nursing is designed to prepare you to become a professional registered nurse. This program is organized into a basic 4-year program.

**Bachelor of Science On Campus (RN to BS):** This on campus program is designed for registered nurses with an Associate Degree or Diploma in Nursing who wish to complete their baccalaureate degree. The College of Nursing has designed an accelerated program that recognizes the academic credits from the student's basic program. On campus students are only eligible to register for and take on campus courses. Students will not be allowed to combine on campus and online course curriculum.

**Bachelor of Science Online (RN to BS):** This 100% online program is designed for registered nurses with an Associate Degree or Diploma in Nursing who wish to complete their baccalaureate degree. The online program allows students to take courses in shorter 7 week sessions to earn their bachelors degree in 15 months. Online students are only eligible to register for and take online courses. Students will not be allowed to combine on campus and online course curriculum.

*Equipment.* The College of Nursing located on the main URI campus has state of the art informational technology services for use by students. There is computer lab with 20 PCs and wireless access for students with laptop computers. There are designated areas for graduate students to study, computers with MS software, data analysis software programs, and full on-line access to the University's electronic journals. A seat smart classroom seats 120, while the auditorium seats 90. A full time information technologist is available during working hours and on 4 evening per week to assist faculty and students. There are 7 fully equipped nursing laboratories for student practice. Two laboratories are equipped with examination tables, and instruments for advanced physical assessment. Five laboratories are set up to simulate the hospital environment in adult, pediatric and maternity care. There are numerous Laerdal SimMan, a SimMan3G and SimBaby mannequins in addition to multiple medium and low fidelity adult and infant mannequins and torsos for psychomotor skill practice. The White Hall Commons is large contemporary space for student meetings, group work, and study. It was designed around a "coffee house" concept with nooks for solo study and tables for group study.

The College of Nursing offers a broad range of clinical and research affiliations from rural community agencies to large urban teaching hospitals throughout Rhode Island, as well as neighboring Connecticut and Massachusetts. These provide appropriate clinical experiences and research opportunities for each level student. Resources offered for faculty include a private office, individual computers and printers, copy machines, scanning facilities, laptop computer and LCD for presentations, IT and office support staff.

**Accreditation.** The University of Rhode Island is accredited by the New England Association of Schools and Colleges. In 2016, the College was granted the full ten-year accreditation by the Commission on College Nursing Education, a recognition of clinical and academic excellence.

**Nursing Education Center** State and University of Rhode Island officials ushered in a new era of higher education and health innovation on Nov. 30, 2017, officially dedicating the South Street Landing development project in Providence, home to the Rhode Island Nursing Education Center. The center opened in August 2017, welcoming URI College of Nursing graduate and undergraduate students, who have access to 133,000 square feet of laboratory, classroom and office space at 350 Eddy St. Rapid changes in the increasingly complex environment for the health sciences demand advanced clinical education and ever-more rigorous academic requirements for nurses.. URI's graduate nursing programs, from its master's degree offering to doctor of nurse practitioner and Ph.D. degree tracks, are entirely housed at the center. The nursing professionals enrolled in these programs learn from faculty who practice at the top of their fields and benefit from collaborative opportunities available at nearby leading health care institutions. The Center's proximity to the state's leading hospitals and health-care providers, as well as Brown University's Alpert Medical School, offers students, faculty and researchers unprecedented opportunities for learning and collaboration.

**URI College of Nursing Research:** Faculty at the URI College of Nursing have taken on leading roles in some key areas of research in the field. Below are just a few examples:

Premature infants and birth, NICU impact on neurodevelopment, birth best practices, women in correctional facilities, therapeutic touch, developing a protocol for nurse-to-nurse shift handoffs, gerontological health, vulnerable populations and watershed contamination on Narragansett tribal land.

**URI's College of Arts and Sciences**

The College of Arts and Sciences include the Department of Computer Science and Statistics (CSC), which is favorably positioned to work interdisciplinary with clinical research faculty throughout the state of Rhode Island. Faculty members within in the CSC department are actively involved in cutting-edge research areas including biostatistics and bioinformatics, Bayesian methods, digital forensics, machine learning and data-mining, network analysis, interactive 3D graphics, econometrics, and spatiotemporal modeling. Several of these areas provide opportunities for collaboration with scientists from other fields, making the department a well-integrated center of interdisciplinary research. The focus of the department is on pedagogy for their students at the undergraduate and graduate level. Faculty members bring their expertise in research and teaching to help students develop problem solving and learning skills, necessary in a fast evolving discipline, while getting prepared to find employment in diverse industrial and academic settings. A collaborative of faculty is proposing a data science institute and new data science programs (BA, BS, and minor), and a new high performance and research computing center. All three of these efforts have a significant educational component. Data science cuts across all disciplines and enterprises. All businesses, governments, and enterprises call for data scientists and require at least rudimentary understanding of data. Educational institutions, federal agencies, medical communities, and legislators are calling for evidence-based policies and strategic plans, and data science has arisen to meet these modern challenges.

The CSC department has also collaborated to secure National Security Agency (NSA) and Department of Homeland Security (DHS) designation for URI as a National Center of Academic Excellence in Information Assurance Education and Research. The department participates in the highly regarded five year IEP (International Engineering Program) through which students double major in Computer Science and a language and spend one year abroad with industry and an institution of higher education. URI's recent hires have been focused on machine learning and computational statistics. As such, the CSC has partners with five other colleges in creating the new interdisciplinary data science major that includes an integrated core of computing, databases, mathematics, statistics, ethics, communication, with upper level data oriented electives in domain disciplines (Business, Bioinformatics and Computational Biology, GIS, and Oceanography for example)

## **URI GRADUATE PROGRAMS**

The Graduate School at URI offers 10 professional degree programs, 23 PhD programs, 36 master's programs, and 14 post-baccalaureate certificate programs, including those of the College of Pharmacy, College of Nursing, and the College of Health Sciences.

### **URI Graduate Programs in Pharmacy**

**Graduate Program in Pharmaceutical Sciences:** As a leader in Pharmaceutical Sciences graduate education, the URI College of Pharmacy offers programs and specializations in highly sought after fields available at few other universities in the country. The College of Pharmacy offers highly-specialized, cutting-edge graduate MS and PhD degrees in Pharmaceutical Sciences with the following specializations: Medicinal Chemistry and Pharmacognosy, Pharmaceutics and Pharmacokinetics, Pharmacoepidemiology and Pharmacoeconomics, Pharmacology and Toxicology. The COP graduate degree program in pharmaceutical sciences brings students into contact with world-renowned researchers exploring solutions to many of society's most pressing health care problems. Students are trained for careers in research, in the development of drug products, and for higher management in the pharmaceutical and healthcare industries. Alumni in graduate programs have gone on to important positions in global healthcare companies and positions in leading academic and government programs.

- *Specialization in Medicinal Chemistry and Pharmacognosy* In this specialization educational and research efforts are focused on drug discovery and delivery through synthesis, mechanism, modeling, screening, isolation of natural products from plant and marine sources. Focus areas include: cancer, HIV, stroke, nanotechnology, brain drugs, antibiotics, drug resistance, herbal medicine, bioinformatics, peptide synthesis; and DNA damage, mutation and repair.
- *Specialization in Pharmaceutics and Pharmacokinetics* This specialization focuses on the design, development, production, evaluation and regulatory approval of pharmaceutical and self-care products as

well as pharmacokinetic and pharmacodynamic studies using virtual, clinical, and preclinical data, often with an emphasis on population approaches.

- *Specialization in Health Outcomes* Pharmacoepidemiology and Pharmacoeconomics are research fields that address the effects of medication use in populations. Pharmacoepidemiology emphasizes effects on health and well-being of a population, and pharmacoeconomics emphasizes effects on health care costs in a population. Both fields require programming skills, knowledge of statistics, an understanding of pharmaceutical practices, and knowledge about specific diseases or health care issues. Both fields require an ability to apply skills to the solution of real life problems by developing research questions, conducting research and sharing research findings with the scientific community. Training in pharmacoepidemiology and pharmacoeconomics prepares students for careers in industry, including pharmaceutical companies and pharmacy benefits management, federal, state and local government public health agencies, academic careers in pharmacy, medicine, and public health, and other related sectors.
- *Specialization in Pharmacology and Toxicology* This specialization focuses on mechanisms involved in disease states and their pharmacological intervention, and mechanisms of toxicity of environmental agents. Research topics include hypertension, biomarkers and treatment of arthritis, toxicity of environmental agents and metals, pharmacogenomics, epigenetics, drug interactions, hepatic responses to neuroactive chemicals, hormonal regulations of gene expression in breast cancer, metabolism, drug transporter, and cell signaling inhibitors.
- *Joint Degree Opportunities.* The College collaborates extensively with other academic and research programs within URI. For example, PharmD students may concurrently study for a Master of Business Administration (M.B.A.), or Master of Science (MS) degree or Pharm.D. and dual French degree during their tenure at URI. Several COP faculty members hold joint appointments in other departments, notably in the College of Engineering. These individuals contribute to pharmaceuticals research and the College of Engineering's BS pharmaceutical engineering track. Recent external academic collaborations include a dual PharmD/Master of Physician Assistant Studies with Johnson and Wales University.

### URI College of Nursing Graduate Programs

**Master's of Science:** The Master's program in nursing prepares professional nurses to assume leadership roles in a variety of settings. The curriculum provides advanced preparation in primary health care nursing (family or gerontological nurse practitioner), psychiatric-mental health nursing adult or child/adolescent, gerontological nursing, nursing education, and nursing administration. Graduates of the programs in nurse practitioner and the clinical nurse specialists are eligible to sit for certification exams. The Master of Science program is designed to accommodate both full ( $\geq 9$  credits) and part-time ( $\leq 8$  credits) graduate students. Specializations include, Nursing Education, Family Nurse Practitioner, Acute Care Nurse Practitioner (Adult-Gerontology Focus), and Adult-Gerontological Nurse Practitioner/Clinical Nurse Specialist.

**Doctor of Nursing Practice (DNP):** The College of Nursing at the University of Rhode Island offers a post-baccalaureate Doctor of Nursing Practice (DNP) degree with nurse practitioner concentrations in acute care (adult-gerontology focus), family, and adult gerontological. Its purpose is to prepare clinicians capable of translating scientific findings, evaluating outcomes and programs, producing clinical scholarship, and transforming health care systems and policies. The program cultivates a sense of inquiry and stimulates collaborative relationships with professional colleagues both in nursing and other disciplines. The doctoral program consists of 35 credits of course work including: core courses, advanced nursing courses, elective components and 18 credits of dissertation research. The purpose of the core and advanced nursing component is to provide the basic knowledge and skills for generating new knowledge in nursing. It includes 23 credits of course work in nursing science, research methods (qualitative and quantitative), theory development (inductive and deductive approaches), and role development in nursing research. In addition, three credits in advanced statistics, six credits of methods electives, and three free elective credits are required. In the nursing domain course (NUR 611), the students map out a program of study in their area of interest extending across the three theoretical domains of nursing. The program culminates with written and oral comprehensive exams and the completion of dissertation research.

- *Post M.S. to DNP:* The DNP program consists of 42 credits including 500 clinical practicum hours. A Master's degree in Nursing with an advanced practice specialization is required. At the present time, the post-masters DNP curriculum builds on advanced practice specializations. A unique feature is the close link between DNP and PhD course work where 4 required courses are shar

- *Post B.S. to DNP:* College of Nursing at the University of Rhode Island offers a post-baccalaureate Doctor of Nursing Practice (DNP) degree with nurse practitioner concentrations in acute care (adult-gerontology focus), family, and adult gerontological/CNS. Its purpose is to prepare clinicians capable of translating scientific findings, evaluating outcomes and programs, producing clinical scholarship, and transforming health care systems and policies.

**Doctor of Philosophy (PhD):** The College of Nursing at the University of Rhode Island offers a PhD program in nursing. Its purpose is to prepare nurse scholars and researchers capable of advancing nursing knowledge through the development and testing of nursing theory and the conduct of research in clinical practice. The program cultivates a sense of inquiry and stimulates collaborative relationships with professional colleagues both in nursing and other disciplines. The doctoral program consists of 35 credits of course work including: core courses, advanced nursing courses, elective components and 18 credits of dissertation research. The purpose of the core and advanced nursing component is to provide the basic knowledge and skills for generating new knowledge in nursing. It includes 23 credits of course work in nursing science, research methods (qualitative and quantitative), theory development (inductive and deductive approaches), and role development in nursing research. In addition three credits in advanced statistics, six credits of methods electives, and three free elective credits are required. In the nursing domain course, the students map out a program of study in their area of interest extending across the three theoretical domains of nursing. The program culminates with written and oral comprehensive exams and the completion of dissertation research.

**Psychiatric Mental Health NP Concentration:** In 2018 the College of Nursing began accepting applications for the newly added Psychiatric Mental Health Nurse Practitioner master's degree program.

**Post-Master's Certificate Programs:** Nurses who have completed a Master's Degree may choose additional preparation in Education or in advanced practice specializing in Family Nurse Practitioner, Adult-Gerontology Acute Care Nurse Practitioner or Adult-Gerontological Nurse Practitioner/Clinical Nurse Specialist.

- *Family Nurse Practitioner:* The family nurse practitioner certificate program prepares nurses, who hold master's degree in nursing, to pursue advanced preparation in primary health care.
  - *Acute Care Nurse Practitioner (adult-gerontology focus):* The Acute Care Nurse Practitioner (Adult-Gerontology focus) prepares nurses, who already hold a master's degree, for advanced practice roles in acute and critical care settings (e.g., intensive care units, emergency departments, hospitalist services, specialty services and acute care rehabilitation hospitals).
  - *Adult Gerontology Nurse Practitioner/ Clinical Nurse Specialist:* The adult gerontology nurse practitioner/clinical nurse specialist program consist of 21 credit hours. Its purpose is to educate adult gerontological advanced practice nurses in the dual role of nurse practitioner/ clinical nurse specialist capable of providing primary health care to adults, older adults and their families in a variety of health care settings. The graduate of this program is also prepared to work across system levels from the individual to the organizational and societal levels to improve health and health care for this population.
  - *Nursing Education:* The graduate certificate program in nursing education consists of 12 credit hours of coursework that focuses on educational assessment, curriculum design, teaching strategies, and evaluation related to teaching in the classroom and clinical areas. The plan of the study is designed for MS degree nurses as nurse practitioners, clinical specialists, staff development educators in the community, long term, and outreach settings who aspire to assume a teaching position.
- Thanatology Certificate Program:* Expanding knowledge in the field of thanatology (study of loss, death, and grief); Developing advanced skills in providing specialized care to the terminally ill and bereaved; and Enriching personal growth. This interdisciplinary program is intended for professionals with baccalaureate or higher degrees. The curriculum is designed for practicing nurses, social workers, psychologist, hospice professionals, bereavement counselors, physicians, teachers, clergy, funeral directors, and others who would like to expand and enrich their knowledge and skills in this area. Senior students may be admitted to the courses by permission of the instructor. Professionals will be prepared to work with the dying and their families in settings such as the home, hospitals, hospices, long-term care facilities, churches/synagogues, and funeral homes.

## URI College of Health Sciences Graduate Programs

**Behavioral Science (PhD):** The Doctor of Philosophy (PhD) in Behavioral Science is a research-intensive program with a strong focus on topics in health psychology and methodology. There are few programs nationwide

in which you can study both of these topics simultaneously. Through this integration, students are prepared for traditional academic career positions as well as positions in contract research, service and the private sector. In addition, they offer robust coverage of social, cognitive, and developmental perspectives in training, while attending to individual and group differences and diverse social, familial and community settings. They welcome the full range and diversity of life experiences and perspectives of our students and faculty, and value the importance of multicultural competence in teaching, research design and practice in behavioral science.

**Clinical Psychology (PhD):** The URI clinical psychology program has been accredited by the American Psychological Association (APA) since 1972. As noted in the APA Accreditation Handbook, the aim of accreditation is to promote program excellence and to provide professional and objective evaluation of programs as a service to the public, prospective students, and the profession. The Clinical Psychology doctoral program at URI is designed for students who are committed to a career involving both practice and research. Students will have the flexibility to focus more on research over practice, or vice versa, as they develop an individual plan of study and choose program committee members, engage in clinical training opportunities, and select elective courses. The Clinical Program is the largest doctoral program within URI's Psychology Department. The program has adopted the Scientist-Practitioner model, and provides generalist training in intervention, assessment, methodology, and the core areas of psychology. They believe it is important to train innovators and leaders, as clinical psychology is a dynamic field with constantly changing content and ever evolving domains of expertise. They elect to train generalists rather than to adhere to rigid academic tracks based on content. They emphasize training in principles of: reliable and valid measurement of psychological construct, categorization and prediction, empirically-based intervention methods. Students in this program can select a focus area in: Health psychology, Multicultural psychology, Neuropsychology,

#### **M.S. in Human Development and Family Studies:**

- *Developmental Science:* This two year Master's of Science degree program offers an innovative curriculum with a foundation in development, policy, and research. Students can tailor courses to their particular interest, such as child development, adult development/gerontology, family life education, or public policy/administration. This program prepares students for advanced positions in the areas of human service, research and program evaluation, policy/advocacy, and family life education.
- *College Student Personnel:* The Master of Science degree program in College Student Personnel (CSP) prepares students for entry-level positions in college and university settings and for careers as advisors, coordinators, directors, and deans at institutions of higher education throughout the country. The program follows the guidelines established by the Council for the Advancement of Standards in Higher Education (CAS). CSP students will be part of a learning community of full- and part-time students who work together to become knowledgeable, skilled, and engaged practitioners. Students gain valuable experience both in and outside of the classroom, so upon graduation they will be ready to make a difference in the lives of others.
- *Couple and Family Therapy:* This two-year program leads to the Master of Science degree in Human Development and Family Studies with a specialization in Couple and Family Therapy. The program offers practical experience in the Couple and Family Therapy Clinic. It is the only Couple and Family training program in Rhode Island that is accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE). Accredited since 1985, they have a proud tradition of 100% employment for our graduates, who work around the country and the world in mental health agencies, family services agencies, state departments of children and families, and independent practice. In addition to learning traditional family therapy theories, students will have the benefit of learning innovative training model which is based on an outcome management (OM) protocol. Using this protocol, students collect feedback from clients on their treatment progress after each therapy session, and record client responses using special OM software. Computerized predictions then provide a basis for identifying clients who are not progressing as expected, allowing trainees in collaboration with their supervisor to adjust their approach appropriately. Using this method, students realize not only rapid development of their skills, but also improved outcomes with their clients.

**Kinesiology (MS):** The Master's degree program is designed for students who want to pursue future study in a doctoral program, or work in a variety of organizations with an interest in the promotion of regular physical activity. Graduate students can choose one of the following specializations:

- *Cultural Studies of Sport and Physical Culture* This specialization focuses on the social, cultural, political, and ethical aspects of human movement with the ultimate goal of promoting social justice.
- *Exercise Science* This specialization focuses on physiological concepts related to the acute and chronic effects of exercise on human subjects, with areas of emphasis including exercise and aging, clinical exercise science, obesity, and the interaction between physical activity and health status.
- *Psychosocial/Behavioral Aspects of Physical Activity* This specialization focuses on understanding physical activity behavior, including the physiologic foundations of the behavior, and its role and manifestations in society in various forms.

**Nutrition and Food Science (MS):** This Master's degree provides areas of specialization in nutritional status and food behavior of high risk population groups; dietary behavior change to reduce chronic disease risk; nutrition issues related to aging and weight management; diet and exercise; energy and macronutrient metabolism; metabolic regulation and energy balance and lipid metabolism.

- *MS in Nutrition/Dietetic Internship* The combined Dietetic Internship Master's of Science program is a degree program in the Department of Nutrition and Food Sciences. The facilities where students gain supervised learning experiences are found throughout the State and represent some of the best healthcare institutions in Southern New England. The variety of facilities provides an opportunity for students to experience different management styles and organizational climates. Most participating sites, however, are concentrated in the northern section of the State, approximately 20 miles from the University. Classes associated with the program are generally scheduled at the University in Kingston.
- *The MS in Dietetics Program* is a 100% online program designed to provide academic training for students who are currently completing ACEND-accredited dietetic internship programs. The required courses complement internship rotations to provide comprehensive study of each area of Dietetics. This is a non-thesis MS degree program that consists of 11 courses completed with a dietetic internship program. The courses are taught in seven-week semesters. The program length is approximately 14 months, with seven 7-week semesters required. Students also complete an independent research project in their area of interest.

**School Psychology (MS/PhD):** The School Psychology MS program prepares students for "entry level" professional positions as a school psychologist. This three-year program provides the skills and knowledge necessary for a practicing school psychologist. The URI School Psychology MS Program is approved by the National Association of School Psychologists (NASP) and the Council for the Accreditation of Educator Preparation. School Psychology is #1 among social service jobs in the U.S. News and World Report's Best Jobs Rankings 2014, based on a variety of factors including salary, job satisfaction, and upward mobility, all of which are rated as above average. *The Doctor of Philosophy Ph.D* The School Psychology PhD program prepares students to assume leadership and practice roles in schools and other organizations serving children, adolescents and families. Students receive extensive research preparation and experience, as well as applied training and experiences, and will become professional psychologists and also scientist-practitioners. The program is accredited by both the American Psychological Association (APA)\* and approved/nationally-recognized by the National Association of School Psychologists (NASP).

**Doctor of Physical Therapy (D.P.T):** The Physical Therapy program at URI is a fully accredited Doctor of Physical Therapy (DPT) degree program. Through an intensive three-year course of study students learn about basic sciences, evaluative and treatment theories, intervention techniques, professional issues analysis, and skills development to allow autonomous practice.

**Speech-Language Pathology (MS):** The Master's in Science education program in Speech-language Pathology at the University of Rhode Island is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language and Hearing Association. The MS in Speech-Language Pathology provides academic and clinical training for students who are preparing for professional practice in speech-language pathology. Speech-language pathologists (SLPs) work to prevent, diagnose, and treat a variety of communication and swallowing disorders, and may be employed in schools, hospitals, and clinics. They often work collaboratively with other health care providers and educators

#### **Certificate Programs:**

- *Alcohol and Other Drug Counseling Certificate Program for Counselors of Substance Troubled People:* This is a five-course sequence designed for counselors, administrators, students and paraprofessionals

interested in working with substance troubled persons, or in chemical dependency-related services. The program emphasizes the psychological research findings and practical applications for intervention techniques with alcohol, other drug, and polydrug abusers, and is suited for training or upgrading of program staff.

- *Applied Behavioral Psychology Certificate Program:* The URI Certificate Program in Applied Behavioral Psychology is a five-course sequence designed to provide training and experience in the use of behavioral approaches with children, adolescents, and adults in educational and mental health settings. The program emphasizes psychological research findings and practical applications of these approaches. This program is designed for students planning to become educators or mental health workers, or for agency staff and administrators wishing to upgrade skills. Classes are taught by experienced instructors, and include training and supervision from professionals currently active in the field. Practicum sites include the Groden Center, a nationally recognized treatment program for autism and other behavioral disorders.
- *Certified Family Life Educator Program:* The objective of Family Life Education (FLE) is to improve the quality of individual and family life. Family life educators use a variety of methods and settings to provide training to people who want to be more effective family members. A few examples of how FLE can strengthen families include: Anger management and co-parenting workshops for divorcing couples with children, Promoting family-friendly workplace policies, Public service campaigns to increase awareness of the importance of strong marriages and families, Developing curriculum and teaching classes for parents.
- *Graduate Certificate in Gerontology and Geriatrics:* The Graduate Certificate provides an important academic step beyond continuing education for professionals who already possess a bachelor's or advanced degree and can lead to further graduate training in a health or human service discipline at URI. The program is interdisciplinary, with faculty from eight different URI departments and colleges participating in offering courses and mentoring students: Gerontology, Human Development and Family Studies, Communicative Disorders, Nursing, Nutrition and Food Sciences, Pharmacy, Physical Therapy, and Kinesiology.

## **URI ACADEMIC RESOURCES FOR FACULTY, TRAINEES AND SCHOLARS**

**Professional Development and Career Advising Services:** The Graduate School provides PhD and master's students with resources and assistance to create a professional development plan and opportunities to define and develop skills, explore career resources and options and help students attain and thrive in their chosen careers. The Professional Development Director assists in creating and improving CVs and resumes, cover letters, devising strategies for job searching and interviewing, bolstering digital presence, identifying opportunities for academic and industry careers, funding, skill building and more.

**Center for Career and Experiential Education:** The University of Rhode Island Center for Career and Experiential Education (CCEE) engages students and alumni in a high quality personal and professional educational experience, from admission through employment. Their team of career education specialists offer self-assessments, searching and networking strategies, resume development and internship information sessions. They provide opportunities to explore a variety of occupations and gain practical experience by doing an internship or service learning while earning credit. The Center for Career and Experiential Education (CCEE) is dedicated to providing faculty with tools and resources to incorporate experiential education and career topics into all courses at URI.

**Business Engagement Center:** The Business Engagement Center (BEC) serves as the "front door" for industry to connect with the vast resources that exist at URI. Companies – from entrepreneurial startups to major corporations – use the services of the Center to sponsor research opportunities, access assistance with technology or intellectual property transfer, seek information about licensing, receive customized workforce training, and connect with undergraduate and graduate students for internships, as well as other essential services to help business thrive.

**Disability Services for Students:** Disability Services for Students is part of the Dean of Students Office in the Division of Student Affairs. The office currently consists of our Assistant Dean/Director, three fulltime

Coordinators, one Graduate Assistant, and several undergraduate Technical Accommodation Assistants. In addition, they hire approximately 150 students to help provide class notes adapted texts, or other supports for eligible students. They are committed to equal opportunity for all members of the URI Community. Disability Services for Students works with students and all units of URI to create inclusive and sustainable learning and working environments. They facilitate access, discourse, and involvement through innovative services, programs, leadership, and collaboration. In response to the ADAAA (Americans with Disabilities Act Amendments Act 2008) and Section 504 of the Rehabilitation Act, we promote academic success, self-advocacy, and equal opportunity through education, awareness, and the understanding that disability is a matter of cultural diversity. Additional duties of the office include: recommend and coordinate reasonable accommodations (exam, course, program, housing, transportation), encourage student development through self-advocacy and personal decision making, support student commitment to academic success and retention, provide information to faculty and administrators regarding disability awareness and inclusion.

**Graduate Student Association:** The Graduate Student Association (GSA) is a government body maintained by and for the graduate students of the University with the purpose of enhancing the academic, intellectual, and social opportunities of its members. Officers and members of the GSA Senate, who are elected annually from the entire graduate student body, distribute GSA funds to graduate students and other qualifying groups, organize social events, and serve as graduate student representatives on University-wide committees. Every graduate student at URI donates to the funds of the GSA through the student activities fee. All GSA programs; events; activities; and decisions are managed by the GSA executive committee as mandated by the GSA Constitution. The executive board is composed of a president; vice-president; secretary; treasurer; and a representative at large, who acts as the webmaster for the GSA website. Each board member is responsible for the duties of their respective position. Each executive board member is elected on an annual basis by voting members of the senate. GSA senators attend monthly meetings with the executive board to discuss and vote on GSA policy decisions. Executive board members have no voting privileges. Any graduate student may sign up to be a GSA senator; for every 20 graduate students, a graduate department is entitled to one department senator. All GSA policy, constitution, and by-law decisions are made by the voting senators. All board members and senators are paid for their duties and contributions to the GSA.

**Speaking Center:** The URI Speaking Center provides assistance for students who want to improve their public speaking skills or manage issues regarding speech apprehension and anxiety. Peer tutors in the Center ensure that students are adequately trained to prepare, develop, and deliver oral presentations in their classes, providing supplemental support for classroom instruction. To facilitate the mission of the Center, the staff uses digital video technology to record and edit student speeches for playback and critique – a critical tool proven effective for developing students' public speaking skills.

**Graduate Assistants United (GAU):** is the legally recognized bargaining unit for the approximately 600 graduate research and teaching assistants at the University of Rhode Island. GAU is a democratically run organization with the ability to bargain for benefits for all graduate assistants at the University and to protect employment rights as defined by their contractual agreement.

**Office of International Students & Scholars:** Students joining us from abroad will need to be in contact with the University Office of International Students and Scholars. They have information geared specifically towards international students. The staff is available to assist international students in becoming comfortable in their new environment. They will help students understand and comply with regulations from the U.S. Department of Homeland Security and the Exchange Visitor Program; prepare I-20 and DS-2019 forms for you and your dependents, help students understand and access other U.S. and local government agencies requirements and services; and learn about other URI administrative offices and services.

**URI Counselling Center:** The URI Counseling Center provides services to enhance the personal, academic, emotional, social, and life planning effectiveness of students. These services may include crisis intervention, individual counseling, group counseling, referrals for psychiatric assessment, and mental health screening. The Center also assists the University community in creating and maintaining a learning environment conducive to psychological and educational development.

**URI's University College for Academic Success (UCAS):** specializes in academic advising. Academic advisors are ready to help students understand their degree requirements and to build connections between their educational interests and career goals. Advisors work to match up academics, interests, and strengths with majors and careers, so students not only graduate on time, but also have a bright future. Students come to find

the academic advising help they need by appointment with academic and faculty advisors who work with students of all academic interests and backgrounds, from those declared in their major(s) and/or minor to those exploring, transitioning, and finding a best-fit major. UCAS academic advising services are located in Roosevelt Hall.

**The UR Academic Enhancement Center AEC:** They assist all URI students in achieving academic success. They seek to help students to build supportive relationships, strengthen academic and professional skills, and strive for personal and intellectual growth – as individuals and as members of a diverse university community. AEC believes that all students are valuable members of the URI community and should be provided with learning support that is inclusive, grounded in research, representative of best practices in college learning, and responsive to individual needs.

**Gender and Sexuality Center:** The Gender and Sexuality Center prides itself on providing Education, Engagement, and Support for the URI campus community and beyond. Education programs allow the entire URI community explore concepts related to LGBTQ people and issues. Engagement programs provide an opportunity for people to meet and create meaningful relationships with each other. Finally, Support programs give students, faculty, and staff a place and time to receive and offer the benefit of community support for whatever issues our community members encounter. The University of Rhode Island's Gender and Sexuality Center is a cultural department that allows students, faculty, and staff to explore and affirm their multiple and intersecting identities, especially surrounding gender and sexuality. We are committed to nurturing a student-centered learning environment where all are engaged in purposeful academic and personal identity development. Our staff passionately promotes a welcoming, inclusive, and supportive URI community.

**URI International Center:** Today's shared global environment delineates the performance of the next generation of specialists regardless of their academic preparation, government, or business orientation. International Education promotes globalization of education and building of students' cross-cultural global skills through educational opportunities in a variety of global environments and institutional linkages. In collaboration with the university community, the International Center provides access and guidance to students that expose them to critical global issues and opportunities for personal growth. Global environments serve as building blocks for defining careers and personal trajectories. The International Center is guided by the principles and goals advanced by the University Transformational Goals and the Academic Plan. Goals are to foster cross-cultural and global skills development and students' discovery of social, cultural, economic challenges occurring worldwide, support international global education standards and crisis management plans, assure compliance with SEVP's and the U.S. State Department's regulations, organize orientation services for international students and interns, and other international visitors, and assist with the formulation of international education agreements.

**Multicultural Student Services Center:** The URI Multicultural Student Services Center (MSSC) is a place dedicated to developing a supportive and inclusive campus culture across the boundaries of culture, identity, and discipline. Celebrating unity in diversity, the Multicultural Student Services Center invites all of its students, faculty, staff, administrators, alumni, and other friends to join in its work in creating a community of learners within and beyond URI. In support of the primary mission of the University toward building a culture of learning, the University of Rhode Island (URI) Multicultural Center critically engages students, faculty, staff, administrators, and other allies in creating and sustaining a campus culture in which diverse persons, organizations, and groups can learn and develop to their greatest potential, and participate in society to their maximum ability. Toward this purpose, the URI Multicultural Center collaborates with others in providing a variety of programs, activities, and services that help diverse learners to systematically explore the ways we culturally construct identity (who we are), knowledge (what we mean), power (how we assert influence), community (how we relate and belong to each other), and culture (how we make meaning).

**The URI Women's Center's:** presence on the Kingston campus is recognized, appreciated, and valued as a precious and integral aspect of the University. Goals are a community committed to social justice and to encourage and advocate for a community committed to gender equity and free from violence and oppression, create a space where all people can feel valued and safe, facilitate and strengthen connections among people across lines of difference to foster balance and equity to strive for a stronger sense of inclusive community. By cultivating an empowered community for all regardless of gender identity or gender expression, the URI Women's Center maintains and nurtures positive energy, information and support to break the silence on interpersonal violence, educate on gender, sexuality (mind and body), health, human rights and discrimination.

In addition to the numerous programs and resources available, they are also a residence for women identified URI students and lactation-friendly spaces.

**URI Faculty Guides Program:** The Faculty Guides program is designed to provide quick, ready, and accessible information for URI faculty and faculty candidates. These programs offer all faculty, in particular early-career faculty and underrepresented faculty, ready resources for specific topics from those knowledgeable in that topic. Teams are composed of senior faculty and staff with expertise about specific topics. Guides are available by phone, email, or in person to offer short-term, expeditious assistance to faculty who have specific questions on that particular topic. Guides may refer faculty to the additional assistance of a mentor, chair, or some other resource, if the issue is complicated.

**Office for the Advancement of Teaching & Learning:** The Office for the Advancement of Teaching and Learning consists of three divisions — Faculty Development, Online Education, and Student Learning, Outcomes Assessment, & Accreditation— all of which promote excellence and innovation in teaching and learning at URI. We provide high quality courses, workshops, resources, and support for faculty, instructors, and graduate students. We help faculty create high quality learning experiences and adapt evidence-based teaching strategies to enhance student learning.

**URI Faculty Mentoring:** All URI colleges implement a mentoring policy that provides for effective mentoring for their new faculty. This mentoring consists of career-advancing guidance, as well as social and psychological support for the new faculty member. College policies include the provision of one or more mentor(s) to each new faculty member, some form of mentor training, and regular “checking in” to ensure that the needs of junior faculty are being met.

**Division of Research and Economic Development Compliance Training:** Required compliance training for University of Rhode Island Investigators and Study Personnel is offered through the Collaborative Institutional Training Initiative, commonly called the CITI Program. CITI training is required for: Human Subjects Research: Investigators and Study Personnel conducting biomedical research and/or social/behavioral research involving human subjects. Animal Subjects Research: Investigators and Study Personnel conducting research involving vertebrate animals. Biosafety: Investigators and Study Personnel conducting research involving biological materials (refresher training only) Financial Conflict of Interest: Investigators conducting research funded by a PHS agency or other agency following PHS Financial Conflict of Interest (FCOI) Regulations. Responsible Conduct of Research: Graduate students matriculating in the fall of 2014 and after in majors with a research thesis or dissertation and post-doctoral researchers, others supported by National Science Foundation (NSF), National Institutes of Health (NIH), or U.S. Department of Agriculture National Institute of Food and Agriculture.

**URI ITS Instructional Technology and Media Services:** Mission is to assist URI faculty and staff in their use of technology to advance effective teaching and learning. Faculty can explore teaching technology options in a relaxed faculty learning center, try new techniques before introducing them to a live class, take advantage of Technology Training & Faculty Workshops, or reserve a one-on one consultation. ITS provides consultation services to URI faculty, staff and team members who are interested in using technology to enhance teaching or to support research. They offer a full spectrum of instructional digital video, web and animation production services. ITS staff and students work with faculty to enhance the use of multimedia in their curriculum to enrich the student learning process. Throughout the year, ITS offers on-demand, just-in-time, training in the format of instructor-led short courses, workshops, brown-bag meetings and classroom presentations on topics such as the Sakai Learning Management System, website development, digital video production and editing, MS Office, E-mail, online calendar, Turning Technologies classroom response system, productivity applications for desktop, and mobile platforms, etc. ITS hosts technology webinars for the URI Community, and arranges seminars and demonstrations of emerging technology in the Chafee 208 Instructional Technology Center. In collaboration with the Office of Online Education, ITMS hosts faculty Workshops and Brown Bag discussions on topics of interest, in the Instructional Technology Center. ITMS also acts as a clearinghouse for additional webinars that you might find useful to register for to watch from your own desk. Statistical help (SAS, SPSS), is also offered.

**Metcalf Institute for Marine & Environmental Reporting:** has a global reputation for providing science training for journalists and communications training for scientists. The Metcalf Institute offers a variety of programs and seminars to help scientists and other science communicators gain the confidence and skills needed to share their science with different audiences. The Institute, part of the world-renowned University of Rhode Island Graduate School of Oceanography, is located on the URI's 200-acre Narragansett Bay Campus. Programs in science communication include (1) SciComm Exchange: (2) Science Communication Workshops for Rhode

Island Researchers, (3) Customized Workshops for Science Communicators, (4) Science Communication Workshops at Scientific Conferences, (5) Poster Presentation.

## **URI DIVERSITY INITIATIVES**

**The URI Office of Community, Equity, and Diversity:** The University of Rhode Island is passionate about promoting a campus culture and community where you are welcomed, respected and valued for who you are. To succeed and lead in the 21st century world, with its wide diversity of cultures, lifestyles, beliefs, abilities, religions, political systems, and philosophies, the ability to communicate, understand, and engage productively while embracing and acknowledging differences is critical. In celebrating this diversity and the University's reflection of a growing, global community, the focus remains clear: to create an inclusive and supportive environment where each individual can thrive.

In 2015, URI became the first institution of higher education in the country to design, build and open a free standing Gender and Sexuality Center to provide a supportive, equitable and safe environment for all persons on campus. Well known for its unique initiatives, the center runs many programs each year to educate, engage and support community members on issues related to gender and sexuality.

The URI community is made up of students, faculty, staff, and alumni representing an array of cultures, lifestyles, beliefs, religions, political affiliations, and philosophies. As such, the commitment is to be a welcoming community for all and to help all members of the community develop the ability to communicate, understand, and engage productively with people different than themselves. The culture of URI is defined in the "Cornerstones" below, developed by the Quality of Student Life Committee and endorsed by the URI Student Senate: The University of Rhode Island is a principled community guided by values. Members of this community, subscribe to the following principles, which form the foundation of their endeavors. The URI community pursues knowledge with honesty, integrity, and courage, promotes independent choice, intellectual curiosity, open-mindedness, and free expression, respects the rights and dignity of each individual and group, rejects prejudice and intolerance, works to understand differences, accepts personal responsibility for actions and consequences, actively cooperates to improve the University, the state of Rhode Island, and the global community beyond borders, strives to be a community where the environment and property are treated respectfully, seeks to create and maintain an environment conducive to personal health and wellness, and works to develop skills that promote lifelong learning, leadership, and service.

In 2016-2017, The University of Rhode Island has a total of 758 faculty members. The faculty categories for the 758 faculty members are: tenured/tenure track, clinical, lecturer, research, visiting, part-time tenured/tenure track, clinical part-time and research part-time. The number of faculty by category are 547 tenured/tenure track, 42 clinical, 130 lecturer, 16 research, 7 visiting, 3 part-time tenured/tenure track, no clinical part-time, 5 lecturer part-time, and 8 research part-time. Of the 758 faculty members, 288 are Professor, 158 are Associate Professor, 166 Assistant Professor, 31 are Instructor, 99 are Lecturer, 5 are Professor part-time, 1 is Associate Professor, 5 are Assistant Professor part-time, and 5 are Lecturer part-time. Of the 758 faculty members, there are 387 men, 339 women, 22 Hispanic, 3 Native American/Alaska Native, 98 Asian, 18 Black, 616 White, and 1 not reported. Overall, there are 141 (18.6%) racial/ethnic faculty (Hispanic, Native American/Alaska Native, Asian, and Black) and 616 (81.2%) White faculty.

Consistent with one of the transformational goals to build a community that values and embraces equity and diversity, URI continues to increase the diversity of faculty. During the academic years 2015-17, URI hired thirty-two (32) Hispanic, Native American/Alaska Native, Asian, and Black faculty into full time tenure track faculty position and approximately fifty percent (50%) were women. In addition, Latina and Black Multicultural faculty Fellows are transitioning into a full time tenure track faculty position at the end of this academic year.

Over the last seven years, URI has seen a steady increase in hiring full time tenure track faculty members from racial/ethnic groups from 109 in 2011 to 141 in 2017. In 2011 racial/ethnic faculty represented 109 (16%) of the total faculty whereas 2012 racial/ethnic faculty represented 110 (16%) of the total faculty whereas 2013 racial/ethnic faculty represented 113 (16%) of the total faculty whereas 2014 racial/ethnic faculty represented 114 (16%) of the total faculty whereas 2015 racial/ethnic faculty represented 120 (17%) of the total faculty whereas 2016 racial/ethnic faculty represented 123 (17%) of the total faculty whereas 2017 racial/ethnic faculty represented 141 (18.6%) of the total faculty.

URI is excited about the hiring of a Diverse Faculty and Staff Recruitment and Retention and the streamlining of the recruitment and search process both of which have contributed to the increase in the hiring of racial/ethnic

full time tenure track faculty members. They are beginning to see steady increases in the hiring of racial/ethnic faculty members over the seven years, and are committed to continuing to strive to increase these numbers each year.

The Office of Community, Equity and Diversity Works in partnership with the University community to increase the number of students, faculty, and staff from marginalized groups who apply to study and work at the University. They strive to recruit students from marginalized groups in every discipline at the undergraduate and graduate levels, recruit faculty from marginalized groups in every discipline at every level, recruit staff from marginalized groups in every department at every level. The Office of Community, Equity and Diversity works in partnership with the University community to maximize the number of students, faculty, and staff from marginalized groups who advance through the educational and professional pipeline at the University. They retain students from marginalized groups at the undergraduate- and graduate-levels in all disciplines and retain faculty from marginalized groups in all disciplines.

## **URI CENTERS, INSTITUTES, INITIATIVES AND PROGRAMS**

**University of Rhode Island Superfund Research Program Sources, Transport, Exposure and Effects of PFASs (STEEP):** This 5-year, \$8 million project will address the growing concerns about the effects of industrial chemicals that are threatening public health. URI, which will pull together work from many of its academic disciplines, ranging from pharmaceutical to engineering and oceanography, will be coordinating efforts to identify and reduce the risks of per- and polyfluoroalkyl substances (PFASs) that pose an immediate threat to human health through groundwater contamination. The URI Superfund Research Program is in partnership with scientists from Harvard University and the non-profit Silent Spring Institute, with funding and support provided by the Superfund Research Program, National Institute of Environmental Health Sciences.

**Center for Biotechnology and Life Sciences:** In the College of the Environment and Life Sciences, students develop new scientific knowledge and partner with world class faculty in the laboratory and in the field, steeped in the sense that stewardship of the earth's resources is at the heart of their experience with us. Whether they engage in the study of marine biology or biotechnology, nutrition or environmental science, CELS students work with professors who are also nationally recognized researchers, conducting cutting edge science to meet the pressing needs of the global community. Our Center for Biotechnology and Life Sciences houses state-of-the-art teaching facilities, high-tech research labs, a genomics center and aquarium facility, all to meet the needs of the College's programs in biotechnology and in the environmental, life, and health sciences.

**Southern Rhode Island Area Health Education Center (sriAHEC):** Housed within the College of Nursing at the University of Rhode Island, the Southern Rhode Island Area Health Education Center aims to develop high quality, culturally competent healthcare workers by recruiting and supporting students as they progress through their academic careers. In collaborating with community partners, sriAHEC addresses health care disparities in Rhode Island, especially its southern regions. **Core programs of sriahec include:**

*Pathways to nursing:* The Pathways program provides academic and social support to highly qualified, motivated, historically underrepresented students, particularly from communities of color. interprofessional education (ipe)

*IPE:* The Warren Alpert School of Medicine (AMS) at Brown University, the University of Rhode Island (URI) Colleges of Nursing and Pharmacy have developed an Interprofessional, student-focused workshop that introduces students to a team-based, patient-centered care experience. An IPE work group consisting of deans, faculty, and other administrators have developed this bi-annual simulation program. They are currently working on a framework and content for fully integrating IPE into the curriculum. summer internships

*Summer Internships:* Internships in community health settings advance student progress in their academic careers while addressing health disparities in Rhode Island communities. mentoring program

*Mentoring Program:* Our Mentoring program pairs Pathways scholars with professional nurses.

**Rhode Island Geriatric Education Center:** The mission is to prepare health care and human service professionals, faculty, and students and caretakers to better meet the physical, functional, and psychosocial needs of older adults. Geriatrics education and training is crucial to improving the healthcare of older populations. As most health care providers encounter older adults in their practice, it is surprising to learn that very few have received any formal education or training in gerontology (the science of the normal aging process) or geriatrics

(the branch of medicine treating the diseases and chronic conditions associated with older adults). Inadequate knowledge in these areas can lead to misdiagnoses, under or over treatment, medication errors, increased hospitalizations, poorer outcomes, increased costs, and reduced quality of life for older adults. RIGEC works to close this education gap. Interprofessional teams of expert faculty are dedicated to developing and delivering a wide array of high-quality educational programs and clinical training experiences that always reflect the latest advancements in evidence-based geriatrics practice.

Based out of the URI program in Gerontology, RIGEC is a consortium of partners established in 1996 one of 45 federal geriatric education centers (GECs) dedicated solely to providing interprofessional geriatrics education and training to health care practitioners and direct services workers, medical trainees, health professions students and academic faculty. Over the past 18 years, RIGEC has delivered hundreds of interdisciplinary focused workshops, lectures, and clinical training programs providing over 4000 individuals across the state with specialized knowledge and skills needed to care for older persons. In July 2015, RIGEC was one of 44 organizations in 29 states awarded a grant by the Health Resources and Services Administration (HRSA) to implement the Geriatrics Workforce Enhancement Program (GWEP). The GWEP aims to further improve health outcomes for older adults by integrating geriatrics into primary care delivery systems and engaging patients, families, and caregivers.

RIGEC is a consortium of Rhode Island's strongest health professions, educational and outreach programs, hospitals and primary care networks, and key community agencies and programs. The consortium is working together to enhance RI's geriatric workforce and to maximize patient and family engagement in care.

The RIGEC program is an Academic Institution housed at URI, that works collaborative with the URI College of Health Sciences, Nursing and Pharmacy, Rhode Island College (Schools of Nursing and Social Work), and Brown University (Warren Alpert Medical School). Additionally, the RIGEC works with Healthcare Networks such as Care New England Health System (Memorial Hospital, Kent Hospital, Butler Hospital and VNA of CNE, Roger Williams Medical Center), the Care Transformation Collaborative of Rhode Island (CTC-RI), Rhode Island Primary Care Physicians Organization (RIPCPC) and Government and Community Agencies such as the RI Alzheimer's Association, Healthcentric Advisors, RI Department of Health and the RI Division of Elderly Affairs.

#### **institute for Immunology and Informatics (iCUBED)**

The Institute for Immunology and Informatics (iCubed) was established in 2008 an independent research unit within URI's Biotechnology Program. A component of the College of the Environment and Life Sciences, iCubed is located in the historic Shepard Building as part of URI's Providence campus. Since its inception, iCubed has grown to 7 faculty members with a shared focus on the immunology of infectious diseases and the application of informatics analysis to the development of vaccines and therapeutics, and has attracted more than \$32 million in external grant funding. iCubed researchers are investigating a broad range of human and animal diseases, including dengue, HIV, influenza, and other neglected tropical diseases. Under U19 and COBRE funding, iCubed has established the Cell Analysis and Sorting Core Laboratory to support the RI scientific community. The Core provides facilities for multiparameter analysis of samples by flow cytometry, fluorescence microscopy, and multilabel plate readers in a BSL2 environment and automated cell sorting using magnetic beads. The Core is available for use by COBRE-affiliated and non-affiliated RI researchers. Given its location on URI's Providence campus, iCubed is within walking distance of the biomedical research community of Brown University and its associated hospitals and many RI biotechnology companies.

- ***iCubed research space and equipment.*** The laboratories currently occupy ~4,800 square feet of research space. The Vaccine and Immunotherapeutics Research Laboratory (VIRL) occupies ~1,400 sq ft of laboratory space fully equipped for molecular biology work, with centrifuges, electrophoresis apparatus, thermocyclers, a shaking incubator, and an Akta FPLC apparatus. The Laboratory of Viral Immunity and Pathogenesis (LVIP) occupies ~2,500 sq ft of laboratory space fully equipped for BSL2 cell and molecular biology work, with dedicated tissue culture space (biosafety cabinets, centrifuges, CO2 incubators, -70°C freezers, liquid nitrogen tanks, standard, inverted, and fluorescence microscopes) and molecular biology space (PCR hood, standard and real-time PCR machines, microcentrifuges, electrophoresis apparatus, QIAcube, QIAgility, and ChemiDoc). iCubed's Cell Analysis and Sorting Core Laboratory is a ~750 sq ft laboratory equipped with two flow cytometers (4-laser, 12-parameter LSR II and 3-laser, 10-parameter MACSQuant), CTL ELISpot plate reader with fluorescence detection, AutoMACS, Envision multilabel plate reader, Cytation 3 imaging plate reader, and ELISA plate washer.

iCubed faculty also have shared access to all equipment in the URI Providence Biotechnology Center, which occupies 5,900 square feet of wet laboratory space. iCubed occupies ~1,900 sq ft of office space, including a Directors' office, faculty offices, Business Manager's office, administrative support staff area, and areas for post-doctoral fellows, students, and research staff. A conference area of ~650 sq ft includes meeting space and four workstations. The Shepard building has a large number of classrooms available for meeting space that are equipped with audiovisual presentation equipment and a 2,000 sq ft lecture room that accommodates up to 75 persons. All iCubed faculty offices are furnished with desktop computers with Internet access and productivity software. Desktop computers are available throughout the iCubed laboratories for data entry and analysis.

**Institute for Integrated Health and Innovation:** The Institute for Integrated Health and Innovation serves as a vibrant hub for collaborative efforts and innovation within the Academic Health Collaborative. Expertise from within the Collaborative and across campus will create, support, and promote cross-disciplinary opportunities in education, research, entrepreneurship, and service provision for health. The Institute prepares health professional students to work in a collaborative environment. New programs and teaching supports teach students to work in health care teams, and provide them with the advantage of learning how to interact and share knowledge, and learn from one another in the pursuit of enhancing health.

**Cancer Prevention Research Center (CPRC):** The primary mission of the Cancer Prevention Research Center is to enhance the quality and quantity of life through prevention of cancer, other chronic diseases and premature death. The primary means is through basic and applied research and dissemination of the most effective behavior change technologies. Their aim of the CPRC is to develop better solutions to the most common killers and crippers of the time, namely life-style factors like smoking, substance abuse, high risk sex, unhealthy diets and sedentary life styles. Efforts are integrated around a common theme, the Transtheoretical model developed at the CPRC and now recognized internationally as one of the most promising approaches to health promotion. Applying a stage paradigm, the CPRC emphasizes proactive and interactive interventions for populations at all stages of change and not just the small minority prepared to take action.

- *CPRC Environment.* The CPRC is housed in a 19,000 sq. ft. building designed specifically to meet the needs of the center and located in an ideal location within the social science complex on the URI campus. This exemplary research facility was opened in June 1991 and an addition that doubled the size was opened in January 2000. The current CPRC building contains 55 offices, a lobby and reception area, three conference rooms, and adaptable research space. Beyond office space, this research setting contains several specially designed areas, including a large telephone survey center (1300 sq. ft.), a large mailing area (420 sq. ft.), and several rooms designed to house the central components of the CPRC computer system.
- *CPRC IT support.* The CPRC has building-wide local area networks (LANs), and these are connected to the campus network through high-speed frame relay connections. CPRC utilizes the latest technology for centralized sharing of files and other resources, and also maintains a web server with data backed up daily. Additionally, the CPRC LANs also provide fast linkage directly to the URI IBM ES/9000 mainframe via a fiber optic network backbone allowing for extremely fast data transfer rates. The mainframe system has available a complete set of the basic software packages needed to perform analyses: EQS, LISREL, SPSS and SAS. In addition the CPRC has available a large number of Pentium class PCs for data cleaning, data storage and statistical analyses. A large number of statistical, graphical and database management packages are available in the microcomputer environment within the CPRC: SYSTAT, SPSS, SAS, EGRET, EQS, LISREL, and BMDP. Available graphics packages include Harvard Graphics, PowerPoint, and SYGRAPH. Available database management packages include EXCEL, PARADOX and ACCESS. In addition, the URI Academic Computer Center mainframe supports FTP (file transfer protocol) software, which enables speedy transfer of large data sets over fiber optic data transmission lines. Firewalls and other sophisticated technologies (such as encryption) are used to enhance network, system, and data security both at URI and the CPRC. The CPRC has access to computer programmers that develop software, manage databases and assist with the Survey Management System needs. They maintain the network, and insure that the capabilities of the system continue to expand in a manner that meets the needs of research staff. Macromedia's Authorware, Softvoice, Quicktime for Windows, Adobe Photoshop, and Creative WaveStudio are available to CPRC programming personnel. The University of Rhode Island also maintains additional audiovisual and multimedia resources (such as film and sound studios), which can be used as needed to support multimedia developments.

- *Data management.* The CPRC has a fulltime data manager who oversees data storage. CPRC utilizes web-based, scanner, telephone, and keyed entry technology for data entry. CPRC has conducted large mail and phone surveys on national and international levels. All staff undergo intensive selection and training (manualized, role-plays, quiz prior to hire), and extensive quality control procedures maintain integrity (random sampling with feedback to interviewers). The CPRC also utilizes an extensive tracking system for follow-up (reports generated with due dates, mailing labels, cover letters, dates of attempted contacts, dates of completion, etc.). Social service agency collaborators have been involved in large federally funded grants for decades, and have the technology and support to effectively conduct such grants. These agencies have more limited software capability, but typically do have SPSS, Access, Microsoft Office, and web access. URI has arranged networking with them for secure data-sharing. Agency staff members have access to networked PCs to share files. Agencies maintain their own network security systems and web sites.

**Behavior Change Research Center (BCRC) /Psychological Consultation Center (PCC):** The Behavior Change Research Center (BCRC) is dedicated to research and training in health behavior change at the graduate and undergraduate levels. The Behavior Change Research Center (BCRC) is home to the Psychological Consultation Center (PCC) and other health research teams in areas such as early intervention and treatment outcome research in alcohol and other substances use, mood disorder evaluation and intervention, and learning assessment and evaluation. The Behavior Change Research Center (BCRC) and Psychological Consultation Center (PCC) were built to support multidisciplinary collaborative health behavior change research and delivery of clinical interventions. Renovated in 2013 with a multimillion dollar grant, the PCC/BCRC are located in a central building on URI's main campus and are accessible to individuals with physical disabilities or other limitations. The PCC is the on-campus clinical training facility for all graduate students pursuing Doctoral degrees in Clinical and School Psychology as well as Behavioral Sciences. The PCC provides clinical services to members of the broad Rhode Island community, as well as University students, staff and faculty.

- *Space and Equipment.* The PCC has 6 unique therapy rooms (4 individual treatment rooms as well as 2 larger family/group-sized treatment rooms). All therapy rooms are outfitted with audio and visual recording capabilities and have one-way mirrors for live-observation. Additionally, the PCC has a waiting and reception space designed to preserve client confidentiality and privacy. The BCRC and PCC also contain 10 offices, 3 laboratory spaces, 2 conference rooms, as well as 2 large suites for research and teaching assistant in the Department of Psychology. Physical conference rooms have state-of-the-art video conferencing capabilities, and the PCC manages 2 "virtual" conference rooms and 2 "virtual" therapy rooms for teletherapy and large-scale remote teaching/conferencing.
- *Information technology (IT).* Full time technicians are devoted to and advise on all technology, video-conferencing, database, and teleservice purchases and systems for the PCC/BCRC. They maintain PCC/BCRC virtual servers, maintain firewalls and other protections, and provide on-site trouble-shooting and repair for all technology questions/concerns. The Psychological Consultation Center (housed in the Behavior Change Research Center) employs a full time Director, advanced graduate assistant, and office manager. Additionally, the PCC has several designated Information Technology support staff who provide assistance with and oversight of all Center technology and data storage.
- *Grant Support.* The Behavior Change Research Center works with the Institute for Integrated Health and Innovation and a core of staff on site devoted to all aspects of pre- and post-award grants and financial management, including: preparation, review and updating of budgets, approval and processing of all financial transactions, financial projections, grants compliance for funded projects, and control and monitoring of subject payments, and payroll.

**George and Anne Ryan Institute for Neuroscience:** The George & Anne Ryan Institute for Neuroscience is a multidisciplinary research center focused on discovering and developing disease-modifying therapies for neurodegenerative disorders such as Alzheimer's disease and Parkinson's disease. Their vision is to be a local and national center of excellence dedicated to the eradication of neurodegenerative diseases. Their search for cures and treatments for neurodegenerative disease combines three powerful approaches: Bench: Research into what triggers the atrophy and death of neural cells and systems in Alzheimer's disease, Parkinson's disease, ALS and other diseases. Bridge: Converting scientific discoveries into potential therapies. Bedside: Shepherding promising therapies into the clinical trial process. The George & Anne Ryan Institute for Neuroscience is a recently established research and discovery center based at the University of Rhode Island with partners at universities, clinical centers, community organizations, and companies across the state. The George & Anne

Ryan Institute for Neuroscience is dedicated to finding treatments and cures for neurodegenerative diseases. Core faculty include neuroscience researchers in several departments at the University of Rhode Island and a faculty network that extends to Brown University, Rhode Island Hospital and Lifespan Health System, Butler Hospital and Care New England Health System, the Providence VA Medical Center, and beyond.

**Rhode Island Genomics and Sequencing Center (RIGSC):** The RIGSC was established to provide technical and analytical support for molecular biology and genomics research at the University of Rhode Island and all RI EPSCoR institutions. The RIGSC offers services in robotic sample preparation, DNA sequencing, fragment analysis, real-time quantitative PCR and the identification of microbial species and phenotypes. The RIGSC also provides imaging services using transmitted light, epifluorescence, and laser scanning confocal microscopy, as well as cryostat sectioning of frozen specimens.

- *RIGSC Equipment:* AirClean 600 PCR Workstation; Agilent 2100 BioAnalyzer; Applied Biosystems 3130xl genetic analyzer; Beckman Coulter Allegra 25R- refrigerated centrifuge; Covaris S220 AFA ultrasonicator; DNASTar Lasergene server; Eppendorf epMotion 5075 VAG; Eppendorf Mastercycler ep GradientS thermal cycler; Illumina MiSeq next generation sequencer; Wafergen Apollo 324 - automated workstation; Invitrogen Qubit fluorometer; MJ Research PTC-1 00 thermal cycler; Nanodrop 8000 (8-channel spectrophotometer); Omnilog Phenotype Microarray System; Qiagen Tissuelyser; Qiagen QiaCube; Roche LC480 qPCR instruments (2); Stratagene Mx3005 qPCR system; Sage Science BluePippin preparative electrophoresis platform; Thermo Savant DNA SpeedVac; Vibrato me 5000 cryostat; Zeiss AxioImager 2 motorized microscopes with AxioCam high-resolution digital camera and LSM 700 scanning confocal module with 4 diode lasers at 405, 488, 555, & 639 nm excitation.

**Center for Molecular Toxicology:** The mission of the Center for Molecular Toxicology (CMT) is to foster a state-wide research and training network in toxicology and related biomedical disciplines in order to enhance research capacity, research competitiveness, and workforce development in Rhode Island (RI). The CMT provides the multi-institutional Rhode Island Institutional Development Award (IDeA) Network of Biomedical Research Excellence (RI-INBRE) Program, which is funded by a grant from the National Institute of General Medical Sciences, NIH, an operational base that is not directly linked to a particular department. At the University of Rhode Island (URI), faculty and students from all colleges have access to and benefit from activities, services, and resources made available through the CMT. The educational and research activities in toxicology are concentrated at the College of Pharmacy and hence the Center is located in this college. The Network institutions include Brown University, Rhode Island College, Providence College, Roger Williams University, Salve Regina University, and Bryant University. Consistent with its mission, the CMT has the following objectives: Research Career Development of Faculty. Since its inception, through the INBRE grant, CMT has been instrumental in leveraging new faculty positions at URI and other network institutions in the state. It supports the career development of junior faculty whose research areas are related to the Center's research focus. Prospective faculty members are assisted in developing their grant proposals. The faculty are mentored and supported usually for three years under this program. In addition, Pilot Projects for proposal development and student training are also awarded. A number of RI-INBRE-supported faculty at URI and Brown University, and some at the primarily undergraduate institutions, have successfully obtained independent external grants. At the primarily undergraduate institutions in the network, faculty receive financial support from RI-INBRE to train students in research methodology, present research findings at scientific meetings, and publish in peer-reviewed scientific literature. A number of URI students and postdoctoral fellows receive financial support from the RI-INBRE Program. In addition, student training in research also takes place at the network institutions. During the summer, a 10-week Summer Undergraduate Research Fellowship (SURF) program is organized both at URI and the network institutions. The SURF program culminates with an Undergraduate Research Day which is celebrated jointly with the RI NSF Experimental Program to Stimulate Competitive Research (EPSCoR) SURF program.

**Rhode Island Nursing Education Center:** State and University of Rhode Island officials ushered in a new era of higher education and health innovation on Nov. 30, 2017, officially dedicating the South Street Landing development project in Providence, home to the Rhode Island Nursing Education Center. The center opened in August, welcoming URI College of Nursing graduate and undergraduate students, who have access to 133,000 square feet of laboratory, classroom and office space at 350 Eddy St. Rapid changes in the increasingly complex environment for the health sciences demand advanced clinical education and ever-more rigorous academic requirements for nurses.

**The Center for Vector-Borne Disease (CVBD):** is devoted to conducting basic and applied research leading to better strategies for predicting and preventing insect- and arthropod-transmitted infections locally and world-wide. The CVBD works on advancing novel concepts like anti-tick vaccine strategies for broad spectrum protection against tick-borne disease. They track diseases like Lyme, Babesiosis, and Anaplasmosis locally, and share methods to develop similar disease surveillance programs around the world. They evaluate new products and assist others in developing and testing their product concepts, and respond to outbreaks locally and draw on multi-disciplinary expertise to assist HEALTH at all levels with emerging and re-emerging infectious disease problems.

**TickEncounter Resource Center:** For over 10 years, URI's Center for Vector-Borne Disease is committed to tackling Rhode Island's growing tick epidemic. In 2006, the Center launched a comprehensive initiative devoted to making swift progress in creating and implementing strategies to "drive tick-borne disease out of Rhode Island." To accomplish this, CVBD is integrating its existing programs in basic research with new outreach programs, to highlight the need for applying a wide variety of "tools" to achieve disease prevention. Goals of this effort include: Creating effective new vaccines and therapeutics to prevent tick-bites and disease transmission, Providing effective strategies for health information delivery and action plan decision support, Developing and promoting community-based tick control strategies to lower tick abundance and pathogen infection rates, Improving reliability in diagnosis and treatment.

### **URI INFORMATIONAL TECHNOLOGY AND COMPUTATIONAL RESOURCES**

The backbone of the URI network is built on Cisco hardware connected with and distributed via fiber optic lines. Available services and support include but are not limited to classroom media assistance, multi-media development services, and instructional support provided by URI's office of Information Technology Services (ITS). In the residence halls, students have access to both wired and wireless internet service, and all general-purpose classrooms are equipped with multi-media equipment.

**URI ITS Instructional Technology and Media Services:** ITS provides consultation services to URI faculty, staff and team members who are interested in using technology to enhance teaching or to support research. They offer a full spectrum of instructional digital video, web and animation production services. ITS staff and students work with faculty to enhance the use of multimedia in their curriculum to enrich the student learning process. Throughout the year, ITS offers on-demand, just-in-time, training in the format of instructor-led short courses, workshops, brown-bag meetings and classroom presentations on topics such as the Sakai Learning Management System, website development, digital video production and editing, MS Office, E-mail, online calendar, Turning Technologies classroom response system, productivity applications for desktop, and mobile platforms, etc. ITS hosts technology webinars for the URI Community, and arranges seminars and demonstrations of emerging technology in the Chafee 208 Instructional Technology Center. In collaboration with the Office of Online Education, ITMS hosts faculty Workshops and Brown Bag discussions on topics of interest, in the Instructional Technology Center.

**Media and Technology Services (MTS):** MTS provides customer-facing support and end-user services to students, faculty and staff for major administrative and academic computing systems and applications. From assisting callers and dispatching technicians to working with faculty on instructional technology issues, MTS provides the University community with an extensive array of support, media, and communication services. In addition to the assistance provided through the Help Desk, MTS supports the high-speed campus network, intercampus connectivity, Internet, and telephones, including voicemail. The University's data network topology is a redundant three-layer design comprised of a core, distribution, and edge layer providing gigabit connections to the buildings and 100 megabit connections to the end points. The network accommodates voice and video traffic in addition to data. MTS has implemented a wireless network throughout the University. It includes over 800 wireless access points connected to the University's high-speed data network. MTS also participates in the design of physical and virtual learning spaces across the enterprise and manages and maintains classroom media, online learning facilities (satellite and IP-based), and the Instructional Technology Center for faculty to develop high-end classroom content. In addition, MTS provides licensed software distribution for both proprietary and open source packages, and manages and maintains PC and Mac laboratories on the Kingston and Providence campuses.

**University Computing Systems (UCS):** UCS supports the University's major computing systems and provides services intrinsic to running a comprehensive and robust university network. The ITS Data Center in Tyler Hall enables generator-backed, continuous operation of the 100+ commodity-type servers running both Microsoft

server software and Linux. These systems provide the University with enterprise services such as: Sakai Learning Management System, e-Campus/ PeopleSoft's administrative processing applications, Noli/ Web-based document access, Enterprise file system, Web services, Netvault data backup system, VDI virtual desktop, VM infrastructure virtual server cluster, Campus-wide research software, Optical Mark Reader services are available for exam grading and survey processing, and plotting services are provided in support of instruction and research. In collaboration with the Help Desk, UCS also designs and maintains campus-wide trouble and response systems to keep all academic and administrative systems running

**Digital Production Resource Center (DPRC):** The Digital Production Resource Center fosters collaborative teaching environments and builds learning communities. It helps promote Problem Based Learning (PBL) and Experiential Learning opportunities. The Digital Production Resource Center serves as a resource to URI faculty, researchers, and their team of Student Technology Assistants. It provides many of the resources necessary to produce and deliver a wide range of professional, broadcast-quality multimedia instructional materials for the classroom and the Web. In addition to the acquisition and creation of new digital material, URI faculty and researchers possess a tremendous amount of non-digital archived materials. Even at top-level research institutions such as URI, these materials often never get incorporated into the educational landscape. The Digital Production Resource Center (DPRC) provides the technical resources required to incorporate the non-digital material into a digital production environment. Once converted, this unique and important archived information becomes part of students' educational experiences.

The Digital Production Resource Center supports a paradigm shift at URI from analog learning to newly created, digital learning. With the addition of new stationary technology and the mobile Web technology, the DPRC has a global reach. The DPRC supports a comprehensive, long-term solution to meet the creation of digital classroom instructional materials. The DPRC is designed to build upon MTS's existing digital production infrastructure, thereby reinforcing and expanding existing digital production capabilities. The facility allows educators and researchers to produce professional quality digital materials. These educational materials can be made available to students by using a variety of media including interactive CD, DVD, videotape, web-based teaching tools, distance education classes, and many other avenues of delivery.

The creation of broadcast quality digital instructional materials enables URI to foster and expand learning communities. The ability to collaborate with faculty, students and researchers throughout the world is increased. Such collaborations serve to enhance URI students' experiential learning. The possibilities are endless for educators and students. The DPRC further ensures that the University of Rhode Island remains a competitive center for learning and research. Faculty teaching capabilities are enhanced and students benefit by access to up to date media-rich instructional materials. The Digital Production Resource Center (DPRC) is the production/content development facility where Student Technology Assistants (STA) work on faculty projects. The Digital Production Resource Center is a robust and comprehensive production center designed to meet the need for creation of digital instructional materials for the classroom. The facility allows educators and researchers to produce professional quality digital materials that can be made available to students through a variety of media and web-based teaching tools. The Digital Production Research Center (DPRC) has two components. The stationary facility, located on URI's Kingston campus, contains three high-end computer workstations that serve as the core of the professional digital production suites. The mobile unit goes well beyond the URI campus by allowing faculty, researchers, and their student assistants the ability to collect, review, edit, archive, transmit, and receive data while working in the field. It includes a high-end computer laptop that serves as a state of the art, broadcast quality, digital video editing and production suite. Both the stationary and the mobile units contain digital video cameras, lighting kits, audio recording/mixing, 3D animation, Flash animation, and web site design capability. The DPRC is a secured facility. Authorized clientele have 24/7 access privileges. Scheduling is managed through a Sakai account. Authorized personnel may use this Sakai account as a primary means of communication among designated URI Media Technology Services staff.

**Student Technology Assistant (STA) program:** The Student Technology Assistant (STA) Program provides student help to faculty who are endeavoring to enhance or increase the use of multi-media technology in their curriculum and/or classroom. Student Technology Assistants provide support for the creation of digital materials to be used within the curriculum. The STA program teams up technology-savvy undergraduate students with faculty who want to include technology in their teaching. The STA program has proven to be an exceptionally successful model of teamwork, producing high-quality digital instructional materials.

**URI Office of Information Security:** When it comes to on-line security, the university offers all of its employees access to the SANS organization's "Securing the Human" on-line training program. This is a popular and helpful program that makes it easy to stay safe online, to protect data, and stay on top of the latest security threats and scams. Securing the Human's short and informative videos cover HIPAA, FISMA and FERPA standards as well as important topics such as Social Networking and Protecting Your Kids, Phishing and data protection. These videos are helpful for anyone who uses a computer. The program helps to ensure that all employees have the training to be knowledgeable of HIPAA, FISMA and FERPA standards.

**High Performance and Research Computing:** The goal is to enhance the capability of 'Big Data' analyses for researchers, while at the same time reducing the overall cost of such capability for those who take advantage of the increased capacity in data collection and processing. The University's latest strategic plan addresses the need to develop high performance and research computing initiatives to facilitate research and advance 'Big Data' analyses and applications across all disciplines. The strategy includes procuring and supporting

- *COP Technology Capacity.* Video Conferencing Communication between partner institutions is facilitated by the video conferencing capabilities of the facility. Cisco telepresence equipment integrated into the university's backend Cisco infrastructure enables video conferencing and classroom capture using installed equipment in three conference rooms, and seven classrooms. Cisco's Jabber software also extends the research of the technology to any of the spaces in the building through the use of mobile technology including laptops and iPads. The building also houses multiple teaching areas and conference rooms equipped with state-of-the-art audio and video equipment including tele-presence video conferencing. The design of the new COP building facilitates collaboration between Faculty members, students, and program staff, including research assistants and analysts. Faculty office, student research spaces, and research laboratories are organized into dedicated areas for each program specialty. The College of Pharmacy employs one full-time information technologist (IT) with several part time assistants. The IT specialist maintains the College of Pharmacy's wireless network and server. The IT specialist is also responsible for video conferencing, data security, and routine maintenance and back-up of College of Pharmacy faculty and staff's desktop and laptop computers. Faculty and staff all have adequate use of personal computing resources and access to the College of Pharmacy network and server. SAS and SPSS consultant services are available through IT services.

## **URI UNIVERSITY LIBRARY RESOURCES**

The University Libraries consist of the Robert L. Carothers Library and Learning Commons in Kingston, the URI Providence Campus Library, and the Pell Marine Science Library in Narragansett. The Robert L. Carothers Library and Learning Commons functions as the main library in the University Libraries system. Additionally, the Providence Campus Library is housed in the historic Shepard Building in downtown Providence. The Providence Campus Library has supported the information needs of Providence students since 1945. Lastly, the Pell Marine Science Library is located on the University's Narragansett Bay Campus, and opened in 1968.

The University Libraries are dedicated to the development of a University community that is information literate, as defined by the American Library Association and the Association of College and Research Libraries. They offer the University community opportunities to become effective, efficient information consumers, researchers, and creators for the 21st century. They actively promote instructional services as the bridge to information literacy empowerment between patrons and their research needs. The University Libraries' Public Services faculty encourages the development of an information literate University community in the following ways, By collaborating with colleagues across the campus to integrate information literacy into academic programs, By promoting the use of information research tools and resources, regardless of format or setting to develop effective and efficient information practice both for university coursework and lifelong learning, By providing instruction formally and informally, to individuals and to classes, in person and online, By providing programmatic instruction that addresses the needs of the University community, By working to make every interaction at the library, especially reference questions, a learning opportunity for users,

**Literature Search Databases:** The University Library has access to approximately 250 databases. Some of the databases included are; PubMed, Cochrane Databases, EMBASE, International Pharmaceutical Abstracts, CINAHL (indexing and abstracts of journal articles and other materials in nursing and allied health) PsycARTICLES (EBSCOhost) which provide full text access to articles from journals published by APA and allied organizations and PsycINFO (EBSCOhost).

## Digital Initiatives

- *Contributing to DigitalCommons@URI* University of Rhode Island faculty, staff, and students are invited to share and archive their work through DigitalCommons@URI, the University's institutional repository. Submissions may include scholarship, creative works, University and departmental publications, course projects, documentation of URI events, and more. Some current highlights of the repository include faculty publications, theses & dissertations, Senior Honors projects, student essays, and digital library collections.
- *Open Access Policy Submissions* In March 2013, the URI Faculty Senate passed an Open Access Policy. Through the Policy, the faculty granted the University a license to exercise any and all rights under copyright relating to each of his or her scholarly articles, in any medium, provided that the articles are not sold, and to authorize others to do the same.
- *SelectedWorks Faculty Profile Pages* URI faculty members may create a profile page using SelectedWorks, part of DigitalCommons@URI.
- *Electronic Theses and Dissertations* The Digital Initiatives unit coordinates with the URI Graduate School to receive and deposit URI theses and dissertations to DigitalCommons@URI for preservation and open access.
- *Online Periodical/Journal Hosting* The University's repository, DigitalCommons@URI, includes a full periodical publishing platform. Any URI faculty member, staff, or student may propose a new journal or move an existing journal onto this platform.
- *Faculty Publications in DigitalCommons@URI* Faculty interested in contributing their past scholarly articles to DigitalCommons@URI (anything published prior to URI's Open Access Policy of March 2013) may send their CVs or list of citations for review. DigitalCommons will check the journal policies, determine what may be deposited, and work with faculty to archive the correct versions of their past articles in DigitalCommons@URI.
- *Shared Shelf* Shared Shelf by ArtStor is a cloud-based platform for storing and sharing media openly on the web, or with a group of authorized users such as students in a course.
- *On-Demand Digitization* In many cases, we can digitize and provide patrons with digital copies of materials from the URI Archives and Special Collections. Some frequently requested items include URI theses, dissertations, and archival photographs.
- *Instruction Services & Information Literacy* At the request of colleagues teaching courses in a wide range of disciplines, reference librarians also design and teach library instruction sessions tailored to fit the specific research and curricular needs of students in particular courses. Librarians teach methods of research, sources of information, and evaluation of information. Examples of what course-related instruction sessions may include are: Electronic database demonstrations with time for hands-on practice, How to choose and use electronic and print periodical indexes, Instruction in general and subject-specific reference materials, How to use the URI Libraries Search, Internet search strategy and evaluation

## **URI RESEARCH CORE FACILITIES**

**Rhode Island IDeA Network of Biomedical Research Excellence (RI-INBRE):** Since 2001, URI has received a total of approximately \$61 million in grants from the Institutional Development Award (IDeA) program, which is run by the National Institutes of Health, to support the Rhode Island IDeA Network of Biomedical Research Excellence (RI-INBRE, previously BRIN). The RI-INBRE Centralized Research Core Facility was inaugurated in July 2003. The facility is supported by the Rhode Island IDeA Network of Biomedical Research Excellence (RI-INBRE) grant and by the institutions participating in the grant. This facility is the only one of its kind in the State and contains over \$4 million of state-of-the-art scientific instrumentation.

The RI-INBRE Centralized Research Core Facility, located in the College of Pharmacy at the University of Rhode Island's Kingston campus, has significantly enhanced the competitiveness of biomedical researchers at Rhode Island's academic institutions. The facility provides research and training support to RI-INBRE participants and to the Rhode Island biomedical research community. It is equipped with instrumentation for biomedical, pharmaceutical, and biotechnological research. Technical staff members manage the laboratory and are available to assist in the operation of the instruments and to analyze samples on a fee-for-service basis. The facility staff also participates in teaching undergraduate and graduate laboratory courses offered by the College of Pharmacy at the University of Rhode Island. In addition, they organize instructional seminars and training workshops in collaboration with the instrument manufacturers. Past topics have included IR-Imaging for In-Cell Western Analysis, Basic Flow Cytometry, and Real-Time Quantitative PCR and RT-PCR.

Northeast Regional INBRE Programs: A formal collaborative agreement was established between the five INBREs: Delaware, Maine, New Hampshire, RI, and Vermont. The Program Directors of these INBRE programs have agreed to share research core facilities and provide opportunities for student training and skill development in entrepreneurship and best practices through frequent communication. RI-INBRE will host a northeast regional IDeA Conference (NERIC) in 2021.

The RI-EPSCoR/RI-INBRE partnership was built in 2008 around student training and core facilities. Common goals of the programs include technical training and professional development in the areas of science communication, career choices, and preparedness. As for core research facilities, our equipment inventories are largely complementary since RI-INBRE focuses on biomedical sciences while RI-EPSCoR funds ocean detection, ecology, and engineering projects.

**The NIH-sponsored RI-INBRE Centralized Research Core Facility:** The network's objective is to support and develop talented individuals committed to biomedical research careers and to build the research capacity of Rhode Island's higher institutions. URI is the lead institution, and six other institutions of higher education in the state are partners in the network, which are Brown University, Bryant University, Providence College, Rhode Island College, Roger Williams University, and Salve Regina University. The RI-INBRE Program maintains the Centralized Research Core Facility, which houses over \$4 million in state-of-the-art research equipment (listed below). The facility is managed by two full-time staff.

- *The Rhode Island Idea Network for Biomedical Research Excellence (RI-INBRE) Centralized Research Core Facility.* The Centralized Research Core Facility was established in 2002 and is located in the new College of Pharmacy building at URI's Kingston campus. This facility is funded by NIH and has trained staff members who manage the laboratory and assist with instrument operation. The Centralized Research Core Facility II occupies 3220 sq. ft. of laboratory space and houses a majority of the equipment listed below.
- *Equipment.* ABSciex 4600 QTOF/MS/MS Mass spectrometer; Shimadzu Axima Performance MALDI-TOF MS; Thermo Elemental iCAP-Q ICP-MS; Hitachi analytical HPLC with fluorescence and DAD detectors; Hitachi analytical HPLC with DAD and thermo auto-sampler; Hitachi micro UPLC with DAD detector, and thermo auto-sampler; Hitachi preparative HPLC with DAD detector; GE AKTA FPLC chromatography system; Teledyne Flash chromatography system; Jasco circular dichroism spectropolarimeter; PerkinElmer fluorescence spectrometer; Promega GloMax96 microplate luminometer; NanoDrop UV/Vis spectrometer; NanoDrop fluorescence spectrometer; Beckman UV/Vis spectrometer with thermal, melting software; Thermo FT-IR spectrometer; BMG Polar Star Optima Multimode micro plate reader; Molecular Device Multimode microplate reader; Bio-Rad complete 2D electrophoresis and gel casting system; Shimadzu PPSQ 31A protein sequencer; Applied Biosystems real time PCR; Eppendorf master cycler PCR; Agilent DNA micro-array scanner; Fuji QuickGene Nucleic acid isolation system; Protein Simple Simon Western blotting system; BD Biosciences FACSVerse flow cytometer; Nexcelom Vision automated hemacytometer; Kendro cell culture incubators; Roche Xcelligence electronic impedance based cell sensing measurement systems; Sorvall table top refrigerated centrifuge; Sorvall high speed centrifuge; Sorvall micro-ultracentrifuge; Nikon TE2000-E/C2 Inverted confocal microscope; Nikon E600 microscope with DIC and fluorescence; GE Typhoon variable mode imager; GE Image scanner; LiCor Odyssey IR imager; LiCor C-Digit blot scanner Beckman Optima Ultracentrifuge Labconco Freeze dryer; Buchi RotaVap drying systems; PerkinElmer gamma counter; PerkinElmer liquid scintillation counter; Radox clinical chemistry analyzer. *Mass Spectrometry (Coordinator, Al Bach, PhD)* AB SCIEX Triple TOF-4600 LC/MS/MS mass spectrometer; Shimadzu Axima Performance MALDI-TOF MS/MS mass spectrometer; Thermo Elemental iCAP-Q Analyzer (ICP-MS).
- *Chromatography* Hitachi analytical HPLC with fluorescence DAD detectors; Hitachi analytical HPLC with DAD and thermo autosampler; Hitachi U-HPLC with DAD and thermo autosampler; GE AKTA FPLC chromatography system; Teledyne-ISCO flash chromatograph. *Spectroscopy:* Jasco circular dichroism spectropolarimeter; PerkinElmer fluorescence spectrometer; Promega GloMax microplate luminometer; NanoDrop UVNis spectrometer; NanoDrop fluorescence spectrometer; Beckman UVNis spectrometer with thermal melting software; Thermo FT-IR spectrometer; Molecular Device Multimode micro plate reader; BMG PolarStar Optima micro-plate reader. *Proteomics & Genomics:* Bio-Rad complete gel casting and electrophoresis system for 2D gel electrophoresis; Shimadzu protein sequencer; Applied Biosystems real time PCR; Eppendorf mastercycler PCR; Agilent DNA micro-array scanner; Fuji QuickGene Nucleic acid isolation system; ProteinSimple Simon Western blotting system; Bioautomation DNA synthesizer. *Cell Culture:* BD Biosciences FACS Verse flow cytometer; Nexcelom automated hemacytometer; NuAir cell

culture hood; Kendro cell culture incubators; Roche xCelligence impedance-based cell sensing measurement systems. Centrifugation: Sorvall table top refrigerated centrifuge; Beckman J2 centrifuge; Sorvall microultracentrifuge; Beckman Optima ultracentrifuge.

- **Bioinformatics Core.** The RI-INBRE Bioinformatics Core provides expert consultation in the development of appropriate informatics strategies for analysis of complex data sets for investigators, including, but not limited to, RNA-seq, ChIP-seq, and genome assembly pipelines. The Core also houses and utilizes numerous programs for modeling and analysis of protein structures, including Biovia's Discovery Studio, AutoDock, Chimera, PyMol, and others. A wide variety of software and hardware applications are utilized in the analysis and interpretation of informatics data. Access to commercial bioinformatics software installed on Dell workstations at URI is granted to investigators at URI and other Rhode Island Institutions. The Core is committed to supporting investigators by providing consultation, training sessions, and workshops on the use of commercial and open-source software.

**The NSF-EPSCoR-sponsored Molecular Characterization Facility (MCF):** The Molecular Characterization Facility contains two NMR spectrometers that support research and teaching across the College of Pharmacy, URI, and all of Rhode Island. The facility collaborates with colleagues across academia and industry to use the spectrometers. This facility is located in the Pharmacy Building and supports research across the College and University (1) Varian 500 MHz NMR spectrometer: One NMR probe; tunable from 19F to 31P under full automation. (2) Bruker 300 MHz NMR spectrometer: Avance III Nanobay system with a 24-position sample changer and a 5 mm Smart Probe (3) ABSciex QTrap4500 triple quadrupole linear ion trap mass spectrometer with a Turbo V source that can be configured for ESI or APCI. The PI also has access to the ADVANCEIIHD 850 MHz NMR through the shared Brown University Structural Biology Core facility.

- **Microscopy/Imaging Facility:** Includes a Zeiss LSM 5 PASCAL confocal imaging system, a Zeiss AxioPlan 2 imaging system, and a Zeiss AxioImager 2 motorized microscope with AxioCam high-resolution digital camera and LSM 700 scanning confocal module with 4 lasers at 405, 488, 555, & 639 nm excitation.
- **Histology/Imaging Facility:** Nikon TE2000-E Inverted microscope with phase contrast and fluorescence with Nikon Confocal upgrade; Nikon E600 microscope with DIG and fluorescence; GE Typhoon variable mode imager; GE Image scanner; LiCor Odyssey IR imager and Caliper IVIS whole animal imager. Other: PerkinElmer gamma counter; PerkinElmer liquid scintillation counter; Labconco Freeze dryer; Buchi RotaVap drying systems; Perkin Elmer gamma counter; Radox clinical chemistry analyzer.
- **High Performance Computing (HPC) Core Facility:** This is a newly developed facility, with a shared \$700K research cluster with organizational support, including EPSCoR-affiliated faculty, and includes operations, systems, networking, and physical space located in URI's Information Technologies Services Data Center.

## **URI RESEARCH ADMINISTRATIVE RESOURCES**

**URI Office of Sponsored Projects:** Goal is to provide excellent service to the research community including faculty members, potential sponsors and collaborators, students and offices. Some of the services offered by the Office of Sponsored Projects include but are not limited to the following functions: Review, approve, and submit proposals to potential external sources, Offer technical support and training with electronic proposals and grant/awards system, Develop policies and procedures to ensure URI Sponsor compliance and government regulations, Negotiate and accept awards on behalf of the URI from external sponsors, Establish sponsored accounts for all award projects, Provide support to principal investigators and department personnel in managing their awards, Establish sub-recipient agreements and assist in managing and monitoring sub-awards, Assist with awards/contracts billing, reporting, receivables and closeout process, Assist with negotiation of Facilities and Administrative (F&A) rates, Act as the University point of contact for Sponsored awards and contracts projects, Acts as the University authorized Signing Official on all Sponsored awards and contracts.

**URI Office of Research Development:** An office within the URI Division of Research and Economic Development, the Office of Research Development (ORD) provides grantsmanship, grant writing, and proposal development support services and resources to the URI community to improve the quality and increase the quantity of research and educational proposals to external funding sources, including state and federal agencies and private foundations. ORD staff work closely with faculty, researchers, and administrators across all disciplines to provide information and identify funding opportunities. The ORD office identifies appropriate funding sources, both internal and external to the university; brainstorms ways to turn a great idea into a fundable project; reviews and edits letters of inquiry, concept papers, and proposal drafts; provides feedback to strengthen proposals prior to submission, provides cursory review of project budgets for consistency with the RFP; gathers

required supporting institutional documentation; drafts and secures letters of support from institutional leadership; coordinates review/input by Washington, D.C.-based consultants, The Implementation Group; interprets reviewers' comments and advises on revisions and resubmissions of declined proposals; and conducts workshops on funding sources, strategies and proposal writing. Upon request, OSP can present workshops and seminars for departments and other groups. The ORD also facilitates grant projects involving multiple colleges and institutions and can match funding sources to areas of team interest as well as promoting networking opportunities for potential collaborations.

**URI Office of Research Integrity:** To ensure research conducted at URI is safe, ethical, and compliant; to facilitate the conduct of research; to comply with applicable regulations, laws, and institutional policies; and thereby, promote a culture of integrity in research.

- **Human Subjects Protections/IRB:** The University of Rhode Island Institutional Review Board (IRB) reviews research projects which involve human subjects to ensure that two broad standards are upheld: first, that subjects are not placed at undue risk; second, that they give informed consent to their participation. The IRB consists of representation from a wide range of scientific disciplines and from outside the academic community, the IRB gives individualized attention to the numerous research projects at the University.
- **Animal Subjects Protections:** The University of Rhode Island (URI) is deeply committed to the ethical treatment of animals in research. The use of animals is essential to the teaching, outreach, and research missions of URI. Significant benefits to the health and welfare of both animals and humans have resulted from animal use in research, and continued use is crucial to future advancements. Without the use of animals, adequate instruction of students in many programs such as agriculture, biological sciences, and veterinary science would be impossible. The URI Institutional Animal Care and Use Committee (IACUC) is responsible for overseeing the provisions for the care and well-being of animals used for research and educational purposes at the University and serves the public by ensuring compliance with all legal and ethical standards regarding the use of vertebrate animals in research and teaching at URI.
- **Animal Facility:** The animal facility (3,000 sq ft.), approved by the American Association for Accreditation of Laboratory Animal Care, is located in the third floor of Fogarty Hall at URI. All animals are maintained in accordance with the provisions of the Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act. Modern, fully approved animal quarters with veterinary supervision are utilized. Laminar flow and filter top units are available. Trained animal care personnel and departmental policies ensure proper health care of animals. Investigators are required to attend yearly training sessions in humane and ethical use of animals in research conducted by a subcommittee of the Animal Institute Committee. Additionally, customized presentations with similar content are also provided. Animals are housed on a charge basis and are constantly monitored for signs of illness and any infectious diseases.
- **Biosafety Committee:** The University of Rhode Island Institutional Biosafety Committee (IBC) reviews and approves Biological Research protocols. Biological Research is defined as any laboratory research activity involving: Recombinant DNA (rDNA), Biological agents (i.e., viable infectious microorganisms (including prions) regardless of their pathogenicity to humans), Human or nonhuman primate materials, Biological toxins subject to the National Select Agents Registry Program managed by the U.S. Departments of Health and Human Services (HHS) and Agriculture (USDA). Prior to commencing Biological Research, investigators must submit a protocol for review by the IBC. The IBC is established to ensure that Biological Research is conducted safely and that compliance is maintained with the following guidelines and regulations: NIH Guideline for Research Involving Recombinant DNA Molecules (NIH Guidelines), Occupational Safety and Health Administration–OSHA Bloodborne Pathogen Standard 1910.1030, CDC-USDA Select Agent Regulations
- **Responsible Conduct of Research (RCR):** RCR is a broad term referring to integrity and ethical standards in the work of scientists, scholars, and professionals involved in the field of scientific inquiry and practice. Responsible and ethical conduct of research is critical for excellence, as well as public trust, in science and engineering. Consequently, education in RCR is considered essential in the preparation of future scientists and engineers. URI is fully committed to educating its students, faculty and staff on the issues surrounding the responsible conduct of research, and their obligations as individuals and members of the larger research community. Instruction areas of RCR education include: Acquisition, Management, Sharing and Ownership of Data, Animal Welfare, Authorship/Plagiarism, Collaboration, Conflict of Interest, Human Subject Protections, Mentoring, Peer Review, Research Misconduct

- **The Comparative Biology Resources Program (CBRC):** The CBRC provides URI faculty, staff, and students high-quality husbandry and support services to accomplish shared research objectives. They provide housing facilities, husbandry services, veterinary support, and personnel training to support the University's research and teaching goals. All vivaria and support areas assure humane care through compliance with Federal regulations and University policies.
- **Office of Intellectual Property & Economic Development (IPED):** The mission is to cultivate, protect, and commercialize inventions and discoveries that result from research and scholarly activities conducted at the University of Rhode Island (URI). They serve the URI community and the Rhode Island Board of Education by connecting the research community and commercialization partners to engender the technology transfer of patents and other intellectual property created at URI. This technology transfer role includes the interpretation and implementation of the URI Intellectual Property Policy as provided in the University Manual Chapter 10 (Sec.10.40.10) approved by the Rhode Island Board of Education on April 8, 2013. The URI IP Policy governs the process by which IPED reviews, protects (patent), licenses, and distributes revenue related to URI inventions and discoveries. The IPED is a department within the Division of Research and Economic Development. The IPED (previously called the IPMAC) is tasked by the Rhode Island Board of Education with protecting and managing intellectual property on its behalf. They work hand-in-hand with the URI Research Foundation which complements their mission for technology transfer and commercialization.
- **The University of Rhode Island Research Foundation's (URIRF):** mission is to promote industry and university collaboration and new technology ventures for economic growth and job creation in Rhode Island, the U.S. and the world. URIRF's unique private, nonprofit status allows it to support a broad range of technology transfer activities, including licensing, startup company formation, equity investments and intellectual property protection. URIRF moves research results from the lab to the marketplace. The URI Division of Research and Economic Development and URIRF work together to develop the inventive and creative works of URI's faculty, employees and students, and to commercialize this intellectual property for the benefit of society. Together they identify sponsored funding opportunities to validate and develop commercial applications of university inventions, license and market URI inventions to industry partners, connect industry needs with URI technology, facility and people assets and form new ventures.