

BENCHMARKS



EAST TENNESSEE STATE
UNIVERSITY

Academic Health
Sciences Center

2016 Report to the Community



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The Academic Health Sciences Center
at East Tennessee State University
2016 Report to the Community

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Why an Academic Health Sciences Center?



Wilsie S. Bishop, DPA
Vice President for
Health Affairs and
ETSU Chief
Operating Officer

There are just over 120 academic health sciences centers in the United States. To qualify as an AHSC, an institution must have a college of medicine and at least one other health professions school and either own or be affiliated with a major hospital system.

ETSU is fairly unique among AHSCs because of the size and complexity of our offerings. We have a college of medicine plus four additional colleges, offering a total of 35 degree programs including 10 doctoral degrees. We also offer extensive graduate medical and graduate pharmacy education through our residency training programs. In all, ETSU enrolls over 4,000 students in these health programs on campus as well as throughout the region and the world in online, clinical, and experiential learning settings.

These educational programs affiliate with two existing health systems – Mountain States Health Alliance and Wellmont Health System – as well as the Veterans Affairs Medical Center, Frontier Health, and numerous clinics and care delivery sites throughout the region. In addition, our medical, nursing, dental hygiene, and speech and hearing clinics provide greater than 215,000 patient visits per year and more than \$5 million per year in uncompensated care to the people of our region.

The changing health care environment increasingly demands innovation and integration of health service delivery that is best achieved by a team of highly trained professionals working together with a focus on the patient, the patient's family, and the community.

The value added from our AHSC's focus on interprofessional education translates to a more holistic and more efficient care delivery process. And the partnerships we foster with members of the health care industry here in our region help us create a more seamless delivery of care to patients.

In addition to our strong educational programs for our students and service delivery to our patients, our research endeavors are focused on improving the health and well-being of the people of the region. Our strong emphasis on translational and outcome-based research places us close to the communities and people we serve. We have enjoyed increasing levels of external funding to support our research endeavors, and make every attempt to assure that these dollars are directed at conducting community-relevant and scientifically based research.

Our AHSC offers a team of highly energetic individuals devoted to the prevention of disease and the promotion of health for those we serve. Our mission statement reflects our name and our commitment to **Excellence in Teaching and Scholarship United to Advance Health and Serve Communities.**



The Academic Health Sciences Center

BY THE NUMBERS

5 Colleges make up the AHSC

35 Programs of study at the undergraduate, graduate and doctoral levels in the colleges that make up the AHSC

4,481
Number of students enrolled in the AHSC colleges in Fall 2015

13 Health care clinics are operated by the College of Nursing, providing services to the uninsured, underinsured and insured throughout the region

8 National ranking awarded to Quillen College of Medicine by *U.S. News & World Report* for the college's rural medicine training

60+
Years that the ETSU College of Public Health has spent impacting academia as well as the community

14 National ranking awarded to the College of Clinical and Rehabilitative Health Sciences' physical therapy program by Graduateprograms.com

98.6 Percent of recent alumni from the Bill Gatton College of Pharmacy at ETSU employed upon graduation



Who We Are...

The Academic Health Sciences Center

www.etsu.edu/ahsc • 423-439-4811

The Academic Health Sciences Center at ETSU is the flagship health sciences institution for the Tennessee Board of Regents System.

Quillen College of Medicine

www.etsu.edu/com • 423-439-6316

Founded in 1974 on a mission to increase the number of primary care physicians in rural, underserved areas, the college is annually ranked among national leaders for rural medicine.

Bill Gatton College of Pharmacy

www.etsupharmacy.com • 423-439-2068

Opening its doors in 2005, the college is a model of public-private partnership as the nation's only privately funded school of pharmacy operating in a public institution.

College of Nursing

www.etsu.edu/nursing • 423-439-7051

The largest nursing school in Tennessee, the college officially opened in 1954 but has roots that can be traced back more than 100 years. The school also manages 13 health care clinics in the region.

College of Clinical and Rehabilitative Health Services

www.etsu.edu/crhs • 423-439-7454

The college is one of the most diversified in the AHSC in terms of programs. Its Department of Audiology and Speech-Language Pathology is nationally renowned for teaching and research.

College of Public Health

www.etsu.edu/cph • 423-439-4243

The first accredited school of public health in Tennessee, and the first one in Central Appalachia, the college also houses LIFEPATH, a federally funded public health training center for the region.

INSIDE

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11 Researchers working to improve heart function after heart attack



“

We've been national leaders in interprofessional education since the early 1990s and felt like if we could have a building where all of our students could come together, we'd be putting a physical symbol on a philosophy we've been living for decades.”

Dr. Wilsie Bishop,
ETSU chief operating officer and
vice president for Health Affairs



ADVANCING

ETSU's INTERPROFESSIONAL MISSION

Interprofessional education in the health sciences colleges at ETSU is nothing new, but having a designated space for such activities certainly marks a huge next step in the venture.

"We've been national leaders in interprofessional education since the early 1990s and felt like if we could have a building where all of our students could come together, we'd be putting a physical symbol on a philosophy we've been living for decades," said Dr. Wilsie Bishop, ETSU's chief operating officer and vice president for Health Affairs. "We've wanted to do this for a long time. We knew if we could have a building for the health sciences center that symbolizes our interprofessional work, that'd be really good."

That building, as it turns out, is Building 60 on the Veterans Affairs Medical

Center campus adjacent to ETSU's Quillen College of Medicine and Bill Gatton College of Pharmacy. The structure, which currently is used as a warehouse and once housed the VA's fire brigade, will be transformed into a top-of-the-line interprofessional education building that includes four floors of simulation laboratories, research space, classrooms, conference rooms, student study space, a food service area and administrative offices.

The \$12-\$13 million renovation initially will be funded by the colleges of medicine and pharmacy, with the university, as the third partner in the project, paying back its share of the cost over time.

The three remaining health sciences colleges to share the interprofessional space are the College of Nursing, the College of Public Health and the College of Clinical and Rehabilitative Health Sciences.

Approximately 75 percent of the structure will be dedicated to simulation labs that will provide students of all health sciences programs with hands-on training in everything from emergency situations to the basics of inserting an IV. The administrative team for the university's Interprofessional Education and Research Committee, a group tasked with finding the best ways to develop and foster opportunities for students to learn in an interprofessional setting, will also be relocated to Building 60.

With expectations of breaking ground in 2017, Bishop hopes to see the building open and operational in fall 2018.

BUILDING 60

on the Veterans Affairs Medical Center campus adjacent to ETSU's Quillen College of Medicine and Bill Gatton College of Pharmacy.





BLUE weekend

ETSU hosts immersion weekend for high school students considering health careers

Dozens of high school students considering health-related careers took part in East Tennessee State University's first-ever BLUE (Bucs Live University Experience) Weekend in the spring.

BLUE Weekend aimed to introduce students to the many health degree programs offered at ETSU while also providing them an opportunity to experience life on campus as a whole.

During the immersion weekend, students were paired with current pre-health students at ETSU who served as peer mentors. The high school students stayed in the residence halls with their mentors and took part in student activities on campus that weekend.

Participants even attended a class in one of three areas – literature, psychology or biology. In addition, students attended informational sessions presented by the five colleges that comprise the Academic Health Sciences Center as well as information from Medical Professions Advisement.

The event, organized by the College of Clinical and Rehabilitative Health Sciences, was so successful that a second annual BLUE Weekend was scheduled and the program is expected to expand to other areas of the university.

ETSU taps Quillen alum as director of Center for Experiential Learning



Dr. Brock Blankenship

An alumnus from ETSU's Quillen College of Medicine has returned to the medical school to serve as its director for the Center for Experiential Learning.

In his new role, Dr. Brock Blankenship, a 2004 Quillen graduate, will assist in leading the effort "to advance the interprofessional simulation program at the university."

In addition to offering a location for students from the various health disciplines to work and study together, the new Building 60 will offer high fidelity simulation facilities as well as an expanded ambulatory training area using standardized patients.

Blankenship will have a leadership role in simulation training for medical students and in bringing students together from across the health sciences programs for interprofessional, team-based learning experiences.

Originally from Nashville, Blankenship has lived in Abingdon, Va., with his wife and their three children since 2007. There, he continues to serve, part time, as an emergency physician at Johnston Memorial Hospital.

AHSC Faculty Members Take Home All Three

ETSU DISTINGUISHED FACULTY AWARDS

At the Faculty Convocation ceremony held in early fall, ETSU awarded the 2015 Distinguished Faculty Awards in the areas of teaching, research and service.

The highest honors given to faculty members, all three awards went to Academic Health Sciences Center faculty.

DISTINGUISHED FACULTY AWARD

TEACHING



Dr. Patrick Brown,
assistant professor
of Health Sciences in
the College of Public Health

Brown is a graduate of the University of Tennessee – Chattanooga and received his Ph.D. in cellular biology from the University of Georgia. Prior to joining ETSU in 2011, he taught at King College and also served as a research assistant professor at the University of South Carolina's Belle W. Baruch Institute for Marine and Coastal Science.

Brown has gained national recognition for his work with the POGIL (Process Oriented Guided Inquiry Learning) method of instruction.

"Patrick exemplifies the phrase outstanding teacher, treats classroom teaching with a passion, maintains a high level of academic excellence, is well liked by his students, and is constantly working on developing his classroom craft," wrote a colleague in a nomination letter. "I specifically chose the word 'craft' to emphasize the way Patrick develops his classroom skill in a way reminiscent of a master craftsman or artist."

DISTINGUISHED FACULTY AWARD

RESEARCH



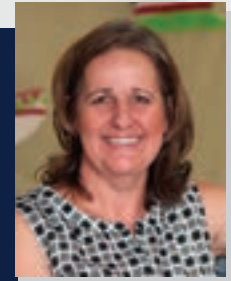
Dr. Krishna Singh,
professor in the Department of Biomedical Sciences at the Quillen College of Medicine and physiologist at the Quillen VA Medical Center at Mountain Home

Singh's record of extramural funding includes 12 grants totaling more than \$4.5 million for projects on which she has been the principal investigator. Most have been large, multi-year awards from the National Institutes of Health, the Department of Veterans Affairs and the American Heart Association. Her research focuses on the molecular and cellular basis of heart failure, investigating how muscle cells die during a heart attack and looking for ways to prevent these cells from dying.

Singh came to ETSU in 2002 after holding teaching and research positions at the Brigham and Women's Hospital (Harvard Medical School), Boston University School of Medicine, the VA Medical Center of Boston, and McGill University, Montreal, Canada, where she completed a post-doctoral fellowship. She earned her B.S. degree in biology at Maharishi Dayanand University, Rohtak, India, and her masters and doctoral degrees in microbiology, biochemistry and immunology at Haryana Agricultural University, Hisar, India.

DISTINGUISHED FACULTY AWARD

SERVICE



Teresa Boggs,
assistant professor in Department of Audiology and Speech Language Pathology in the College of Clinical and Rehabilitative Health Sciences

In addition to being an assistant professor, Boggs is director of clinical services for speech language pathology. Her greatest contribution, however, is guiding the Nave Language Center's facility devoted to the needs of children with autism and related communication disorders.

In 2005, as a speech language pathology supervisor at ETSU, Boggs noted an influx of children with the diagnoses of autism and realized graduate students needed specific training to better serve this population.

Boggs was able to obtain a classroom at the Nave Center in Elizabethton and established the Nave Language Center. With help, she created a sensory movement room in another classroom.

By 2010, the center provided nearly 1,300 visits for speech and language services. In 2010, the Positive Eating Program began as a way to address the many children on the autism spectrum who exhibit feeding disorders.

“

It brings pediatric subspecialists into an interprofessional arena, bringing the patients to a one-stop facility for their care. Having them all together is convenient for the family and provides the opportunity for ongoing collaboration. And the health professionals can work together to make a long-term plan for these children.”

– Trish Mims, JCCHC director

High-risk clinic

for neonatal ICU patients now housed at JCCHC



The High-Risk Neonatal Intensive Care Unit (NICU) Follow-Up Clinic has found a new home at ETSU's Johnson City Community Health Center (JCCHC).

Formerly housed at the Quillen ETSU Physicians pediatric office, the clinic treats and monitors the development and medical status of infants, typically age 1 month to 24 months, who received care in the NICU when they were born.

The clinic now resides within the JCCHC where it aims to provide health care in a team-based setting, a service that has been foundational to the High Risk NICU Follow-Up Clinic for years. Since its relocation in January 2015, the health care team has met with over 240 families to ensure that their children's health status continues to improve.

“It brings pediatric subspecialists into an interprofessional arena, bringing the patients to a one-stop facility for their care,” explains Trish Mims, director of the JCCHC.

The clinic team consists of six health professionals – a neonatologist, a pediatric physical therapist, a nutritionist, an audiologist, a speech therapist and a nurse practitioner – who collaborate to provide individualized care to each patient during a single appointment at the clinic.

“Having them all together is convenient for the family and provides the opportunity for ongoing collaboration. And the health professionals can work together to make a long-term plan for these children,” Mims said. “In this way, the High-Risk NICU Follow-up Clinic fosters a uniquely team-oriented environment that will continue to allow providers at the JCCHC to deliver comprehensive health care in an accessible, effective manner for years to come.”

6
areas toward
a collaborative
health care
industry

- 1 curriculum
- 2 assessment
- 3 simulation
- 4 faculty development
- 5 practice transformation
- 6 community engagement

'Swimming upstream'

to establish collaboration in health care



Dr. Brian Cross

Teamwork isn't just needed on the ball field. In fact, if you ask ETSU's Dr. Brian Cross, it's even more necessary in the health field.

"It's all about communication and relationships," said Cross, an associate professor and vice-chair in the Department of Pharmacy Practice at ETSU's Bill Gatton College of Pharmacy.

"You have multiple eyes looking at the same person from different angles. If you consider the patient from the perspective of the nurse, the social worker, the psychologist, the pharmacist, the physician – they're all going to look at the same patient slightly differently."

The key, Cross said, is creating an environment where each person involved in caring for that patient feels comfortable speaking up and offering his or her opinion related to a proposed treatment plan.

"I believe with everything that I have that we are not using everybody on the team to the best of their abilities because of the way we've defined roles in the past," Cross said. "And I think the best way to combat this is at the educational level."

Citing a need to integrate team-based, patient-centered care concepts into health professions and educational processes, Cross said the sooner those seeking degrees in health fields learn to work with one another, the better off patient care will be in the long run.

"Our goal is training these groups of people together much, much earlier and much more consistently," Cross said. "When students in various health care professions come into the Academic Health Sciences Center at ETSU, we've got to align them in interacting groups."

That is one of the main goals of the university's Interprofessional Education and Research Committee (IPERC), whose members spent much of 2015 developing a five-year strategic plan that focuses on how best to integrate interprofessional learning into the health sciences colleges.

"There are **six areas we are focusing on**, with individual groups looking at each of them," said Cross, who has been an IPERC member since its inception and now serves as its interim director. "We are looking at **curriculum** – how to make changes within what we are already teaching and changes to what we are teaching overall. We are looking at **assessment** – developing a standardized process to evaluate the outcomes of what we initiate. We are looking at **simulation**, because as we move closer to Building 60 being open and in operation, the part of the training that entails simulations will take a whole life of itself.

"We are looking at **faculty development** because we have spent our entire careers teaching in our silos and interprofessional education requires a different kind of teaching. We are hoping to address **practice transformation**, which is our long-term goal of making sure what the students learn within these walls is actually what is happening in the real world. And we are looking at **community engagement**, making sure the learners have engaged real people and see the benefits of interprofessional processes in the real world."

While transforming health care from what it is today into an interprofessional, collaborative industry won't happen overnight and comes with its fair share of challenges, Cross said it is well worth the effort.

"We are absolutely swimming upstream. But this isn't about us. It is about the patients who will be served by the graduates of these programs," he said. "If you believe it is the right thing to do, then we must be willing to do whatever it takes to ensure this process of training becomes the expectation of all learners, not an exception for only some learners."

ETSU chief operating officer receives

'Alumni Star' award



Dr. Wilsie Bishop as a nursing student at VCU and today.

Dr. Wilsie Bishop, ETSU's chief operating officer and vice president for Health Affairs, was honored by her alma mater as one of the university's brightest alumni stars. Virginia Commonwealth University bestowed the honor upon Bishop at a special ceremony held in Richmond, Virginia, in November.

Bishop earned two degrees from VCU – a bachelor's of science in nursing in 1970 and a master of science in nursing in 1978. She was recognized for her personal and professional achievements throughout her 30-plus-year career.

Bishop, who has a second master's degree as well as a doctorate from the University of Southern

California, began her career at ETSU in 1978 and has held numerous leadership positions since then, including dean of the College of Public and Allied Health, department chair in the College of Nursing, assistant vice president for Academic Affairs as well as her current roles. She is one of only two nurses in the nation to head an academic health sciences center. Bishop is a tenured professor at ETSU, teaching a policy, leadership and ethics course to doctoral students.

In honoring Bishop, VCU leaders noted several other recognitions she has received throughout her career, including being inducted into the Tennessee Women's Hall of Fame in 2013 for making "outstanding, unique and lasting contributions to the economic, political and cultural well-being of Tennessee."

3 PROJECTS GARNER FUNDING

through scholarship endowment at ETSU

Several faculty members and a student at ETSU were awarded project funding through the Behringer Interprofessional Education Scholarship Endowment at the university.

Drs. Judy McCook, a nursing professor, and Anthony Delucia, a professor of surgery, received \$1,000 for their "Aligning Healthy People 2020 Objectives with Interprofessional Education" program, which relates to objectives including tobacco use in adolescents living in Carter County. The money was used to purchase models to educate students at health fairs about the consequences of tobacco use.



From left to right: Dr. Judy McCook, Dr. Anthony Delucia, Melissa Eggert, Dr. Helene Holbrook

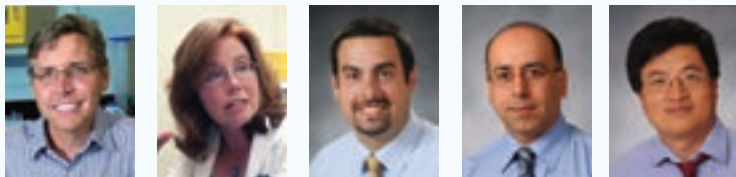
Melissa Eggert, a second-year medical student at Quillen College of Medicine, received \$1,000 to buy supplies for health screenings at the Johnson City Farmers Market. Sponsored by Dr. Caroline Abercrombie, an assistant professor at the medical school, Eggert's "Community Nutritional Health Outreach" project includes involvement from students in the colleges of medicine, pharmacy and clinical and rehabilitative health sciences.

Dr. Helene Holbrook, an assistant professor in the College of Nursing, received \$400 for her "Group Appointment with Conversation Maps" program, which aims to improve glycemic control, promote weight loss or maintenance and integrate a new evidence-based approach into the management of pre-diabetes and type 2 diabetes patients. The effort provides improved access to self-management strategies for patients of the Johnson City Community Health Center.

Several members of ETSU's Interprofessional Education and Research Committee reviewed and selected the projects for funding.

Research

Team studying possible link between drug side effects, genetic makeup



L-R: Dr. Jonathan Moorman, Dr. Michelle Duffour, Dr. David Cluck, Dr. Sam Harirforoosh and Dr. Kesheng Wang

A new team of collaborators at East Tennessee State University received a grant to study the possible connection between genetic traits and side effects of a drug used to treat HIV.

“Right now, there are more than one million people diagnosed with HIV in the United States,” said Dr. Sam Harirforoosh, associate professor at the Bill Gatton College of Pharmacy and principal investigator for the project. “Currently, there are 25 medications available to treat HIV and a number of combinations of those drugs.”

One such combination medication, Stribild, was approved to treat HIV in 2012 by the Food and Drug Administration. The fixed-dose, once-daily tablet, however, has caused adverse side effects in some patients.

“Some people show some kidney dysfunction from taking this medication. Sometimes people do not respond to medicine the way we are expecting,” Harirforoosh explained, noting that other side effects may include liver impairment and gastrointestinal issues. “We are trying to understand if genetic makeup influences these responses to the medication.”

Through a \$50,000 University Research Development Committee Interdisciplinary grant, Harirforoosh and his colleagues – Dr. Jonathan Moorman and Dr. Michelle Duffour, both of ETSU’s Quillen College of Medicine; Dr. Kesheng Wang, of ETSU’s College of Public Health; and Dr. David Cluck, of the Gatton College of Pharmacy – are studying the effect of Stribild in 120 HIV patients.

A single blood sample is taken from each consenting patient and studied to determine what, if any, correlation exists between the concentration of Stribild components in the blood, the side effects a patient experiences and that individual’s genetic makeup.

In addition to genetic makeup, the researchers examine environmental factors as well as physiological factors – age, gender, weight and more – that might influence the drug’s effects.

“We are hoping to find this relationship between side effects and genetic makeup in order to prevent those side effects in people by offering them other medication options,” Harirforoosh said. “We want to equip medical professionals with the tools to better care for patients. The results of this study may do that. And this is just the beginning. We want to continue this with a broader study examining genetics.”

All five researchers are members of ETSU’s Center of Excellence for Inflammation, Infectious Disease and Immunity. In addition to the formation of an interdisciplinary research team, this study will also comprise the doctoral dissertation research of Derek Murrell, a student in the Pharmaceutical Sciences concentration of ETSU’s Biomedical Sciences graduate program.

“Everybody brings a particular expertise to this project,” Harirforoosh said. While the study is multifaceted, Harirforoosh said ultimately, “we are hoping our research will prove beneficial to the community and to ETSU.”

..... Students take part in 'Refugee Experience'



In March, students taking part in an Interprofessional Education Program at ETSU put what they learned to the test during a real-world simulation event at ETSU's Valleybrook campus.

During the "Valleybrook Refugee Experience," student groups were required to set up a refugee camp and treat the refugees arriving at the site. Scenarios throughout the day utilized scripted actors to simulate the experience as realistically as possible.



Health sciences students taking part in the Interprofessional Education Program complete the two-year program as a cohort, working to complete four competency-based experiences and activities that prepare them for the capstone activity held in the spring.



Lindsay Daniel hired as

HIPAA..... compliance officer

Johnson City native and Science Hill High School alumna Lindsay Daniel joined the staff at ETSU's Office of University Counsel to serve as the institution's compliance officer for the Health Insurance Portability and Accountability Act (HIPAA) of 1996.

HIPAA is a federal law that protects the confidentiality and security of patient health care information. Daniel will work predominantly with the five colleges that are a part of ETSU's Academic Health Sciences Center.

In addition to creating uniformity for HIPAA compliance across the university, Daniel's work also addresses challenges related to evolving methods of providing health care, including telemedicine and other new technologies.

"Right now is an exciting time in the health care industry with new technology and legislation being developed almost daily," she said. "As the means by which we provide health care evolve, we face new challenges specifically in regards to

protecting the privacy and security of our patients' health information."

Daniel received a bachelor's of arts degree in political science from Converse College in Spartanburg, South Carolina. She earned her law degree from Mercer University's Walter F. George School of Law in Macon, Georgia. Prior to joining the ETSU staff in May, Daniel served as general counsel for a private medical practice in Jonesborough where she dealt with state and federal compliance issues.

Research team working to improve **HEART FUNCTION AFTER HEART ATTACK**



Dr. W. Andrew Clark



Dr. Charles Collins



Dr. Eileen Cress



Kristen McHenry



Dr. Ray Mohseni



Dr. Jonathan Peterson



Dr. Kamesh Sivagnanam

A team of researchers at ETSU is studying a potential way to improve heart function after an individual suffers a heart attack.

“When a person has a heart attack, they may lose a part of the heart’s ability for the heart to squeeze effectively,” said Dr. W. Andrew Clark, associate dean of research in the College of Clinical and Rehabilitative Health Sciences and professor in the Department of Allied Health Sciences. “They are often put on a regimen that includes a beta blocker, a statin and a specific diet.”

The statin, Clark explained, blocks an enzyme called HMG-CoA Reductase, which is the building block of cholesterol. “Unfortunately, it’s also a building block for something called Coenzyme Q10,” he noted.

Coenzyme Q10 is essential in a person’s ability to make adenosine triphosphate (ATP), which is “the cellular gasoline that keeps our body going,” Clark said.

“Essentially, the statin drug, when administered at higher levels, is reducing the functionality of making energy by reducing the synthesis of Coenzyme Q10, so a person starts experiencing muscle weakness,” he said. “And, remember, the heart is a muscle.” While over-the-counter Coenzyme Q10 currently is available for supplementation, it is fat-soluble, making it difficult for absorption in the body, especially for those who should not be eating fatty foods, Clark said.

“We are going to take Coenzyme Q10 and increase the absorption ability by making it water-soluble,” Clark said. “The human body is a water-soluble system so it being water-soluble should increase the absorption.”

One-hundred patients of Dr. Kamesh Sivagnanam, a cardiology fellow at Quillen ETSU Heart, will take part in the research to determine if the water-soluble Coenzyme Q10 impacts the heart’s ability to function.

“If this works, it would improve a person’s life greatly. They would have better muscle function, oxygenation of blood, better circulation,” Clark said. “I hope it is successful so we can help people. That’s my ultimate goal – to help people.”

Clark is the principal investigator on the project. Sivagnanam is serving as a co-investigator along with Dr. Charles Collins, a professor of pharmaceutical science in the ETSU Bill Gatton College of Pharmacy; Dr. Eileen Cress, a registered dietitian and assistant professor in the Department of Allied Health Sciences in the College of Clinical and Rehabilitative Health Sciences; Dr. Jonathan Peterson, an assistant professor of Health Sciences in the College of Public Health; Dr. Ray Mohseni, a professor of analytical chemistry in the College of Arts and Sciences; and Kristen McHenry, a respiratory therapist and assistant professor in the Department of Allied Health Sciences at the College of Clinical and Rehabilitative Health Sciences.

In late 2015, the project received a Dean’s Research Enhancement Award from the College of Clinical and Rehabilitative Health Sciences, which aims to provide seed money for the research being conducted.

ETSU's Hagaman, Mathis partner
with Carter County to implement

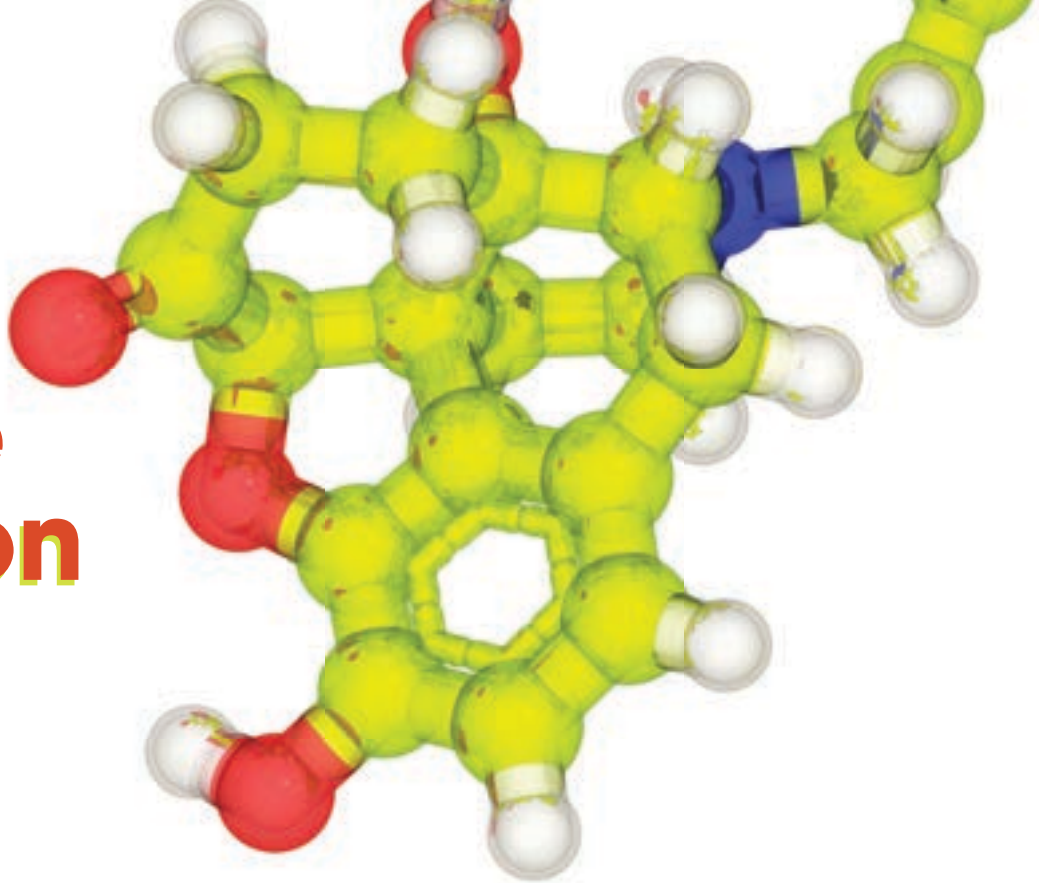
overdose prevention project

Angela Hagaman, ETSU's College of Public Health drug-abuse research program director, and Stephanie Mathis, a doctoral student in the Department of Community and Behavioral Health, partnered with the Carter County Health Department and Red Legacy Recovery to support a new Carter County Drug Prevention coalition.

The collaborative team working on the project is an extension of the ETSU Prescription Drug Abuse and Misuse (PDAM) Working Group, which is an interdisciplinary working group focused on prescription drug abuse and misuse. Hagaman and Mathis applied for and received funding through the Tennessee Department of Health, Office of Minority Health and Disparity Elimination to implement the Overdose Prevention Project in Carter County.

The project will increase access to and awareness of Naloxone, a life-saving opioid antagonist.

"The Carter County Overdose Prevention Project represents the essence of public health in that it requires formal partnerships among multiple sectors of the community to disseminate evidence-based interventions that result



in lasting community change and improve overall health and life expectancy," Hagaman said. "Carter County and East Tennessee are disproportionately impacted by prescription drug abuse and its devastating consequences including death by overdose.

"Naloxone, if given soon enough after drug exposure can displace opiates from receptor sites in the brain and can reverse respiratory depression, which is usually the cause of overdose deaths. Unfortunately, many health care professionals and emergency response personnel are not well-informed about how to prescribe, access and use the lifesaving drug."

Eighty-two people in Carter County lost their lives due to drug poisoning between 2006-2012, Hagaman noted. "Yet many emergency response personnel and the general public do not yet know about Naloxone, a life-saving antidote that can be prescribed to anyone upon request. I am confident that this funded project will save lives both in the short and long term."

ETSU's PDAM Working Group has developed a long-range vision for a Center for Prescription Drug Abuse Prevention at ETSU. In 2012, the Working Group began meeting regularly to develop research, training, service and development projects that would grow into such a Center. Their work resulted in a large-scale grant from the National Institute for Drug Abuse in 2013. The PDAM Working Group now has multiple funded projects that address this epidemic.

Interdisciplinary team studying heart failure



Dr. Timir Paul

An interdisciplinary team from ETSU garnered funding to conduct a study related to heart failure.

Led by Dr. Timir Paul in the Quillen College of Medicine's Department of Internal Medicine, the team analyzed the National Inpatient

Sample, the largest all-payer inpatient care database in the United States, to uncover trends of cardiovascular diseases and procedure, utilization, predictors, complications, length of hospital stays and cost analysis.

The NIS contains data on more than 7 million hospital stays. Its large sample size is ideal for developing national and regional estimates and enabling analysis of rare conditions, uncommon treatments and special populations.

In addition to Paul, the team includes Dr. Shimin Zheng, a biostatistician and assistant professor in the College of Public Health, as well as Drs. Ashraf Abusara, Hemang Panchal and Samit Bhatheja, all cardiology fellows.

The analysis helps identify predictors of poor outcomes, cost involved, preventive measures and subsequent policy making and implementation, Paul explained.

5 Colleges make up the AHSC

East Tennessee State University is the flagship health sciences institution for the Tennessee Board of Regents System, offering more than 25 programs of study at the undergraduate and graduate levels as well as 10 at the doctoral level, and accredited residency training programs in the colleges of medicine and pharmacy. The faculty and students that make up the Academic Health Sciences Center conduct research to better understand health issues specific to rural areas and are forming partnerships with local residents to work with them to identify and address health concerns in our own communities.

See back page for degrees



College of Medicine

- More than 1,800 graduates, 50 percent of whom practice in Tennessee
- 38,000 patient encounters per month
- Admits 72 medical students annually
- 14 residency programs and a Family Medicine Rural Fellowship



College of Pharmacy

- Nation's only privately funded pharmacy school in a state institution
- Admits 80 students per year and has a 97.5 percent graduation rate
- PGY2 residencies in ambulatory care and internal medicine
- 72 percent of students are from Southern Appalachian region



College of Nursing

- Largest college of nursing in Tennessee with more than 1,100 students
- Runs 13 nurse-managed clinics, including the federally funded Johnson City Community Health Center
- Officially began in 1954, but ETSU has been training area nurses since it opened in 1911
- Leader in nursing education at bachelor, master's and doctoral levels



College of Clinical and Rehabilitative Health Sciences

- Offers programs that address workforce shortage issues
- Over 10,000 visits annually to dental hygiene, speech-language pathology and autism clinics
- Growing presence in the Johnson City Community Health Center
- Department of Audiology and Speech-Language Pathology is nationally renowned for teaching and research



College of Public Health

- First accredited college of public health in Tennessee
- Attracts students from across Tennessee, 44 states and 39 countries in the past few years
- Houses the Tennessee Institute of Public Health, which releases the County Health Rankings each year
- Actively involved with State Department of Health to better understand



Two education leaders at Quillen receive national recognition

Two education leaders at Quillen College of Medicine received separate national recognitions in 2015, both of which represent prestigious honors for the individuals as well as the university.

Dr. Tom Kwasigroch, the associate dean for student affairs at Quillen and professor in the Department of Biomedical Sciences, received The Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award from the Association of American Medical Colleges (AAMC) for his efforts in medical education since joining ETSU in 1979.

During his more than 30 years at Quillen, Kwasigroch has taught and mentored thousands of students. He is the most awarded faculty member at the medical school, having received more than 50 awards. He is a 14-time winner of Professor of the Year at Quillen and is also a five-time recipient of the Gender Equity Award from the American Medical Women's Association. He was recognized nationally as a McCann Scholar for Excellence in Mentoring and Teaching in 2005.

Kwasigroch has cultivated a reputation for being on the leading edge of education. In 2012, as director of teaching programs in gross anatomy, he obtained iPad technology for each dissection table to integrate educational apps that maximize learning in the anatomy lab.

In 2013, he was the first at ETSU to flip the classroom to encourage active learning



Dr. Tom Kwasigroch



Dr. Ken Olive

and enhance students' ownership of their education. Kwasigroch and his colleagues currently are conducting research on innovative embalming procedures to provide more realistic learning experiences for continuing medical education programs.

As associate dean for student affairs, Kwasigroch obtained spin bikes for Quillen and is a champion for the Professional and Academic Resource Center, which provides free, broad-spectrum counseling to students. He also was the motivational force behind the construction of the Student Study Center, a modern student learning center.

Kwasigroch accepted the award at the annual AAMC conference in Baltimore in November.

The American College of Physicians awarded Dr. Ken Olive, the executive associate dean for academic and faculty affairs at Quillen College of Medicine, a Mastership design-

nation in internal medicine. Olive was formally conferred his Master's hood and certificate at a convocation ceremony in Boston in April.

Mastership is conferred by the organization only on a select number of candidates who are deemed distinguished through the practice of internal medicine. Candidates must be nominated by their peers. Approximately 40-50 nominees are then chosen for the honor each year.

"To be recognized by my peers as one of their leading members is really such a highlight," Olive said. "It's kind of the pinnacle of my career."

Olive is board certified in internal medicine and geriatric medicine. He has long been involved with the American College of Physicians, a group that boasts some 130,000 members. Olive joined the professional organization in 1982 while in the Air Force, even serving as the executive secretary for the Air Force chapter for a year.

When he moved to East Tennessee in 1989, Olive became involved in the state chapter here. He has been a member of the Tennessee chapter's Governor's Council for about 15 years and served as the Governor of the chapter from 2009-2013. Olive has also served on national committees for the organization, including one on health and public policy.

Quillen ranked 8th in nation for rural medicine training

East Tennessee State University's Quillen College of Medicine has been ranked eighth in the nation for rural medicine training by *U.S. News & World Report*.

The 2016 *U.S. News & World Report's* "Best Graduate Schools" rankings were released in Spring 2015.

"The Quillen College of Medicine has always had a mission to educate future physicians, especially those who will practice in underserved rural communities," said Dr. Robert Means, dean. "We are honored to be recognized, once again, as one of the nation's leading schools for training in rural medicine."

In recent years, ETSU consistently has ranked in the top 10 for rural medicine.

For the rankings in specific specialties such as rural medicine, medical school deans and senior faculty selected the best programs.

Awards, Honors & Recognitions

- **Dr. Ron Hamdy**, a 30-year faculty member, was awarded a 'Bronze Medal for Commendable Service' in recognition of his contributions to the United States Environmental Protection Agency. Hamdy was a key member of the EPA's Inter-agency Steering Committee on Radiation Standards Working Group on Medical Radiation, helping to develop a federal guidance report related to improving X-ray safety practices within the Veterans Affairs system and the larger federal health care system.

- **Dr. Rick Wallace**, assistant director of ETSU's Quillen College of Medicine Library, earned a first place research award from the Southern Chapter of the Medical Library Association (SCMLA) for his paper, "An Assessment of Information Interventions with Isolated Rural Clinicians."

- **ETSU's three family medicine clinics**, operated by the Quillen College of Medicine, received national recognition for their efforts as patient-centered medical homes. The facilities are located in Johnson City, Kingsport and Bristol, Tenn. The National Committee for Quality Assurance (NCQA), a non-profit organization dedicated to improving health care quality, certified all three family medicine residency clinics as Level 3 NCQA Patient Centered Medical Homes, the highest level attainable.

- **The William L. Jenkins Forensic Center** at East Tennessee State University earned continued full accreditation from the National Association of Medical Examiners.

- **Nakia Woodward**, senior clinical reference librarian at the Quillen College of Medicine Library, was named one of *Library Journal's* "2015 Movers and Shakers." Woodward was among just 50 individuals and one organization to earn the honor. According to the publication's website, Woodward is a "grant-getting wonder" dedicated to "bringing health series to the rural Appalachians."

- **Dr. Robert Means Jr.**, dean of Quillen College of Medicine, was appointed deputy editor of the *Journal of Investigative Medicine*. He had served as associate editor for the past 17 years. The *Journal of Investigative Medicine* is the official publication of the American Federation for Medical Research.

Walden, Bailey hired as associate deans



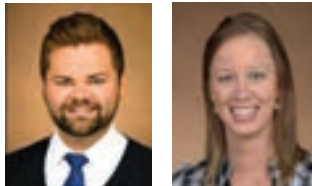
Rachel Walden | Eileen Bailey

ETSU's Quillen College of Medicine hired two new associate deans in 2015.

Rachel Walden was hired in early 2015 to serve as associate dean of learning resources for the medical school. Walden, who spent 12 years working in the biomedical library at Vanderbilt University prior to taking the position at ETSU, is originally from Morristown. At ETSU, Walden is responsible for the operations of Quillen's medical library and the biomedical communications and information technology divisions of the Department of Learning Resources.

Eileen Bailey came on board in October 2015 to serve as the associate dean for Continuing Medical Education (CME). Bailey, originally from upstate New York, worked for several years at the University of Virginia as CME program manager. Bailey oversees the quality of ETSU's CME program, which includes approximately 175 activities annually.

Two students take leadership roles in AMSA



Daniel Gouger | Rebekah Rollston

Two students from Quillen were selected to take leadership roles in the American Medical Student Association (AMSA).

Daniel Gouger, a third-year medical student at Quillen, is serving as the cultural sensitivity coordinator for AMSA while Rebekah Rollston, a fourth-year medical student, is a co-director of AMSA's Sexual Health Leadership Course.

AMSA is the oldest and largest independent association of physicians-in-training in the country. Through Gouger's role with AMSA, he will collaborate with other national leadership as a member of the AMSA Race, Ethnicity and Culture in Health Action Committee. In Rollston's role with AMSA, she will assist in the advancement of medical education within the field of human sexuality.

Quillen graduates largest class in history



The East Tennessee State University Quillen College of Medicine's commencement ceremony in May 2015 honored the largest graduating class in the medical school's 40-year history.

Seventy-one students received their doctoral hoods from class-selected hooders Dr. Robert Schoborg, professor in the Department of Biomedical Sciences, and Dr. Todd Aiken, associate professor in the Department of Pediatrics.

That same day, the Quillen College of Medicine hosted a commissioning ceremony for the seven members – roughly 10 percent – of the Class of 2015 who graduated from ETSU and became members of the United States military.



College of Medicine

Research highlights

1 NIH awards \$2.7 million grant for study of C-reactive protein



Dr. Alok Agrawal

A \$2.7 million grant from the National Institutes of Health awarded to Quillen College of Medicine will support research into the link between a blood protein and inflammatory diseases such as rheumatoid arthritis and atherosclerosis. The protein, called C-reactive protein, or CRP, has been the focus of Dr. Alok Agrawal's research for the past 31 years. Agrawal says every person has a baseline level of CRP, but in patients suffering from rheumatoid arthritis and atherosclerosis, levels of CRP in the blood rise. "And we don't know why, or what CRP is doing," said Agrawal, a professor of biomedical sciences. "Our theory is that when inflammation begins, the protein senses there is a problem and changes its structure and becomes active. And in some people, it may be that the proper microenvironment doesn't exist for CRP to alter its structure and be functional." With the NIH grant, he will test various modified forms of CRP in animal models to see what protective effects it might have on atherosclerosis and rheumatoid arthritis.

2 Scientist receives \$340,000 to study stress, immune system



Dr. Deling Yin

Dr. Deling Yin, a professor at Quillen College of Medicine, received a \$340,000 grant from the National Institutes of Health to study the effect of stress on the immune system. "Everybody gets stress almost every day," Yin said. "But chronic stress can decrease the immune system and that can make you more suscep-

tible to getting diseases." Chronic stress, Yin noted, is any period of stress that lasts more than six hours. It is this type of constant and persistent stress that can be most damaging to the immune system, Yin explained. Funded by the NIH since 2005, Yin's previous work on the topic has determined that different genes play important roles in controlling the influence of immune responses during stress. However, the mechanisms by which stress affects the immune system, he explained, remain unclear. With the three-year grant, Yin is examining the mechanisms through which the immune system is influenced by stress with the hope of developing specific treatments or drugs that may improve the interaction of stress and the immune system.

3 Singh receives \$423,000 for ischemic heart disease research



Dr. Krishna Singh

Dr. Krishna Singh, a professor in the Department of Biomedical Sciences and physiologist at the Quillen VA Medical Center, received a \$423,485 grant from the National Institutes of Health to research the role of a protein called ATM, or ataxia telangiectasia mutated kinase, in ischemic heart disease.

Mutations in the ATM gene cause a rare genetic disorder known as Ataxia-telangiectasia, or A-T, which affects multiple organs in the body and leads to severe disability. Individuals carrying both copies of the mutated ATM gene die in their teens or early 20s. Patients with one normal and one mutated copy of the ATM gene are spared from most of the symptoms of the disease. However, they are more susceptible to cancer and ischemic heart disease. "The aim of this research is to identify a link between ATM and ischemic heart disease, and to understand why ATM-deficient patients are more susceptible to ischemic heart disease," Singh said. "Loss of heart muscle cells during heart attack compromises the normal functioning of the heart."



4 Microbiologist studies protective factor of chlamydia against herpes



Dr. Robert Schoborg

An ETSU microbiologist has found a potential protective benefit of one common sexually transmitted infection against another. Dr. Robert Schoborg, a professor in the Department of Biomedical Sciences, has examined the common co-infection of chlamydia and herpes in laboratory cultures for years, but his recent NIH-funded studies took it a step further and involved observing the pathology of co-infection in mice. “When we co-infected the mice with chlamydia and herpes, we expected that the disease would be worse,” Schoborg said. “As it turns out, the exact opposite happened. When we infected the mice with chlamydia,

then followed that infection with herpes virus, the chlamydia infection actually protected the mice from being superinfected with herpes virus.” Schoborg was awarded funding from ETSU’s Research Development Committee to investigate the mechanisms involved in that protective action. He and his team are asking, “What is it that chlamydia is doing when it infects the host that makes the host resistant to a subsequent challenge with herpes virus?”

5 Team studies reptilian embryonic nutrient pathways



Dr. Tom Ecay

ETSU scientists are continuing their study of embryonic nutrient pathways in snakes in hopes of learning more about calcium absorption during the embryonic development of humans. Dr. Tom Ecay, a professor in the Department of Biomedical Sciences, is leading the study of the development of snakes and lizards because of the similarity of their systems to those of mammals and humans. “One of our goals is to understand the origins of common themes in reptile and mammal embryonic development,” he said. “And although this project concerns snakes that lay eggs, we also have an interest in snakes

that give live birth, so another goal is to understand the origin of placentas and the placental transport of calcium and other nutrients in live-bearing animals.” Ecay hopes the current research being funded through a university Research Development Committee grant will result in the preliminary data needed to apply for further grant funding. “The aim of the grant is to use the newest technologies for DNA sequencing to find the important genetic elements responsible for this (nutrient transport) process,” Ecay said.

6 ETSU funds study about balance and its role in diagnostics

The ETSU Research Development Committee awarded a grant to advance the study of balancing and its potential role in diagnosing diseases. Principal investigator Dr. Istvan Karsai, professor in the Department of Biological Sciences, is collaborating with Allison Hilbun, a Ph.D. student in Biomedical Sciences. The researchers are examining how a person’s movements and balance relate to overall wellness. By looking at how individuals involuntarily balance themselves, Karsai and Hilbun hope to gain a greater understanding of how small changes in the brain that affect balance may be predictors of future neurological disease. The researchers say the way humans balance themselves changes over time, and those changes may be clues to the early detection of neurological disorders. The goal of the study is to collect baseline data on groups with different health conditions and to develop mathematical models and data analyses programs for the completion of a pilot study that could result in external funding. The research will ultimately target the development of a diagnostic tool for different disorders in clinical studies.

Emerging Leaders in Medicine program awarded funding



Dr. Reid Blackwelder

A new leadership program arrived at Quillen College of Medicine after receiving approval and funding from the national Alpha Omega Alpha Honor Medical Society in the spring.

The “Emerging Leaders in Medicine” program is an extracurricular fellowship allowing for the implementation of leadership development and multidisciplinary education into current extracurricular schedules for interested medical students at ETSU.

“This really fills a huge void,” said Dr. Reid Blackwelder, medical professor, director of Medical Student Education for the Department of Family Medicine and faculty advisor for the project. “With medical school education, there’s a very structured process of education, a very strict curriculum. It’s a rigorous set of things that have to be done. The things that get left out are really the components of leadership.”

Through the new program, Blackwelder hopes participants will obtain a skill set that includes more educational opportunities in interprofessional work, leadership and advocacy.

A predominantly student-led effort, the program includes a community service component as well as a team-based simulation laboratory aspect and significant focus on multidisciplinary education.



Gatton College of PHARMACY

celebrates 10-year anniversary

The year 2015 marked 10 years since the Gatton College of Pharmacy first opened its doors at ETSU. The college hosted a special ceremony on the school grounds to commemorate the anniversary. Among attendees were benefactor and namesake Bill Gatton, who has contributed \$4 million to the school, and President Emeritus Dr. Paul Stanton, who first announced plans to start a pharmacy school at ETSU in 2004.

On March 17, 2005, then Tennessee Governor Phil Bredesen visited the ETSU campus and issued a landmark challenge: to raise \$5 million in 90 days in order for the university to take the proposal before the Tennessee Board of Regents and the Tennessee Higher Education Commission for final authorization, and raise an additional \$2.5 million before the arrival of the inaugural class.

A mere 58 days later, ETSU had met the \$5 million fundraising goal.



Attendees gather during the anniversary celebration held at the pharmacy school.



A special toast to kick off the gala event held in October.

On June 10, 2005, the Tennessee Board of Regents gave unanimous approval for the school, and, on July 14, the Tennessee Higher Education Commission gave the final authorization for the College of Pharmacy.

By April 3, 2006, the \$7.5 million fundraising goal had been reached. The inaugural class of 72 students arrived on campus on Jan. 8, 2007, for their White Coat Ceremony. Those students graduated in May 2010. As of May 2015, the Gatton College of Pharmacy has graduated 444 pharmacists.

An anniversary gala was held in late October to further celebrate the anniversary.



Welch hired as new associate dean



Dr. Adam Welch

In May, the Gatton College of Pharmacy named Dr. Adam Welch its new associate dean for Academic Affairs and Assessment. Welch also serves as an associate professor of pharmacy practice at ETSU.

He joined ETSU after serving as acting assistant dean for Academic Affairs and Assessment for two years at Wilkes University, Nesbitt School of Pharmacy in Wilkes-Barre, Pennsylvania. He served several other roles at Nesbitt School of Pharmacy as well during his 10-plus years there.

A registered pharmacist in both Pennsylvania and North Carolina, Welch earned his doctor of pharmacy degree from the University of Pittsburgh and a master of business administration from Wilkes University. He completed a community pharmacy residency with the University of North Carolina at Chapel Hill and Kerr Drug.

Pharmacy faculty member serving as chair of TSP



Dr. McKenzie Calhoun

Dr. McKenzie Calhoun, assistant professor in the Department of Pharmacy Practice at the Gatton College of Pharmacy, spent much of 2015 serving as the chair of the Tennessee Society of Pharmacists (TSP), which is part of the Tennessee

Pharmacists Association. Through Calhoun's work at ETSU Family Physicians of Kingsport, she is a part of the faculty that work interprofessionally to educate medical and pharmacy students and residents.

New program allows ETSU pharmacy..... students to earn B.S. en route to Pharm.D.

Starting in fall 2015, students at Gatton College of Pharmacy were given the opportunity to earn a bachelor's degree while studying for the doctor of pharmacy (Pharm.D.) degree. The pharmacy school's new bachelor of science degree in pharmacy studies – the first in the state of Tennessee – was approved over the summer by the Tennessee Board of Regents.

Gatton is among the vast majority – 121 of 129 – of pharmacy schools in the country that do not require a bachelor's degree for admission, according to data from the American Association of Colleges of Pharmacy.

Most pre-pharmacy coursework can usually be completed as part of the general education curriculum at a typical college, university or community college. However, the remaining pre-pharmacy coursework fulfills specific science requirements as preparation for the professional school curriculum, but does not place the pre-pharmacy student on the path to any particular major. The student may choose to enter

pharmacy school upon completion of the pre-pharmacy requirements or to go on and complete a bachelor's degree, delaying entry into pharmacy school.

Between 30 and 40 students – approximately half of the Gatton College of Pharmacy's new students each year – enter without a bachelor's degree, says Steve Ellis, assistant dean for Student Affairs. Even though they appreciate the "fast track" this offers to the Pharm.D. degree, he says, many students see the benefit a bachelor's degree would provide.

"Even when we first opened our doors, we had students ask if there was any way they could receive a (bachelor's) degree," Ellis said. "We had to say, 'No, we wish we could, but we just have the Pharm.D.'"

After continuing to receive such requests, and noticing that some other institutions were offering bachelor's degrees to pharmacy students, administrators pursued the establishment of the B.S. degree in pharmacy studies, and Ellis believes the

new program will be of benefit to not only its students, but also to the university.

"This will allow interested students to receive an ETSU degree even if they did not start their undergraduate careers here at ETSU," he said. "We also think it will attract students, from the start, to attend ETSU for their undergraduate work, because even though they don't have to, they will be able to complete two or three years of undergrad and go on to pharmacy school and (concurrently) get a bachelor's degree, and overall, save time. Theoretically, a person could go from high school to a Pharm.D., completing a B.S. along the way, in six years. So it's really a terrific opportunity for them."

The pharmacy studies degree program provides instruction in mathematics, biology, chemistry, physics, statistics, pharmaceuticals, pharmacology and toxicology, dosage formulation, manufacturing, quality assurance and regulations.



Students receive scholarship funding from Cardinal Health

To date, Cardinal Health
has provided over
\$717,000 in scholarship
and financial
support to the Gatton
College of Pharmacy.



Cardinal Health, a global health care services company, established an endowed scholarship at the Gatton College of Pharmacy and presented the \$15,000 scholarships to two students – Aaron Garst of Wytheville, Va., and Dr. Bryan Barnhill of Vestavia, Ala., both fourth-year students.

To date, Cardinal Health has provided over \$717,000 in scholarship and financial support to the Gatton College of Pharmacy.

“While the official approval for the ETSU College of Pharmacy came just 10 years ago, our independent community pharmacists had been rallying for this school for many years,” said Dr. Larry Calhoun, dean of the pharmacy school. “Cardinal Health has been a true champion for not only independent community pharmacists across the region but also for our students, and has provided generous financial support that has significantly lessened their educational costs. We are very fortunate to have them as our partners.”

Making the presentation on behalf of Cardinal Health was Steve M. Lawrence, senior vice president of Independent Sales. Lawrence was joined by David Pesterfield, founder of Pharmacy Plus in Maryville which serves independent pharmacists. Since 2008, Pharmacy Plus has donated over \$64,000 to the Gatton College of Pharmacy.

creating
training
resource
for pharmacy students



Dr. Cortney Mospan

The Bill Gatton College of Pharmacy’s Delta Epsilon chapter of the academic honor society Rho Chi received a grant to help create a valuable resource for students.

The grant, obtained by assistant professor and the ETSU chapter co-advisor Dr. Cortney Mospan, will allow the college to create an online arena in which fourth-year pharmacy students at ETSU can log in for guidance in finding post-graduation training positions.

The project is being called the Online Residency Preparation Site Sponsoring Applicant Success. “It will focus on how to find information about programs, how to apply, how to develop a curriculum vitae, how to write a letter of intent, interview etiquette,” Mospan said. “We didn’t have many resources to navigate these types of things. With this, faculty, past graduates and pharmacists in the community will post resources, offer advice and record an info session on the different topics.”

Since fourth-year students sometimes are completing Advanced Practice Pharmacy Experiences, or clinicals, out of the area, it is crucial that the resource be offered online, Mospan noted.



Students recognized for service and performance

The student chapter of the National Community Pharmacists Association (NCPA) at the Gatton College of Pharmacy was awarded a high honor from the NCPA Foundation.

The group earned first runner-up for 2015 NCPA Student Chapter of the Year. The award recognizes commitment to community service, recruiting new members, promoting independent community pharmacy and advocating legislative action.

Members were presented with a certificate of achievement for their efforts during the NCPA's annual convention in October in Washington, D.C. Roughly 35 students at the pharmacy school are members of the NCPA chapter.

The Gatton student chapter developed several new initiatives over the previous year leading



to recognition, including hosting a Pharmacy Ownership "Boot Camp" in conjunction with Cardinal Health, a bone marrow donor drive with Delete Bone Cancer, development of a monthly legislative newsletter and several community outreach programs.

Student pharmacists also developed an educational program in April at Hope House in Kingsport, focusing on safe use of over-the-counter medications in pregnancy, lactation, and children.

GenRx awarded for launch of new preceptor model



From left to right: Garrett Messmer (Chair of ETSU Generation Rx Committee), Brandie LeBlanc (Past Chair), Jake Peters (Past Chair)

The Generation Rx (GenRx) chapter at Gatton College of Pharmacy brought home a national award for its efforts related to prescription drug abuse.

The student organization, which aims to enhance medication safety and combat the misuse and abuse of prescription drugs through educational programs, was named the best overall GenRx chapter in the country during the American Pharmacists Association – Academy of Student Pharmacists conference held in March 2015.

The GenRx group from ETSU has reached hundreds of young people through its community outreach presentations and has created a provider toolkit presentation about prescription drug abuse. The presentations, often given by an interprofessional group of students from the ETSU Academic Health Sciences Center, help educate health care providers about safe prescribing practices.

The national honor came with a more than \$1,000 award, which will assist the group in future outreach efforts.

Student group earns national award for impacting policy, legislation

A student organization within the Bill Gatton College of Pharmacy won a national award for its efforts in impacting policy and legislation.

In March, the American Pharmacists Association – Academy of Student Pharmacists chapter from ETSU accepted the National Policy and Legislative Award, which is given to only one chapter in the

country for its active participation as agents of change within the legislature.

"Students took a large role in promoting the ultimately successful collaborative practice legislation in Tennessee that was signed by Gov. Bill Haslam in 2014," said Loren Kirk, a third-year student pharmacist at ETSU.

The Collaborative Pharmacy Practice legislation establishes the role of pharmacists as providers of care and encourages ongoing collaboration between pharmacists and other essential health care providers as part of team-based health care. This collaboration will allow for increased access to quality patient care services, Kirk explained.



\$1.8 million awarded for new preceptor model



Dr. Christy Hall

A \$1.8 million grant was awarded to the College of Nursing at ETSU to launch a new model to be used for preparing and mentoring nurse practitioners who serve as clinical faculty preceptors for graduate students.

In nursing education programs, clinical preceptors are typically nurses and nurse practitioners, who work in health care centers and supervise students but are not full-time faculty members.

“These preceptors play a vital role in educating our future nurses and nurse practitioners and it is crucial that we provide them with proper training and support so they can be effective in these roles,” said Dr. Christy Hall, project director and assistant professor in the College of Nursing.

In the project, funded by the Health Resources and Services Administration, Hall and the grant team are focusing specifically on graduate nursing education and the nurse practitioners who serve as preceptors. The new model is called Student and Preceptor Advancement in a Designated Education Site (SPADES).

“In undergraduate nursing education, Dedicated Education Units are areas within the acute care setting that are designated as training areas,” Hall said. “With this new grant project, we are establishing the concept of a Dedicated Education Site, where an entire primary care site is used for preparing nurse practitioners.”

The new model will be tested at the Johnson City Community Health Center

and will eventually be implemented at the Hancock County School-Based Health Centers in Sneedville.

Hall and her team will focus on the preparation of preceptors at those sites on such issues as communication, competency development, teaching and evaluating students, and conflict management.

“I am especially excited about the Rapid Cycle Quality Improvement strategies we will be using that will involve collecting audio recordings of preceptors and students giving feedback on the overall teaching and learning process, and using that information to make quick adjustments as needed,” said Hall, who noted that graduate nursing students at ETSU are required to have 1,000 hours of clinical time, usually supervised by a preceptor.

Joining Hall on the grant project are Drs. Sandy Diffenderfer and April Stidham from the College of Nursing. The initiative is expected to last three years.

Nursing receives \$1M grant to build new Day Center



ETSU’s College of Nursing Family Practice Network received a \$1 million federal grant from the Health Resources and Services Administration in the fall to construct a new building to house its Johnson City Day Center.

The Day Center, located at 202 W. Fairview Ave., Johnson City, provides health care and other services to the homeless population in the region. The College of Nursing has been serving homeless individuals for more than 25 years and has done so at the Day Center facility since 2005.

“On a typical day, the Day Center serves upward of 60 clients, with resources that are adequate to serve about half that,” said Dr. Wendy Nehring, dean of the nursing school. “The building is too small, which forces us to have to limit our offerings each day. The building is also plagued with structural issues.”

The new, 4,365 square-foot facility, to be located on the same property as the existing Day Center, will feature updated resources and medical equipment, allowing for the

expansion of medical, behavioral and social health services.

“We are aiming to take a holistic approach to improving the lives of the homeless population of our region,” said Dr. Wilsie Bishop, ETSU’s chief operating officer and vice president for Health Affairs. “We will increase our level of services by providing health care and social services five days a week, which will allow for onsite medical testing and improving the basic needs of these individuals – everything from laundry and shower facilities to recovery programs and life skills training.”

In 2014, the Day Center recorded more than 11,000 visits, including 326 primary care appointments and 280 mental health appointments. Through the project, ETSU officials expect to see a 150 percent increase in the number of individuals who are served by the Day Center, with availability of individual patient resources increasing by more than 400 percent.

The current facility will remain open during the time that the new center is being built.



Dr. Wendy Nehring

Two nurse-led clinics celebrate milestones



Silas Tolan, executive director of ETSU's community health centers, speaks during the JCCHC anniversary gala held in the fall



From left to right: Lt. Gov. Ron Ramsey, College of Nursing Dean Dr. Wendy Nehring, State Rep. Timothy Hill and ETSU Chief Operating Officer Dr. Wilsie Bishop at the MCEHC anniversary celebration.

Two of ETSU's 13 nurse-led clinics celebrated 25th anniversaries in 2015, marking the milestone with special events hosted in their respective cities.

The Johnson City Community Health Center (JCCHC), formerly known as the Johnson City Downtown Clinic, hosted a benefit in April, while the Mountain City Extended Hours Health Center (MCEHHC) held a celebration in September.

The JCCHC opened its doors in 1990 as a facility to provide the area homeless population with primary health care. The City of Johnson City provided funding for the first year and donations were received from private citizens and community groups. The Salvation Army of Johnson City provided a small space in its special services complex and the College of Nursing provided the services of a nurse practitioner and a secretary.

In 1995, services were expanded to cover medically indigent and TennCare patients. Two years later, the clinic moved to a new location on West Fairview Avenue but outgrew that facility

and, in 2005, moved to a location on East Myrtle Avenue.

In 2012, the JCCHC made the move into a new, federally funded clinic space at 2151 Century Lane just off of State of Franklin Road behind Woodridge Hospital in Johnson City. Today, the JCCHC serves nearly 6,000 patients, with more than 25,000 visits to the clinic last year alone.

The MCEHHC opened in September 1990 and provides primary care, prenatal care and behavioral health services to residents of Johnson County and the surrounding region.

A certified Rural Health Clinic, the center is open six days per week, including evenings and weekends, and is located at 1901 South Shady Street inside the Johnson County Community Hospital.

Both facilities serve the uninsured, the underinsured and the insured.

College partners with The Lexington to offer health services

The College of Nursing's nurse-led Johnson City Community Health Center (JCCHC) began providing onsite health services at The Lexington Senior Living in December 2015. Primary care services are offered to residents and staff on Tuesday and Friday afternoons by a Board Certified Family Nurse Practitioner. Services include preventative health care, such as the "Welcome to Medicare" visits, yearly physicals and sick visits. The JCCHC is pleased to be able to meet the health care needs of the senior population and the Lexington staff. The residents benefit from "in-house" services, while the partnership allows JCCHC to offer high quality care and expand services to a new population.

The TN eCampus nursing administration program ranks second in nation

TheBestSchools.org, a resource for campus and online education, ranked the TN eCampus Master of Science in nursing administration as second in the nation.

TheBestSchools.org states selections were made "based on the quality of the program, types of courses provided, and faculty strength, as well as school awards, rankings and reputation, including reputation for online learning."

"Multiple universities in the collaborative bring together the best students, curriculum and faculty to make an enjoyable and successful program," said Dr. Nancy Cameron, who serves as concentration coordinator for the program. "I am fortunate as an ETSU professor to have the opportunity to be associated with such a dedicated group."



ETSU students take part in first-ever white coat ceremony for nursing program



Approximately 100 future nurses crossed the stage at ETSU's Martha Culp Auditorium one fall afternoon to take part in the first-ever College of Nursing white coat ceremony at the university. The event recognized second-semester sophomores in the College of Nursing who began their clinical and lab work requirements in the fall. These students are set to graduate in December 2017 as registered nurses.

"This is our future and we're in good hands with these students," said Dr. Wendy Nehring, dean of the College of Nursing. "They are here because they care about others and they are passionate about being the best nurses they can be."

ETSU's nursing program is one of the first in the state to hold a white coat ceremony for

nursing students, doing so through a grant from the Arnold P. Gold Foundation.

"Official white coat ceremonies for nursing started in 2014 and we are fortunate to have received one of these grants in just the second year," Nehring said. "It is a special day."

Dr. Wilsie Bishop, Chief Operating Officer and vice president for Health Affairs at ETSU and a nurse in her own right, served as the keynote speaker for the inaugural event.

"The white coat symbolizes trust, compassion and professionalism," she told the students prior to their cloaking. "And it acknowledges that nurses play a vital and collaborative role in health care delivery."

Tillman tapped as new associate dean



The College of Nursing named Ken Tillman its new associate dean of academic programs. Tillman was previously serving as the director of undergraduate programs for the

College of Nursing and has been with ETSU since 2013. In addition to his role as associate dean, Tillman serves as an associate professor in the nursing college.

Prior to coming to ETSU, Tillman served as an assistant professor and coordinator at Southeastern Louisiana University School of Nursing.

"ETSU's College of Nursing is known for being the largest nursing program in the state," Tillman said. "As associate dean of academic programs, my goal is for us to be known as the best nursing program in the state."

In addition to his duties at ETSU, Tillman is on the board of the non-profit organization Aneurysm Outreach and has previously served in leadership roles with other non-profit and professional organizations.

Student health clinics get new executive director



The College of Nursing hired a new executive director of the Student University Health Services and School-Based Clinics.

Roslyn "Roz" Robinson took over the position in September 2015. In the role, she oversees ETSU's on-campus Student Health Clinic as well as local school-based clinics at several Washington County schools and Northeast State Community College.

"By next year, I want to make sure we increase our services overall, but particularly in mental health," she said. "I want to be able to offer more to our students."

Robinson comes to the position after spending nearly seven years working for Covenant Health System in Knoxville where she served as a Registered Nurse, a case manager and then the business development manager.

Prior to her work at Covenant, Robinson spent more than two decades working for a pharmaceutical company in plasma collection facilities across the country.

Alum named director of undergraduate programs



The College of Nursing named Teresa "Tese" Stephens as its new director of undergraduate programs in 2015.

Stephens, a native of the region, comes to ETSU from the University of Tennessee's nursing program in Knoxville where she served as a clinical assistant professor and the coordinator of the RN-BSN program as well as the nursing research coordinator at UT Medical Center.

Stephens has also held faculty positions at King University and Milligan College between 2009 and 2014, worked with Wellmont Health System served as a school nurse in Sullivan County and was a nurse at two hospitals in the region during her nearly 30-year career.

A licensed registered nurse and certified nurse educator, Stephens joined ETSU in the fall, serving as an assistant professor as well as the director of undergraduate programs.

Stephens manages all undergraduate nursing curricula and professional development of the faculty.



JCCHC receives \$50K to establish medical-legal partnership for patients



The Johnson City Community Health Center (JCCHC), a nurse-managed clinic operated by East Tennessee State University, was one of just two facilities in the nation to receive a \$50,000 grant to advance a medical-legal partnership that addresses patients' health and economic stability.

The grant is being funded through the National Nursing Centers Consortium Medical-Legal Partnership Foundation and the Kresge Foundation.

"It is for the partnership of a medical entity and a legal practice to address

social determinates of health for the disparate populations," said Dr. Patti Vanhook, associate dean of practice for the ETSU College of Nursing. "Health care providers address health care issues, but often there are other issues involved and no ability to address them – financial issues, environmental issues and other external factors that impact health where lawyers have a role as a partner in health care."

Through the grant, the JCCHC has partnered with the Tennessee Justice Center to help patients with everything from being accepted for TennCare and disability eligibility issues to getting medications and equipment they need.

"A lot of times, these things slip through the cracks or there could be an insurance denial or a problem that we actually could get fixed fairly quickly," Vanhook explained. "Legal will work with them to get those issued resolved in a timely manner."

Nursing students, dean attend conference in nation's capital



Three students from ETSU joined College of Nursing Dean Wendy Nehring and others at a public policy summit held by the American Association of Colleges of Nursing in March. The students heard several speakers talk about health policy issues, including the Affordable Care Act. They also visited Capitol Hill, meeting with several legislative aides and others in Congress. "This was a wonderful experience for our students," Nehring noted. "They came away with a much larger breadth of knowledge related to issues that the nursing profession faces every day."



JCCHC breaks ground on community garden

The Johnson City Community Health Center celebrated Earth Day in April with a groundbreaking for its community garden. The garden will provide poorer members of the community with better access to healthy food.

Students elected to positions in state organization



Ashleigh McMahan



Ben Leichter

Two ETSU students were elected to serve in positions with the Tennessee Association of Student Nurses (TASN).

Ashleigh McMahan, a fourth-year student working toward a bachelor of science in nursing, was elected communications director for the TASN and Ben Leichter, a third-year student working toward a bachelor of science in nursing, was elected legislative director.

McMahan and Leichter were elected to the positions in October 2015 and will serve in their roles for one year.

Approximately 18 nursing students from ETSU attended the conference this year, the largest group to attend in the history of the program.



HALL *of* FAME

The College of Clinical and Rehabilitative Health Sciences inducted
its inaugural members into the college's newly created Alumni Hall of Fame.

A special ceremony was held in September 2015 to recognize the honorees. Those inducted were:



Dr. Amelia Brown



William Hensley



Dr. Ruth Ketron



Dr. Rebecca Nunley



Dr. Chuck Thigpen



Dr. Richard Wilson

Dr. Amelia Brown

Brown received a bachelor's degree in home economics education from ETSU in 1969, a master's degree in food sciences from the University of Tennessee in 1971 and a PhD in foods and nutrition from Kansas State University in 1975. She began her teaching career at Kansas State and Virginia Tech before her 30-year tenure at ETSU. During her time at ETSU, Brown held many leadership positions and received 15 grants related to her discipline. She retired in 2009, but continues to teach in the Regents Online Degree Program and in the Department of Management and Marketing.

William "Mac" Hensley

The late William "Mac" Hensley was a physical therapist who received his bachelor's degree in math and physical education from Western Carolina University and a physical therapy degree from Duke University Medical School. He was the first licensed physical therapist in the state of Tennessee and practiced physical therapy for 62 years. He helped lead the effort to establish the physical therapy program at ETSU in the late 1990s, was a founding member of the college's philanthropy board and has an endowed scholarship in his name.

Dr. Ruth Ketron

Ketron began working as a dental assistant during her junior and senior years of high school. In 1971, she became one of the first graduates of ETSU's dental hygiene program. Ketron completed her bachelor's degree in health education in 1972 and began teaching in the Department of Dental Hygiene. Later, she completed a master's degree at ETSU and then received her EdD from the University of Tennessee in 1979. She retired in 1995 as a full professor. While with ETSU, Ketron served in a variety of leadership roles and continues to serve as an adjunct professor.

Dr. Rebecca Nunley

In 1976, Nunley received her associate's degree in dental hygiene from ETSU and, in 1978, graduated from ETSU with a bachelor's degree in Public Health. Nunley worked as a dental hygienist in the Tri-Cities before moving to Texas where she completed her DDS degree at the University of Texas in San Antonio. She began a private practice in Elizabethton but returned to ETSU in 1988 as department chair for Dental Hygiene. She served in that role for 16 years before opening a private practice. She was instrumental in the development of the Keystone Dental Clinic, an indigent patient dental care facility in Johnson City.

Dr. Chuck Thigpen

Thigpen earned his bachelor's degree in physical therapy from ETSU in 1997. He completed a master's of science as well as a PhD in Human Movement Sciences at the University of North Carolina in 2003 and 2006 respectively. He is a clinical research scientist for ATI and director of observational clinical research in orthopaedics with the Center for Rehabilitation and Reconstruction Sciences at the University of South Carolina. He holds adjunct appointments with Duke University, University of South Carolina and Clemson University.

Dr. Richard Wilson

Wilson, a native of Bristol, completed his bachelor's degree in audiology at ETSU in 1964 and a master's degree in audiology at Vanderbilt University in 1965. He pursued his doctoral degree at Northwestern University in 1970 under the tutelage of Dr. Raymond Carhart, a pioneer in the audiology field. Wilson, who joined the faculty at ETSU, devoted his life and work to furthering knowledge in the field of audiology and mentoring young researchers and clinicians. Wilson founded the Appalachian Spring Conference, which has been sponsored by the Veterans Affairs Medical Center for more than 20 years.



Williams elected vice president of ASHA



Dr. Lynn Williams

Dr. Lynn Williams, associate dean in the College of Clinical and Rehabilitative Health Sciences, was elected to serve as vice president for academic affairs in speech-language pathology for the American Speech-Language-Hearing Association (ASHA).

ASHA is the national professional, scientific and credentialing association for 182,000 members and affiliates who are audiologists, speech-language pathologists, speech, language and hearing scientists, and more.

In her role with ASHA, Williams, a speech-language pathologist, is charged with identifying issues and forecasting needs and trends; initiating recommendations for actions to advance undergraduate and graduate education in the field; recruiting individuals into the study of human communication sciences and disorders, and more.

Samples appointed president of committee



Dr. Don Samples

Dr. Don Samples, dean of the College of Clinical and Rehabilitative Health Sciences, was appointed president for the Committee on Accreditation for Polysomnography Technology Education (CoA PSG).

The CoA PSG reviews educational programs in polysomnographic technology to determine the extent to which the program meets standards and guidelines for accreditation.

Its mission, in cooperation with the Commission on Accreditation of Allied Health Education Programs, is to establish, maintain and promote appropriate standards of quality for the educational programs in polysomnography and to provide recognition for educational programs that meet or exceed the minimum standards.

Voice matters: Nandjundeswaran selected as inaugural Dean's Research Fellow



Dr. Chaya
Nandjundeswaran

Dr. Chaya Nandjundeswaran, assistant professor in Speech-Language Pathology, is the inaugural recipient of the College of Clinical and Rehabilitative Health Sciences Dean's Research Fellowship.

Awarded in late 2015, the research fellowship provides the recipient with a buy-out of one-half of her teaching load for two years and some funding for conducting the proposed research. Nandjundeswaran's research is titled, "A Preliminary Study in the Treatment of Vocal Fatigue in Teachers."

"I see a lot of teachers with lesions on their vocal folds," Nandjundeswaran said. "They are having to talk all day and, often times, at louder levels, which puts them at high risk for voice problems."

The speech-language pathologist helps run the Voice Clinic within the college. There, she focuses on teaching patients how to best prevent long-term damage to their voice and vocal cords, or vocal folds as they are often called.

"Voice defines who you are. It is a unique print, just like your fingerprint," Nandjundeswaran said. "A lot of times, people take it for granted, but if you don't take care of it, you risk losing that identity."

ETSU Physical Therapy program ranked 14th in the nation by online resource

Graduateprograms.com, an online resource for prospective graduate students, ranked the physical therapy program in the College of Clinical and Rehabilitative Health Sciences among the best in the nation.

In the Fall 2015 rankings, the physical therapy program at ETSU was ranked 14th for physical therapy schools and programs across the nation. The program ranked seventh in the nation for financial aid and ninth in the nation for career support.

"I am very pleased and excited that our program is once again ranked among the top physical therapy schools in the country by Graduateprograms.com," said Patricia King, chair of the Department of Physical Therapy. "These rankings are particularly meaningful to us since they are student-opinion driven. We have excellent students and hope these rankings will bring ETSU PT to the attention of even more of the best and brightest pre-physical therapy students across our region and the country."



Grants awarded for research, clinical enhancements

The College of Clinical and Rehabilitative Health Sciences awarded Dean's Research and Clinical Enhancement Grants to several faculty members.

"These grants have provided faculty support to initiate research in their professional areas of expertise," said Dr. Don Samples, dean. "Providing faculty with start-up costs to support their projects has been beneficial in the development of their research agendas."

Professor co-edits new textbook on hearing disorder



Dr. Marc Fagelson, a professor of audiology in the College of Clinical and Rehabilitative Health Sciences, collaborated with Dr. David Baguely of Cambridge University in England on the book, "Tinnitus: Clinical and Research Perspectives."

The book is intended to support patients suffering from tinnitus as well as the clinicians, researchers and students who work on their behalf. Released in November 2015, the book features 21 chapters focused on contemporary findings from basic and clinical research regarding tinnitus mechanisms, effects and interventions.

Recipients of the Dean's Research Enhancement Awards:



Dr. W. Andrew Clark, professor of Clinical Nutrition and associate dean for Research, for his project titled, "The Impact of water-solubilized Coenzyme Q10 on Cardiac Function in Patients with Ischemic Cardiomyopathy Taking Statin Drugs." The research aims to create a water-soluble version of a coenzyme needed to keep a heart efficiently squeezing after an individual suffers a heart attack.



Dr. Jacek Smurzynski, audiology professor, for his project titled, "New protocols of frequency modulated distorted-product otoacoustic emission (fDPOAE) tests aimed for improving diagnostic performance." The research is a continuation of a multicenter study initiated in 2013 and designed to evaluate state-of-the-art diagnostic system, Sentiero, developed by a German medical company.



Dr. Brenda Louw, chair of the speech-language pathology and audiology department, for her work, "Speech-Language Pathologists' Perceptions of Collaborating with Registered Dietitians in the Pediatric Population." Louw is conducting her research in collaboration with Dr. Michelle Lee, assistant professor of Clinical Nutrition.

Recipient of the Dean's Clinical Enhancement Award:



Dr. Lindsay Bondurant, assistant professor of audiology, for her project called, "Pediatric Audiology Testing, Communication and Habilitation (PATCH) Clinic Enhancement." Through the award, Bondurant aims to upgrade diagnostic equipment to streamline patient care in pediatric audiology and open new avenues for collaboration with ETSU's College of Nursing, which operates the Johnson City Community Health Center (JCCHC).

Faculty member discovers college-age individuals not getting enough vitamin D



Dr. Eileen Cress

A study by Dr. Eileen Cress, a nutrition professor, reveals college-age individuals may not be getting enough vitamin D, which supports bone health.

Cress conducted her study among 100 ETSU students ages 18 to 29. Her research included looking at each student's diet to determine his or her intake of vitamin D from food sources.

"The estimated average requirement for vitamin D is 400 international units per day," Cress said. "Only eight students in the group met that with their food intake."

That, she explained, is likely because most foods are not rich in vitamin D.

"You can obtain vitamin D in fortified milk and cereals and fatty fish such as salmon," Cress said. "But one 8-ounce glass of milk contains only 100 international units. Very few of these students were consuming milk at all and those that were had no more than a glass a day so it still wasn't enough."

In all, 69 percent of the students studied had less than optimal vitamin D levels, according to the study.

"To find 69 percent of them at low levels is of concern," Cress said.



Student Spotlight:

Speech-language pathology students win state competition



A trio of students in the speech-language pathology program took first place in the Tennessee Association of Audiologists and Speech-Language Pathologists (TAASLP) Knowledge Bowl held in October as part of the organization's annual conference. Pictured above (from left to right), MacKenzie Anderson, Kristi Moore and Erin Boccardo, all second-year students in the speech-language pathology master's program, competed against Vanderbilt University to win the competition, which poses questions that require participants to synthesize information, knowledge, skills and abilities believed necessary to practice independently as a speech-language pathologist.

Radiography student selected to attend educational symposium



The American Society of Radiologic Technologists (ASRT) chose Crystal Storey, a junior enrolled in the radiography program, to take part in the Student Leadership Development Program at its Educational Symposium and Annual Governance meeting in Albuquerque, New Mexico. Dr. Ester Verhovsek, chair of the Department of Allied Health Sciences, called it "an honor" for an ETSU student to be selected, noting that the experience is "an insider's look into the largest association for medical imaging and radiation therapy professionals." Storey attended the symposium in June.

Group helps give the gift of hearing



Audiology students helped deliver a special gift to a young woman from Guatemala who had recently moved to the area – the gift of hearing. The 19-year-old woman has been deaf since birth as well as non-verbal. ETSU's chapter of the Student Academy of Audiology started a scholarship program in 2015 to help one patient per year get the necessary equipment to improve his or hearing. The students selected the Guatemalan woman as their first recipient of the scholarship. Pictured, from left to right, are Devon Shock, SAA vice president; Dr. Shannon Bramlette, audiologist; the first recipient of the award; Paige Waddell, SAA president; and Julia McDowell, SAA secretary.

ETSU dental hygiene student takes third place at national conference



An ETSU online student completing her bachelor's degree in dental hygiene was awarded third place in the national student awards presented by the American Association of Public Health Dentistry. Jessie Hewlett, who graduated in December 2014, presented her poster at the national Oral Health Conference held in Kansas City in spring 2015. Her poster was the result of her Community and Rural Dental Health Education course. Her project was created for the Knoxville-based Serenity Center, which serves women who are either recovering addicts or victims of domestic violence and are working to return to self-sufficiency. There, Hewlett assessed patients' dental

health and knowledge, planned an educational and treatment intervention based on their needs and evaluated the project. She also coordinated volunteers and procured donated supplies to provide the dental services to the women.

Faculty members establish scholarship in honor of Phil Carney



Phil Carney

Several faculty members in the Department of Imaging Sciences established a scholarship fund in memory of a man they say had a "special place in his heart" for students of the university.

"I met Phil Carney in 2013," said Christy Raby, an assistant professor and clinical coordinator for Imaging Sciences. "I knew immediately that he loved our students. He really took an interest in their education."

As director of radiology for LeConte Medical Center in Sevierville, Carney worked annually with three ETSU radiography students completing their clinical requirements at the facility. Carney died suddenly in April from a heart attack. He was 62.

"Prior to his passing away, I had this idea that I wanted to start a scholarship to help students during the summer because that can be hard on students since they aren't full time," Raby said. "Then he passed away and I thought this would be a great way to honor him."



ETSU partners with Peace Corps to offer new academic program

In late 2015, ETSU's College of Public Health inked an agreement with the Peace Corps to offer a new program for graduate students through a partnership with the international service organization.

"Students seeking a master's in public health through the Master's International (MI) program at the university will serve with the Peace Corps for 27 months to meet their field experience requirements to earn their degrees," said Dr. Megan Quinn, assistant professor in the Department of Biostatistics and Epidemiology and coordinator of ETSU's application for the MI program.

The program will be beneficial to both the Peace Corps volunteers and to other students at ETSU, according to Dr. Randy Wykoff, dean.

"The entering volunteers will have the opportunity to take advantage of ETSU's long-standing commitment to providing students the skills necessary to address a wide range of real-world public health challenges," he said. "At the same time, the volunteers can provide us feedback to ensure that our training is relevant and current to meeting the public health needs of low-resource areas."

MI students will be given two options for program completion. The first requires them to complete 18 months

of coursework either on campus or online through ETSU and then 27 months of Peace Corps service. The second option requires students to complete 12 months of coursework before going into the Peace Corps. During the 27 months with the Peace Corps, they would complete the remaining six months of work required for the degree online.

"We are delighted to partner with East Tennessee State University to give students the opportunity to incorporate Peace Corps service into their graduate studies," said Carrie Hessler-Radele, Peace Corps director.

"Peace Corps volunteers develop cross-cultural, leadership and language skills during their service that – in combination with a graduate degree – make them extremely competitive candidates in today's global job market."

The college anticipates recruiting up to eight MI students per year for the first three years of the program, which officially began in December. The first class is expected to start in August 2016.

Wykoff, Pack elected to positions in national association



Wykoff



Pack

College of Public Health Dean Randy Wykoff and Associate Dean Rob Pack were elected by their peers to serve in senior leadership positions in the Association of Schools and Programs of Public Health (ASPPH).

ASPPH is the membership organization for all schools of public health and graduate programs in public health that are accredited by the Council on Education for Public Health. Currently, ASPPH membership includes almost 100 different universities across the United States and in several other countries.

Pack was elected the co-chair of the Academic Affairs section for ASPPH. Wykoff was elected to serve as the chair of the Education Committee for ASPPH and, in this capacity, will also serve as a member of the ASPPH board.

Wykoff delivers address at 38th annual conference

Dr. Randy Wykoff, dean of the College of Public Health, delivered a keynote address at the 38th Annual Appalachian Studies Conference held at ETSU in the spring.

His address, "The Health Status of Central Appalachia," showcased data about the 238 counties of central Appalachia as compared to the overall health status of the country in categories such as premature death, smoking, obesity, poverty and educational achievement.

CELEBRATING 60 years

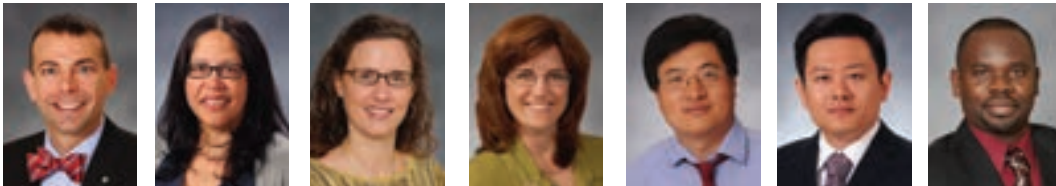


ETSU's College of Public Health celebrated "over a half-century of health" with a special gala in September. Held at The Venue in Johnson City, the event recognized the college's successes over the past 60 years, including its impact in academia as well as in the community.



Dozens of faculty members featured in publications

Here are a handful of those achievements:



L-R: Dr. Patrick Brown, Dr. Mildren Maisonet, Dr. Jodi Southerland, Deb Slawson, Dr. Kesheng Wang, Dr. Liang Wang and Dr. Hadii Mamudu

Dr. Mildred Maisonet, in the Department of Biostatistics and Epidemiology, authored two publications on the long-term consequences of prenatal exposure to environmental contaminants. The first was published in *Environmental Health Perspectives* and the second in *Environment International*.

Drs. Hadii Mamudu, Sreenivas (Phani) Veeranki and Mary Ann Littleton, along with David Kioko and Rafie Bohozian-Khoygani, published an article in the *Journal of Public Health Management and Practice* exploring support for 100 percent college tobacco-free policies and tobacco-free campuses among college tobacco users.

Drs. Jodi Southerland and Deb Slawson, as well as then-students Dr. Christian Williams and Taylor Dula, authored the article, "School-Based Adolescent Obesity Prevention Programming: Perceptions of School Personnel in Southern Appalachia," in *Southern Medical Journal*.

Dr. Patrick Brown, in the Department of Health Sciences, authored an anatomy and physiology textbook – *Anatomy and Physiology: A Guided Inquiry* – that utilizes a teaching method known as Process Oriented Guided Inquiry Learning, or POGIL.

Dr. Kesheng Wang and Dr. Liang Wang, both in the Department of Biostatistics and Epidemiology, contributed a chapter to the textbook, *Molecular Aspects of Alcohol and Nutrition*. The chapter is titled "Genes Associated with Alcohol Withdrawal."

Dr. Joel Hillhouse, associate dean for research, is lead author on a research letter published in *JAMA Dermatology* titled "Prevalence and Correlates of Indoor Tanning in Nonsalon Locations Among a National Sample of Young Women." Carter Florence, a doctoral student in the Department of Community and Behavioral Health, is a co-author.

Faculty published an article, "Prevalence and Correlates of Indoor Tanning and Sunless Tanning Product Use Among Female Teens in the United States," in *Preventive Medicine Reports*. Dr. Megan Quinn, in the Department of Biostatistics and Epidemiology, was the lead author, joined by faculty members Drs. Arsham Alamian, Joel Hillhouse and Katie Baker as well as Dr. Colleen Scott, a doctoral graduate from the college, and Dr. Rob Turrisi from Pennsylvania State University.

Three articles in the ebook *Undergraduate Education for Public Health in the United States* were written by **ETSU faculty**. The opening article, "A history of undergraduate education for public health: from behind the scenes to center stage," was co-written by Dr. Randy Wykoff, dean. Wykoff, Dr. Mike Stoots, Dr. Amal Khoury and Dr. Rob Pack also contributed two other articles – "An undergraduate curriculum in public health benchmarked to the needs of the workforce" and "Undergraduate training in public health should prepare graduates for the workforce."

ETSU recognized by Tennessee Environmental Health Association

The ETSU College of Public Health's Department of Environmental Health received the 2015 Educator of the Year award presented by the Tennessee Environmental Health Association at the organization's Tennessee Environmental Hall of Fame Award Dinner and Induction in September.

The award is given to a program or educator that has made significant advancement and impact on the profession of environmental health.

The Department of Environmental Health was founded in 1964 and was the first program in the nation to be professionally accredited by the National Environmental Health Science and Protection Accreditation Council. To date the Department of

Environmental Health has graduated over 1,300 undergraduate and graduate students from its program. It is the host partner of the Tennessee Environmental Hall of Fame and has educated, trained and prepared hundreds of individuals for a career in the field of environmental health.

Also at the event, Dr. Monroe T. Morgan was inducted into the Tennessee Environmental Hall of Fame.

Morgan was the founding professor and chair of the Department of Environmental Health in 1963, and retired from ETSU in 1998. A true pioneer in environmental health education, he developed the first bachelor's and master's degree curriculum in environmental health to be accredited by

the National Environmental Health Science & Protection Accreditation Council.

He served as the chair the first Earth Day Forum in 1970; received the Governors Outstanding Tennessean award in 1974, and, in 1975, became the first Tennessean to serve as president of the National Environmental Health Association. He was deeply committed to assuring all students, including many international students, received an education in environmental health.

The Tennessee Environmental Hall of Fame was created in 2009 to recognize meritorious service in the field of environmental health and the Tennessee Environmental Health Association. It is on display in Lamb Hall on the campus of ETSU.



College of Public Health

Research highlights

1 ETSU receives grant to study childhood obesity in Central Appalachia



Kate Beatty

A joint effort between faculty at ETSU and NORC at the University of Chicago was funded by the Appalachia Funders Network (AFN), a coalition of foundations and other funders focused on work in Central Appalachia.

The AFN requested proposals from organizations to conduct research and synthesize findings that provide a picture of childhood obesity and chronic disease in central Appalachia, engage regional grant makers and health professionals to identify promising practices and approaches, and to develop a report and presentation to highlight the research findings and recommendations.

In March 2015, the AFN announced it had selected the proposal submitted by ETSU and NORC, a nonprofit research organization with the mission of conducting high-quality social science research in the public interest.

“We are honored and privileged to be selected to work with AFN on this project,” said Kate Beatty, with ETSU’s College of Public Health and principal investigator for the grant.

The joint effort tackles four main tasks: developing a report on the extent of childhood obesity in Appalachia; creating a list of current programs in Appalachia that address childhood obesity; identifying those childhood obesity programs in Appalachia that have been most effective; and recommending strategies to reduce childhood obesity in the region.

3 Li studying heat-related mortality



Dr. Ying Li

Dr. Ying Li, an assistant professor in the Department of Environmental Health, received funding to conduct research titled, “Projecting Future Heat-Related Mortality in the United States under Global Climate Change,” which looks at the expected increase in public health effects associated with rising temperatures resulting from global climate change.

One of the most significant consequences is the increase in heat-related illnesses and premature deaths, Li noted. Her project will estimate the future excess mortality in the mid-21st century attributable to higher temperatures across the continental United States. It will compare model projections of future temperature in the years 2048 through 2052 under high and low emission scenarios.

Li then will apply heat-mortality health functions to estimate potential changes in the heat-related mortality under the two scenarios. “The outcomes of the project will contribute to the current understanding of future health consequences attributed to warming climate due to human activities,” Li said.

2 Peterson receives funding to research treatment for liver disease



Dr. Jonathan Peterson

Dr. Jonathan Peterson, an assistant professor of Health Sciences, garnered a \$163,000 grant from the National Institutes of Health to study the impact of a specific protein on fat collection in the liver.

In 2010, Peterson began researching the protein known as CTRP3 and its effect on non-alcoholic liver disease and how it relates to diabetes and obesity issues. “I was looking at how tissues talk to each other to regulate glucose in the blood,” Peterson said. “We discovered CTRP3 has a real protective effect on the liver. It actually prevented high-fat, diet-induced accumulation in the liver.”

His research turned to alcoholic liver disease when he discovered CTRP3 levels were lower after alcohol consumption. “Now we want to see if it has the same effect with alcohol consumption, which is the other way fat collects on the liver,” Peterson said. “Alcoholic fatty liver accounts for 50 percent of cirrhosis, which is the 12th largest killer in the country.”



4 Baker and Hillhouse looking at social media for mother-daughter health communication



Dr. Katie Baker

Dr. Katie Baker and Dr. Joel Hillhouse, both in the Department of Community and Behavioral Health, are collaborating with Dr. David Buller from Klein Buendel Inc., a research organization in Colorado, and Dr. Sherry Pagoto from the University of Massachusetts-Worcester, to study social media as a health communication tool for mothers and daughters in East Tennessee.

The five-year, \$3.3 million grant from the National Cancer Institute focuses on the role of social media in public communication campaigns, especially as it relates to health promotion and disease prevention.



Dr. Joel Hillhouse

Klein Buendel Inc. is “a health communications firm specializing in the research and development of programs to change behavior and educate communities about health promotion and disease prevention.”

Baker and Hillhouse are coordinating activities with the project’s Expert Advisory Board and overseeing participant recruitment across 40 counties. They also are helping to develop social media intervention content, and Hillhouse will provide additional insight into assessment methods, data analysis and interpretation of study outcomes.

5 Wang and team researching impact of childcare setting on childhood obesity



Dr. Liang Wang

Dr. Liang Wang in the Department of Biostatistics and Epidemiology received funding for his project, “Influence of child care setting on obesity risk among U.S. children.”

The setting for child care plays an important role in ensuring children’s wellbeing, he explained. Healthy habits learned in that setting may be influential over time, yet limited research has been done on the role of child care setting in preventing obesity.



Dr. Deborah Slawson

Dr. Deborah Slawson, chair of the Department of Community Health, is a co-investigator on the grant. The researchers will study the longitudinal relationships of child care setting and obesity risk from childhood to adolescence. The study will examine the influence of child care type – center care, home-based care and parental care – on adiposity measures and obesity risk.

The researchers aim to study critical phases for obesity risk and accumulation of risk from childhood through adolescence.

Tennessee Institute of Public Health awarded major grant



Ginny Kidwell

Ginny Kidwell, director of the Tennessee Institute of Public Health located at ETSU’s College of Public Health, was awarded a major grant from

the BlueCross BlueShield of Tennessee Health Foundation.

The grant has two parts. The first part, called “Regional Roadmap 2: Down the Road to a Healthier Appalachia,” is a grant allowing TNIPH to continue the highly successful Regional Roadmap to a Healthier Appalachia project originally funded in 2013.

In the original proposal, the TNIPH used a mini-grant program to fund 20 community-based health initiatives in rural Tennessee areas. Each initiative was a locally generated project to improve the health and welfare of those living in the host community. Topics covered by the first grant included substance abuse, cancer, diabetes, cultural factors, lack of education and economic issues.

The success of that initial project resulted in the BlueCross BlueShield of Tennessee Health Foundation awarding Kidwell the second grant to significantly expand the geographic range and overall size of the effort.

The second part of the new grant, called “Healthy WEST: Working to Energize and Strengthen Tennessee,” will allow TNIPH to expand the Regional Roadmap project to rural counties in west Tennessee.

5 Colleges make up the AHSC



Quillen College of Medicine

- MD Program
- PhD Program
- MD/MPH joint degree program



Bill Gatton College of Pharmacy

- PharmD
- PharmD/MPH joint degree program
- PharmD/MBA joint degree program



College of Nursing

- Bachelor of Science in Nursing (BSN)
- LPN to BSN (for licensed practical nurses)
- RN to BSN (for diploma or associate degree nurses)
- Accelerated Program (bachelor's degree in another field)
- AAS/BSN Dual Degree
- Master of Science in Nursing (MSN)
- MSN to RODP
- DNP
- Ph.D.
- Post-Master's Family Nurse Practitioner
- Post-Master's Nursing Administration
- Post-Master's Nursing Education
- Post-Master certificate programs in a variety of areas



College of Clinical and Rehabilitative Health Sciences

- Bachelor of Science in Allied Health – Concentrations in Allied Health Leadership, Cardiopulmonary Sciences, Nutrition and Foods, Radiography
- Bachelor of Science in Dental Hygiene
- Master of Science in Allied Health
- Master of Science in Clinical Nutrition
- Master of Science in Speech-Language Pathology
- Doctor of Audiology
- Doctor of Physical Therapy



College of Public Health

- Doctor of Public Health (DrPH) – Community Health, Epidemiology
- Doctor of Philosophy (PhD) – Environmental Health Sciences
- Master of Science in Environmental Health
- Master of Public Health – Biostatistics, Community Health (on ground and online), Environmental Health, Epidemiology (on ground and online), Health Services Administration (on ground and online)
- MD/MPH joint degree programs
- PharmD/MPH joint degree programs
- Bachelor of Science in Public Health – Community Health
- Bachelor of Science in Public Health – Health Administration
- Bachelor of Science in Health Sciences – Human Health
- Bachelor of Science in Health Sciences – Microbiology
- Bachelor of Science in Environmental Health

