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FROM THE SCHOOL OF GRADUATE STUDIES

The East Tennessee State University School of Graduate Studies is proud to present Illuminated, a magazine that showcases the excellent work of our graduate students and their faculty advisors. There are over 2,300 students enrolled in graduate programs at ETSU. Illuminated presents some of our students’ research and creative works that make meaningful contributions to various disciplines, and contribute to our strong graduate programs. Illuminated features research and creative projects that are currently happening on campus, and provides updates on alumni of ETSU graduate programs.

Enjoy!

Celia McIntosh Ph.D.
Dean

Karin Bartoszuk Ph.D.
Associate Dean

Scott Kirkby Ph.D.
Assistant Dean

GRADUATE STUDENTS & ADVISORS

Are you excited about your research and would like to share your hypothesis or findings? You might be a perfect fit for Illuminated. There is more than one way to get involved.

FOR CURRENT GRADUATE STUDENTS AND THEIR ADVISORS:

Are you or one of your graduate students working on a culminating experience (e.g., thesis, dissertation, capstone)? Your research could receive additional exposure through Illuminated Magazine and help educate the rest of the campus about your department and program. This is a unique opportunity to get your work recognized!

FOR CURRENT GRADUATE STUDENTS AND THEIR ADVISORS:

Did you or one of your students get accepted into an excellent doctoral program or receive an excellent career opportunity? We want to hear about it! Share your story in the “Where Are They Going?” section.

FOR FORMER GRADUATE STUDENTS AND THEIR ADVISORS:

Do you know an outstanding student who graduated from ETSU more than a year ago? We want to hear from them! The “Where Are They Now?” section features former ETSU graduate students who are now professionals in positions across the country.


For more information on nominating students or getting featured in Illuminated, please contact: Dr. Karin Bartoszuk, bartoszu@etsu.edu
RESEARCH GRANT AWARD RECIPIENTS
2016 - 2017

MD SALMAN AHMED
M.S., Computer and Information Science
Title: Simulation and Validation of Data-Driven Driving Models for Large-Scale Urban Transportation Networks Using Big-Data
Dr. Mohammad Hoque, Committee Chair

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JEDAIYAH CHILUFYA
M.S., Biology
Title: Analyses of Anandamide-Mediated Growth-Inhibition in Physcomitrella Patens
Dr. Aruna Kilaru, Committee Chair

JEDAIYAH CHILUFYA
M.S., Biology
Title: Analyses of Anandamide-Mediated Growth-Inhibition in Physcomitrella Patens
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AARON DOYKA
M.S., Geosciences
Title: Surface Water/Groundwater Interactions in the Stony Creek Syncline, Carter County, TN
Dr. Ingrid Luffman, Committee Chair

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SANGAM KANDEL
M.S., Biology
Title: Structural and Functional Analysis of Grapefruit Flavonol Specific 3-O-Glucosyltransferase
Dr. Cecilia McIntosh, Committee Chair

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REEM QAISARI TARIQ
M.S.E.H., Environmental Health
Title: Comparative Analysis of Survival and Decay of Fecal Indicators in Bovine and Porcine Feces
Dr. Phil Scheuerman, Committee Chair

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EMMA FREDRICK
Ph.D., Psychology
Title: Creation and Validation of the Bisexual Microaggression Scale
Dr. Stacey Williams, Committee Chair

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LAUREN TAYLOR
M.F.A., Studio Art
Title: Pass (Age)
Catherine Murray, Committee Chair

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M.F.A., Studio Art
Title: Pass (Age)
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REBECCA WILSON
Ph.D., Biomedical Sciences
Title: Investigating the Localization of Norepinephrine and its Physiological and Behavioral Roles in the Orb-Weaving Spider Larinioides Cornutus
Dr. Thomas Jones, Committee Chair

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Kenneth Seaton’s passion for chemistry began in an undergraduate organic chemistry class with Dr. Aleksey Vasiliev. Once he began working in Dr. Vasiliev’s lab as an undergraduate, Kenneth was convinced chemistry was the field for him. He decided to pursue his M.S. in Chemistry at ETSU after spending a couple of years in industry. His time with Dr. Vasiliev in a research environment set Kenneth on the path to pursuing a higher level of education. Though he enjoyed his job at Eastman Chemical Company, Kenneth desired to explore the field in a manner that his undergraduate degree could not provide. After a conversation with Dr. Vasiliev about the opportunity to work on an externally funded project for a master’s student, Kenneth knew he could not squander the chance to learn from Dr. Vasiliev again. Kenneth states, “Dr. Vasiliev has been fantastic. Anytime I’ve had questions he is always there to help and talk me through the next step. I couldn’t ask for a more helpful advisor.”

Kenneth currently works on an international collaboration between four institutions across the United States and Ukraine titled the “Development of Superselective Adsorbents Against CBRN Agents.” Funded by the Science of Peace and Security Programme of NATO (grant #984639), the project addresses the development of filters for the removal of cesium from the environment. Radioactive cesium-137 is the cesium isotope responsible for the contamination of large areas after nuclear disasters. Two of the most prominent examples are the cities of Chernobyl, Ukraine, and Fukushima, Japan. In 1986, Chernobyl was devastated by an explosion and subsequent fire in a nuclear reactor plant, which released radioactive materials into the atmosphere. Similarly, Fukushima also experienced the effects of a nuclear disaster in 2011 when an earthquake and tsunami disabled four nuclear reactors. With cesium-137 as the primary contaminant, both cities were devastated by the accidents. As the world has seen with these disasters, radioactive cesium is highly hazardous. Just one gram of cesium-137 dispersed over Manhattan would make the island uninhabitable. Because of the severity of effects on the environment, cesium is considered a potential agent for terrorism. The grant Kenneth is working on is in preparation for either a nuclear disaster or nuclear terrorist attack.

For this project, Kenneth is focusing primarily on the adsorption of cesium from water sources to provide safe, potable water post contamination. However, cesium is very challenging to isolate. More common elements such as sodium and potassium have similar properties, which allows these elements to strongly compete with cesium in adsorption from the environment. This poses a major issue when developing potential filter materials.

Kenneth and Dr. Vasiliev found that the materials containing heteropolyacids embedded in silica gel produce the best results. Silica gel is insoluble in water, but alone is not efficient as a filter. The heteropolyacids containing the transition metals tungsten and molybdenum can form strong bonds with cesium. However, they are soluble. Embedding the heteropolyacids into the silica gel makes them insoluble while their ability to bind cesium remains very high. Thus, the combination of the heteropolyacids and the silica gel create an ideal material for the adsorption filters.

To test out the adsorbent, Kenneth studied the amount of cesium adsorbed, the diffusion rate of cesium in the silica pores, the interaction between the cesium and the material surface, kinetics of cesium removal, and the selectivity of cesium in the presence of sodium and potassium. For this study, he prepared solutions with specific cesium contents. The adsorbent material was then added to the solutions and allowed to sit for a specific amount of time. Kenneth then analyzed the remaining cesium content of the solutions. By comparing the initial and final cesium contents, Kenneth could track the amount of cesium adsorbed by the material. Conducting this experiment with various cesium concentrations, temperatures, and contact times allowed him to have a better understanding of the diffusion rate and kinetics of the material. Once the cesium was removed, the material used can be disposed of in a proper storage facility or potentially recycled. However, the recycling option is still in the research stage and is not viable at this time. The filter, once fully developed, could help to minimize the damage from nuclear disasters or potential terror attacks.

Under the tutelage of Dr. Vasiliev, their work has garnered recognition within their discipline. The research was recently presented at many conferences including the 68th Southeastern Regional Meeting of the American Chemical Society, the 5th World Congress on Materials Science and Engineering (Spain), and NATO SPS Information Day (Ukraine). The work was recently submitted for publication in the Journal of Hazardous Materials, which is a prestigious peer reviewed publication. Kenneth not only receives a NATO stipend from this grant but he also was able to attend Quantachrome Instruments Training in Boynton Beach, Florida, through NATO as well. On campus, Kenneth was a 2016 recipient of the Outstanding Teaching Assistant Award.

In the future, Kenneth is looking forward to pursuing his doctorate degree and becoming a professor. Academia provides him with the perfect combination of continuing his research and teaching. During his time at ETSU, Kenneth was afforded the opportunity to teach chemistry in the Upward Bound program and in the lab sections of several of the chemistry courses. He takes great pleasure in the learning process, which makes teaching enjoyable for him. Academia allows Kenneth to combine his passions for learning, teaching, and research into one profession.
or Anthony Peluso, the path to public health is of a personal nature. While completing his undergraduate degree with a double major in Biology and Sociology at the University of Pittsburgh, the passing of his beloved grandfather from melanoma sparked his interest in public health. After researching the field, Anthony realized that public health would allow him to combine his interests in biology and sociology while affecting populations as well as the health of individuals. He states, “My goal is to save one life… There comes a point where you have to look at an individual’s experience and think, I could affect that person’s outcome.” He chose ETSU to pursue his M.P.H. with a concentration in Community Health, because of the student to faculty ratio and the professional reputation of the College of Public Health. During a summer visit to ETSU with his parents, Anthony decided to attend ETSU and also chose his mentor and faculty advisor—Dr. Katie Baker. “Dr. Baker’s mentorship has done so much for me academically and professionally. I would not be here without her,” Anthony says. While pursuing his degree, Anthony is working on several projects alongside Dr. Baker, all of which revolve around health promotion and disease prevention. Currently, Anthony and Dr. Baker are working on a five-year social media grant project called “TN Health Chat” in a collaboration with the University of Massachusetts Medical School and Klein Buendel, Incorporated. Klein Buendel is a health communication firm based in Golden, Colorado. Team members at Klein Buendel are responsible for data collection, management, and analysis for the grant. The University of Massachusetts Medical School will develop the health information. The grant focuses on providing high quality health education to mothers of teenage girls in a format that is easily accessible. With the vast majority of Americans joining online social networks, social media might create an ideal platform for disseminating information to large groups of people with just the click of a button. Dr. Baker and Anthony are utilizing social media, particularly Facebook, to share health information.

As a part of their formative research, Dr. Baker and Anthony conducted interviews with Coordinated School Health Coordinators and mothers in the region to explore the most pressing health issues impacting adolescent girls. Coordinated School Health is a state-level program only available in Tennessee and Texas that seeks to improve the students’ capacity for learning through the improvement of health, both physical and emotional. Working with Coordinated School Health Coordinators has proved to be a valuable resource for the project. Interviews and focus groups conducted with mothers of teenage daughters allowed the project team to choose topics that were of the highest interest to mothers. Currently, the list of topics includes nutrition, physical activity, bullying, mental health, body image issues, vaccinations, and drug use, among others. With the list of topics complete, the results were sent to the University of Massachusetts Medical School where the quality health education information is developed and is being delivered to Facebook groups. Once the formative research was complete, Dr. Baker, Anthony, and the rest of the research team began their search for mothers of teenage daughters to enroll in the program. The enrollment goal is 2,000 mothers by September of 2017. When a mother is enrolled, she and the daughter are both given surveys. These serve as a baseline measure to gauge their health knowledge, attitudes, beliefs, and behaviors. The mothers are then invited to join Health Chat Facebook groups. After joining the Facebook groups, Health Chat posts will simply show up in the mother’s newsfeed. This will allow the mothers to access and read the information with a minimal time commitment, which builds on previous research that states approximately 84% of Appalachian mothers are on Facebook. The Health Chat team will post content to each Facebook group daily over the course of a year. Follow up surveys will be administered immediately after the program and six months after completion. Klein Buendel will analyze the surveys.

In addition to the Health Chat project, Anthony has worked on another research project to expand his understanding of the role of social media in public health. Partnering with the University of Massachusetts Medical School, Anthony analyzed tweets pertaining to tanning bed and tanning salon use. The tweets were categorized by classifying key themes. A few of the themes included napping in the tanning bed, burns or injuries while tanning, mocking tanners, the desire to go tanning, and employee experiences at tanning salons. Since participating in indoor tanning just one time before the age of thirty-five increases the odds of developing melanoma by 59%, Anthony is hoping the Twitter analysis will lead to an innovative prevention strategy.

As for the future, Anthony plans to work in public health practice for a few years before considering further education. Anthony would like to experience the implementation aspect of public health so he can increase his understanding of the field. He is also interested in working with young adults or adolescents to improve their health, particularly in cancer prevention. Anthony plans to continue his research using social media in public health practice.
**SAMUEL KAKRABA**  
Mathematical Sciences, M.S., 2015

**WHAT DEGREE DID YOU EARN AT ETSU?**  
I earned an M.S. in Mathematical Sciences from the Department of Mathematics and Statistics.

**WHAT YEAR DID YOU GRADUATE FROM ETSU?**  
Spring 2015.

**WHAT IS YOUR CURRENT POSITION, AND WHAT DOES THE POSITION ENTAIL?**  
Currently, I am a graduate research assistant in my second year in a Ph.D. (Bioinformatics) offered jointly by the University of Arkansas at Little Rock (UALR) and the University of Arkansas for Medical Sciences (UAMS). My research focuses on drug design to solve aging-related diseases like Parkinson’s, cancer, Alzheimer’s, Huntington’s disease and other neurodegenerative diseases in the Donald W. Reynolds Institute of Aging at UAMS. As with all research in the medical sciences, my research requires me to undertake a lot of experiments in the laboratory and use data mining tools to make scientific and statistical inferences as well as presentation of my research findings at conferences in the scientific community.

**WHAT IS THE MOST INTERESTING ASPECT OF YOUR POSITION?**  
Aging is common place for all living species. The opportunity to understand age-related diseases and the use of animal models to study these diseases with the goal of seeking pharmacologic interventions through drug design is not only a life-saving course in the long run, but of great interest to me as well, with my motivation to touch and bring a positive impact to the lives of people.

**HOW DID YOU EDUCATE AT ETSU IMPACT YOUR LIFE AND CURRENT POSITION?**  
Numerous blessings have resulted from my education at ETSU. After completion of my bachelor's degree at the University of Cape Coast in Ghana, the Department of Mathematics and Statistics offered me a lot of opportunities to strengthen my mathematical, statistical and computational biology skills necessary for Ph.D. studies in Bioinformatics, and other related mathematical sciences. I was particularly attracted to the department’s powerful pedagogical resources, vibrant intellectual atmosphere, comprehensive curriculum, diversity of research and faculty support (including mentoring experience), which helped me develop critical thinking and problem-solving skills necessary for my current position. My graduate studies at ETSU offered me the chance to successfully build a computational model (hierarchical graph) and use it to study the effect of single point mutation on the nucleotide binding domain 2 (NBD2) of the Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) under the supervision of my advisor. This heightened my interest in the study of diseases using modeling. A presentation of my research at the 2015 MCBIOS Conference while in graduate school at ETSU opened the door to my current doctoral program of study. Faculty teaching and mentoring experiences gained under Professor Jamie McGill, which subsequently translated into my teaching of six undergraduate classes in the Department of Mathematics and Statistics as a graduate teaching assistant, strengthened my presentation skills and boosted my confidence, and subsequently enriched my presentation skills at conferences. The great student-faculty relationship at the School of Graduate Studies at ETSU provided all the necessary assistance for my success as a student. The experience gained from the School of Graduate Studies at ETSU did not only prepare me for further studies or the job market, but most importantly for life. No wonder ETSU becomes a home to many students like me.

**DO YOU HAVE ANY ADVICE FOR CURRENT OR FUTURE GRADUATE STUDENTS?**  
ETSU offers many great opportunities, which unlock numerous doors in academia, job placement and life, in the broader spectrum.

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**COLTON WATTS**  
Biology, M.S., 2014

**WHAT DEGREE DID YOU EARN AT ETSU?**  
I earned an M.S. in Biology with a concentration in Biology.

**WHAT YEAR DID YOU GRADUATE FROM ETSU?**  
I graduated from ETSU in 2014.

**WHAT IS YOUR CURRENT POSITION, AND WHAT DOES THE POSITION ENTAIL?**  
I am currently a Ph.D. student at the University of Nebraska-Lincoln. I divide my time between teaching introductory biology lab courses and researching the evolution of communication in arachnids.

**WHAT IS THE MOST INTERESTING ASPECT OF YOUR POSITION?**  
The science, of course! I love learning how the natural world works, so I am constantly fascinated by the research conducted by the scientists I have the pleasure of calling my colleagues. Being part of an interactive and innovative research community makes every day truly interesting.

**HOW DID YOU EDUCATE AT ETSU IMPACT YOUR LIFE AND CURRENT POSITION?**  
For me, ETSU represented an opportunity to show myself that I could make a career as a scientist. With the help of an amazing mentor, Dr. Thomas Jones, I learned how to be a competent and confident biologist, doing everything including conducting experiments, publishing manuscripts, teaching classes, and communicating science to the public. These experiences have not only unlocked previously unimagined career opportunities for me, but have completely changed the way that I think about the natural world. My time at ETSU represents a critical turning point in my life, and I will always be grateful for it.

**DO YOU HAVE ANY ADVICE FOR CURRENT OR FUTURE GRADUATE STUDENTS?**  
Be as engaged with your academic community as possible. Being successful in your field takes more than just knowing a lot of information!
Caitlin Botelho’s interest in sociology first began with a guest speaker in a high school history class, which first introduced the topic. As she listened to the speaker, she realized that many of the sociological questions the speaker posed corresponded to questions she found herself asking regularly. During her undergraduate career, she realized that those same questions reflected a sociological thought process and that she could pursue this as a career. Caitlin states, “Sociology allows you to open your mind and think in a different way.” After completing her undergraduate degree in her home state of Massachusetts, Caitlin began searching for a Sociology M.A. program that would allow her to begin in the spring semester. Also, Caitlin wanted to explore Southern culture from a different perspective. ETSU met both of these requirements.

In her first semester at ETSU, Caitlin took Dr. Martha Copp’s topical seminar on Work and Occupations. After learning about the factors that influence the nature and quality of work in the United States, she began to search the literature for the impacts on correctional officers. For Caitlin, the impact on correctional officers is a plight that she has witnessed firsthand since both her father and aunt are correctional officers. Neither one spoke of their work very often, but Caitlin could tell that the work her father and aunt did was not easy. When she was considering a topic for her thesis, Caitlin knew this was a subject that she wanted to study further.

For her thesis, Caitlin examined the impact of the negative work environment on correctional officers’ lives at work and away from their place of employment. She conducted twenty in-depth interviews with eight female and twelve male correctional officers. All of the officers worked in county jails or state level prisons in various states including Tennessee, Florida, Rhode Island, and Massachusetts. Each conversation was transcribed, coded, and analyzed. Initially, Caitlin found that many correctional officers were hesitant to be interviewed. Eventually, the participants opened up when they realized she just wanted to hear their perspective on their jobs.

Through her analysis, Caitlin noticed this as an underlying theme. Some correctional officers do not acknowledge how their jobs affect their lives. If they showed that their work is affecting their lives, especially their emotions, they often felt stigmatized as bad officers. In Caitlin’s interviews, the officers found a sanctuary to discuss their work and air their grievances while assured full anonymity and confidentiality. Through this process, Caitlin gained a valuable insight into how correctional officers perceive their work. Many officers view themselves as the “forgotten cops” and “unsung heroes of law enforcement.” They reported feeling that they have to fight for respect among their fellow law enforcement officers, administrators, and members of the public. Also, Caitlin noticed that the officers take their negative work environment with them into the community. These officers spend most of the day walking among the inmates that society does not feel safe circulating among the general population. This creates a high stress and hostile environment, which is difficult to compartmentalize into one area of life.

In addition to her interviews, Caitlin conducted a content analysis of a public community Facebook page for correctional officers. In these posts, she found a plethora of information that strengthened the common themes from the interviews, as well as the added dimension of examining officers’ interactions with each other. One of the biggest themes that appeared was the socialization process correctional officers cycle through across a career.

According to her analysis, newer correctional officers were typically ridiculed for posting altruistic comments, especially regarding the potential rehabilitation of inmates. Once newer officers gain experience, they may become overly confident about their work, creating a friction with both their co-workers and inmates. After an extended tenure on the job, some transition into the pragmatic stage, where it is just a job to provide for their families and themselves. Surprisingly, her analysis reported a low turnover rate in the field, which was mainly due to great healthcare and retirement benefits. The few who do leave corrections had experienced traumatic events at work or found jobs that allowed them to have a higher occupational status.

Another overarching theme from both the interviews and the Facebook posts is the feeling that correctional officers are often misunderstood by administrators and the public due to the sequestered nature of their work. Society typically expects correctional officers to treat every inmate equally no matter what their crimes. However, many officers have difficulty reconciling this standard with their feelings on the nature of the inmates’ crimes. For example, correctional officers are required to treat the inmate who stole money to feed his family the same as the inmate who committed a sexual assault against a child. These conflicting signals transform the work of correctional officers into “dirty work” that can be morally challenging. The officers often feel that the administrators do not understand the job either, especially in regards to company policy. Many felt that the work policies are a hindrance to successfully conducting their jobs. This further exacerbates the misunderstood notion of many of the correctional officers.

In the future, Caitlin would like to teach sociology at the community college level, which has been her goal since she began studying sociology. At ETSU, she has worked as a teaching assistant and is now the instructor in a seventy-five student course as a part of her graduate assistantship. Although it is challenging, Caitlin feels prepared due to learning from the wonderful professors in the Sociology Department, especially Dr. Copp. In the future, Caitlin hopes to cultivate students in the same manner as Dr. Copp has cultivated her.
Jedaidah Chilufya’s first interest in biological research began as an undergraduate student at the University of Zambia. After studying microbiology, she undertook a personal task to examine the types of microbial organisms found on money exchanged in the open-air markets. The microscopy work as an undergraduate microbiology student coupled with the money research fascinated Jedaidah and inspired her to advance her research skills. While searching online, she discovered the Biology M.S. program at ETSU and felt that the program would allow her to further her research experience while gaining a deeper understanding of biology.

Once on campus, Jedaidah began working with moss in Dr. Aruna Kilaru’s lab. In the lab, prior research was conducted with the anandamide compound, which is found in both moss and humans. In humans, the compound mediates various functions including memory and immunity. In moss, the compound influences development and growth. Originally, Jedaidah hypothesized that anandamide would help with immunity in moss as well. Jedaidah spent a year trying to infect moss and then heal the infection with anandamide. However, the moss would not be infected. Jedaidah was not discouraged though. She states, “In science, research does not always work out, so you have to rethink the question. Then you oftentimes end-up discovering something else.” Jedaidah credited her attitude and shift in research goals to Dr. Kilaru, who provided her guidance in how to conduct research, especially regarding trouble shooting potential problems. For Jedaidah, Dr. Kilaru also helped her to develop her strengths and address her weaknesses. Jedaidah states, “I am probably the student Dr. Kilaru has been the most patient with, because I did not have a lot of experience. She has been great, not just as an advisor, but as a mentor as well. She sees my strengths and weaknesses and helps me with them.”

After reevaluating her research, Jedaidah decided to research the mechanism by which anandamide effects growth. Moss typically survives periods of high environmental stress such as extreme temperatures, and Jedaidah is examining if anandamide is associated with stress tolerance. Since anandamide is a lipid derivative, the compound can be dissolved in ethanol. The anandamide was added to media at varying concentrations to allow her to observe the impact of the compound on plant growth. At different time intervals, photographs would be taken to visualize the moss growth plates. She used a digital imaging analysis software called ImageJ to determine if the growth was impacted by the presence of anandamide. In addition, ImageJ was also used to examine the images of individual leaf-like structures of the moss called phylodes. Images of phylodes were taken using a compound microscope so the chloroplast could be seen at a higher magnification. Chloroplasts are organelles found in plant cells that contain chlorophyll and participate in photosynthesis, which plays an important role in plant growth. Jedaidah observed that moss growth was stunted and chloroplasts decreased in number and size in the presence of anandamide.

While conducting her research, Jedaidah was given the opportunity to work at Worcester Polytechnic Institute in Massachusetts, during Spring Break, with a professor who specialized in moss growth. There are two vegetative stages in the life cycle of moss. Gametophores are the dominant life stage of moss with excess leaf-like structures. Protonemata are the filamentous stage that originates during germination and give rise to new gametophores. Jedaidah’s research revealed that protonemal tip growth was inhibited by anandamide. During her time in Massachusetts, she learned advanced microscopic techniques that allowed her to continue with her research at ETSU.

Jedaidah returned to ETSU not only with more information on moss, but also with a desire to pursue her research further. After her graduation in December, she plans to continue her education at the doctoral level with an eventual goal of returning to her home in Zambia as a professor and researcher. While at ETSU, Jedaidah has received numerous awards and honors including the Marcia Davis Research Award and a competitive national level research grant from Sigma Xi. She has attended the American Society of Plant Biologists Annual Meeting, and she published a literature review on anandamide and related compounds in eLife Sciences. She won best oral presentation for her research at the Appalachian Student Research Forum. In addition, she has received the Graduate Research Grant Award from ETSU, a travel grant from the American Society of Plant Biologists, and another travel grant from the Phychochemical Society of North America. Jedaidah is also a member of the President’s Pride, which is an honorary service organization on campus. Students must maintain a 3.0 GPA and be nominated by a faculty member. Also, she is a member of Shades of Africa, which is a campus organization that promotes African culture and supports African students on campus. Jedaidah is hoping to use her experience at ETSU to spring her into a successful career.
WHAT DEGREE DID YOU EARN AT ETSU?
My undergraduate work at ETSU was in anthropology and philosophy, so it made sense to continue that work in the M.A.L.S. degree in Liberal Studies with a concentration in Gender and Diversity Studies. I chose the thesis option for this program and focused my research on how media in Southern Appalachia portrays Muslims and Islam. I received the 2015/2016 Outstanding Thesis in Arts and Humanities award from the School of Graduate Studies. I intend to further that unique research in my doctoral dissertation. I am currently enrolled in the doctoral program for Educational Leadership with a concentration in Postsecondary and Private Sector Leadership through ETSU’s Clemmer College of Education.

WHAT IS YOUR CURRENT POSITION, AND WHAT DOES THE POSITION ENTAIL?
I am a Doctoral Fellow with ELPA at the College of Education. I assist the ELPA faculty with all matters of administrative duties as well as participate in research projects to be presented at conferences and in journals. I am also the manager for medical facilities in Johnson City and Elizabethton where I supervise all aspects of the practices, human resources, and patient care.

WHAT IS THE MOST INTERESTING ASPECT OF YOUR POSITION?
I have lived and traveled around the world for study. Most significantly, I studied anthropology and archaeology in Egypt and Israel. It is also important to note that I was the first executive director for the Rhythm and Roots Festival in Bristol, Tennessee and Virginia. I was in that position for the first five years of the festival’s creation. These experiences developed and showed me my leadership strengths, and that I wanted to earn a terminal degree to continue that work.

WHAT DID YOU EDUCATION AT ETSU IMPACT YOUR LIFE AND CURRENT POSITION?
Prior to starting the position as a Doc Fellow, I was teaching as an adjunct professor for the Women’s Studies department at ETSU. The M.A.L.S. degree with a focus in gender and diversity led to that position. This position impacted me more than any other position I have held yet. I found it very fulfilling to be able to teach students about diversity, critical thinking, civic engagement, and social justice. I intend to continue teaching foremost after completing the doctorate degree. I also would not be in the doctoral program now if not for the support and education that I received through the liberal studies program. My education from ETSU has completely changed my life’s direction. I have been awarded several academic scholarships for continuing my study, and I have found that teaching and administration in higher education is precisely where I would like to spend my life.

WHAT DEGREE DID YOU EARN AT ETSU?
I earned my Ph.D. in Psychology, Experimental Concentration, from the Department of Psychology at ETSU in August of 2015.

WHAT IS YOUR CURRENT POSITION, AND WHAT DOES THE POSITION ENTAIL?
I am a Postdoctoral Research Fellow at the Australian National University (ANU), where I work on several government-funded projects with Dr. Kate Reynolds. One project relates to improving student outcomes within public schools in the Australian Capital Territory (ACT). Students, parents, and staff complete a school climate survey, and our team examines how students’ identification/belonging with a school and school norms can impact on rates of bullying, student well-being, and academic achievement.

My work as a Postdoctoral Fellow includes writing reports for the Australian government. Since taking this position at ANU, I have written reports exploring the status of social cohesion in Australia, at-risk behaviors among youth related to radicalization and violent extremism, and resiliency factors that buffer against youth aggression, violence, anti-social behavior, and poor mental health.

WHAT IS THE MOST INTERESTING ASPECT OF YOUR POSITION?
The most interesting aspect of my position is the translational nature of these projects. By translational, I mean that we “translate” findings from fundamental, empirically supported social psychological research into practical and meaningful solutions. My mentor, Dr. Kate Reynolds, has created an innovative research team that takes an interdisciplinary approach to applying the social identity perspective (a social psychological theoretical framework that has over 40 years of research) to issues relevant to a policy domain. By doing so, our work at the ANU is situated at the interface of social psychology and public policy, and adds new insights that lead to innovative socio-political solutions.

DO YOU HAVE ANY ADVICE FOR CURRENT OR FUTURE GRADUATE STUDENTS?
The best advice that I have for current or future graduate students is to pursue your goals decisively and fiercely. There are endless opportunities at ETSU, but as a student it is your job to make the most of your educational experience by putting in the time, energy, and effort. If you seek out opportunities at ETSU and dedicate yourself to making the most of your academic career, the sky really is the limit. If you had told me two years ago I would be living in Australia and getting to work my dream job, I would not have believed you. So dream big and do not just follow your dreams, chase them.
Yang Chen first developed her interest in infectious disease epidemiology while obtaining her B.S. in Biology in China. As a part of her internship, she was assigned to work infectious disease outbreaks for the Chinese Center for Disease Control and Prevention. Through her efforts, Yang decided she wanted to continue her education to further her ability and knowledge of epidemiologic principles to better provide services to communities. She decided to pursue not only her Masters of Public Health (M.P.H.), but also her Doctor of Public Health (Dr.P.H.) at ETSU because of the student-focused environment in the College of Public Health. The program was challenging, but with the guidance and support of her advisor, Dr. Liang Wang, she felt comfortable. Addressing the mentorship Dr. Wang provided, Yang states, “Without Dr. Wang, I would not have finished. He has been my advisor for five years including my time as a M.P.H. student. Dr. Wang has given me so much advice and encouragement in developing my research.” Yang’s choice to stay at ETSU for her Dr.P.H. degree is a common decision among some graduate students. Dr. Wang states, “The quality of teaching research methodologies even at the M.P.H. level leads our students to stay here for their doctorate degree to continue in an area of interest that began at the master’s level.”

With Dr. Wang’s guidance, Yang began researching the prevalence of Hepatitis C Virus (HCV) in the United States. HCV is a blood-borne, viral infection that is associated with non-sterile needle injections, unscreened blood transfusions, or unsafe sexual encounters. If left untreated, HCV can lead to chronic liver disease. Between 50% to 80% of individuals with untreated HCV will develop chronic liver disease and about 10% will develop liver cancer. Recent studies have suggested that the prevalence of HCV in the United States decreased from 2002 until 2006 and then stabilized until 2010. However, since 2010, new findings revealed an increase in HCV prevalence, which is atypical when considering not only the epidemiological trends, but also the advances in treatment. In December of 2013, the FDA approved two new HCV treatments that were more than 90% effective. This was a marked increase from the older treatment, which averaged between 50% and 80% effectiveness. The discrepancy between HCV prevalence and effective treatments intrigued Yang. For her dissertation, Yang examined the current HCV climate in the United States as well the result specific to East Tennessee. For her research, she examined the prevalence and risk factors for HCV infections, barriers to treatment for HCV infections, and the risk factors and characteristics of HCV and HIV co-infections. For each of her three areas of research, Yang used a variety of methods tailored for each section to provide the best quality of data for her research.

For the first research objective, Yang used data from 52,217 participants in the National Health and Nutrition Examination Survey (NHANES). NHANES is a national survey that provides free health data from the National Center for Health Statistics, which is part of the Center for Disease Control and Prevention. NHANES provides national level data allowing Yang to analyze the results using logistic regression in SAS. SAS is a statistical analysis software commonly used among epidemiologists for analyzing data. Logistic regression is a statistical analysis tool used to analyze the relationship between a binary outcome and one or more independent variables. For her research, she categorized the independent variable age into “older” (individuals born between 1945 and 1965, “baby boomer”), and “younger” (individuals born after 1965). In this study, Yang’s dependent variable was either a positive or negative HCV test. According to her findings, age played a role in HCV prevalence. Individuals born after 1965 were shown to have a significant increase in prevalence in the last five years. She also found the prevalence of HCV increased overall from 1.3% in 2010 to 1.42% in 2012.

Yang then examined the barriers to treatment for HCV. For this portion of her dissertation, she conducted 100 phone interviews with people infected with HCV in Northeast Tennessee. According to the background research that she used for comparison, an estimated 50% of HCV-infected individuals across the nation never received treatment. According to her phone interviews, 70% of the infected individuals in Northeast Tennessee never received treatment. When examining this trend, Yang found that a lack of knowledge was a major factor for Northeast Tennesseans not receiving treatment. Many people who are infected with HCV do not experience symptoms. When symptoms are not present, treatment is still necessary to prevent the illness from progressing to chronic liver diseases. Another barrier to treatment was the cost of the new treatment. Currently, the cost is around $1,000 per week over an eight-week span. Adding to the individual cost, public forms of health insurance such as Medicaid and Medicare do not cover treatment costs.

For the last component of her dissertation, Yang focused on identifying the risk factors in HCV and HIV co-infections that could be used for preventative measures. In her research, men who have sex with men was a risk factor for only HCV infection. In general, HCV-infected individuals were younger in age than individuals infected with HIV. In her research, Yang identified intravenous drug use as a risk factor for both HCV and HIV. Yang is hoping her research could lead to further preventative measures for HCV through the expansion of programs such as the syringe exchange program. In the program, a safe syringe disposal site is made available for drug users. In addition, clean syringes are available at the disposal site as well as addiction counseling. However, this program is found only in fourteen states, and Nashville is the only city in Tennessee to utilize this program.

Yang has already received recognition for her work. She presented her research at the Appalachian Student Research Forum and the Tennessee Public Health Association. Currently, Yang has accepted an ORISE fellowship position with the Chronic Viral Diseases Branch at the Center for Disease Control and Prevention, which she began on November 1st. ■
M aria Aparcero-Suero’s interest in criminal justice originated during her teenage years. A native of Spain, Maria’s hometown did not experience a high crime rate. Therefore, when the region had two missing person cases in a short period of time, Maria noticed. One of the cases was solved after the body of the victim was found in a river, but the other case remains unsolved. With the second case in Maria’s hometown, the police were forced to interrogate the suspects to find the body. The suspects confessed to the crime but provided more than nine different locations for the body. Since the body was never found, the police could not charge the suspects with a crime. As a result, these cases sparked Maria’s interest in the use of psychology in criminal justice. She came to the United States as an undergraduate exchange student at the University of Virginia’s College at Wise (UVA-Wise). One of her professors suggested ETSU for her graduate degree. After learning about the support for international students, Maria knew ETSU was the right place for her to pursue her M.A. in Criminal Justice and Criminology.

Maria already had an interest in sex offenders and their crimes. She knew this was a potential avenue for her thesis, so she began to search for a faculty mentor with an area of expertise that would align with her research goals. Dr. Chris Rush, was that expert. Maria says, “Dr. Rush gave me the freedom to look at what I was interested in, but she helped to narrow my focus.” Dr. Rush and Maria developed a questionnaire. Her goal is to extend the existing knowledge about law enforcement officers’ beliefs by investigating the perceptions of officers about sex offenders, and their beliefs about the fairness, efficacy, and scope of laws aimed at sex offenders, including registration, community notification, and residency restrictions. Dr. Rush and Maria’s survey focused on three main areas: law enforcement officers’ knowledge on the myths surrounding sex offenders, the officers’ opinions regarding laws for sex crimes, and the training on dealing with sex crimes the officers receive.

With the myth section of the questionnaire, Maria is hoping to examine the relationship between community myths and the perceptions among law enforcement officers of sex offenders. Often, the general public’s opinions of sex offenders are disconnected from the actuality of the scientific data. For example, one common myth is that most sex offenders are strangers to their victims. In reality, most sex offenders perpetrate their crimes against someone they know. Maria is also examining myths around rape victims. Two of the common myths she is examining are ideas about male rape and the attitudes about female rape victims. A common myth about rape is that males cannot be raped, which can lead to under-reporting. Also, police officers may not believe the victims if they ascribe to this misconception. For female victims, a common myth is that they falsely accuse men of rape. However, less than 1% of all rape cases are falsely reported. If officers share these attitudes, then their behaviors might be influenced in a negative way.

For questions regarding laws on sex offenders, Maria is interested in the perception of the laws’ fairness and efficiency by police officers. Since most of the laws were created in response to extreme cases, some of the requirements can be quite strict for the nature of some of the crimes. The definition of sex crimes varies across states and jurisdictions and can include everything from sexual assault to public urination. Regardless of the level of crime committed, most sex offenders are required to register with local police and follow the living restrictions set by the states. Both of these laws can pose a problem for offenders once they are trying to infuse themselves back into society. Because of the living restrictions, many sex offenders have problems finding housing and social support. As a result, colonies of homeless sex offenders have emerged. Since people often assume the worst, sex offenders often find it difficult to assimilate back into society. Thus, Maria is interested in examining the officers’ attitudes about these laws.

In addition to the laws and myths, Maria is studying the training level of the officers in dealing with the sex crimes. Since sex crimes are sensitive in nature, the method of dealing with victims is paramount. For example, officers’ perceptions and beliefs about sex offenders may influence how such offenders are treated and, ultimately, whether or not sex offenders desist from criminal behaviors. Similarly, the way the officers treat victims may impact victim recovery.

In the future, Maria would like to use her research to develop an evidence-based training guide for law enforcement in dealing with sex crimes. The training will teach the police officers how to investigate sex crimes objectively. Maria previously studied about the predictive utility of a recidivism risk assessment tool in sex offender cases and her thesis has been selected for presentation at the annual meeting of the Academy of Criminal Justice Sciences in March of 2017. She also published an article called “Studying the Influence of Variables on Spanish and American Eyewitness Memory” in an international journal called Behavior & Law. As for her future plans, Maria is applying to Ph.D. programs in clinical psychology with a focus in forensic psychology after her graduation from ETSU in May of 2017. The clinical psychology component will allow Maria to continue her research as well as advance her skills in the practice of psychological assessment and intervention. This will allow her to help develop a more effective criminal justice system which, in her eyes, involves an institution that tries to solve cases and reduce crime rates by increasing member expertise, improving proceedings, reducing biased decisions, avoiding further victimization, and educating community members.
No matter the assigned responsibilities, each member is focused on improving the student experience. Dr. Howard states, “Our mission is to promote student success both in and out of the classroom.”

To this end, Student Affairs is engaged in many activities and initiatives across campus. In light of the presidential election, Student Affairs and ACTS supported a campus initiative, ETSU Votes, to help students register to vote and to engage in the national and local elections. Over 600 students have been registered to vote since the start of the school year. Student Affairs oversees other initiatives on campus such as the ViolenceFree and TobaccoFree Campaigns. Student Affairs is also responsible for intramural sports, which many graduate students participate in. They oversee the counseling center on campus, which provides mental health services to all ETSU students, and Volunteer ETSU. This program acts as a clearinghouse for community programs searching for student volunteers. By registering with Volunteer ETSU, students are connected with outside agencies in a service capacity.

Student Affairs is involved in compliance with federal regulations as well. They play a major role in Title IX and Sexual Misconduct complaints. Nine Student Affairs Professionals are trained Title IX investigators and are tasked with investigating complaints of sexual harassment, rape, dating violence, and domestic violence between students. As a result, Student Affairs implemented the online Haven training to educate new students about all forms of sexual harassment and bystander intervention training. They also play a role in compliance with the Clery Act, a federal regulation that requires the university to make crime statistics available for violations on campus such as drugs, alcohol, robbery, and sexual assault. Student Affairs is committed to improving the knowledge of sexual assault at ETSU. In February of 2016, ETSU hosted the Tennessee Board of Regents Student Leadership Conference for Sexual Violence: Be Aware, Take Action. The conference was larger than both the conferences held in Middle and West Tennessee combined.

While the responsibilities of Dr. Sherlin, Dr. Howard, and Dr. Byrd can be daunting, Student Affairs is never too busy for their most important role – student advocacy. Dr. Byrd states, “We live by an open door policy here. We want to hear from students and get them connected.” They each work to ensure that students have a voice on campus whether they are an undergraduate or a graduate student. For more information on any of the aforementioned programs please consult www.etsu.edu/students/ or visit their offices on the third floor of the D.P. Culp University Center.
WHAT DEGREE DID YOU EARN AT ETSU?
I earned both my Master of Science in Nursing (M.S.N.) and the Doctor of Nursing Practice (D.N.P.) with concentrations in Family Nurse Practitioner at ETSU. I was in the first D.N.P. cohort at ETSU.

WHAT YEAR DID YOU GRADUATE FROM ETSU?
I graduated in December 2008 from my M.S.N. program and in May 2014 from the D.N.P. program.

WHAT IS YOUR CURRENT POSITION, AND WHAT DOES THE POSITION ENTAIL?
I am currently an assistant professor in the Family Nurse Practitioner program at Western Carolina University (WCU) in North Carolina. I teach a variety of courses in the master's level FNP program. I also continue working in clinical practice for Health-e-Schools Telemedicine program in North Carolina, where I have practiced for the past three years. My position with Health-e-Schools is exciting, because I am able to use cutting-edge technology and practice in an innovative way to serve hard-to-reach populations. I am able to provide care to students at school in hopes of keeping children at school and parents at work. This also provides a way to reach a large number of patients without the overhead of office space, multiple providers, or even mileage.

HOW DID YOUR EDUCATION AT ETSU IMPACT YOUR LIFE AND CURRENT POSITION?
Before attending ETSU I would have never considered a faculty position. I had two professors in particular, Dr. Tami Pearson in my master's program and Dr. Flo Weierbach in my doctoral program, both shaped my learning and my life. They had an impact on me, not only in my education, but also outside the classroom. They are the reason I am teaching today, and I hope I will be able to help students think of new and exciting ways to care for patients as I have been able to practice in school health and telemedicine. My position at Health-e-Schools is exciting, because I am able to use cutting-edge technology and practice in an innovative way to serve hard-to-reach populations. I am able to provide care to students at school in hopes of keeping children at school and parents at work. This also provides a way to reach a large number of patients without the overhead of office space, multiple providers, or even mileage.

WHAT IS THE MOST INTERESTING ASPECT OF YOUR POSITION?
My faculty position at WCU allows me to train the medical providers of tomorrow! What could be more exciting than that? I hope I will be able to help students think of new and exciting ways to care for patients as I have been able to practice in school health and telemedicine. My position at Health-e-Schools is exciting, because I am able to use cutting-edge technology and practice in an innovative way to serve hard-to-reach populations. I am able to provide care to students at school in hopes of keeping children at school and parents at work. This also provides a way to reach a large number of patients without the overhead of office space, multiple providers, or even mileage.

DO YOU HAVE ANY ADVICE FOR CURRENT OR FUTURE GRADUATE STUDENTS?
Always think outside the box and look for opportunities to use your education to do more than you ever expected you could. Dream big and go for it!