The Savannah State University Journal of Research

SPRING 2019

PATH TO A BRIGHT FUTURE IN GEOSCIENCES

Change Change

MISSION POSSIBLE

A DESIRE, A DREAM AND A DESTINY TO BE A SCIENTIST

VIRTUAL FORENSIC SCIENCE: SSU

WINDOW TO THE WORLD

fellowship for the future

CYBERSECURITY FOR A NEW GENERATION

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Arising

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Savannah State University, the oldest public historically black university in the State of Georgia, develops productive members of a global society through high quality instruction, scholarship, research, service and community involvement. The University fosters engaged learning and personal growth in a student-centered environment that celebrates the African American legacy while nurturing a diverse student body. Savannah State University offers graduate and undergraduate studies including nationally accredited programs in the liberal arts, the sciences and the professions.

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For more information about Savannah State University's grant and sponsored research programs contact: Office of Sponsored Research Administration, Chellu Chetty, Ph.D., associate vice president. 912-358-4277, chettyc@savannahstate.edu, www.savannahstate.edu/osra.

On the cover: Dhimani Still, a sophomore forensic science major with a concentration in chemistry from Marietta, Ga., tests out virtual reality crime scene technology developed by Karla-Sue Marriott, Ph.D., a professor and coordinator of the forensic science program, and the software firm Vizitech. Savannah State University is the only place in the world with access to the high-tech forensic science technology.

MESSAGE FROM THE PRESIDENT

Arising magazine debuted in 2013 as our university's premier research publication. Our goal was to showcase the research in which our faculty and students were engaged.

Through *Arising*, we have told countless stories about revolutionary research, students and faculty working in pursuit of academic excellence, and vital community outreach programs that have made a difference in our area.

This year's issue of *Arising* is no exception. We feature some compelling research and acknowledge Chellu Chetty, Ph.D., associate vice president for Research and Sponsored Programs, who has worked tirelessly to raise the research profile of Savannah State to its current level of prominence. Whether it's helping faculty secure grant funding, sponsoring student research or planning conferences, Dr. Chetty and his team are committed to the university's mission to educate and prepare students for the workforce.



The most rewarding benefit has been the students' experiences as researchers. The enthusiasm and expertise with which they present their research is evident at the university's annual research day conference. They are seriously impressive.

We are inspired by student researchers who take great pride in their work. Recently, three of them presented at a Board of Regents meeting and awed the audience with their forensic science—facial reconstruction—research. Two of the students already have secured employment with law enforcement entities and the third, who just completed her undergraduate degree, is headed to a doctoral program in chemistry. It is because of our excellent teaching and research faculty, who are successful with grantsmanship, and inquisitive young minds that we are able to give students the opportunity to follow their passions and succeed.

Many of our graduates, who were involved in research, are now in careers related to biostatistics, clinical research, management and logistics, and operations at major companies and corporations. Some have gone on to graduate school.

In January, I announced my retirement as president of SSU effective June 30, 2019, after eight years of service. Since my arrival in 2011, we have generated more than \$41 million in funding, providing faculty with unprecedented opportunities to engage in high-level research in their respective fields. Our grant and research programs are thriving and I am appreciative to all who have supported and will continue to support Savannah State University.

Sincerely, **Cheryl Davenport Dozier, DSW** *President*



our mission, should you choose to accept it, is to solve real-world STEM problems, submit your project to a national competition, and prepare for your future college degree and dream career.

More than 70 middle school students from across the city accepted the challenge to participate in Savannah State University's eCYBERMISSION program, a national initiative that promotes self-discovery among young scientists and enables participants to recognize real-life applications of STEM.

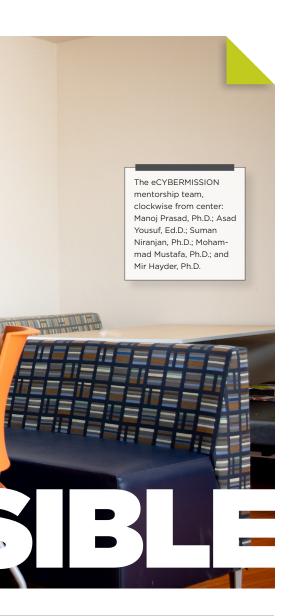
Funded through a one-year, \$39,800 grant from the U.S. Army Educational Outreach Program (AEOP) through the U.S. Department of Defense, eCYBERMISSION aims to engage students in STEM training and careers and to broaden, deepen and diversify the pool of STEM talent in support of the U.S. Defense Industry Base.

Every other week, the students, who were selected from four Savannah-Chatham County Public School System middle schools, meet on the SSU campus and break into teams of four. The teams, led by teachers at their respective schools, work with faculty mentors to solve real-world problems in areas such as engineering, robotics, alternative energy, national security and safety, physics, chemistry, applied mathematics, cybersecurity and environmental science.

"The goal is to work with minority students so that we can encourage them to go toward STEM majors," says Asad Yousuf, Ed.D., professor of electronics engineering technology, interim chair of the Department of Engineering Technology and the grant's principal investigator (PI).

Working alongside co-PIs Mir Hayder, Ph.D., associate professor of engineering technology; Mohammad Mustafa, Ph.D., professor of civil engineering technology and interim dean of the College of Sciences and Technology; Suman Niranjan, Ph.D., associate professor of supply chain and logistics, director of the Interdisciplinary Transportation Studies program, and coordinator of the university's Global Logistics and International Business Education and Research Center of Excellence; and Manoj Prasad, Ph.D., assistant professor of chemistry, the mentors introduce students to concepts in their fields of expertise and give them ideas as they work to complete their

In addition to working with the faculty



mentors, the students engage in hands-on STEM activities and enjoy guest speakers who introduce topics and expose them to career possibilities.

Once they complete their projects in the spring, the students will submit them to the national eCYBERMISSION program competition, which takes place in Washington, D.C., in June.

"Introducing students in our community to STEM is a priority at Savannah State," says President Cheryl Davenport Dozier, DSW. "The exposure to our faculty and our facilities, along with the problem-solving techniques learned in the eCYBERMISSION program, will serve the students well as they continue on in their secondary school careers and eventually work toward college degrees."

DOD at **SSU**

Since 2014, the U.S. Department of Defense (DOD) has funded numerous grants at Savannah State University totaling more than \$3.3 million. The grants have enabled SSU faculty members to engage in cutting-edge research in a number of scientific fields, while creating unprecedented opportunities for students, especially underrepresented minorities.

SNAPSHOT OF RECENT U.S. DEPARTMENT OF DEFENSE GRANTS

Marine Mammal Associations with Environmental and Prey Variability of Cape Hatteras

Funding Agency: U.S. Department of Defense/Research and Education HBCU/ MI Program

Principal Investigator: Amanda Kaltenberg, Ph.D., assistant professor of marine sciences

Duration: 2018-21 Award: \$487,000

Role of Lipids Reorganized by Viral Proteins and Restriction Factors in Viral Life Cycle

Funding Agency: U.S. Department of Defense/Research and Education HBCU/ MI Program

Principal Investigator: Takayuki Nitta, Ph.D., assistant professor of biology

Duration: 2018-21 Award: \$557,172

Sigma-1 Receptor Agonists as Novel Therapeutic for Brain Mitochrondrial Dysfunction in Gulf War Syndrome

Funding Agency: U.S. Department of Defense/Congressionally Directed Medical Research Programs Principal Investigator: Kai Shen, Ph.D., associate professor of chemistry Duration: 2017-20

Award: \$672,888

Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue

Funding Agency: U.S. Department of

Defense/ U.S. Air Force Office of Sponsored Research Principal Investigator: Kai Shen, Ph.D., associate professor of chemistry Duration: 2017-20 Award: \$671,465

HBCU Research/Education Program: Acquisition of Laser Confocal Microscope

Funding Agency: U.S. Department of Defense/Army Research Office Principal Investigator: Takayuki Nitta, Ph.D., assistant professor of biology Duration: 2017-18 Award: \$360,438

Design and Synthesis of New Heteroleptic Lanthanide Complexes to Catalyze Ring-Opening Polymerization of Cross Linkable Gamma Lactone Monomers to Exclusively Obtain Unsaturated Polyesters

Funding Agency: U.S. Department of Defense/Army Research Office Principal Investigator: Pascal Binda, Ph.D., associate professor of chemistry Duration: 2015-18

Award: \$332,633

Mediating Role of Metavinculin on the Mechanical Properties of Extracelluar Matrix and Smooth Muscle Cells (with 2 HSAP supplements)

Funding Agency: U.S. Department of Defense/Army Research Office Principal Investigator: Kai Shen, Ph.D., associate professor of chemistry Duration: 2015-18 Award: \$332,972

MRI: Acquisition of a Raman Microscope for Interdisciplinary Research and Training

Funding Agency: U.S. Department of Defense/Army Research Office Principal Investigator: Kai Shen, Ph.D., associate professor of chemistry Duration: 2014-17

Award: \$331.997

CYBERSECURITY FOR A NEW GENERATION



For one week last summer, middle schoolers from across the city became Savannah State University cyber geniuses, learning topics from hardware assembly to cryptography and everything in between.



All photos courtesy of Bryan Knakiewicz, Ph.D.





(Left) Students engaged in hands-on activities during the weeklong GenCyber camp. (Right) SSU Coordinator of Computer Science Technology Alberto De La Cruz (third from left) worked closely with students, introducing them to programming, network fundamentals, operating systems fundamentals and cybersecurity principles.

n 2018, SSU received a \$92,723 grant from the National Science Foundation and National Security Agency to launch GenCyber, a national program that seeks to increase interest in cybersecurity careers, create diversity in the cybersecurity workforce, help students understand appropriate and safe online behavior and how to be good digital citizens, and improve secondary school teaching methods for the delivery of cybersecurity content.

While the national program is geared toward a wide range of ages — kindergarten through 12th grade — Program Director Bryan Knakiewicz, Ph.D., assistant professor of civil engineering technology and the grant's principal investigator (PI), and Lead Instructor Alberto De La Cruz, coordinator of computer science technology and co-PI, chose to focus on Savannah-Chatham Public School System 6th-8th graders.

"Most students [at that age] are willing to learn anything about new technology," says De La Cruz.

Though many of the students came in with little knowledge about computers, hardware or software, they jumped right in, learning how to build Raspberry Pis — small single-board computers that have all of the processing capabilities of standard computers. They also learned about networking infrastructure, using routers and switches, configured a small network and even had the chance to design their own video games.

"We took them from introductory level to intermediate programming skills [in five days]," says Knakiewicz.

In addition to learning about programming, network fundamentals and operating systems, the students also were introduced to various elements of cybersecurity, including cryptography, safe online practices, online ethics and other Cybersecurity First Principles. Each day featured a different speaker, among them an FBI agent, cybersecurity professional, lawyer, cryptology expert and

police officer.

"Not only did this program get the students interested in STEM disciplines, but it also taught them basics in cybersecurity, and issues such as cyber bullying and online safety, which is very important. [These are topics that are] not covered in a lot of middle schools when [the students] start engaging in online activities," Knakiewicz says. "The exercises were [designed] to stimulate their interest and knowledge of computers and to allow them to have fun so they [will want to] pursue [these areas of study] later in their education."

During the weeklong camp, Knakiewicz and De La Cruz were assisted by 10 Savannah State computer science students, who served as mentors and helped with hardware and software installation, along with several SCCPSS teachers, who helped manage the classroom setting.

And while many students were skeptical when they arrived, the feedback Knakiewicz and De La Cruz received at the end of the program showed just how far the middle schoolers had come in a short period of time.

"Before I came to this camp, I didn't know much about cybersecurity. We did many activities that were very fun and interesting," one participant stated.

Another participant said that it was interesting to see how many cybersecurity jobs are left unfilled each year, while another was excited to learn about coding.

The students also learned very important lessons about online safety.

"I learned that even though you may have something private, people can always get into it. I also learned that people may not be what they seem that they are," one participant noted.

The SSU GenCyber camp recently received funding to offer the program again in Summer 2019. □

fellowship for the future





n Fall 2018, Napoleon Martin was enrolled in his first semester as a graduate student in mathematics at Savannah State University, working full time at Home Depot and starting to build a new life with his wife, Savannah. Juggling his study of high-level applied mathematics with work and family time was challenging. When the physical demands of his job caused intense back pain, Martin knew that something had to change.

"I told my wife that I couldn't work and go to school full time," says Martin, who received a bachelor of science degree in mathematics from SSU in 2015.

That's when Martin learned about a new grant program at SSU that would cover his tuition and provide a generous stipend, enabling him to concentrate full time on his studies and engage in high-level research.

The SSU Masters in Mathematics and Marine Sciences (SSUMMS) program, launched in 2018, aims to increase the number and strengthen the preparedness of low-income and minority master of science graduates in mathematics and marine sciences. The six-year, \$2.6 million program, funded through a U.S. Department of Education Title VII grant, supports 10 qualified merit scholars each year. The goal of the program is to recruit and retain high-quality students and to prepare them to compete in the STEM workforce or for admission to doctoral and professional degree programs.

"I was surprised by how well-funded the program was. [I was told] they would try to make it as financially feasible as possible, but I didn't expect something like this," Martin says. "This is like a dream — a once-in-a-lifetime deal."

In addition to providing students with stipends and covering tuition, SSUMMS fellows receive support for research and financial assistance for conference travel and work closely with a faculty mentor. In exchange, the fellows are required to conduct research and complete a thesis, engage in community service on the Savannah State campus, and attend workshops and seminars.

Martin serves the university community by working in the tutorial lab, assisting undergraduate students with math work. He completed a summer research project in which he helped local businesses maximize profits by calculating optimal sales prices. In January, Martin traveled to Baltimore to present his summer research at the American Mathematical Society and the Mathematical Association of America's annual Joint Mathematics Meeting, the largest gathering of mathematicians in the U.S. He is currently conducting thesis research to create a code to help self-driving cars avoid obstacles.

"The goal [of SSUMMS] is to see us succeed," says Martin, who plans to apply for a Ph.D. program in engineering upon

completion of his master's degree and eventually work as an engineer. "And they've done everything to help us be successful."

Kristopher Maedke-Russell found himself in a similar position when he entered the graduate marine sciences program at Savannah State in 2018. Working full time at Whole Foods, tackling graduate studies and providing for his wife, Rebecca, and young daughter, Lottie, made focusing on coursework and research challenging.

"The goal for any graduate student is to not have to work full time and do a full course load and do your thesis and research," says Maedke-Russell, who received a B.S. in biology from Armstrong State University (now Georgia Southern University).

Maedke-Russell learned about the SSUMMS Fellowship during that difficult first semester of his graduate studies and knew it would help alleviate the burden of working full time while being a full-time student. While the financial compensation initially attracted him to the program, he quickly discovered that there were other benefits to the fellowship as well.

"The financial aspect was certainly part of it, but to have someone investing in your research, is like a [boost] for your emotional well-being and minimizes the stress that goes along with a [graduate] program," he says.

Under the direction of his faculty mentor, Maedke-Russell spends his days researching the ecology of freshwater systems, identifying how human impacts can affect marsh ecosystems. He also serves as a crew member on one of the marine sciences department's boats, the RV Margaret Robinson, to fulfill the service component of the fellowship.

"It's great because I get field experience and get to be out on the water," says Maedke-Russell, who has taken 6th graders from a local middle school on educational trips through the estuary to conduct water sampling and trawl for fish.

Maedke-Russell will present his research at various conferences this spring, complete his graduate coursework in May and finalize his thesis over the summer. He eventually plans to work for the Georgia Department of Natural Resources Coastal Resources Division and then pursue a Ph.D. in marine sciences.

"There's no way I would have been able [to graduate] in two years if I were working full time," he says. "The funding has really made it possible to [complete] the program. □

Napoleon Martin (left), a second-year graduate student in mathematics, and Kristopher Maedke-Russell (right), a second-year marine sciences graduate student, are both receiving support through the Savannah State University Masters in Mathematics and Marine Sciences (SSUMMS) grant program.



s a young girl growing up in Savannah, Ga., Sue Ebanks, Ph.D., was introduced to the earth sciences through her parents, who were both environmentally conscious. But for many kids in the Savannah area, exposure to the discipline is limited, particularly for minorities. Ebanks, an associate professor in the Department of Marine and Environmental Sciences at Savannah State University, is hoping to change that by helping equip educators with the tools necessary to increase the number and diversity of students pursuing careers in geosciences.

In 2018, Ebanks received a \$177,512 award from the National Science Foundation for year-one funding for Improving Undergraduate STEM Education: Pathways into Geoscience (I-USE GEOPATHS). The award, which is expected to receive an additional two years of funding, is a collaboration between SSU, Tennessee State University, and Florida A&M University that seeks to increase the diversity of the geosciences workforce through a data- and theory-driven process of intervention design and evalu-

ation specifically targeting HBCU teacher preparation programs.

"What we're seeing is that in many cases, students aren't getting a chance to see a teacher that looks like them talking about geoscience, being confident about geoscience and promoting geoscience as a career option," Ebanks says. "We want to change that environment so that those who are studying and teaching and promoting the geosciences have diverse backgrounds, ethnically, culturally, [even] age [wise] — traditional versus nontraditional students."

To help achieve that goal, Ebanks; Cora Thompson, Ed.D., assistant professor in the SSU College of Education; and Tavares Brown, curriculum director of Oglethorpe Charter School in Savannah, are working along with their colleagues at the other universities to develop an assessment and evaluation tool that will allow institutions to better support students, particularly African-Americans, and garner interest in the geosciences. The team is currently looking at best practices for instruction and curricular change.

Once the team develops the tool, the insti-

tutions will engage in a self-assessment to determine how they can implement changes or sign up to have a group of professionals conduct an on-site visit to help execute best practices. The goal is for the institutions to identify gaps and find ways to improve geosciences instruction, thus better serving their students and helping create pathways to careers in the field.

Brown, who taught science before shifting into his role as curriculum director, believes the opportunity to empower teachers and eventually expose students to geosciences beyond textbook instruction will have a lasting impact.

"This opportunity will provide teachers with professional development, additional resources and a real-world approach to provide instruction for their students," Brown says. "One of my favorite sayings is that 'experience is one of life's greatest teachers,' and that relates to this project because students [will gain] exposure to know what is offered to them in this vast world in which we live."



Seeds of Change

or many Savannahians, the only option for purchasing food is to visit nearby convenience stores stocked with prepackaged, unhealthy snacks. These local residents live in what is known as food deserts — urban areas in which it is difficult to purchase affordable, fresh food.

Shawn Rosenquist, Ph.D., is hoping to change the grim reality that so many local children and adults face on a daily basis through a new Savannah State University-sponsored initiative based on the concept of aquaponics, a system of growing plants in water that leads to the cultivation of aquatic animals.

In 2019, Rosenquist, an environmental science instructor and coordinator of the College of Sciences and Technology's First-Year Experience program, received a \$50,000 grant from the U.S. Department of Agriculture/Sustainable Agriculture Research and Education program that seeks to bring together several groups: local university researchers studying aquaponics, community activists working to eliminate food deserts, conservationists fighting to address urban nutrient pollution in indigent communities, local farming

businesses, city government and Savannah State students.

"What we've proposed is to use urban aquaponics in the proximity of urban food deserts on available vacant land that the city owns to meet the needs of [the residents] with scaled food production," says Rosenquist, explaining that the project will help mitigate environmental problems that are often associated with urban gardening, such as waste runoff, while creating an abundance of fresh produce and seafood for residents to eat.

Partnering with the Savannah-Chatham County Public School System, which is providing a vacant lot next to Gadsden Elementary School, Rosenquist has enlisted the help of researchers studying aquaponics at Georgia Southern University Armstrong campus, community organizers, environmentalists, and local farming businesses Savannah Hydroponics & Organics and Billy's Botanicals.

Rosenquist, the grant's principal investigator (PI), and his co-PIs Sue Ebanks, Ph.D., associate professor of marine and environmental sciences, and Philip Omunga, Ph.D., assistant professor of urban studies and

planning, will work closely with SSU students throughout the process. Urban planning students will create surveys to determine which produce and fish products are most desirable to community members, while marine and environmental sciences students will design the aquaponic garden itself.

Once constructed, the aquaponic garden will not only serve as a learning tool for the Gadsden students, it will also be used as a demonstration site for community members, who will be invited to tour the facility in hopes that they will, in turn, set up their own entrepreneurial ventures on vacant land in their neighborhoods. The team hopes that this will create a domino effect that will lead to job creation, economic growth, environmental protections and improved health outcomes for urban food desert residents.

"Growing food is a great tool for consensus building within communities, something [that] is direly needed in Savannah," says Andrew Morris, owner of Savannah Hydroponics & Organics, one of the project's partners. "The outcomes of [this] project will help lower crime, feed the hungry and bring communities together by raising awareness through aquaponics."

A DESIRE, A DREAM AND A DESTINY TO BE A SCIENTIST



SSU ADISRE students (from left to right) De'ja Glover, a freshman biology major from Orangeburg, S.C.; Savannah Buteaux, a freshman forensic science major with a concentration in biology from New Iberia, La.; Emmanuella Martin, a freshman forensic science major from East Dublin, Ga.; and Crystal Bride, a freshman biology major from Savannah, Ga., conduct research with Professor Karla-Sue Marriott, Ph.D.

How can I leave an impact on my community? How will my degree and position in a biomedical field affect my community? How can I give back? How am I making a difference? These are questions that Karla-Sue Marriott, Ph.D., is confident students will be able to answer after participating in Savannah State University's Achieving Diversity through Integrative Scientific Research Experience (ADISRE) program.

unded by a five-year, \$1.3 million grant from the National Institutes of Health (NIH) National Institute of Biomedical Imaging and Bioengineering's Enhancing Science, Technology, EnginEering, and Math Educational Diversity Research Education Experiences (NIBIB-ESTEEMED) grant, ADISRE (pronounced "a desire") seeks to create a spark within students to become self-directed learners, as well as open-minded, caring and ethical scientists who will eventually pursue careers in biomedical sciences.

Marriott, a professor and coordinator of the forensic science program at SSU, established the program in 2018 with the intention of inspiring students to be their best selves as they pursue careers in the field.

"It's just my little contribution into bringing up a generation that is well-rounded and involved in the sciences and the arts," says Marriott, who serves as the grant's principal investigator (PI). "[I want students to] have an appreciation for both [disciplines], [for] facilitating creativity and for ethical conduct—especially in science and especially in how it relates to serving the community."

To meet those goals, Marriott and her team, co-PI and Associate Professor of Chemistry Pascal Binda, Ph.D., and Program Manager Holly Sparks, recruit seven incoming freshmen each year to become ADISRE scholars. The cohorts, who must major in

chemistry, biology, forensic science or mathematics, are sponsored for two years by the program before transitioning to a comparable upper-level program at the university.

Selected students, who receive a generous stipend for their participation, attend a bridge program the summer before their first year to familiarize them with the Savannah State campus, science facilities, faculty and coursework. Once enrolled, the ADISRE students attend workshops and presentations throughout the year and work closely with faculty mentors on research projects, all the while participating in special programs that expose them to art and culture.

Upon completing the program and beginning their junior year, the students receive continued support from the ADISRE team, who keep in close contact with them and continue to nurture them. In turn, the students promise to serve as big brothers or big sisters to incoming students in the program.

After graduating from SSU, the ADISRE cohorts are expected to advance to biomedical graduate programs, enter the field as ethically sound and well-rounded professionals, and eventually serve their communities.

Crystal Bride, a freshman biology major from Savannah, Ga., and one of the first seven scholars to be recruited, plans to use the program as a launching pad for her biomedical career. "The experience has been amazing so far," says Bride, who plans to study self-replicating viruses as part of her faculty-led ADISRE research. "I hope to get out of this program well-rounded knowledge of the scientific and biomedical fields. I feel like I'll be more prepared than a person who doesn't go through a program like this."

In addition to supporting 28 scholars over the course of the five-year grant, ADISRE also seeks to impact the entire university community by designing a class based on the core concepts from the program.

"We can't just leave [the concepts of the program] to that small group. We want to institutionalize it and change the culture," says Marriott, who is in the process of creating a course that will focus on ethics, scientific techniques and documentation.

Marriott hopes the new course, along with the ADISRE program, will have a lasting impact on the students that they will carry into the STEM workforce and that will propel them to be thoughtful and ethical scientists.

"I don't just want [to produce] a scientist, but I want somebody who really feels an emotional connection with the community, one who feels that they can be creative," Marriott says. "The appreciation for art and the creation of art really nurtures empathy and creativity. The scientist cannot truly make a meaningful impact without that."



hanks to television shows like *CSI* and major advances in technology over the past decade, the discipline of forensic science has grown in popularity among students across the country. Savannah State, the first college in Georgia to offer a B.S. in forensic science with tracks in biology and chemistry, is leading the way, offering students unparalleled access to technology that

Karla-Sue Marriott, Ph.D., a professor and coordinator of the forensic science program at SSU, worked with Vizitech to create the world's first virtual

will give them a leg up once they enter

the profession.

reality crime scene software to train undergraduates. Utilizing the exclusive technology, students put on VR headsets and enter crime scenes in virtual reality, using controllers to select forensic tools and weapons, to position victims'/perpetrators' bodies, calculate gunshot trajectories and blood spatter, and recreate/predict scene outcomes. Since Fall 2017, the software has been used to teach the program's capstone forensic science courses Crime Scene 1 and 2, giving students the opportunity to recreate real crime scenes and create their own.

"Forensic science is going in the direction of 3-D. [Real crime scene investigators] are going in [to crime scenes]

with scanners to document scenes three dimensionally," says Marriott, who collaborated with the Vizitech team to develop the software using funds she received from an SSU U.S. Department of Education Title III grant. "In addition, the forensic science program boasts a FARO 3-D scanner used to document crime scenes in 3-D. Students can take a scan of a room, and then also have the option of using VR equipment to

Professor Karla-Sue Marriott, Ph.D., helps Dhimani Still (VR headset), a sophomore forensic science major with a concentration in chemistry from Marietta, Ga., and Jarod Cox, a junior forensic science major with a concentration in biology from Savannah, Ga., utilize the university's exclusive virtual reality crime scene software.

enter and explore [the crime scene they just created] in virtual reality. If they become law enforcement agents [one day], they're going to go into [the profession] already knowing how to [work a crime scene]."

Marriott says that the creation of a 3-D interactive and virtual forensics training and simulations tool rich in visual, spatial and kinesthetic content with assessment capabilities offers the ability to provide each student with a first-person, realistic interaction with experiential content.

"This virtual avatar-based module enables students to visually and kinesthetically step into the shoes of a suspect to better understand the emotional and physical possibilities associated with crime scene investigation," Marriott says. "Experiments that we are not able to safely conduct currently such as gunshot projectile experiments can now be safely conducted in this virtual setting. With this advanced learning system, we usher in a new paradigm and raise the bar to new heights in forensic science training at an undergraduate institution nationally and internationally."

Dhimani Still, a sophomore forensic

science major with a concentration in chemistry from Marietta, Ga., developed an interest in forensic science as an elementary school student thanks to his crime-fighting family — a father, who worked as a detective, and an uncle, who served in the FBI. When it came time to select a college, Still toured schools across the South but was ultimately drawn to SSU when he was introduced to Marriott and the university's forensic science facilities. Having access to the virtual reality technology and crime lab early in his college career has reinforced his decision to pursue a degree in the discipline.

"Being able to recreate crime scenes and solving automated crime scenes [has been my favorite part of the program]. It helps keep your mind [thinking] outside of the box," says Still, who plans to pursue a Ph.D. in biochemistry and hopes to one day own his own forensics firm. "The software makes it easier to understand [the complexities of solving cases and helps us understand] what the mind of a killer was like."

While students in the forensic science program enjoy access to the

virtual reality technology and the crime scene lab through their coursework, the program will soon gain an even greater audience. SSU is launching an 18-hour certificate in Virtual Forensic Science: Evidence Processing, Documentation and Analysis open to students in any major at SSU, as well as professionals employed in law enforcement, military or an associated area of forensic science, criminal justice or homeland security.

The certificate will provide an immersive learning experience that utilizes the 3-D virtual reality technology and covers procedures necessary for the proper use of 3-D technology in criminal investigations, including 3-D scanning, processing, analyzing and the use of 3-D virtual reality technology in courtroom presentation of crime scene evidence.

The certificate is set to launch in Fall 2019 and will be offered on both SSU's main campus and at Georgia Southern University's Liberty campus in Hinesville, Ga. □

SSU's 3-D virtual reality crime scene software enables students to simulate crime scenes and practice the skills they learn in class.



or the past 26 years, Chellu Chetty, Ph.D., has been a fixture on the Savannah State University campus, serving in numerous capacities, overseeing major grant and research programs, and changing the lives of countless students.

Chetty, Regents Distinguished Professor and associate vice president for Research and Sponsored Programs, came to SSU in 1993, having previously served as a visiting faculty member at the National Center for Toxilogical Research in Jefferson, Ark.; University of Mississippi Medical Center in Jackson, Miss.; and Selma University in Selma, Ala. He started his career as a lecturer and associate editor at Sri Venkateswara University in Tirupati, Andhra Pradesh, India, from where he also received a B.S. in biology, an M.S. in zoology and a Ph.D. in physiology.

Throughout the course of his academic career at Savannah State, Chetty has held many positions, including professor of biology, program director of the National Institutes of Health Biomedical Research Program and dean of Graduate Studies and Sponsored Research.

He stepped into his current role in the Office of Sponsored Research Administration in 1997, first serving as associate/executive director before assuming the position of associate vice president in 2009.

Under Chetty's leadership, the university's grant and research program has expanded tremendously. He has overseen numerous multimilliondollar grant programs, including Minority Access to Research Careers Undergraduate Student Training in Academic Research (\$4.5 million), Research Initiative for Scientific Enhancement (\$1.1 million), and Strengthening Research Collaborations in Health Disparities – NIH/NIMHBD Research Infrastructure in Minority Institutions (\$3.9 million).



But perhaps Chetty's greatest accomplishment is the mentorship that he's given to hundreds of students and young professors, both at Savannah State and earlier in his career. In 2003, he received the U.S. Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring from President George W. Bush at a ceremony at the White House in recognition of his achievements as a mentor. Here, some of Chetty's past students and current colleagues reflect on how he has impacted their lives.

Dr. Chetty first encouraged me to pursue my Ph.D. at Stony Brook University after I graduated from SSU in 2001. At that time, I had never considered such an opportunity. I think he saw something in me that I did not see in myself. I was 20 years old and immature and not even really thinking about what my next steps would be. He always encouraged but never pushed. I think that is what makes him unique; he knows how to encourage you to push yourself to the next level. Outside of my family, he was one of my biggest cheerleaders. We always remained in close contact — through graduate school, postdoc, fellowships and faculty positions. He has been a great source of support. - Teresa I. Shakespeare, Ph.D., associate pro-

fessor of biology, Savannah State University;

former student of Chetty's at SSU

Dr. Chetty helped me apply for a fellowship program and mentored me not only on how to design and conduct health disparityrelated research projects, but more importantly on how to engage SSU undergraduate students in the projects and mentor these next generation scientists for their future STEM careers. Dr. Chetty [later] mentored me to explore federal funding opportunities and to involve students in funded projects. He reviewed my research proposals during his busy schedule and provided invaluable feedback. Thanks to his continuous mentorship, I was able to find the right collaborators and was awarded with federal grants that have involved more than 20 SSU undergraduate students and nine Savannah region high school students in research training and prepared them for their academic careers. Dr. Chetty has fundamentally impacted my personal academic career through his mentorship and leadership.

More importantly, he has crafted a mechanism that promotes SSU faculty, especially junior faculty members, to seek mentorship from both inside SSU and other academic institutions, which I believe will benefit their academic careers profoundly.

-Kai Shen, Ph.D., associate professor of chemistry, Savannah State University

I have known Dr. Chetty for over 10 years. It would be an understatement to say that he has been the single most influential person in my life. He is an exceptionally gifted mentor that any mentee would dream about having. Right from the time I joined SSU in 2010, Dr. Chetty has always helped me make the right decisions professionally. My \$1 million external funding from the National Science Foundation would not have been possible without his guidance and support. Dr. Chetty's selfless, helping nature, tireless attitude and work ethic are his greatest qualities found rarely in people. Numerous accolades that Dr. Chetty received over the last 35 years nationally and internationally speak volumes about his dedication toward minority student success. In my 15-year academic career, I have not come across a person who is so passionate about others' success. He is simply irreplaceable. -Suman Niranjan, Ph.D., associate professor of supply chain and logistics, director of the Interdisciplinary Transportation Studies program, and coordinator of the university's Global Logistics and International Business

I have known Dr. Chetty for the last nine years through a collaborative research/mentoring program (RIMI) between Mercer University and SSU. After I moved from Mercer University and joined SSU as a faculty member, Dr. Chetty mentored me in writing research proposals and in academic/professional career development. His thoughtfulness, dedication and insight always inspire me to dedicate my career to research and teaching. He is the person who inspired and helped me to submit my very first research

Education and Research Center of Excel-

lence, Savannah State University

proposal. He is a wonderful mentor who always has very practical and insightful advice. Through his mentoring, research and teaching over 40 years, Dr. Chetty has positively impacted the lives of many young faculty members like me. His mentoring and research experience have provided leadership to SSU in its commitment to serve minority students for their educational, intellectual and cultural development.

- Manoj Prasad, Ph.D., assistant professor of chemistry, Savannah State University

Mentors like Dr. Chetty are few and far between. He taught me by example and provided me with the environment for investigative research. He stimulated and encouraged me to seek and push back scientific knowledge. He is known for his unwavering support of students and a major inspiration in the careers of several pupils. He has been exemplary [in] his generosity and his gift to realize the dreams of his students, and this is his greatest professional accomplishment. The best teachers pass on the philosophy of the profession and influence generations of students, and Dr. Chetty, without doubt, is one of the finest teachers. When I think of guiding teachers who have helped the young minds in their academic careers, I think of proponents and mentors like Dr. Chetty, who have shown the path to many students to walk tall and proud today. -Srinivasa Karnam, Ph.D., professor of physiology and biophysics, Virginia Commonwealth University School of Medicine; former student of Chetty's at Sri Venkateswara University

I have known Dr. Chetty since 1985. He was my physiology professor in graduate school and later on, I did my doctorate work under his guidance. Dr. Chetty's invaluable advice and guidance made me what I am today. He is shaping the next generation of biomedical professionals, is a great researcher and educator, and above all, an outstanding role model, mentor and advisor. -Srinivas Pentyala, Ph.D., professor and director of Translational Research of Anesthesiology, Stony Brook Medical Center; former student of Chetty's at at Sri Venkateswara University □

CHRISTINA L. DAVIS Ph.D.

uring a Summer 2018 trip to Ghana with fellow educators, Christina L. Davis, Ph.D., an assistant professor and program coordinator of Africana studies at Savannah State University, was bestowed the Ghanaian name Dela at a ceremony at a small village. Davis returned with a pot emblazoned with her new name, which means "savior" in Twi, and a host of experiences to share with her students.

"The ability to share items created in Ghana heightens the delivery of material," says Davis, who illustrates classroom lessons with her own first-hand accounts from the West African country. "It's allows me to convey Ghana's rich culture effectively and get their attention more quickly."

Davis, who grew up in Hillsboro, Alabama, came to SSU in 2012 after completing a Ph.D. in history at the University of Georgia (UGA). Though she received her undergraduate and master's degrees from Florida A&M University (FAMU), she had not considered the possibility of returning to a Historically Black College or University (HBCU) to teach. When she received an email about an opening at Savannah State from a classmate's father, a former SSU professor, she felt drawn to the University by the Sea.

"The universe brought me here. I never thought that I'd end up at an HBCU. When I got here, I realized that it was like coming home," Davis says. "The atmosphere at an HBCU — the family and community — is much stronger than at the historically white university. Now I can't imagine why I did not aim to teach at an HBCU from the beginning."

Davis teaches approximately 250 students each semester. While all SSU students take a course on the African-American experience, Davis believes that any student can benefit from choosing the discipline as a major or

minor

"Knowing that your history does not begin with slavery in North America provides students with a sense of confidence. Starting conversations about African-American ancestry with West African civilizations also helps students understand where they fit in the world. It sheds light on present-day inequality and structural racism," Davis says. "I teach students that if they know their history and their worth, they can do anything if they put in the work. I'm here to teach our students that Africana studies matters too."

When the opportunity to expand her knowledge even more by traveling to Ghana arose in 2018, Davis jumped at the chance. In May, she and 12 educators traveled to Ghana as part of a \$100,000 U.S. Department of Education Fulbright-Hays award, "Understanding Ghana's History, Culture, and Geography through the North-South Divides: An Expansion of the 2015 Ghana Group Project Abroad." The project, a partnership with the Savannah-Chatham County Public School System (SCCPSS), supported seven SSU faculty members and six SCCPSS teachers to travel throughout Ghana for four weeks.

In addition to continuing to build upon the knowledge and partnerships gained during a 2015 Fulbright-Hays-funded SSU trip to Ghana, the group studied the historically significant relationship between Savannah, a major port city during the trans-Atlantic Slave trade, and the West Coast of Africa, the place from which many African-Americans in the U.S. trace their ancestry.

The group went from Cape Coast to the border of Burkina Faso, visiting seven cities and numerous villages along the way. They focused much of their travel on studying the less developed northern part of Ghana, which was subjected to both the trans-Saharan and the trans-Atlantic slave trades.

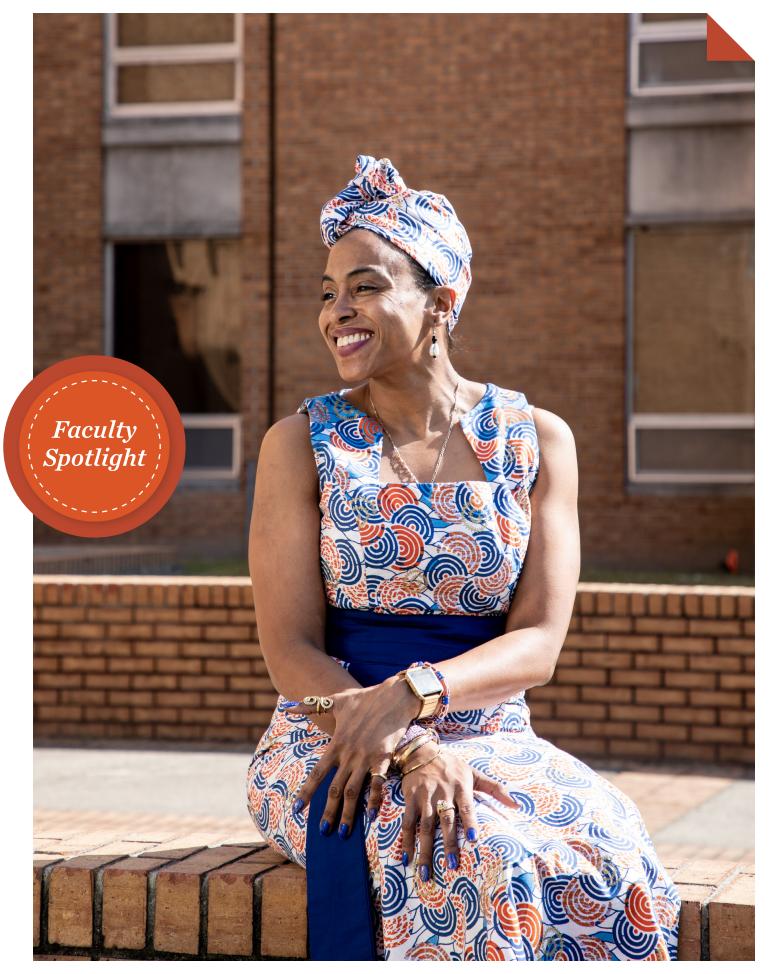
The educators can now bring their knowledge back to secondary school and university classrooms to make the curriculum more relevant for African-American students, who represent the largest segment of the populations at both Savannah State and the SCCPSS.

The trip, and especially the experience traveling through northern Ghana, resonated with Davis, who seeks to help students gain an even deeper understanding of their roots and their place in today's society.

"Going from south to north Ghana and seeing all the different people in just this one country makes the case for diversity. To lump everybody on the continent as 'African' minimizes the diversity and robs different ethnicities of cultural agency from so many different groups. And that's one of the things I'm able to highlight [in the classroom]," Davis says. "I'm grateful to Dr. Emmanuel Naniuzeyi (director of the SSU International Education Center and the Fulbright-Hays award's principal investigator) for providing this opportunity to expand our students' understanding of the connections between African-American and West African culture."

Teaching those lessons to her students and celebrating the history of Savannah State's Africana studies program, established in 1996 as a result of student protests, made it all the more meaningful for Davis when students spoke up to prevent the deactivation of the program last fall.

With one Instagram post, students mobilized and sprang into action to speak out against the change. The withdrawal of the motion affirmed Davis' decision to become an educator. "Witnessing the outstanding advocacy that erupted from our students is hands down the proudest moment of my career."





n his first role at Walmart, Savannah State University graduate Reynard Scott managed an account that averaged over \$2.5 billion.

"It was one of the largest lines on the balance sheet [at Walmart] and one of the largest lines on the P&L (profits and loss statement)," says Scott, who joined Walmart in 2016 as a financial analyst on the company's project accounting team.

Scott's journey from his hometown of Savannah, Ga., to Walmart corporate headquarters was a long one marked by hard work and determination.

Scott graduated from Alfred E. Beach High School in 2006 and enrolled in SSU in 2012 after receiving dual associate degrees in business administrative technology and accounting from Savannah Technical College. His department head at Savannah Tech, Tom Thompson, saw Scott's potential and recommended that he attend Savannah State to earn a bachelor's degree.

A nontraditional student, Scott worked full time during the day as a special education teacher in the Savannah-Chatham County Public School System while taking business classes at night. Midway through his journey at SSU, he switched careers, working as a lab technician at LensCrafters so that he could have a more flexible schedule and take classes during the day.

When Scott first entered SSU, his plan was to major in accounting. In 2013, when the university launched the global logistics and international business (G-LIB) program, Scott jumped at the chance to take on a second major.

"My first thought after they came out with the program was the [proposed] deepening of the Savannah River. I knew that there would be a great influx [of jobs] and logistic opportunities," Scott says. "I felt it would be beneficial to be a little bit multifaceted."

Scott credits Suman Niranjan, Ph.D., associate professor of supply chain and logistics and coordinator of the university's G-LIB Education and Research Center of Excellence, with helping make the program accessible for students with busy schedules.

"I like the way he tried to introduce different concepts of teaching, especially being a teacher [myself]," Scott explains. "He also installed cameras in some of the classrooms and recorded sessions so that people taking classes online still got the same content and information [as students in class]."

Scott also enjoyed the coursework, especially the variety of topics covered and learning about the logistics of supply chains in the context of international business.

"In a lot of my classes we talked about robust supply chains and things of that nature, and of course Walmart was one of the main focuses because it has one of the largest supply chains in the world," Scott says.

But even then, Scott never anticipated that he would one day work for the world's largest corporation.

After receiving dual bachelor of business administration degrees in 2015, he continued to work for LenCrafters while he applied for positions in his field. In January 2016, he received an offer from Walmart, and a few months later he left Savannah with his wife, Silena, and headed to Bentonville, Ark.

Scott began his career in the company's accounting department, then did a short stint in the auditing department before assuming his current role in operational support in Walmart's international technology division, where he is working on the global launch of the real estate software system TRIRIGA. In his new position, Scott is responsible for the division's property management module, which has already gone live in China and will soon be introduced in Latin America, Chile, Mexico and Canada.

Scott, who will travel to China, Japan and India in the coming year, credits his experience at Savannah State, and especially the challenges he faced as a nontraditional student working full time, with helping prepare him for a global position with Fortune 500's No. 1 company.

"[SSU helped me succeed] especially from a time management perspective — not having a lot of time and working [full time while learning new] concepts and ideologies [prepared me for my position at Walmart]," says Scott, who took as many as six courses per semester in order to complete his degree. "[As a student, understanding how] to apply [the new concepts], especially [within the context of] international business teams, [and learning about] different cultures, how they operate and what the rules of engagement are helped me to do business a little bit better." □

WINDOW TO THE WORLD

Savannah State University's four-year, interdisciplinary bachelor of business administration degree in global logistics and international business (G-LIB) launched in 2013 and was the first of its kind in the state of Georgia to focus on both global logistics and international business. The degree program seeks to increase awareness and understanding of globalization, international business, global logistics and supply-chain management, taking full advantage of the resources available in the Savannah region, which include the Port of Savannah, home of the largest single container terminal in North America

G-LIB courses give students exposure to a wide range of topics, among them Global Operations Management, Global Supply Chain Management, Global Business Logistics, International Marketing and Export Management, Business Strategies for Emerging Markets, International Business Management, Global Electronic Business, International Transportation Management and Retailing Management. The program also encourages the study of foreign language, specifically Chinese (Mandarin) and Korean.

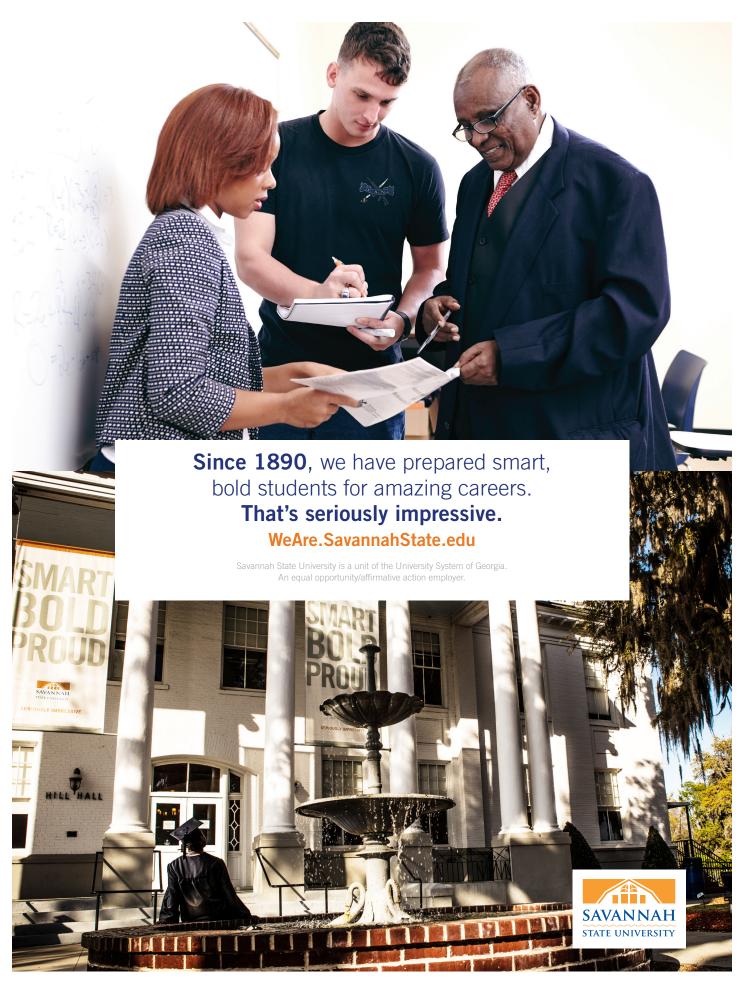
The G-LIB major is one of several initiatives of SSU's Global Logistics and International Business Research (G-LIBER) Center of Excellence. The center, which was funded through a U.S. Department of Education Title III grant, promotes economic development, trade, growth and job creation by engaging SSU students and the local Savannah busi-

ness community with institutions of higher education and businesses worldwide. The G-LIBER Center is supported by Centers for International Business Education and Research (CIBERs), which were created by Congress under the Omnibus Trade and Competitiveness Act of 1988 to increase and promote the nation's capacity for international understanding

and competitiveness.

In addition to offering the G-LIB major and minor, the G-LIBER Center helps students secure internships with national and international organizations, promotes faculty development, organizes overseas trips that enable students to take courses at universities abroad and engages with the local business community.

"The university's G-LIB major and G-LIBER Center for Excellence equip students with the tools they need to work in the international business sector," says Michael J. Laney, Ph.D., provost and vice president for academic affairs. "Whether our graduates choose to stay in Savannah and work for the fastest-growing port in the U.S. or accept a position with the world's largest corporation, they are well-prepared to succeed in an ever-changing global marketplace." □



or the past 18 years, the Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) at Savannah State University has served thousands of students enrolled at Tompkins, Hubert, DeRenne and Mercer middle schools, as well as Beach, Groves and the School of Liberal Studies at Savannah High schools. In 2018, the grant program — a collaborative partnership between SSU and the Savannah-Chatham County Public School System — received its fourth cycle of funding from the U.S. Department of Education, with a total award of \$3.9 million over a seven-year period.

During the current grant cycle, the program will serve more than 700 students per year from DeRenne and Hubert middle schools and will support and track them through entry into Beach and the School of Liberal Studies at Savannah High and into their first year of college.

GEAR UP, a unit of Savannah State's College of Education, targets low-income and

first-generation college students in 6th and 7th grade, offering them an array of services including academic tutorial, Sensational Saturday sessions, summer bridge programs, study skills, test preparation workshops, mentoring, job shadowing, parental involvement, financial aid information, college application assistance, academic advisement, assistance in secondary and postsecondary course selections, personal/ social counseling activities, campus visits, educational/cultural field trips and financial literacy sessions.

If the students choose to matriculate at Savannah State, they receive additional support through their first year of college. SSU GEAR UP Director Tamara Waterman and Program Coordinator Sherrie Jackson offer lunch-and-learn programs; bring in speakers to talk about topics such as financial literacy, financial aid and tutoring; and even start advising students about graduate school programs. And while the program may officially end once the students finish their first

year, Waterman and Jackson still keep in touch with their SSU cohorts, offering them advice, support and mentorship.

Waterman says that the key to the success of the GEAR UP program is catching the students while they are young and just beginning to think about their futures in hopes that attending college will become their primary goal.

"The goal is to help the students get prepared for college, to give them early exposure and assist them with their college preparation needs," she says. "We've had quite a few students who have [transformed thanks to the program]. Students who people had written off are now college graduates, business owners and productive citizens."

For more information about the GEAR UP program, contact Program Director Tamara Waterman at 912-395-3201 or waterman@ savannahstate.edu. □



Student Voices

Hughes

am from Savannah, Ga., and attended DeRenne Middle School, graduating from Alfred E. Beach High School with honors in 2018. I enrolled in Savannah State University in Fall 2018. Thanks to earning college credits in a dual enrollment program at Savannah Technical College, this is my sophomore year at SSU. I am majoring in behavior analysis with a minor in forensic science.

I started participating in the U.S. Department of Education Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) while in 6th grade. When I first started participating in the program, I was eager to see what GEAR UP had to offer. I had future career goals in mind but was undecided on how to achieve my goals. There was no doubt that I was going to enroll in college, but I needed guidance to get there. GEAR UP provided me with the guidance I needed to successfully transition from middle to high school and college.

GEAR UP had a big impact on my middle and high school years. The program taught me how to be a productive student. The program leaders took me and my mom on college tours. They coordinated community service activities for me and other students at

my high school.

My favorite experiences with GEAR UP were my participation in the annual summer programs on the Savannah State campus, as well as the visits to local and out-of-state colleges. GEAR UP influenced my decision to attend Savannah State thanks to the mentorship I received from SSU students while in middle and high school.

GEAR UP also had a major impact on my academics. The program provided me with SAT/ACT classes, writing workshops and summer programs, all in preparation for my first year of college. I still participate in GEAR UP activities today. I maintain a strong connection with the GEAR UP staff and my fellow classmates.

I plan to continue my education at SSU and eventually obtain a doctorate degree in psychology. My experience with GEAR UP has prepared me for my future because I have become more confident and willing to participate in more organizations while giving back to my community. GEAR UP is an excellent opportunity for any young person who wants to get a head start on a great future.

Kayla Hughes is a sophomore behavior analysis major from Savannah, Ga. 🗖



Ja Brekia Bass

uring my childhood in Savannah, Ga., I came across many
opportunities to help advance
my education. As I matriculated
from middle school to Alfred E. Beach High
School, I was introduced to the U.S. Department of Education Gaining Early Awareness
and Readiness for Undergraduate Programs
(GEAR UP). GEAR UP assisted me academically and prepared me for enrollment in the
Savannah State University College of Business Administration, where I am majoring in
accounting.

During my 9th grade year of high school, GEAR UP provided a tutor and mentors who worked alongside my teachers in all my core curriculum classes. They were typically SSU upperclassmen who shared their journey to college enrollment. The tutor and mentors were alongside me and my classmates during the school day, encouraging everyone to finish high school and enroll in college.

I also received one-on-one counseling services from the GEAR UP coordinator, Sherrie Jackson, and the program specialist. It was beneficial to have the program onsite in my school building as I was able to stop by the GEAR UP office for assistance with all my college preparation needs. The GEAR UP staff shared many scholarship opportunities with me, and they assisted me with signing up for my college entrance exams. Throughout my four years at Beach, I visited Savannah State University, Emory University, Georgia State University, Albany State University and Kennesaw State University, but I ultimately chose to attend SSU.

Additionally, I participated in a female-only mentoring group that featured guest speakers and tips for dealing with real-life situations. The mentoring group met monthly and focused on how to foster positive relationships with others, and I received tips on how to stay motivated to complete high school on time. I also attended summer program activities at Savannah State and spoke with admissions office representatives during their visits to our high school campus. I played basketball at Beach, so I was

excited to have the opportunity to join the SSU Lady Tigers basketball team this year.

SSU's GEAR UP program had a positive influence on my life and on my college decision. GEAR UP helped me to become aware that the world is bigger than Savannah. The program played a huge role in me attending Savannah State. During my last few weeks of high school, I was offered a \$1,500 scholarship from the university president, Dr. Cheryl D. Dozier. I also received a basketball scholarship from Savannah State.

The GEAR UP program continues to provide services throughout my freshman year of college. We meet monthly and I am already excited about looking at graduate school programs. GEAR UP provides tutoring and assistance with book purchases. I am so grateful for the opportunity to be a SSU GEAR UP student. The program has provided me with the best opportunity possible.

Ja'Brekia Bass is a freshman business accounting major from Savannah, Ga. □

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${\tt CURRENTGRANTFUNDING} \, at \, {\tt SSU}$

FUNDING AGENCY	PRINCIPAL INVESTIGATOR
National Science Foundation	Kisha Aites, Ph.D.
U.S. Department of Education	Dedra N. Andrews, Ed.D.
U.S. Department of Education	Dedra N. Andrews, Ed.D.
National Science Foundation	Agegnehu Atena, Ph.D.
Active Minds	Jacqueline Awe
U.S. Department of Defense/Army Research Office	Pascal Binda, Ph.D.
National Science Foundation	Abhinandan Chowdhury, Ph.D.
National Oceanic and Atmospheric Administration /Abt Assoc. Inc.	Tara Cox, Ph.D.
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NASA/Georgia Institute of Technology	Jonathan Lambright, Ph.D.
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National Science Foundation/University of Georgia	Mohamad Mustafa, Ph.D.
National Science Foundation	Suman Niranjan, Ph.D.
National Science Foundation	Takayuki Nitta, Ph.D.
U.S. Department of Defense/Army Research Office	Takayuki Nitta, Ph.D.
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U.S. Department of Education	Zenobie Purnell
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Georgia Department of Natural Resources/Augusta County	Shawn Rosenquist, Ph.D.
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U.S. Department of Defense/Congressionally Directed Medical Research Programs	Kai Shen, Ph.D.
U.S. Air Force Office of Sponsored Research	Kai Shen, Ph.D.
University of the West Indies	Paramasivam Sivapatham, Ph.D.
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U.S. Department of Education	Tamara Waterman
U.S. Department of Education	Tamara Waterman
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U.S. Department of Defense/Army Educational Outreach Program	Asad Yousuf, Ed.D.
U.S. Department of Defense/Army Educational Outreach Program	Asad Yousuf, Ed.D.

Waste Management Education and Enhancing Environmental Science Program Mediating Role of Metavinculin on the Mechanical Properties of Extracelluar Matrix and Smooth Muscle Cells SC2: Metavinculin Regulation of Cell Cytoskeleton Remodeling in Response to Substrate Stiffness Sigma-1 Receptor Agonists as Novel Therapeutic for Brain Mitochrondrial Dysfunction in Gulf War Syndrome Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue Developing a Strategy for the Mitigation of Cadmium in Cocoa GEAR UP Georgia GEAR UP Georgia GEAR UP GEAR UP DeRenne CYBERMISSION Research & Engineering Apprenticeship (REAP) 2018-19 \$1,000	GRANT	DURATION	AWARD
HBCU-UPTI-Developing a Minor in Math	SSU/STC Noyce Teacher Scholarship	2014-19	\$1,421,715
HBCU-UP TIP: Developing a Minor in Math	Title III-B	2018-19	\$4,526,521
Chapter Launch Grant Program 2018-19 \$10.00 Design and Synthesis of New Heteroleptic Lanthanide Complexes as Catalysts 2015-19 \$34.16.03 Catalyst Awark Identification of Effective Heat Conductivity Coefficient of Particulate Two-Phase Materials 2018-20 \$175.079 Technical Contract Support for LCP Chemicals Georgia Natural Resource Damage Assessment, 2019-20 \$175.079 Technical Contract Support for LCP Chemicals Georgia Natural Resource Damage Assessment, 2019-20 \$10.000 \$1	Title III-SAFRA	2018-19	\$1,137,334
Design and Synthesis of New Heteroleptic Lanthanide Complexes as Catalysts Catalyst Award Identification of Effective Heart Conductivity Coefficient of Particulate Two-Phase Materials 2018-20 3175077 Technical Contract Support for LCP Chemicals Georgia Natural Resource Damage Assessment, Bottlenose Dolphin Injury Quantification and Restoration Planning 2019 85,000 REU: Bridge to Research in Marine Sciences 2015-20 918-19 85,000 REU: Bridge to Research in Marine Sciences 2015-20 918-22 1018-19 2018-19 8150,242 17 17-18 17-1	HBCU-UP TIP: Developing a Minor in Math	2017-20	\$399,972
Carabyst Award: Identification of Effective Heat Conductivity Coefficient of Particulate Two-Phase Materials 2018-20 \$175,079	Chapter Launch Grant Program	2018-19	\$100
Bottlensoe Dolphin Injury Quantification and Restoration Planning 2019 8.0.075	Design and Synthesis of New Heteroleptic Lanthanide Complexes as Catalysts	2015-19	\$341,633
Bottlenose Dolphin Injury Quantification and Restoration Planning Assisting the Georgia Marine Mammal Stranding Network REU: Bridge to Research in Warine Sciences GP-IMPACT: Expanding HECU Pathways for Geoscience Education 2018-21 \$157,552 GP-IMPACT: Expanding HECU Pathways for Geoscience Education 2018-12 \$151,552 Student Support Services 2018-20 \$1,223,843 Student Support Services 2018-20 \$1,223,843 Student Support Services 2018-20 \$1,223,843 Inspiring Young Women into Engineering Fields 2018-19 \$1,293,843 Recovery and Response to Hurricane Irma 2018 \$9,990 Living Marine Resources Cooperative Science Center (LMRCSC) 2017-21 \$53,65,484 National Ocean Sciences Bowl (NOSB) Duight David Elsenhower Transportation Fellowship 2019-32 \$9,67,373 HRCU-UP RIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the Cacp Hatters Top-Predator Diversity Hotspot Gencyber Middle School Summer Camp Gencyber	Catalyst Award: Identification of Effective Heat Conductivity Coefficient of Particulate Two-Phase Materials	2018-20	\$175,079
Assisting the Georgia Marine Manmal Stranding Network 2018-19 \$8,000	Technical Contract Support for LCP Chemicals Georgia Natural Resource Damage Assessment,		
REUL Bridge to Research in Marine Sciences 2015-20 \$427,437 \$17,525 \$18,525,525 \$18,	Bottlenose Dolphin Injury Quantification and Restoration Planning	2019	\$61,075
GP-IMPACT: Expanding HBCU Pathways for Geoscience Education 2018-19 \$150,242 Title IV-E Georgia Child Welfare Student Training Program 2018-19 \$150,242 Student Support Services 2015-20 \$12,23,843 Inspiring Young Women into Engineering Fields 2018-19 \$14,903 Recovery and Response to Hurticane Truna 2018 \$19,993 Living Martine Resources Cooperative Science Center (LMRCSC) 2017-21 \$35,65,484 National Ocean Sciences Bowl (NOSB) 2018-19 \$9,000 Dwight David Eisenhower Transportation Fellowship 2019 \$24,500 MARC U-STAR Program 2012-23 \$967,373 HBCU-UP RIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the Cope Hatteras Top-Predator Diversity Hotspot 2016-19 \$828,106 Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras 2018-21 \$487,000 GenCyber Middle School Summer Camp 2018-19 \$92,723 Development of Road ConstRuction Database (RECORD) System 2018-19 \$92,723 Development of Road ConstRuction Database (RECORD) System 2018-19 \$92,723 Development of Road ConstRuction Database (RECORD) System 2018-19 \$97,7824 Georgia Space Grant 2018-19 \$13,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-19 \$33,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 ESTEEMED - Research Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$45,000 Peach State LSAMP 2016-21 \$45,000 Peach State LSAMP 2016-21 \$85,000 Peach State LSAMP 2016-21 \$85,000 Peach State LSAMP 2016-21 \$85,000 Peach State LSAMP 2016-21 \$93,000 Peach State LSAMP 2016-21 \$33,000 Peach State LSAMP 2016-21 \$33,000 Peach State LSAMP 2016-21 \$33,000 Peach State LSAMP 2016-21 \$3		2018-19	\$5,000
Title IV-E Georgia Child Welfare Student Training Program 2018-19 \$15,02.42 Student Support Services 2015-20 \$1,223,843 Inspiring Young Women into Engineering Fields 2018-19 \$14,093 Recovery and Response to Hurricane Irma 2018 \$9,980 Living Marine Resources Cooperative Science Center (LMRCSC) 2017-21 \$35,6548 National Ocean Sciences Rowl (NGSF) 2018-19 \$9,000 Dwight David Eisenhower Transportation Fellowship 2019 \$24,500 MARCU-STAR Program 2012-23 \$96,7373 HBCU-UP RIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the Cape Hatteras Top-Predator Diversity Hotspot 2018-19 \$282,106 Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras 2018-21 \$487,000 Gencyber Middle School Summer Camp 2018-19 \$22,723 NASH TSS Equity HIPS Grant 2017-19 \$23,5229 NASH TSS Equity HIPS Grant 2018-19 \$40,000 HBCU-UP TIP. Trageted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,00 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$37,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP. Interdisciplinary Data Analytics 2016-21 \$45,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$35,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$32,341 HBCU-UP TIP. Interdisciplinary Data Analytics 2016-21 \$35,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$32,341 IBCU-UP TIP. Interdisciplinary Data Analytics 2016-21 \$35,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$35,000 INCLUDES: Colla	REU: Bridge to Research in Marine Sciences	2015-20	\$427,437
Student Support Services 2018-19 \$1,223,843 Inspiring Young Women into Engineering Fields 2018-19 \$14,993 Recovery and Response to Hurricane Irma 2018 \$9,980 Living Marine Resources Cooperative Science Center (LMRCSC) 2017-21 \$336,548 National Cocan Sciences Bowl (NOSB) 2018-19 \$90,000 Dwight David Eisenhower Transportation Fellowship 2019 \$24,500 MARIC U-STAR Program 2012-23 \$967,373 HRCU-UP RIA- Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the Cape Hatteras Top - Predator Diversity Hotspot Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras 2018-21 \$487,000 Gencyber Middle School Summer Camp Development of Road Construction Database (RECORD) System 2018-19 \$92,723 NASH TSS Equity HIPS Grant 2018-19 \$92,723 NASH TSS Equity HIPS Grant 2018-19 \$477,824 Georgia Space Grant 2018-19 \$30,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-29 \$3,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-29 \$3,000 EACH DEST Course Embedded Undergraduate Research Experiences (CURES) 2018 \$3,331,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HRCU-UP TIP: Interdisciplinary Data Analytics 2016-21 \$450,000 ROLLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2018-21 \$450,000 ROLLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$450,000 ROLLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$399,974 HBCU-UP TIP: Interdisciplinary Data Analytics 2016-21 \$399,974 ROLLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$390,974 ROLLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disc	GP-IMPACT: Expanding HBCU Pathways for Geoscience Education	2018-21	\$517,552
Recovery and Response to Hurricane Irma 2018 814,903 Recovery and Response to Hurricane Irma 2018 89,980 2017 83536,548 National Ocean Sciences Rowl (NOSB) 2018 89,980 2018 89,980 2018 89,980 2018 89,980 2018 89,980 2019 824,500 2018 89,980 2019 80,940 2018 89,980 2019 80,940 2018 89,980 2019 80,940 2018 89,980 2019 80,940 2018	Title IV-E Georgia Child Welfare Student Training Program	2018-19	\$150,242
Recovery and Response to Hurricane Irma	Student Support Services	2015-20	\$1,223,843
Living Marine Resources Cooperative Science Center (LMRCSC) National Ocean Sciences Bowl (NOSB) National Ocean Sciences Bowl (NOSB) Make U-STAR Program ABGU-UP RIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the Cape Hatteras Top-Predator Diversity Hotspot Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras Cape Hatteras Top-Predator Diversity Hotspot Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras Cape Hatteras Top-Predator Diversity Hotspot Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras Cape Hattera	Inspiring Young Women into Engineering Fields	2018-19	\$14,993
National Ocean Sciences Bow! (NOSE) 2018-19 \$9,000 Dwight David Eisenhower Transportation Fellowship 2019 \$24,500 MARC U-STAR Program 2012-23 \$967,373 HBCU-UP RIA- Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the 2016-19 \$282,106 Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras 2018-12 \$487,000 Gen Cyber Middle School Summer Camp 2018-19 \$92,732 Development of Road Constituction Database (RECORD) System 2017-19 \$23,529 NASH TS3 Equity HIPS Grant 2018-19 \$6,000 HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$470,824 Georgia Space Grant 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,070 Math Teachers Circle Training Program 2016-21 \$450,000 Peach State LSAMP 2016-21 \$450,000 INCLUDES: Collaborative Research Integrated Approach to Retain URM Students in STEM Disciplines	Recovery and Response to Hurricane Irma	2018	\$9,980
Dwight David Eisenhower Transportation Fellowship	Living Marine Resources Cooperative Science Center (LMRCSC)	2017-21	\$536,548
MARC U-STAR Program2012-23\$967,373HBCU-UP IRIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the2016-19\$282,106Cape Hatteras Top-Predator Diversity Hotspot2018-21\$487,000Gen Cyber Middle School Summer Camp2018-19\$92,273Development of Road COnstRuction Database (RECORD) System2017-19\$23,529NASH TSS Equity HIPS Grant2018-19\$6,000HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies2015-19\$476,824Georgia Space Grant2015-19\$36,000ESTEEMED- Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE)2018-23\$1,331,100INSE Course Embedded Undergraduate Research Experiences (CURES)2018\$7,707Math Teachers Circle Training Program2019\$3,000Peach State LSAMP2016-21\$450,000INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines2016-21\$39,974HBCU-UP TIP: Interdisciplinary Data Analytics2017-20\$399,974HBCU-UP Research Initiation Award: Mechanisms of Interaction of Glyco-gag with Restriction Factors2018-21\$557,172RISE Biomedical Research Training Program2012-21\$1123,953HBCU Masters in STEM (Mathematics and Marine Sciences)2017-23\$2,259,496Educational Talent Search2016-21\$3,334,899Upward Bound2018-23\$3,200,892Working Group to Address the Challenge of Food Deserts through Urban Agriculture2019-21\$3,339,200,892	National Ocean Sciences Bowl (NOSB)	2018-19	\$9,000
HBCU-UP RIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the Cape Hatteras Top-Predator Diversity Hotspot Marine Marmal Association with Environmental/Prey Variability of Cape Hatteras 2018-21 4845000 GenCyber Middle School Summer Camp 2018-19 2018-23 2018-19 2018-23 2018-19 2018-23 2018-19 2018-23 2018-19 2018-23 2018-19 2018-23 2018-19 2018-23 2018-19 2018-23 2018-23 2018-23 2018-23 2018-23 2018-23 2018-23 2018-23 2018-23 2018-23 2018-23 2019 2019 2010 2019 2010 2019 2010 2019 2010 2010	Dwight David Eisenhower Transportation Fellowship	2019	\$24,500
Cape Hatteras Top-Predator Diversity Hotspot 2016-19 \$282,106 Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras 2018-21 \$487,200 Gen Cyber Middle School Summer Camp 2018-19 \$29,232 Development of Road COnstRuction Database (RECORD) System 2017-19 \$23,529 NASH TSS Equity HIPS Grant 2018-19 \$6,000 HEUC-UP TIP. Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 IUSE Course Embededed Undergraduate Research Experiences (CURES) 2018 \$5,700 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$45,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$39,974 HBCU-UP Tip: Interdisciplinary Data Analytics 2018-21 \$557,172 Role of Lipids Reorganized by Viral Proteins and Restriction Factors in Viral Life Cycle 2018-21 \$557,172 RI	MARC U-STAR Program	2012-23	\$967,373
Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras 2018-21 \$487,000 GenCyber Middle School Sumer Camp 2018-19 \$92,723 Development of Road COnstRuction Database (RECORD) System 2017-19 \$23,529 NASH TS3 Equity HIPS Grant 2018-19 \$6,000 HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 USE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,701 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$450,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-21 \$450,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2017-20 \$39,9974 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$39,9974 HBCU-UP TIP: Interdisciplinary Data Analytics 2018-21 \$299,961 Role of Lipids Reorganized by Viral Proteins and Restriction Factors in Viral Life Cycle 2018-21	HBCU-UP RIA: Physical Forces Impacting the Temporal Viability of Mesopelagic Prey at the		
GenCyber Middle School Summer Camp 2018-19 \$92,223 Development of Road COnstRuction Database (RECORD) System 2017-19 \$23,529 NASH TSS Equity HIPS Grant 2018-19 \$6,000 HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$476,824 Georgia Space Grant 2018-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,31,100 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,707 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP TIP: Interdisciplinary Data Analytics 2018-21 \$55,172 RISE Biomedical Research Initiation Award: Mechanisms of Interaction of Glyco-gag with Restriction Factors 2018-21 \$55,172 RISE Biomedical Research Training Program 2012-19 \$1,123,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2018-21 \$2	Cape Hatteras Top-Predator Diversity Hotspot	2016-19	\$282,106
GenCyber Middle School Summer Camp 2018-19 \$92,223 Development of Road COnstRuction Database (RECORD) System 2017-19 \$23,529 NASH TSS Equity HIPS Grant 2018-19 \$6,000 HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$476,824 Georgia Space Grant 2018-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,31,100 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,707 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP TIP: Interdisciplinary Data Analytics 2018-21 \$55,172 RISE Biomedical Research Initiation Award: Mechanisms of Interaction of Glyco-gag with Restriction Factors 2018-21 \$55,172 RISE Biomedical Research Training Program 2012-19 \$1,123,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2018-21 \$2	Marine Mammal Association with Environmental/Prey Variability of Cape Hatteras	2018-21	\$487,000
NASH TS3 Equity HIPS Grant 2018-19 \$6,000 HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$477,824 Georgia Space Grant 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,707 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$45,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP Research Initiation Award: Mechanisms of Interaction of Glyco-gag with Restriction Factors 2018-21 \$557,172 RISE Biomedical Research Training Program 2012-19 \$1,23,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2017-23 \$2,559,496 Educational Talent Search 2016-21 \$2,334,889 Upward Bound 2018-22 \$3,260,892 Working Group to Address the Challenge of Food Deserts through Urban Agriculture	GenCyber Middle School Summer Camp	2018-19	\$92,723
NASH TS3 Equity HIPS Grant 2018-19 \$6,000 HBCU-UP TIP: Targeted Infusion Project in Interdisciplinary Transportation Studies 2015-19 \$477,824 Georgia Space Grant 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,707 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$45,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP Research Initiation Award: Mechanisms of Interaction of Glyco-gag with Restriction Factors 2018-21 \$557,172 RISE Biomedical Research Training Program 2012-19 \$1,23,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2017-23 \$2,559,496 Educational Talent Search 2016-21 \$2,334,889 Upward Bound 2018-22 \$3,260,892 Working Group to Address the Challenge of Food Deserts through Urban Agriculture	<u> </u>	2017-19	\$23,529
Georgia Space Grant 2015-19 \$36,000 ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) 2018-23 \$1,331,100 IUSE Course Embedded Undergraduate Research Experiences (CURES) 2019 \$3,000 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$450,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP Research Initiation Award: Mechanisms of Interaction of Glyco-gag with Restriction Factors 2018-21 \$259,961 Role of Lipids Reorganized by Viral Proteins and Restriction Factors in Viral Life Cycle 2018-21 \$557,172 RISE Biomedical Research Training Program 2012-19 \$1,123,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2017-23 \$2,255,9496 Educational Talent Search 2016-21 \$2,334,889 Upward Bound 2018-21 \$3,200,082 Working Group to Address the Challenge of Food Deserts through Urban Agriculture 2019-21 \$50,000 Biota Improvement in an Urb	NASH TS3 Equity HIPS Grant	2018-19	\$6,000
ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,707 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$450,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP TIP: Interdisciplinary Data Analytics 2018-21 \$299,961 Role of Lipids Reorganized by Viral Proteins and Restriction Factors in Viral Life Cycle 2018-21 \$255,7172 RISE Biomedical Research Training Program 2012-19 \$1,123,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2018-23 \$2,559,496 Educational Talent Search 2018-23 \$3,260,892 Working Group to Address the Challenge of Food Deserts through Urban Agriculture 2019-21 \$50,000 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration 2018-20 \$46,000 Waste Management Education and Enhancing Environmental Science Program 2018-20 \$46,000 Mediating Role of Metavinculin on the Mechanical Properties of Extracelluar Matrix and Smooth Muscle Cells 2018-20 \$296,692 Sigma-1 Receptor Agonists as Novel Therapeutic for Brain Mitochrondrial Dysfunction in Gulf War Syndrome 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-18 \$177,036 GEAR UP Georgia 2018-19 \$2,800,0		2015-19	\$477,824
ESTEEMED - Achieving Diversity through Integrative Scientific Research Experiences (ADSIRE) IUSE Course Embedded Undergraduate Research Experiences (CURES) 2018 \$7,707 Math Teachers Circle Training Program 2019 \$3,000 Peach State LSAMP 2016-21 \$450,000 INCLUDES: Collaborative Research: Integrated Approach to Retain URM Students in STEM Disciplines 2016-18 \$32,411 HBCU-UP TIP: Interdisciplinary Data Analytics 2017-20 \$399,974 HBCU-UP TIP: Interdisciplinary Data Analytics 2018-21 \$299,961 Role of Lipids Reorganized by Viral Proteins and Restriction Factors in Viral Life Cycle 2018-21 \$255,7172 RISE Biomedical Research Training Program 2012-19 \$1,123,953 HBCU Masters in STEM (Mathematics and Marine Sciences) 2018-23 \$2,559,496 Educational Talent Search 2018-23 \$3,260,892 Working Group to Address the Challenge of Food Deserts through Urban Agriculture 2019-21 \$50,000 Biota Improvement in an Urban Stream through Aquatic Habitat Restoration 2018-20 \$46,000 Waste Management Education and Enhancing Environmental Science Program 2018-20 \$46,000 Mediating Role of Metavinculin on the Mechanical Properties of Extracelluar Matrix and Smooth Muscle Cells 2018-20 \$296,692 Sigma-1 Receptor Agonists as Novel Therapeutic for Brain Mitochrondrial Dysfunction in Gulf War Syndrome 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-20 \$672,888 Sigma-1 Receptor Agonists as Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue 2017-18 \$177,036 GEAR UP Georgia 2018-19 \$2,800,0	Georgia Space Grant	2015-19	\$36,000
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	JETS UNITE	2018-19	\$34,360

SAVANNAH STATE UNIVERSITY

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