

# The University RESEARCH NEWSLETTER

The University Research Newsletter  
is published by the Office of the Provost.

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MILLERSVILLE UNIVERSITY OF PENNSYLVANIA



## A Message from the Provost

Millersville University is experiencing a season of positive change with

impactful transitions and experiences for our students. On July 1, 2018, Dr. Daniel Wubah became the 15th University President. Dr. Wubah has detailed some of his experiences in this edition's Faculty Interview section.

With the support of our new President, the faculty, and various centers on our campus, incoming students will be entering an environment where they will find a campus climate that is embracing and open to a variety of perspectives and opinions. These viewpoints can lead to ideas that evolve into research topics for our faculty, graduate students, and undergraduate students over the course of their time here and beyond.

In any academic setting, it is important for perspectives and opinions to be backed by evidence and scholarship. By engaging in scholarly research as an undergraduate, we hope our students gain experience in data collection, analysis, refinement, and the presentation and publishing

processes that can be carried into all future career paths. To encourage this scholarship, our students currently have access to a significant number of resources for conducting meaningful research on topics within their respective fields. Many of these students share their findings at conferences, such as "Made in Millersville," which is hosted annually by the University. With the support of faculty as well as a variety of available grants, our students may also be afforded the opportunity to present their work regionally, nationally, and even internationally.

I hope you find the research summaries, profiles, and commentary in this edition of the University Research Newsletter to be meaningful and reflective of the ongoing positive change at MU. We are honored to have Dr. Rita Smith Wade-El as the author of this edition's commentary.

Sincerely,

Vilas A. Prabhu, Ph.D.  
Provost and Vice President  
for Academic Affairs

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# AN INTERVIEW WITH MU'S 15TH PRESIDENT

## Dr. Daniel A. Wubah



### Who are you bringing to MU with you?

My wife, Dr. Judith Wubah, and I are the only people moving into Tanger House. Our two daughters are grown and we don't have any pets.

### What drew you to Millersville University?

I was drawn to this university based on its reputation and potential to be a top public comprehensive university that offers excellent educational experiences for students at an affordable cost. During our on-campus interview, my wife and I were impressed with the dedication and commitment of everyone we met.

### As of now, do you plan to conduct any research while President at Millersville? If so, what might the research entail?

Up until I became a provost, I was able to carve out time to carry out research by taking students to Ghana in the summer under the National Science Foundation Research Experiences for Undergraduates program. Unfortunately, my schedule as the president will not allow me to conduct scientific research in the lab. However, I would like to increase research opportunities for our faculty and students.

### When you were attending the University of Cape Coast (UCC) in Ghana, did you conduct student research? How did it help you prepare for life after college and your future career?

Yes, one of the requirements of honors students at UCC was to submit and defend a thesis based on original independent research. My research focused on the relationship between the obligate parasitic vine, *Cassytha filiformis* and its hosts, mainly members of the Lauraceae. While there is no direct linkage between my thesis project and my graduate studies, I believe that the process of doing independent research prepared me for my future career as a microbiologist and botanist. I learned the process of designing an experiment to address a specific problem and to disseminate the results. That skill is necessary for all scientists.

### Can you tell us a bit about your most recent research?

My most recent research focused on studying anaerobic zoospore-producing fungi found in the gastrointestinal tract of herbivores and how they contribute towards degradation of

the fibrous material ingested by their host. The project involved developing techniques to isolate pure cultures of the fungi, determining their taxonomic characteristics and examining their ability to break down highly lignified plant tissues. Our ultimate goal was to improve the efficiency of rumen digestion.

### Could you detail any practical outcomes of any of your lines of research?

One of the major outcomes of rumen digestion is the production of greenhouse gases that contribute to the depletion of the ozone layer. These gases are produced through eructation (belching) of ruminants such as cows, sheep and horses. It has been estimated that the economic impact of increasing the efficiency of the microbial digestion in the rumen by 1 percent globally is equivalent to about \$1 billion annually in addition to decreasing the production of greenhouse gases.

### What was your proudest moment as a researcher?

As an educator, my proudest moments were when my students presented their research at professional meetings and they took ownership of the work. A number of them have won awards for their work. As a scientist, it is not easy to point to one particular result as my proudest moment. However, among my contributions that made me proud was identifying new morphological characteristics of these fungi and finding out that some of my isolates produced the most active lignocellulases ever discovered at that time. These lignocellulases are the enzymes that remove the non-digestible part (lignin) from the digestible part (cellulose) in plants. Ultimately, genes from these isolates were transferred into bacteria to improve degradation of plant material in the paper and pulp industry.

# MU ALUM PROFILES

## How has your research affected how you approach other aspects of your career?

As a scientist, my career has focused on identifying a problem after literature search, designing a valid experimental protocol to address the problem, carrying out the experiment to collect and analyze data to generate new knowledge that address the problem. This approach is not linear and does not always yield clear cut results. The new knowledge serves as the basis for developing additional questions to be answered. This cycle of advancing knowledge can at times lead to ambiguous outcomes, which can serve as the basis for additional research. As an academic leader, my background as a scientist helps me to decipher problems, find ways to solve these problems and to handle ambiguity, which can be commonplace in the academy.

## Would you reflect on the current research being done at the University?

We have several exciting projects going on at Millersville University. We have faculty working on projects ranging from telling the untold stories of the founding of the United States to the hugely successful BBC movie, "The Return," that describes how a family is reunited after being separated for over two decades. Our science faculty supervise students in projects such as investigating Appalachian-induced fine-scale frontal features, identifying pigments in art using surface enhanced Raman spectroscopy and an evaluation of invertebrate prey in the subfolium level of forest floors. The Made in Millersville program provides a forum to showcase and disseminate their work and it encapsulates the level of research and experiential opportunities that are available to students. One of my priorities is to integrate such practices into the fabric of the MU academic structure so that all our students will have this experience.



**Dr. Jaime Kurtz '00** earned her Bachelor of Arts in Psychology from Millersville University of Pennsylvania in 2000 and her Master of Arts and Ph.D. from the University of Virginia in 2003 and 2007, respectively. Jaime is an associate professor of Psychology at James Madison University and teaches courses including Social Psychology, Positive Psychology, Personality and Research Methods. She also teaches a study abroad class in Sweden and Denmark each summer.

Most recently, Kurtz published the book "The Happy Traveler" in 2017. The book focuses on how to make traveling more enjoyable.

"I love travel, but I was starting to see that my travels weren't always as fun as I expected them to be. Since fun is often the very point of travel, I thought it was

interesting that we can do such a bad job of crafting a fun experience for ourselves. I realized that psychology could offer some practical advice on how to do it better. Since travel is rare and expensive for many of us, why not learn how to do it a little better?" she explained.

She became interested in research topics such as this while at graduate school at the University of Virginia. While there, she worked with a professor who studied happiness and why people are not always the best at judging what will make them happy in the future.

"The topic is so far-reaching and fascinating; it continues to inspire research questions!" Kurtz explained.

While studying at Millersville University, Kurtz completed a University Honors College thesis with Dr. Tae Woo on eating behaviors and how people consume different amounts of food when under stress.

"I have vivid memories of making over eighty vanilla milkshakes for students in the lounge of Byerly Hall (now Luek Hall)," Kurtz recalled.



**Amber Liggett '18**, a metrology major, is currently a first year master's student in Millersville University's Emergency

Management Program. As an undergraduate student, Amber conducted research under Dr. Sepi Yalda, that examined qualitatively identified gust front signatures, or the increased winds that develop before a thunder storm. Amber's goal for this research was to offer refinements to improve algorithms, based on human forecasting, so that gust fronts are accurately forecasted using computers. Amber was motivated to conduct this research since the

topic stemmed from an internship she completed in 2015 at the National Weather Center in Norman, Oklahoma. While working with a newly developed machine intelligence algorithm, she was able to identify areas of improvement in the accuracy of gust front detection.

After graduating from the M.S. program in 2020, Amber plans to combine her two degrees to ultimately communicate meteorological science information and disaster risk to both the general public and public officials. Amber's other accomplishments include establishing an award-winning animal balloon business, completing five undergraduate internships, and being appointed as a graduate assistant in the Center for Disaster Research & Education at MU.

# COMMENTARY

DR. RITA SMITH WADE-EL

## What Are You Missing?



After 35 years at Millersville University as a faculty member, and many accomplishments and positive experiences, I can unequivocally state that mentoring students

through research has been the most fulfilling. This is especially true because the students I mentored were consistently overlooked by faculty when scouting for students with which to collaborate or mentor. I started taking on mentees 25 years ago. Students began by presenting at research conferences on campus, but were soon presenting at regional and national conferences and most recently at international conferences. In May of this year, I accompanied 10 students who presented at the international conference of the Global Awareness Society International (GASI) in Atlanta and last year, eight students to Costa Rica for the GASI annual conference. MU students have also presented at GASI conferences in New York, Italy, Philadelphia, Jamaica and Hungary. Next year, GASI will be in Morocco.

Topics which have been presented include:

- Racial and ethnic differences in social media use and the impact on academic performance
- Cross racial adoption in the LGBTQ community
- Racial differences in the stigmatization of learning disabilities
- Colorism and the perception of African American Vernacular English (AAVE)
- The educational experiences of immigrants and refugees in Lancaster County
- Factors in the political involvement of African American college students
- College students' experiences & attitudes toward law enforcement as a function of gender and race

- What causes students of color to drop out of predominantly white institutions?

As invaluable as the research and presentation experiences are, the opportunity to interact with scholars and students from all over the world and across a variety of disciplines provides students with perspectives and critical and analytic skills not available in more insular settings. In addition, GASI provides the opportunity for students to learn about the culture of the country or city. After the conference, the students and other attendees spend 2 to 7 days touring the country or city. They are not just tourists. They are exposed to places and hear presentations that examine social and political issues. Even when the conferences are held in the United States, learning the perspective of someone not from the United States is eye-opening.

Sometimes the conference itself addresses political and social issues. Recently, Dr. Marilyn Parrish, two Millersville students, and I attended a conference in Belfast, "Dangerous Oral Histories: Risk, Responsibilities and Rewards," sponsored by the Oral History Society. These histories were gathered in troubled times around troubled issues, such as conflicts between Irish Catholics and British Protestants in Northern Ireland, being HIV positive in Pakistan, domestic violence in Australia, and the dangers of oral history in India.

Our presentation was on the experiences of students of color on Millersville's campus since the election of President Donald Trump.

When I had a sabbatical leave in 2013 after 30 years at MU, I wanted to see if data would support my experience. When visiting various equivalent public universities in Maryland, New Jersey, and Pennsylvania, I found that African American and Latino students who had worked with faculty on research graduated from those institutions. Our University, especially the President's Commission on Cultural Diversity and Inclusion, supported this approach by obtaining funds for a three-year research mentoring initiative which has been very successful and must continue. You can be a part of this. The program pays tuition, room and board and allots a \$1,500 stipend for the student and an independent study faculty salary.

In case you missed the point of this commentary, it is a commercial. I am selling those students we might be overlooking. I am selling the rewarding experience of mentoring. I am selling the opportunity to see awe rekindled. The awe whose source is the discovery of a new perspective. I am selling the previous motto of our school, the opportunity to develop "lifelong learners."



2018 GASI Scholarship recipients in Atlanta, Georgia

# FACULTY-STUDENT COLLABORATION

## Center for Public Scholarship and Social Change: A Productive Student-Faculty-Community Collaboration

### OVERVIEW:

The Center for Public Scholarship and Social Change at Millersville University has taken on a multitude of projects geared towards improving the local community. The Center partners with numerous University faculty, graduate and undergraduate students, along with community entities and non-profits.

Students involved with these projects include Brandon Lee, sociology, who was recently mentioned in Dr. Wubah's State of the University address for the Narcan training he brought to MU's campus, Lisa Brenneman, who is a graduate student in the Masters of Social Work program and Joe Brandenburg, a graduate assistant in the Masters of Clinical Psychology program.

"The level of skill I gained [working at the center] is instrumental. I am getting experience that most people do not get until they are out of school. I am learning and practicing report writing, working with community entities, applying for grants, and helping non-profits with social media presence," Brandenburg said of his experience with the Center.

The Center also has five other graduate and undergraduate students conducting research for these projects, along with involving sociology students in large-scale research. Faculty who are involved with the Center include Dr. Mary Glazier, who is both the Sociology/Anthropology Department Chairperson and the head of the Center, along with Dr. Carrie Smith, Associate Professor of Sociology; Kris Castner, Adjunct Professor of Sociology; Dr. Laura Granruth, Assistant Professor of Social Work; Dr. Jennifer Frank, Assistant Professor of Social Work; and Dr. Ryan Orr, Associate Professor of Sociology.

### CONFERENCES:

This November, members of the Center will be traveling to the American Society of Criminology meeting in Atlanta, GA.

Dr. Glazier and Joe Brandenburg will present a paper on racial disparity in bail setting and have a seat at a symposium. They will, along with other members of the Center, also be giving a poster presentation.

Members of the Center will also be assisting with the October Positive Change Conference focused on recovery from addiction, held in the Student Memorial Center. Select faculty and students will also be at the Educational Foundations Department's Education and Poverty Conference in November, where the Center's work will be presented through the Social Work Department.

### OVERVIEW OF CURRENT RESEARCH EFFORTS AND OTHER PROGRAMS:

**Ambassadors for Hope:** This non-profit program aims to serve the needs of children of incarcerated parents. The Center recently wrote a grant which provided the funds to purchase 200 teddy bears that have the capability to record and play back a message. Incarcerated parents will be able to record a special message for their children. The Center also will participate in the Extra Ordinary Give on November 16 and are at the Ware Center every First Friday for fundraising.

### Community Mobilization and SoWe:

The Center collects and analyzes crime statistics in Lancaster city for this organization to ensure that the efforts they are taking to reduce crime in their communities are effective.

**NAACP:** The Center works with the NAACP by researching and comparing racial disparities related to bail in Lancaster City. A recent finding suggests that the amount of bail does not necessarily vary by race, but the type of bail set for various individuals does vary.

**Elder Abuse Research:** This research effort partners with the Lancaster DA's Office and examines financial exploitation of the elderly.

**Quantitative Report on Camera Use in Lancaster City:** Working with the Lancaster

Safety Coalition (LSC), the Center examines criminal cases in Lancaster that include video evidence in order to deduce whether or not having security footage clarifies the case or influences the results.

**The Lazarus Project:** This community-based project is geared toward addressing the prevalence of opioid addiction. Last year, the Center organized Narcan training on campus.

**SouthEast Surveying:** In partnership with the Spanish-American Civil Association, the Center and sociology students from the University conduct door to door research by surveying 350 residents in the southeast sector of Lancaster City. The goal is to gauge the community's perception of safety and to identify residents' desires and goals for their neighborhood.

**Aimee Tyson & Homeless Providers:** This contracted research project focuses on the Rapid Rehousing strategy for helping homeless people. The strategy involves finding the homeless housing before addressing any other issues they may be having. The Center is working with 35 homeless care providers in order to work towards the implementation of effective programs in Lancaster City.

### Disproportionate Minority Contact:

The Center analyzes data that are collected at an event that includes 200 middle schoolers and Lancaster City law enforcement officers. The 'intervention' is associated with improvements in young peoples' attitudes about police.



Graduate and Undergraduate Student Workers

# STUDENT RESEARCH



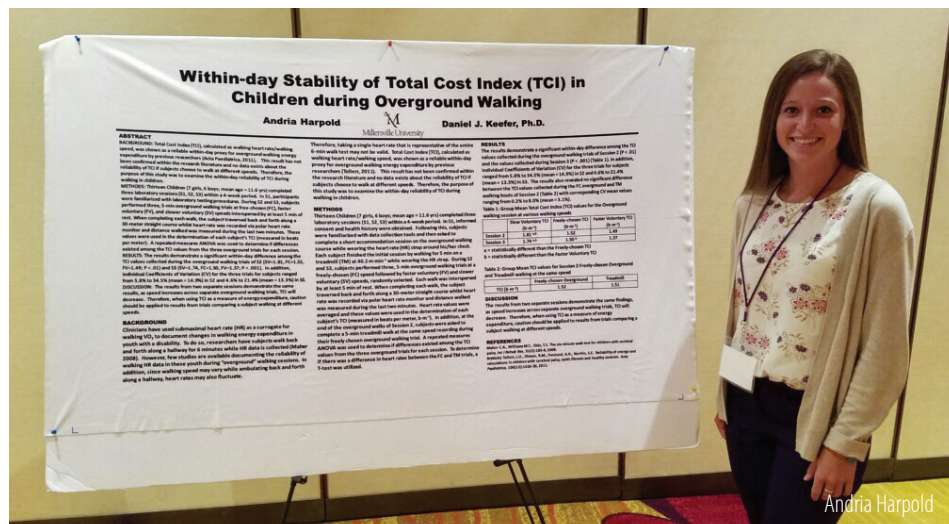
Girum Erkalu

**Girum Erkalu '20**, Chemistry/Biochemistry, participated in a Research Experience for Undergraduates at Boston University over the summer of 2018. During his time there, he worked with Katherine Cook, his mentor and a graduate student, on hydrogels that dissolve on-demand through thiol-thioester exchange.

"They are looking to use them as an alternative for traditional adhesive wound dressings to eliminate damage done when changing and removing gauze dressing and for many other applications," Erkalu explained.

Essentially, the hydrogels are made by combining dendrons (which is an extension of a nerve cell) and crosslinkers (which are capable of making multiple bonds) with different methylene chains with chemical bonds. The crosslinker contains bonds that allow the hydrogel to dissolve. After creating the gels, studies are performed on the gels.

In addition to work in the lab, Erkalu also had the opportunity to hear people who work in the industry, such as pharmaceutical companies, patent offices, and consultants, tell their stories. He also attended PhD defenses and grad student group meetings while at Boston University.



Andria Harpold

"[Having these opportunities] opened my eye to all the possible careers out there," Erkalu said about his experience. He plans on pursuing his PhD after finishing his undergraduate program at MU and wants to work as a researcher in the future along with owning his own business related to health and fitness.

**Andria Harpold '18**, a Pre-Physical Therapy major, presented a poster titled "Within Day Stability of Total Cost Index (TCI) in Children during Overground Walking" at the North American Society for Pediatric Exercise Medicine biennial meeting in August 2018 in Oakland, California.

"Changing my major to Multidisciplinary Studies, I knew when I would apply to Doctorate of Physical Therapy (DPT) programs that I would have to really try and sell myself when being compared to other students coming from an Exercise Science background or a pre-physical therapy degree," Andria explained.

Dr. Daniel Keefer, Andria's academic advisor, offered to help her conduct a research study as part of an independent study course. After completing the study, she applied to the conference and was accepted.

"The conference was a great experience – being able to see the applications and

connections to some of the content I have learned in courses I've taken. It also provided great exposure and practice presenting at a conference like this because I will have to present research during my DPT program," Andria said of the experience.

After graduating in December, Andria plans to attend a three-year doctoral program in Physical Therapy and specialize in pediatric physical therapy.



**Bryanne Minnella, '18**, a music performance, music education and inclusive education major (grades 7-12), and member of the University Honors College, completed her honors thesis, which researched and analyzed "Die schone Mullerin," a song cycle by Franz Schubert.

Her thesis, titled "Die schone Mullerin – Performance, Application and Analysis of a Major Biedermeier Era Song Cycle,"

began by analyzing the 20-piece song cycle poetically, harmonically, and by musical form. It ended with Bryanne organizing each piece to be performed by her peers at a traditional Schubertiade event on Dec. 12, 2017. During that event, she narrated the story told by each song by summarizing the lyrics in a modern and understandable way.

Along with her thesis research, Bryanne completed three majors in three and a half years, worked on campus, and had the opportunity to live in foreign countries twice throughout her time at Millersville.

In the summer of 2017, Bryanne studied abroad in Vienna, Austria. Then over the summer of 2018, Bryanne was able to spend the summer in Madrid, Spain as an au pair. An au pair is a person who speaks a language that parents would like their children to learn and that person interacts with the children in that language in order to work on their development of the language. While with

her host family, Bryanne and her host father, who was an opera singer, often performed opera together.

"I got to visit Portugal, various cities in Spain, France, Belgium, Italy and Luxembourg. I made many friends in Madrid and now have a second family that I can go back to at any time," Bryanne said of her experience.

After graduation, Bryanne plans on moving to Falun, Sweden to teach music to students in grades 4-6.



**Timothy Sakowski '19**, a geology major and University Honors College member, conducted research under the supervision of Dr. Talor Walsh.

Timothy's research examined core drilled from different sites throughout Pennsylvania. He identified

the natural fractures from the induced fractures and then organized the natural fractures to find a correlation between the different types of fractures, their depth, and the rock type they existed in. Timothy's interest in his research stemmed from a similar project Walsh was conducting. Moreover, Timothy was able to conduct his research upon receiving a grant through the Millersville University Mentored Undergraduate Research Experience. While reviewing his data, Timothy was able to find a new pattern that had previously been an oversight. As a follow-up to his research, Timothy is interested in understanding if the patterns could eventually be used to create a model that is able to predict the location of underground fractures.

Upon graduating from Millersville, Timothy hopes to work with the federal government or in an environmental field pertaining to geology. After gaining work experience, Timothy also plans to earn a master's degree in geology.

## Have you heard about the Made in Millersville Journal?

You may have already heard about the annual Made in Millersville conference that showcases the scholarly and creative work of Millersville students in all class levels and includes a range of projects in diverse disciplines, spanning across observational research in Earth Sciences to original photography in Art & Design.

The "Made in Millersville Journal," on the other hand, has been gaining popularity the last three years by capturing diverse and vibrant student projects that are presented at the Made in Millersville conference in print. Through inclusion in the journal, students can impress potential future employers with a published writing sample. Working with a team of trained student editors, student authors experience a unique, authentic and personalized publishing process. As a result of this process,

students can improve their own writing by consolidating their conference presentations into an effective and accessible summary for the public audience.

To find out more about this journal, which showcases diverse disciplinary projects in one place and continues the discussion of student works after the Made in Millersville conference, visit the following: [www.mimjournal.com](http://www.mimjournal.com).

For questions, please contact the faculty directors of the journal: Dr. Kerrie Farkas [kerrie.farkas@millersville.edu](mailto:kerrie.farkas@millersville.edu) and Tatiana Pashkova-Balkenhol [tpashkovabalkenhol@millersville.edu](mailto:tpashkovabalkenhol@millersville.edu).

If you haven't heard about the Conference or want to find out more, visit the following: [www.madeinmu.education](http://www.madeinmu.education).



Caption: Journal Editorial Team presenting at the Made in Millersville 2018 conference. From the left: Daniel Dicker, Sara Lipski, Mikayla Steele, and Shaakirah Ahmad Tate (not pictured)

# FACULTY PROFILE



**Dr. Changfu Chang**, professor in the Communication & Theatre Department, has been busy with filmmaking and is taking steps to

broaden University relationships with the outside world. Most recently, he was a speaker at the September 2018 United Chinese American in Washington D.C.

Chang's documentary work has received much recognition for multiple films he has helped produce, direct, and/or write. He recently worked as a director for the BBC on a story that resulted in three separate documentaries: "The Return" (broadcast version), "Meet Me on the Bridge" (online version), and "Return to China" (radio version). The online version has 60 million views and is the second most watched BBC online film ever.

"The Confucius Village," which Chang produced, was released in 2016. This feature-length documentary was the official selection of numerous film festivals, winning the equivalent of an Emmy award in China.

His films also include works such as "Ricki's Promise" and other films focusing on China and its one-child policy. One of his current projects will focus on the recent botched indictments of falsely accused Chinese-American scientists with flimsy evidence by the American government. He is also working on a concept that involved the "people who carry the Chinese economy on their wheels," Chang said. This project will focus on truckers in China and the obstacles and hardships that they face.

Outside of filmmaking, Chang is helping Millersville University make international connections. He hopes to create a global partnership between Millersville University and his alma mater, Yancheng Teachers College in China, so that both universities may eventually send students to study at each other's campuses.

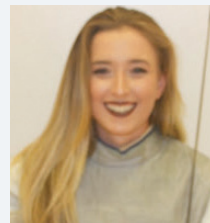
At Millersville, Chang makes sure that his upper level production and video classes gain real-world experience by partnering student teams with companies, mostly non-profits, to make promotional videos.

## NEWSLETTER STAFF



**Editor in Chief:**  
**Dr. Elizabeth Thyrum**

Dr. Elizabeth Thyrum serves as the Director of MU's Honors College and is Associate Professor in the Department of Psychology. She teaches courses that include Psychology of Drug Addiction, Health Psychology, and Applications of Biopsychology. Her research interests encompass areas related to stress and coping, health behavior, cognitive functioning and physical illness (AIDS, hypertension), and substance abuse.



**Student**  
**Managing Editor:**  
**Kaylee Herndon**

Kaylee Herndon is a junior at Millersville University majoring in sports journalism. She currently serves as a media relations intern with the Reading Royals. For her University Honors College thesis, she will be creating a manuscript of her creative writing and conducting an in-depth analysis of her work. She is an assistant coach at Nook Fencing Academy and holds an officer position at the Fencing Guild at Millersville University.



**Student**  
**Assistant Editor:**  
**Brittney Brown**

Brittney Brown is the former President of the NAACP College Chapter at Millersville University. Brittney will graduate in December 2018 from the University's Honors College and is a Government and Political Affairs major with minors in both Philosophy and African American Studies. She has conducted a variety of studies on factors that influence political participation in African American college students and also presented her findings at various conferences. Her University Honors College thesis investigates mental health stigma and its impact on being elected into office.