### MEYERHOFF PARENTS ASSOCIATION

### HELPING OUR STUDENTS HOLD FAST TO THEIR DREAMS...



#### HOT NEWS

#### Save the Date!

Students can chill out at the Fall Stress Buster on December 10 from 6-9pm. Food, fun, games, prizes, therapeutic massages—It all happens in the UC Ballroom. Parents can help by donating items or volunteering at the event. Details on page 9.

Winter Commencement Ceremonies at UMBC Event Center: -Graduate Commencement-12/19/18 @

10am

Visit <u>https://</u> commence-<u>ment.umbc.edu</u> for more information.

#### INSIDE THIS ISSUE:

Support	3
Meyerhoff Fall Retreat	4
Welcome M30s!	5
UMBC Rhodes Scholarship	6
Alumni News	8
Announcements	9
Meyerhoff Stories	10

# Newsletter

## UMBC's Global Medical Brigade: NICARAGUA

During spring break 2018, M29s Dominique Brooks, Makayla Headley and Keren Herran traveled to Esteli, Nicaragua with UMBC's Global Medical Brigade, an international movement of students and medical professionals working alongside local communities and staff to implement sustainable health systems.

Dominique describes the experience: "The community we served was called Las Gavetas. For three days, we traveled about 45 minutes every morning to the community to set up the medical and dental clinics. There were several stations in which we participated, including triage, consultations and *charla* (chat).

This was such an amazing and humbling experience. We met so

many great people and learned a lot, not only about the community but ourselves as well.



Dominique Brooks checks a patient's blood pressure at Las Gavetas medical clinic

This experience made me realize that I take a lot of things for granted, such as having access to clean water, having sustainable living quarters, or just simply having food to eat every day." Makayla adds, "The trip was very humbling, and I believe it is something everyone should experience. Being a part of the medical portion of the Brigade, I worked alongside doctors, assisting them by taking vitals, distributing medication, and providing educational workshops.

**FALL 2018** 

By seeing the people in the communities, I did self-reflection and thought about how much I took for granted. I did not expect the trip to have such an impact on me as it did. This is something I would definitely do again, and I strongly encourage others to experience!"

Keren's impressions include: "The Global Brigade Medical Brigade trip was a beautiful experience. (continued on next page)



Makayla Headley digs a trench to start the foundation for a water piping system



Keren Herran and Makayla Headley pose with two girls from the local village

### MPA Activities 2018-19

The Meyerhoff Parents Association works behind the scenes all year round to help UMBC and the Meyerhoff Office staff support our students.

Along with a Board of Directors, each current Meyerhoff cohort has at least one Class Representative. Parents of Meyerhoff alumni are also represented on the Board.

The MPA supports a number of studentcentric activities throughout the year, including Selection Weekend, Summer Bridge, Fall and Spring Stress Buster events, as well as fundraising efforts. All Meyerhoff parents are welcome and encouraged to participate.

Please contact the Meyerhoff Parents Association at umbcmpa@gmail.com to learn more.

## **Don't Miss Out!**

Don't miss out on important information that affects you and your student. Make sure you're receiving the most current information about the Meyerhoff Program by keeping your contact information up-to-date.

Parents, please update your contact information via this survey:

### **Click Here for Contact Information Survey**

Your response by **December 14** is greatly appreciated.

### **UMBC's Global Medical Brigade Continued from cover page**

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We accomplished serving hundreds of patients in a very rural area. Our roles included triage, doctor's assistant, OBGYN, pharmacy technician, and data informatics.

In addition, I had the honor of coleading the curriculum development for the children's health workshop we designed in which proper handwashing technique was taught through interactive activities and a fun song."

Dominique describes their daily duties: "At the triage station, we were responsible for taking important vitals such as blood pressure, pulse, respiratory rate, weight, temperature, etc. At the next station, consultation, we shadowed doctors and assisted them by manually recording information.

The patients expressed their health symptoms to the doctor, and we helped identify the diagnosis and

treatment. In addition, patients could also visit the dental clinic to get cleanings, extractions and fill-ins.

Dominique sums up her overall experience this way: "I gained a new perspective of the world, which has allowed me to appreciate and be grateful for the opportunities and the resources that I have access to. Most importantly, I am glad I was able to provide assistance to those who needed it most."



### **SURF: Undergraduate** Research

The 21st Annual Summer Undergraduate Research Fest (SURF) was held on August 8, 2018. This annual event, hosted by the College of Natural and Mathematical Sciences, provides a venue for summer undergraduate research presentations at UMBC.

Student researchers, including participants in the MARC U\*STAR, Meyerhoff Howard Hughes Medical Institute (HHMI), STEM BUILD and the Summer Biomedical Training Programs presented their summer research projects as oral talks or scientific posters at this annual event.

See the 2018 SURF Conference program here.

### Welcome to the Meyerhoff Parents Association!

As parents of Meyerhoff scholars, we know the experience of a scholar is unique, opening doors to new and novel experiences, forging lifelong relationships and propelling these students toward a fulfilling career. It's vitally important to support our scholars. One way to do that is to donate to the Meyerhoff Parents Association (MPA). The MPA works tirelessly to enhance the scholars' college experience through ongoing support and activities. We need your help to continue to make this program a success. Please donate to the MPA today. Visit <u>https://gritstarter.umbc.edu/p/meyerhoffparents/</u> to make an online donation.

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Phone1:	(H)	(C)			
Email Addres	s(es) 1:				
Parent/Guard	dian FULL Name 2:				
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I work for a matching gift company. Enclosed is my employer's matching gift form.					
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	Fall Stress Buster		\$	_Amount	
	Spring Stress Buster		\$	_Amount	
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	Senior Reception		\$	_Amount	
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Online Dona	tion:	<u>https://gritstarter.umbc.edu/p/meyerhoffparents/</u> SELECT: Meyerhoff Parent Association Operating Fund.			

#### Meyerhoff Parents Association (MPA) Member Donation Form

The funds raised are administered by the UMBC Foundation for the benefit of the UMBC MPA

# Fall Family Meeting and Retreat

The September Fall Family Meeting and Retreat is an opportunity for students, staff and UMBC administrators to gather as a family and spend an entire day in fellowship and fun.

Students are welcomed to the new academic year and program updates are shared at an on-campus meeting. Students are then transported to an offcampus park where lunch is provided.

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The students become better acquainted through teambuilding and leisure activities and show their competitive spirit through cohort games and competitions. Go Meyerhoffs! (M26 Cohort not pictured.)

### Congratulations to the M27 Cohort Olympic Winners!



# Welcome, M30 Meyerhoff Scholars!

We're excited to introduce our newest scholars class, the M30s. Welcome to the Meyerhoff family! We also send a big thank you to the M30 parents who answered the call for assistance with the 2018 Summer Bridge Stress Buster. They showed up with bags and huge crates of balloons filled with water, ready for the annual water balloon toss. This was a cool way to relieve stress on a very hot summer day near the end of Summer Bridge. These volunteers helped manage activities for a fun-filled afternoon with more than 80 students, including calculating weights for guessing games, handing out prize bags, working with small groups as they played trivia games, overseeing rope tug of war and ball carrying games. Many thanks for your ideas, energy and enthusiastic support of our students!





# 68th Nobel Laureate Meeting



### June 2018 Conference held in Lindau, Germany

M26 Naomi Mburu, UMBC's first student to receive a **Rhodes Scholarship**, was competitively selected and participated in the 68th annual conference in June 2018. The various lectures, discussions, master classes, and panel discussions were designed to activate the exchange of knowledge, ideas, and experience between and among Nobel Laureates and young scientists.

Each year, about 30 Nobel Laureates convene in Lindau, Germany to meet the next generation of leading scientists: 500-600 undergraduates, PhD students and post-doc researchers from all over the world.

Congratulations, Naomi!

# In Search of . . . M31 Meyerhoff Scholars

The Meyerhoff Scholars Program is now accepting applications for its M31 scholars class. The priority deadline for applications is December 1, 2018, and the final deadline is January 15, 2019.

For complete details about the Meyerhoff Scholars Program and application process, visit <u>https://</u>meyerhoff.umbc.edu/.

The program is open to all highachieving high school seniors who have an interest in pursuing doctoral study in the sciences or engineering, and who are interested in the advancement of minorities in the sciences and related fields. Meyerhoff Scholars receive fouryear scholarships, ranging from \$5,000-\$15,000 per year for instate students and \$10,000-\$22,000 per year for out-of-state students. The Meyerhoff Selection Committee considers students' academic performance, standardized test scores, recommendation letters, and commitment to community service. Scholars are



These scholarships are per academic year, to assist in covering tuition, mandatory fees, and other expenses. selected for their interests in the sciences, engineering, mathematics, or computer science, as well as their plans to pursue a Ph.D. or combined M.D./Ph.D. in the sciences or engineering.

## Meyerhoff Scholars: International Studies

By Renita Prevot Smith, MPA Senior Reception Chair & Cohort Representative

Aliyah was accepted to an internship at the University of Oxford in Oxford, England through an internship program at the University of California, Santa Barbara (UCSB). She worked in the Micromechanics Lab in the Department of Materials under Dr. Angus Wilkinson and Dr. Jicheng Gong, studying the effects of ultrasonic fatigue testing on 304 stainless steel, conducting physical tests in the lab as well as elastic finite element analysis (FEA) simulations.

In addition to conducting research, she had the chance to travel to other cities such as London, Paris, and Amsterdam.





While in the UAE, Aliyah had the opportunity to visit other countries, such as Jordan, Thailand, India, and Oman, with the other students in her study abroad program. She particularly enjoyed experiencing differing cultures and having to figure out logistics, such as flights, lodging, and excursions while traveling.

Aliyah really enjoyed herself during these two study abroad/internship programs, and definitely will look for more international experiences during her graduate school career, and thereafter. She also took part in local cultural activities, such as going to the pub to watch "football" matches.

After her summer experience, Aliyah-was determined to find a semester-long study abroad program that worked with her degree. After working with the UMBC Study Abroad Office and committing hours to researching potential study abroad programs, Aliyah finally found a program that worked and would not delay her graduation date.

During 2018, the Spring semester of her junior year, Aliyah went to the United Arab Emirates for one semester. She studied at the American University of Sharjah (AUS) in the emirate of Sharjah, mainly taking courses that fulfilled her General Education Program (GEP), as well as two courses that fulfilled her mechanical engineering degree requirements.



### Meyerhoff Scholars: Alumni News



Left to Right: Isaac Kinde, Seth Miller, Kenny Gibbs, and Andy Windsor

By Edie Windsor, MPA Board Alumni Representative

My son, Andy, joined the Meyerhoff Community in September 2001 as a member of the M-13 cohort. Straight away, Andy and his roommate, Isaac Kinde, joined forces with their neighbors, Kenny Gibbs and Seth Miller. The four young scholars roomed together following freshman year and have been a dynamic quartet ever since. Now, 13 years since their UMBC graduation they continue to be very close, and I am still known as "Momma W."

**Isaac Kinde, MD, PhD**—I am Chief Scientific Officer at PapGene, Inc., a cancer diagnostics startup commercializing tests for the earlier detection of cancer.

**Seth Miller, MD**—I am an Attending Radiation Oncologist at Carolina East Health System in New Bern, North Carolina.

**Kenneth (Kenny) Gibbs, Jr., PhD**—I am Director of the Postdoctoral Research Associate Training (PRAT) Program at the National Institute of General Medical Sciences (NIGMS). I am also a Program Director at NIGMS in the Divisions of Training; Workforce Development and Diversity; and Genetics & Molecular, Cellular, and Developmental Biology. The focus of these divisions is to lead and administer federal programs that train the next generation of scientists, broaden participation in the research workforce, and promote basic research.

**T. Andrew (Andy) Windsor, MD**—I'm an Assistant Professor in the Department of Emergency Medicine at the University of MD School of Medicine. I see patients in the emergency department at the University of MD Medical Center. As an academic physician, some of my responsibilities include teaching our residents and medical students clinically in the department and lecturing on the management of trauma patients. I also teach other physicians at national-level courses about how to use emergency ultrasound, and I participate in clinical research projects in our department.

### CONGRATULATIONS TO ALUMNI GRADUATE RESEARCH FELLOWSHIP PROGRAM WINNERS



Awardees: Jasmin Zarb, Randi Williams, Gwenaelle Thomas, Sean Najmi, and Sarah Hemler

Honorable Mentions: Kori McDonald, Alvaro Fletcher, and Roy Anderson



### Samantha Furman, M25: PhD in Computational Biology

At the University of Pittsburgh & Carnegie Mellon University, I study the spatial heterogeneity of tumors, specifically within colorectal carcinoma. A data set I work with is of 700 highly multiplexed tumor micro-environments (TME) florescent images along with corresponding clinical data including age, sex, cancer stage, cancer grade, and time to recurrence. The first step in studying the heterogeneity of tumors within TME images is to segment the cells and label them into cell types. The state-of-the-art method for phenotyping segmented cells is supervised machine learning algorithms which require a large sum of the data to be manually labeled by an expert in order for the algorithm to be trained to label the remaining cells. The supervised nature creates a bottleneck in research for computationalists to find an expert willing to label a mass number of cells for them. Over the last few months, I have built an unsupervised machine learning algorithm which can phenotype the cells based solely on their biomarker expression features. This method has enabled our group to separate the cells in our data into epithelial and stromal cell groups as well as further subtype these groups into stem cells, immune cells, and cancer associating fibroblasts without the need to manually label any data.

# Announcements

Our Deepest Condolences



### The MPA extends our deepest condolences to:

M4 Sydney Cousin Jr. & family on the loss of his father, **Dr. Sydney Cousin, Sr.** M28 Jethro Ssengonzi & family on the loss of his father, **Dr. Robert Ssengonzi.** The family of **M30 Sincere Melvin** on the loss of your son.

### Fall Stress Buster Monday, December 10 6-9pm UMBC UC Ballroom

Shortly after the Thanksgiving break, students are all too aware of the tension that sets in as final exams draw near. The MPA has a plan to help diffuse the stress that accompanies the semester's end with a Fall Stress Buster, organized especially for Meyerhoff students.

This event, which is free for students, is being organized by the M29 sophomore MPA parent cohorts and provides a



hot, delicious meal, laid-back games and activities, music, prizes, therapeutic massage, crafts and more. Parents help by volunteering at the event and/or donating needed items. A letter was recently sent to M29, M27 and M26 parents requesting donations and parent volunteers. If you have questions or would like to help, please contact us at <u>umbcmpa@gmail.com</u> with subject line **STRESS BUSTER**. Let's all pitch in together to make this a successful event!



### **New Parking System Effective August 2018**

A new parking permit system affecting students and visitors went into effect on August 29, 2018. The new system, using License Plate Recognition, will identify vehicles by their license plate, removing the need for physical hangtags and allowing all permit holders to easily add and maintain multiple vehicles on their accounts. License plates will be the used to determine if cars are parked in the assigned zone or if virtual permits are paid for.

Visiting campus? Visitor parking will now be "Pay–By– Plate." When purchasing parking at a pay station, vehicle license plate numbers will have to be entered.

The system will record plate numbers and immediately issue 'virtual' parking passes for the time period purchased. Paper tickets will no longer be issued to place on your dashboard, however, a receipt can be requested if needed. For more information, please visit <u>https://parking.umbc.edu/lpr-virtual-permits/virtualpermits-faq/</u>.

## How I Spent My Summer: Meyerhoff Stories

Internships are an integral part of the scholar's experience. Many students find their passion through hands-on work solving real-world problems. Here, several Meyerhoff students share their insights.



#### Aliyah Smith, M27

Aliyah, a Mechanical Engineering major, worked at the NASA Goddard Space Flight Center in Greenbelt, MD, developing an ultra compact testbed for a prototype star scanner. Star scanners are one of the most accurate devices used for spacecraft altitude determinations, as they tell us the orientation of spacecraft down to the arcsecond. The project involved capturing, sorting, and processing data from the star scanner for future spin-stabilized CubeSats or larger spacecraft.



### Myles Ellis, M27

Myles, majoring in Mathematics and Economics, interned at T. Rowe Price in Baltimore, MD. Myles says, "It was truly a privilege to be able to work alongside experts in multi-asset investments. I was able to observe the crucial role math plays in the world of finance. Overall, my academic goal is to earn my PhD in Behavioral Economics and to understand the way personal preferences shape decision making. Without this internship, I wouldn't have found my passion for this area of economics."



#### Katherine Berkowitz, M27

Katherine, a Mechanical Engineering major, spent the past two summers working at NC State University in Raleigh, NC in the Mechanical and Aerospace Engineering Department. Her research began with analyzing the effects of impact damage on radar permissibility in radome composites and expanded to multiple types and variation of damage. Impact damage was monitored and studied along with moisture contamination over a period of time. The findings from these experiments were significant, leading to several variations in the experiments.



#### Keynon Bell, M28

Keynon, a Chemistry major, headed northwest to the University of Washington in Seattle where he worked in a lab at the Institute for Protein Design. His research focused on computational modeling and characterization of heme binding proteins. Using Rosetta, a molecular modeling suite which allows for *de novo* design and structure prediction of proteins. Keynon and his mentors designed thousands of proteins, from which they selected seven that were the most stable for further study to determine if heme was bound correctly in the protein.

## How I Spent My Summer: Meyerhoff Stories



#### Sierra A. Wallace, M29

Sierra, a Biology major, spent her summer at Clemson University in Greenville, SC. She says, "Damaged DNA can result in a DNA double-strand break (DSB), which if not repaired correctly can cause diseases such as cancer. Proteins RAD51 and BRCA2 have integral roles in this mechanism. Our goal was to change an amino acid in RAD51 that is predicted to be important for interaction with BRCA2. My research provided insight into the interaction of RAD51 with BRCA2.



Halle Welch, M29

A Chemical Engineering major, Halle immersed herself in research at Boyce Thompson Institute at Cornell University in Ithaca, NY. Artichoke has a distinct phenotype, similar to the *Arabidopsis erecta* mutant. Halle's research examined the characteristics of the *artichoke* mutant to better understand how the mutation alters the plant's overall structure. Studying plant size and architecture is particularly important, as the research can be connected to crop development, where there is major demand.



### Austin King, M29

Austin, a Biology major, headed south to the University of Texas Southwestern in Dallas, TX, where he researched a theorized mitochondrial pathway involving the NDUFA4 protein. The theory is that during hypoxic conditions HIF1—a protein—activity increases, transcribing many different genes such as those related to glycolysis and cell growth. At the same time the NDUFA4 protein decreases and as a result Oxidative Phosphorylation is unregulated and continues to create ATP. This leads to increased glycolysis and/or cell death due to Oxidation Phosphorylation function in low oxygen conditions.

### **Contact Us!**

Meyerhoff Parents Association c/o UMBC/Meyerhoff Scholars Program 1000 Hilltop Circle Sherman Hall 218 Baltimore, MD 21250 umbcmpa@gmail.com



Helping Our Students Hold Fast to Their Dreams...



Many thanks to the photographers, parent volunteers, MPA members, students and many others whose contributions made this newsletter possible.



The Meyerhoff Scholars Program will celebrate its 30th anniversary in 2019! More details will follow in the coming weeks.



Visit <u>http://bookstore.umbc.edu/home</u> for more information and to place your order.