

THE SCOPE

THE OFFICIAL NEWSLETTER OF THE COLLEGE OF SCIENCE & MATHEMATICS / SCHOOL OF HEALTH PROFESSIONS

Message from the Dean

It has been my pleasure to serve as the Dean of the College of Science & Mathematics and School of Health Professions for the past four years. I will be returning to the faculty in Fall 2018. It is hard to believe how much we accomplished these past four years. While too many to list, major highlights certainly include the Summer Undergraduate Research Program now with nearly 100 students participating, multiple awards of major research grants from NSF and NIH to highly talented faculty, introducing the Learning Assistant program, and creation of new curriculum for 21st century careers.

We now welcome Dr. Cristian Botez as the new dean on August 1, 2018. Dr. Botez joins Rowan from the University of Texas – El Paso where he was the chair of the Department of Physics. I believe that Dr. Botez is the right person at the right time to lead CSM/SHP in our pursuit in advancing our strength as a research institution and growing our graduate programs, while staying true to our mission as an undergraduate institution.

Karen Magee-Sauer, Dean
College of Science & Mathematics
School of Health Professions



Professor Gustavo-Moura Letts Receives NSF CAREER Award

The National Science Foundation (NSF) recently presented Rowan University associate professor of chemistry & biochemistry Gustavo Moura-Letts, Ph.D. with The Faculty Early Career Development (CAREER) Program award. Moura-Letts is the first faculty member in the College of Science & Mathematics to earn the award. Dr. Tabbetha Dobbins arrived at Rowan with a CAREER already on her resume.

Dr. Ali Houshmand, president of Rowan, stated, “This validates Rowan’s ongoing investment in world-class research and highlights the skills and potential of the outstanding faculty we continue to draw to the University.”

The NSF awarded Moura-Letts, 40, an anticipated \$525,000 for his project “CAREER: Metallooxaziridines for the Synthesis of Nitrogen-Containing

Three-Membered Heterocycles,” to be used between May 2018 and April 2023. Moura-Letts, is an organic chemist who is developing new chemical reactions for the creation of metal complexes to selectively deliver nitrogen atoms across other molecules, thus enabling the creation of better processes to make therapeutic drugs.

The goal of his research is to exploit the unique chemical properties of these complexes for the invention of novel chemical reactions. He has worked with more than 35 Rowan students during the last three years on this initiative. He also focuses on developing mechanisms to engage undergraduates, high school students, and returning veterans in chemical research in order to stimulate their interest in scientific careers.

This is quite an honor for a professor that is less than 10 years out of graduate school. CAREER awards are as prestigious as they come for young faculty, going to those the NSF determines “have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization.”



**Dr. Moura-Letts with his
2017-18 research lab students**

Professor Gustavo-Moura Letts Receives NSF CAREER Award

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Moura-Letts left his native Peru for graduate school at the University of Massachusetts. "I wanted to do state-of-the-art science," he said.

He came to Rowan for much the same reason. "I wanted to lead undergraduate research. I truly believe undergraduate research can compete at the highest levels," Moura-Letts said. "I felt like Rowan was the only institution I applied to that truly was shifting, that was changing, that was growing. I felt like Rowan would allow me to grow with it. Rowan gives me the opportunity to do what I want to do, what makes me happy, what makes me excited. And it gives me the opportunity to grow at my own pace."

Moura-Letts earned his B.S. in chemistry from Universidad Peruana Cayetano Heredia, Peru and a Ph. D. in chemistry from the University of Pittsburgh. Prior to joining the Rowan faculty, he was a postdoctoral fellow in the Molecular Pharmacology and Chemistry Program at Memorial Sloan-Kettering Cancer Center, New York City, and a postdoctoral associate in the Department of Chemistry at Ohio State University.

A member of the American Chemical Society, Moura-Letts holds a patent and has published and presented extensively. Numerous organizations have presented him with awards for his work.

Moura-Letts, who now lives in Cherry Hill with his wife and son, is excited about the CAREER award not just for himself but also for the University. "This means that the National Science Foundation recognizes the kind of science that we are producing at Rowan. I think that this award not only represents my efforts but also reflects the environment I am in," he said. "Rowan is growing, I am growing with Rowan in building a state-of-the-art research university."

Dean's Outstanding Senior Award Winners Honored

On Monday, April 16th, over 70 students, faculty and guests gathered in the Eynon Ballroom to celebrate a group of the most accomplished seniors in the College of Science & Mathematics and the School of Health Professions. The evening also included a keynote address by Rowan alumni Casey Christy, '92.

Dr. Karen Magee-Sauer, opened the night with heartfelt congratulations. "Parents, friends, and guests of our distinguished award winners be proud. The students honored here tonight embraced opportunities at Rowan and with these opportunities they truly excelled."

Following dinner, Christy gave a great message to graduating seniors that included, "Always remember where you came from, in regard to your parents, family, and of course Rowan University." He added, "It was my Rowan education that gave me the



2018 DOSA Award Winners with Dr. Karen Magee-Sauer



Casey Christy, '92 spoke to the audience about his experience at Rowan.

desire and the drive to lead."

The awardees included: Gabriel Haila (Biochemistry), Nicolas Scorese (Bioinformatics), Callan Tweedie (Biological Sciences), Alyson Paneque (Chemistry), Brennan Ringel (Computer Science), Esma Ozdemir (Health & Exercise Science), Marc-Gregory Dixon (Mathematics), VaLori Abad (Nursing), Loulia Al Bitar (Office of Health Professions), Natalie Page (Physics & Astronomy) and Autumn Paz (Psychology).

The evening concluded with a tribute and thank-you to Dean Magee-Sauer, who is completing her fourth year in the position. Dr. Peter Rattigan, Associate Dean for Academic Affairs thanked Dr. Magee-Sauer for her service to the College and that was met by a standing ovation by all in attendance.

Biren and Dobbins receive awards from University Senate

Faculty members Greg Biren (Health & Exercise Science) and Tabbetha Dobbins (Physics) received prestigious awards from the University Senate. Biren was awarded the Lindback Distinguished Teaching Award and Dobbins was honored with the Excellence in Diversity for Social Activism award.



L to R: Dr. Ali Houshmand, Dr. Greg Biren, and Dr. Jim Newell

Biren teaches students studying in every major within the Health & Exercise Science department. In his courses, students gain a thorough understanding of nutrition, health, performance, prevention and rehabilitation of injuries, and a keen knowledge of how the human body functions for the development of exercise. They also learn from a master teacher who is laser focused on knowing his students well, understanding how they learn best, and then pushing them to excel. “His sense of caring, dedication and passion to ensure an outstanding record of teaching and a sustained commitment to student learning are second to none,” a colleague says. An associate professor, Biren is the program coordinator of the Human Performance in Clinical Settings major. Each semester, he meets with more than 100 students to discuss everything from their learning in the course to their goals, to how he can improve his teaching. “Thanks to the legend known as ‘Biren,’ I have a heightened obsession with exercise physiology,” a student says. “He is the epitome of what a professor should be.”

In more ways than one, Dobbins is the driving force in ensuring that students from underrepresented and first generation populations are

exposed to—and excel in—STEM fields. Associate professor and associate chair of the Department of Physics, Dobbins’ “dedication to diversity makes an impact on all groups of people, including high school students, incoming students, Rowan students and faculty, as well as her professional community at both the national and international level,” says a colleague. Dobbins has led Saturday programs for Camden high school students through both Rowan’s CHAMP and BREATH programs. Since 2011, she has worked with pre-freshmen STEM majors in Rowan’s ASCEND program. Dedicated to mentoring students in the field of physics, Dobbins has driven students to prominent conferences, such as the Conference for Undergraduate Women in Physics, Conference for Undergraduate Underrepresented Minorities in Physics, and National Society for Black Physicists Conference where they have presented their research. She is the inaugural faculty mentor and was advisor to the National Society of Black Engineers student organization at Rowan. Dobbins also is the inaugural faculty mentor for WINGS (Women Inspiring the Next Generation of Scientists) student organization.



Dr. Ali Houshmand with Dr. Tabbetha Dobbins

THE SCOPE - SPRING 2018

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The Scope is published twice a year by the CSM Dean’s Office to highlight the achievements of its faculty, staff, students, and alumni.

Send suggestions and comments to: esm@rowan.edu

Rowan a Silver Sponsor of Philadelphia Science Festival

Rowan University was one of two universities (Jefferson University) that was a silver sponsor for the 2018 Philadelphia Science Festival. Rowan hosted Family Science Sunday and a City Wide Star Party on campus. Rowan also hosted its first adult event at the Pine Tavern Distillery. Rowan faculty and students participated in Science at the Ballpark, the Brain Food event at the Reading Terminal Market, and had nine exhibits at the Carnival held on the Ben Franklin Parkway.



Scenes From Commencement 2018

Over 1,000 students crossed the stage during two commencement ceremonies for the College of Science & Mathematics and the School of Health Professions on Monday, May 7, 2018!



News and notes from spring semester

February 16, 2018

Dr. Russell Buono, also known as the “Dr. Brain Dude”, did a presentation for the Pre-Health Studies Club on the human brain. Buono works at the Cooper Medical School of Rowan University.

February 23, 2018

The Rowan Chapter of Alpha Epsilon Delta (AED) inducted a new cohort of students into its pre-professional honor society. Alpha Epsilon Delta is dedicated to the encouragement and recognition of excellence in pre-professional health scholarship. AED welcomes all students engaged in the pursuit of professional development, provides a forum for students with common interests, and extends a program of service to benefit the college/university community.

March 24, 2018

This marked the third installation of Rowan's Pre-Health Society's annual banquet honoring the NJ chapter of the Make-A-Wish (MAW) Foundation. Students, staff, and members of the community gathered to raise awareness and funds for the organization through entrance tickets and exciting door prizes, while learning more about the foundation through a moving speech given by a dedicated MAW representative. This year's event donated approximately \$5,000 towards MAW.

March 26, 2018

Led by students Samantha Weiss and Alexis Foschini, with faculty support from Nathaniel Nucci, a Rowan chapter of American Physician Scientists Association (APSA) has been approved by the National APSA team. The APSA strives to be the student physician-scientists' leading voice for improving educational opportunities, advancing patient-oriented research, and advocating for the future of translational medicine.

March 27, 2018

Chemistry student Brittany Stinger, won the "Outstanding Student Poster Award" from the American Chemical Society (ACS), division of Physical Chemistry. She had one of over 200 posters in the division. She is currently working on studying which ionic liquids can help an unstructured protein adopt a stable structure, which can ultimately lead to designing ionic liquids to keep proteins working in non-natural environments.

March 28, 2018

Rowan's grant with ASRC Federal Mission Solutions (AFMS) has been extended for a third year and potentially years four and five. Professor Tony Breitzman, who leads the grant team, commented, "Through this grant, Rowan is able to introduce to ASRC Federal some of our best and brightest students. Meanwhile the students gain invaluable experience working on cutting edge problems from ASRC." ASRC Federal Mission Solutions, has been developing satellite imaging systems to identify objects with Rowan computer science students on a project titled "Image Fusion for Situational Awareness."

April 11, 2018

Math professor Thanh Nguyen's proposal submitted to the PIC Math program was accepted. PIC Math prepares mathematical sciences students for industrial careers by engaging them in research problems that come directly from industry. The program will involve 10-15 students taking a class during the Spring 2019 semester and four participating in the PIC Math Competition!

April 12, 2018

Congratulations to alumni, Olivia Fiebig, '16 (BA, Chemistry and BA, Physics) on her NSF Graduate Research Fellowship. Olivia is currently studying Physical Chemistry in a PhD program at MIT.

April 25, 2018

Student Glenn Kresge, '18 will continue his studies here at Rowan in the MS in Pharmaceutical Sciences program. He was awarded a prestigious SMART fellowship from the Department of Defense. Kresge is guaranteed a two-year position once his degree is completed at the Defense Forensic Science Center in Fort Gillem, GA as a civilian contractor working on chromatography method development. This is similar to the work he has been doing in Dr. Jim Grinias' lab here at Rowan. Rowan has had previous winners in 2008, 2009, 2010, 2016, and 2017.

May 1, 2018

Assistant Professor in Health & Exercise Science Mehmet Uygur was invited to present at the 15th International Scientific Conference on Transformation Processes in Sport - "Sport Performance" in Budva, Montenegro. His talk was titled "Assessment of neuromuscular quickness through isometric force pulses".

May 2, 2018

Students Emily Acton (senior), John Joseph Arimado (senior) and Michael Klimkiewicz (sophomore) presented research findings at the American Society of Biomechanics East Coast Meeting at Penn State Berks. Both senior students completed their internships as undergraduate researchers in Dr. Mehmet Uygur's lab. The title of their presentation was "Comparison of rate of force development scaling factor between endurance and power athletes". In this study, the students recruited around 30 track and field athletes at Rowan to reveal the long term training adaptations of the neuromuscular system to endurance and power training.

May 21, 2018

Kevin Rescigno, a student in Health & Exercise Science presented his poster on food insecurity among undergraduate students at the 11th Annual National Conference on Health Disparities in Philadelphia.

Graduating senior feature: Loulia AlBitar, '18, Biological Sciences

A missile that ripped into her school was the final impetus for Loulia Al Bitar, '18 to leave her native Syria with her mother, Rana, six years ago and settle into Washington Township.

"I had undergone three school closings prior to coming here. I had to move around a lot because of that," Al Bitar, 22, recalls of her time in capital city Damascus, close to 6,000 miles from South Jersey. "We just at that point decided it was best for me to have a stable education."

The move was a blessing in disguise. "When I moved here I just felt like it was a different atmosphere to learn," Al Bitar said. "I was always inspired to learn. Not that the schools there didn't inspire me, but it was more exciting to learn, to go to school here."

She became interested in Rowan University early on. "What initially sparked my interest in Rowan was during my tour of the school I was able to see how close the tour guides were and how much of a tight-knit environment the school fostered," she says. "I also loved the fact that it had small class sizes and was near my home."

At Rowan, she graduated with a degree in biological sciences, minoring in psychology and was part of the Thomas N. Bantivoglio Honors Concentration. She started conducting research in her freshman year with professor Dr. Luke Holbrook, using Avizo, a program that analyzes data from CT scans, to look at structural differences in fossils, such as tooth surface complexity, to trace their evolutionary history.

"I have been fortunate to have her to support my research," notes Holbrook, who called her reliable and capable of group and independent work.

She decided on her future career thanks to a friend who was born with a cleft lip and cleft palate and underwent a dozen surgeries and thanks to the dentist who treated her friend. "I went with her to see her dentist. Her dentist had a photo of her when she was little and was following up with her. I realized how close of a relationship they had because of the impact this had on her life," Al Bitar says. "That just made me want to explore it, and I was able to do just that at Rowan. I thought I was given all the tools, every opportunity I could to explore that."

Al Bitar, who works part time in a dental office, dedicated time outside of the classroom and lab to serving others. She was secretary of the Biology Club and founder and president of the Rowan American Student Dental Association Pre-Dental Chapter. And she was founder and president of the Rowan chapter of Operation Smile, a nonprofit organization that raises funds to provide surgeries for children with cleft lips and palates in developing countries.

"This was an organization I started exploring after talking with my friend about her experiences with a cleft lip and cleft palate," says Al Bitar, who grew Operation Smile from three to 35 plus members from her sophomore to senior year. "It really inspired me to want to work toward raising awareness about this."

She also maintains connections to her homeland, where her father, grandmothers and some uncles still live. She has returned to the region to visit family and to help others, including volunteering for the Saeed Society, organizing fundraisers for Syrian children and returning to Damascus her sophomore year to teach them English.

"I had to see strife at a younger age. Seeing that firsthand made me so determined that I wanted to outweigh all that hate and ugliness with love and giving and making a positive impact," says Al Bitar.

"Some of my fondest memories (at Rowan) will always be the close relationships I was able to develop with my peers, peer-leaders, and school faculty throughout my time here," Al Bitar says. "Students here are always willing to help one another and have study meetings. The leaders in the extracurricular activities I was involved in always maintained a fun environment to work and collaborate in."

"And the faculty at this school never fail in showing their passions for their fields and being fully supportive to every student on campus. The cohesive and strong bond between every individual in this school is a memory I will always hold on to."

Al Bitar plans to apply to dental school in the summer. "What made me realize that this field is what will fulfill my heart by giving me joy . . . is that I am able to use my creativity and love for science to be of help to people."

"I'll be happy with whatever opportunity I'm given," says Al Bitar, who is the first woman in her family to earn a college degree and will be the first dentist in her family. "I would love to specialize in maybe pediatrics or orthodontics, but I'm open to exploring other fields or even general dentistry as well."

"I love this school. One day I would love to be able to maybe contribute to starting a dental school here," she says. "The school gave me everything."



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Professional groups appoint faculty to national committees

The American Chemical Society (ACS) has named Dr. Gregory Caputo, department head of the Department of Chemistry & Biochemistry at Rowan University, to its Committee on Professional Training (CPT), a joint committee of the ACS Council and Board of Directors, for 2018. The CPT promotes excellence in postsecondary chemistry education and provides leadership to the ACS in the professional training of chemists.

The American Physical Society (APS) has appointed Dr. Karen Magee-Sauer, dean of the College of Science & Mathematics at Rowan University and a professor in the Department of Physics & Astronomy, to its Committee on Education (COE). The three-year appointment began Jan. 1.

Magee-Sauer, in her fourth year as dean, joined the Rowan faculty in 1989. She is a member of the APS and the American Association for the Advancement of Science. She currently serves as the principal investigator on a PhysTEC grant funded by the APS and American Association of Physics Teachers to increase the number of high-quality physics teachers.

“These appointments to national committees reflect the caliber of faculty

and programs in the Rowan University College of Science & Mathematics,” said Dr. James Newell, provost. “Drs. Magee-Sauer and Caputo will bring extensive experience to these organizations and will further their missions.”

**Dr. Karen Magee-Sauer speaks at 2018 DOSA Dinner****Dr. Greg Caputo with students in his lab**