

Department of Physiology

Message from the Chair

This newsletter is our first. I started this job in December 1999 and I am happy to report that the Department of Physiology has been very busy and highly successful. The Department of Physiology is currently ranked 39th out of 83 (with thirteen faculty) on the National Institutes of Health (NIH) Blue Ridge Institute for Medical Research. Our faculty are active in international societies, scientific committees and editorial boards and have strong research programs. And as you will later see, our postdoctoral fellows and students are also productive members in the department, which is a reflection of the mentorship our faculty



provide. In addition, our department frequently hosts international visiting scientists and the most recent is Dr. Chenghao Yu who is a visiting professor in my lab. He is a Professor and Vice Dean at the Chengdu University of TCM.

Below are some recent activities that will be of interest to our readers.

Firstly, congratulations to Dr. Ruth Harris. She was elected president-elect of the Society for the Study of Ingestive Behavior (SSIB). Her research was recently featured in the Atlanta Business Chronicle.

Secondly, it is with our best wishes that we bid farewell to our long-time friend and colleague, Professor Javier Stern. He has moved to the Neuroscience Institute at Georgia State University. He served Augusta University for over a decade and we are grateful for his devotion to our students, the department, and the university.

We welcome several new faculty members: Assistant Professor Mykola Mamenko and Assistant Research Scientists Vivek Choudhary, Weiguo Li, and Fernanda Priviero.

In March 2017, Dr. Adviye Ergul received a Regents' Professorship of the University System of Georgia. This is the highest academic recognition given by the Board of Regents and it reflects on her scholarship and numerous accomplishments. Congratulations, Adviye.

Drs. Sullivan, O'Connor, Brands, Ergul, and I were featured in Medical College of Georgia (MCG) Medicine (https://issuu.com/ghsu/docs/lo_res_mcgmediciness17) for our Research Program Project Grant from the National Heart, Lung, and Blood Institute (NHLBI).

Lastly, the Department of Physiology has met a milestone in extramural funding. Every faculty member has secured an extramural award and that is an outstanding achievement.

As usual, we could not have great success without our alumni and supporters. Their suggestions and financial support have contributed to the greatness of our department. On behalf of the department, I wish all alumni and supporters a successful start to the 2017 academic year.

Clinton

R. Clinton Webb, PhD Herbert S. Kupperman Chair in Cardiovascular Disease Regents' Professor and Chairperson

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Top Row: Hiram Ocasio, Michael Brands, Paul O'Connor, Jennifer Sullivan, Ryan Crislip, Mykola Mamenko, Amel Komic, John Paul Valenzuela **Fourth Row**: Yasir Abdul, Jackie Musall, Anthony Payne, Wendy Bollag, Jessica Filosa, Patricia Martinez-Quinones, Alena Cherezova, Fernanda Priviero, Mahmoud Abdelbray, Ki Jung Kim, Ashley Washington **Third Row**: Xunsheng Chen, Yue Pan, Hakjoo Lee, Yisang Yoon, Katie Wilson, Bansari Patel, Shane Harper, Mong Wang, Vivek Choudhary, Rabei Alaisami, Vadym Buncha, Guangkuo Dong, Hongyi Zhou **Second Row**: Rawipan Uaratanawong, LaDonya Jackson, Sarah Jamil, Delaney Rauch, Lia Taylor, María Póo García, Ellen Gillis, Kara MacVean, Ruth Harris, Weiqin Chen, Juan Ramiro Diaz, Fabiano Calmasini **Bottom row**: Clinton Webb, Adviye Ergul, Cathy Davidson, Rebecca Ward, Safia Ogbi, Marissa Seamon, Khadijah Alexander, Nicole Klee **Not pictured**: Weiguo Li, Bianca Marsh, Purnima Merai, Cam McCarthy, Khushboo Sahay, David Stepp, Jingping Sun, Julie Vincent, Camilla Ferreira Wenceslau, Hongfang Yu

<u>A Productive Team</u>

- 14 Primary Faculty
 - ◊ 3 Regents' Professors
 - **6** American Heart Association Grants
 - Diabetes Action Research & Education Foundation Grant
 - **3** Intramural Grants
 - National Institute of Health Grants
 Supplements to NIH Grants
 - Veteran Administration Merit Awards
- 4 Research Faculty
- 13 Affiliated Faculty
- 3 MCG-UGA Medical Partnership Faculty
- O 10 Graduate Students
- 8 Postdoctoral Fellows
- 4 Administrative Staff
- **o** 2 Medical Residents
- 2 Visiting Faculty Researchers
- 1 Undergraduate Student

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A Milestone in Extramural Funding:

Every faculty member has secured an extramural award and that is an outstanding achievement.

Department Spotlight

The "Metabolism and Cardiovascular Diseases" Mini-Symposium was a success! <u>Dr. Weiqin Chen</u> coordinated the two day event which included three internationally renowned speakers: Drs. Evan Dale Abel (University of Iowa), Rosalind Coleman (University of North Carolina), and Kenneth Walsh (Boston University).

<u>Dr. Weiqin Chen</u> was awarded 2017 Outstanding Young Basic Science Faculty Award from the MCG Faculty Senate.

<u>Dr. Jessica Filosa</u> was named the 2017 Hamilton Scholar in Physiology. This award was well deserved for her scholarship and service activities in support of the department and MCG, which include receiving multiple R01s.

Dr. John Hall, an expert in cardiovascular, renal, and endocrine physiology from Mississippi Medical center served as the 19th Thomas G. Muldoon Lecturer.

Dr. Ruth Harris received the Augusta University Research Institute 2017 Distinguished Research Award.

The 2017 Greenblatt Lectureship guest speaker, Dr. Murray Elser from Baker IDI Heart and Diabetes Institute, was well received. Thank you, <u>Dr. Paul O'Connor</u> for coordinating this effort.

Dr. Jennifer Sullivan was awarded Outstanding Faculty Member Award from The Graduate School.

<u>Dr. Clinton Webb</u> was selected for the Inaugural Sibley W. Hoobler, MD Lectureship in Hypertension at the Frankel Cardiovascular Center, University at Michigan.

Department Outreach: PhUn Week

"Students, postdocs and faculty from the Department of Physiology at Augusta University participated in the American Physiological Society's Physiology Understanding (PhUn) initiative. This is an outreach program designed to inspire children to pursue careers in physiology.

The departmental representatives presented workshops at three local schools including Stallings Island Middle School (7th graders), St. Mary's on the Hill (7th graders) and Copeland Elementary (4th and 5th graders).

The students were taught about physiology and career possibilities in physiology. The younger students experimented to determine their lung capacity. They also learned about the sugar content in sodas and the importance of good hygiene to prevent colds. The older students looked at different types of cells under a microscope. They explored a cow's heart and learned how different organs are designed to allow for function. Two other stations focused on the function of the cardiovascular system as a whole. In one, they had the opportunity to monitor their blood pressure at rest and during various activities. In the other, they measured their heart rate under normal conditions and under stress. Finally, they experienced what it feels like to perform laparoscopic surgery using a training simulator.

At the end of the session, the students all said they had PhUn and had learned a little more about physiology."

- Debra Irsik, postdoc in Brands lab

This article was previously published in a 2017 FASEB Journal Supplement.



Theo Szasz uses an anatomical heart model and a preserved bovine heart to grab the attention of students.



Cam McCarthy and Nicole Klee teach students how to find a pulse and measure heart rate.



Patricia Martinez-Quinones supervises students performing an exercise on laparoscopic surgical trainers.

Recent Postdoctoral

Awardees

Yasir Abdul:

• Won second place in postdoctoral poster competition at the Southern Translational Education and Research

Ellen Gillis:

- Caroline tum Suden Award from the APS at Experimental Biology
- American Heart Association Council on Hypertension Onsite Trainee Poster Award
- 8th Annual Southern Translational Education and Research Postdoctoral Award

Nicole Klee:

- Won the Best Podium Competition Award for the Society of Pelvic Research
- Diabetes Symposium Travel Award from the American Urological Association

Patricia Martinez-Quinones:

- Won third place at the Association of Women Surgeons.
- Won the First Place Oral Presentation Award from the Georgia Society of the American College of Surgeons

Cam McCarthy:

- Selected to participate in the Council on Hypertension Advisory and Mentoring Program
- Caroline tum Suden Award from the APS at Experimental Biology

Postdoc News



Left to Right: Juan Ramiro Diaz, Ki Jung Kim, Yasir Abdul, Fabiano Calmasini, Amel Komic, Patricia Martinez-Quinones, Ellen Gillis, Nicole Klee Not Pictured: Cam McCarthy, Riyaz Mohamed, Camilla Ferreira Wenceslau

It has been a very busy and productive year for the postdoctoral fellows! This year's summer seminar series (organized by the Physiology Postdoctoral Fellows) featured four graduate students, four postdoctoral fellows, and one research fellow.

The Lois Ellison Lectureship was established to honor the postdocs in the Physiology Department at MCG and is organized by our fellows. Dr. Lois Ellison is an accomplished physician and it is a noteworthy mention that she is also the first woman postdoc in the Department of Physiology at MCG. Her career is featured on the NIH website (https://cfmedicine.nlm.nih.gov/physicians/biography_100.html). The seventh annual lectureship will be given by Dr. Kathryn Sandberg, Director for the Center for the Study of Sex Differences in Health, Aging, and Disease at Georgetown University on November 9, 2017 on the Health Sciences Campus.

Physiology postdoctoral fellowships in the past 5 years:

Mohammed Abdelsaid, PhD (2012-2015): American Heart Association Postdoctoral Fellowship, 2016 American Heart Association Scientist Development Grant

Ellen Gillis, PhD (2016-): American Heart Association

Postdoctoral Fellowship

Jennifer Thompson, PhD (2013-2017): American Heart

Association Postdoctoral Fellowship, National Institutes of Health Pathway to Independence Award (K99/R00)

Camilla Wenceslau, PhD (2013-): American Heart Association Postdoctoral Fellowship, National Institutes of Health Pathway to Independence Award (K99/R00)

Graduate Program News



Top Row: Khadijah Alexander, Mahmoud Abdelbary, John Paul Valenzuela, Yue Pan, Rebecca Ward, Ryan Crislip **Bottom Row:** Khushboo Sahay, Marissa Seamon, Lia Taylor, LaDonya Jackson

Dr. Adviye Ergul has directed the Physiology graduate program since 2009. Under her guidance, Physiology graduate students have achieved tremendous success – in the forms of publications, travel awards, and of course fellowship awards (see right). Dr. Ergul is now passing the baton to Dr. Paul O'Connor as of 2017. Thank you, Dr. Ergul, for all your hard work in promoting the success of Physiology graduate students.

Since 2001, our graduate students have organized fourteen Virendra B. Mahesh Lectureships. This lectureship provides a lasting tribute to Dr. Mahesh, a pioneer in steroid biochemistry and reproductive biology. The lectureship brings outstanding and distinguished leaders in science to the Augusta campus, enabling them to exchange ideas with MCG researchers while inspiring students and young investigators.

Year Five students

Year Four students

○ Ryan Crislip—Dr. Sullivan
 ○ J.P. Valenzuela—Dr. Ergul
 ○ Becca Ward—Dr. Ergul

OLia Taylor−Dr. Sullivan

O Yue Pan−Dr. Wang

Welcome our newest graduate students to the labs!

- Mahmoud Abdelbary–Dr. Sullivan
- Khadijah Alexander–Dr. Filosa
- LaDonya Jackson—Dr. Ergul
- Khushboo Sahay—Dr. Chen
- Marissa Seamon–Dr. Harris

Recent Grad Student

Awardees

Ryan Crislip, PhD student (2013-):

• American Heart Association Predoctoral Fellowship

Trevor Hardigan, MD, PhD student (2012-2016):

• American Heart Association Predoctoral Fellowship

Brett Heimlich, MD, PhD student (2012-2014):

• His dissertation project on sickle cell disease led to a Fulbright-Fogarty Global Health Fellow in Lilongwe, Malawi

Cameron McCarthy, PhD student (2012 -2016):

• American Heart Association Predoctoral Fellowship

Lia Taylor, PhD student (2014-):

- American Physiological Society Porter Fellowship
- National Institute of Health Diversity Supplement

John Paul Valenzuela, PhD student (2013-):

- American Heart Association Predoctoral Fellowship
- National Institute of Health Diversity Supplement

Rebecca Ward, PhD student (2013-):

• American Heart Association Predoctoral Fellowship

Margaret A. Zimmerman, PhD student (2011-2014):

• American Heart Association Predoctoral Fellowship

All Physiology Graduate Students brought funding into the department in 2016.

<u>Alumni Spotlight</u>



<u>Dr. Bhavna Desai</u>, a former Graduate Student, is currently a postdoctoral fellow at Harvard Medical School. In 2015, Dr. Desai was inducted into Alpha Upsilon Phi Honor Society, as well as the "Who's Who Among Students in American Universities and Colleges, 2015", a national honor that selects a single student per discipline per university each year.



Congratulations to former Physiology Postdoctoral Fellow, <u>Dr. Dexter Lee</u>, on becoming a member of The Leadership Alliance. Members of the Leadership Alliance include thirty-five of the nation's leading research and teaching academic institutions and one associate member from industry. The mission of the Leadership Alliance is to develop underrepresented students into outstanding leaders and role models in academia, business, and the public sector. Dr. Lee is currently an Associate Professor at Howard University.



<u>Dr. LaShon Sturgis</u>, a former Graduate Student, is an Assistant Professor of Emergency Medicine and Medical Educator in the Office of Academic Affairs at Augusta University. Dr. Sturgis was a 2017 finalist for Augusta University Resident of the Year, nominated by the Department of Emergency Medicine.



<u>Dr. Camilla Ferreira Wenceslau</u>, a Physiology Postdoctoral Fellow in Dr. Webb's lab, received a prestigious K99 grant. Dr. Wenceslau has also received numerous other awards including the 2016 Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award and 2015 Research Recognition Award - Respiratory Section from the American Physiological Society.

Recent alumni academic and professional positions:

Mohammed Abdelsaid, PhD: Assistant Professor (2016-),

Department of Biomedical Sciences, Mercer University, Savannah, Georgia. Received an American Heart Association Scientist Development Grant as a postdoctoral fellow in the department.

John Apolzan, PhD: Assistant Professor, Ingestive Behavior Fellowship as a graduate student in the department.

Laboratory. Pennington Biomedical Research Center. Louisiana State University System. Postdoctoral fellow in th department.

Vinicia Biancardi, PhD: Assistant Professor (2015-),

Department of Anatomy, Physiology, and Pharmacology, within the College of Veterinary Medicine at Auburn University, Auburn, Alabama. Received American Heart Association Scientist Development Grant as a postdoctoral fellow in the department.

Maha Coucha, PhD: Assistant Professor of Pharmaceutical

Sciences (2016-), College of Pharmacy, South University, Savannah, Georgia. Received an American Heart Association Predoctoral Fellowship as a graduate student in the department.

Stella Goulopoulou, PhD: Assistant Professor (2014-),

Institute for Cardiovascular and Metabolic Diseases, University of North Texas Health Science Center, Fort Worth, Texas. Received an American Heart Association Scientist Development Grant as a postdoctoral fellow in the department.

Sherif Hafez, PhD: Assistant Professor of Pharmaceutical

Sciences (2017-), Larkin Health Sciences University, Miami, Florida. Received an American Heart Association Predoctoral Fellowship as a graduate student in the department.

Johanna Hannan, PhD: Assistant Professor (2015-) at the

Brody School of Medicine, East Carolina University. Received a Heart and Stroke Foundation of Canada Research Fellowship as a postdoctoral fellow in the department.

Helena Morrison, PhD: Assistant Professor of Nursing

(2015-), University of Arizona, Tucson, Arizona. Received a National Institute of Health NRSA Individual Postdoctoral Fellowship (F32) as a postdoctoral fellow in the department.

Theodora Szasz, PhD: Biomedical Scientist Managing Editor

(2017-), A.D.A.M. Consumer Health, Atlanta, Georgia. Received an American Heart Association Postdoctoral Fellowship as a postdoctoral fellow in the department.

Jennifer Thompson, PhD: Assistant Professor (2017-)

Libin Institute in the Cumming School of Medicine, University of Calgary. Received an American Heart Association Postdoctoral Fellowship and received a NIH K99.

Foundation/Endowment Giving

Physiology Graduate Student and Postdoctoral Fellow Endowment Fund

In addition to existing endowments, the Department of Physiology is undertaking a new strategic initiative in 2017. Specifically, we have established a Graduate and Postdoctoral Training Endowment Fund with the goal of enhancing graduate student and postdoctoral training in the department. Awards from the endowment will be aimed at supporting travel to present at meetings, purchasing research supplies, or providing short-term bridge funding for completion of a dissertation. Successful implementation of this endowment will provide continuity of educational and research goals of the department.

The endowment has been initiated with a \$10,000 donation, and we are hoping to reach the \$50,000 mark required to establish permanent endowment status by 2022. *We are asking for your help in reaching that goal.*

This endowment is the first of its kind at MCG. We expect that it will help ensure continuing success of MCG Physiology trainees and keep the Department of Physiology at the forefront of discovery for years to come. In uncertain times like these, philanthropy and gifts have become integral to all levels of education and we hope that you will join us in supporting future generations of biomedical PhD and MD-PhD scientists in our department.

If you are interested in making a gift to the Department of Physiology, please go to our website (www.augusta.edu/mcg/phy/phys_gift.php) for more information on our other Endowment Funds. *Thank you for considering making a contribution to this or one of our other endowments.*



2016-2017 PHYSIOLOGY DONORS

Michael and Kelley Brands Darrell W. Brann Wendy and Roni Bollag Weiqin Chen Aisha Cobb Cathy Davidson Lois T. Ellison Adviye Ergul Stella Goulopoulou Ruth Harris Cameron G. McCarthy and Camilla F. Wenceslau

Brett Michael Mitchell

Ann and Derek Schreihofer

Charles H. Wang

Mong-Heng Wang

Clinton and Nancy Webb

Zhekang Ying

Yisang Yoon

Consider a gift to the Department of Physiology

Physiology Graduate Student and Postdoctoral Fellow Endowment Fund Endocrinology Fund Greenblatt Lectureship Herbert S. Kupperman Endowed Chair Lois Ellison Lectureship Mahesh Lectureship and Graduate Award Thomas Muldoon Lectureship W. F. Hamilton Memorial Fund For more information on these funds or to make a contribution please visit us at www.augusta.edu/mcg/phy/ phys_gift.php.

Department of Physiology in the News NHLBI Research Program Project Grant—Drs. Brands, Ergul, O'Connor, Sullivan, and Webb

- • Augusta University gets \$9.4 million to study cell death from high blood pressure" (Atlanta Business Chronicle)
 - https://www.bizjournals.com/atlanta/news/2017/02/14/augusta-university-gets-9-4-million-to-study-cell.html
 - "Grant funding AU researchers' work on blood pressure" (Augusta Chronicle) http://chronicle.augusta.com/news/2017-01-28/grant-funding-au-researchers-work-blood-pressure

Dr. Wendy Bollag

- O "Cancer drug might help with skin disease" (Augusta Chronicle)
- http://chronicle.augusta.com/ news/ 2017-05-28/ cancer-drug-might-help-skin-disease

Dr. Ruth Harris

- "Augusta University researcher gets \$1.6 million grant to study link between sugary drinks and weight gain" (Atlanta Business Chronicle)
- https://www.bizjournals.com/atlanta/news/2017/07/25/augusta-university-researcher-gets-1-6-million.html
- "AU researcher: Drinking sweetened beverages is a fast train to obesity" (Augusta Chronicle) http://chronicle.augusta.com/news/2017-05-20/au-researcher-drinking-sweetened-beverages-fast-train-obesity
- Sugary Drinks" (The Medical Minute, Georgia Public Broadcasting) https://soundcloud.com/gpbradioaugusta/mm-0923-sugary-drinks

Dr. Jennifer Sullivan

- O "AU researcher studying blood pressure issues regarding women" (Augusta Chronicle)
- http://chronicle.augusta.com/news/2017-01-21/au-researcher-studying-blood-pressure-issues-regarding-women • "Heart Health" (News Channel 6, WJBF, JENNIE Show)

http://wjbf.com/2017/02/14/segment-one-dr-jennifer-sullivan-heart-health-couple-married-for-80-years/ Postdoctoral Fellow Cam McCarthy

• "New study of brains of football players finds high percentage of chronic damage" (Augusta Chronicle) http://chronicle.augusta.com/news/2017-07-25/new-study-brains-football-players-finds-high-percentage-chronic-damage





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