Dear E&M Members,

It is sometimes difficult to internalize how in a few months our whole world has turned upside down. The COVID-19 pandemic has disrupted our professional and personal lives in every imaginable aspect. First and foremost, our thoughts are with all members and loved ones impacted by this pandemic. Please do not hesitate to contact the E&M section or APS if we can be of any help to alleviate your professional burden.

After thoughtful deliberations, Experimental Biology 2020 was canceled for health and safety reasons. We all missed the opportunity to meet in person and feel the energy of our trainees. Nevertheless, APS quickly organized APS Live, an exciting and innovative virtual meeting where many trainees from the E&M section had the opportunity to present their outstanding research.

Congratulations to 2020 E&M section awardees Jennifer Sones, Jacob Pruett, Samuel Bloom, Mona Elgazzaz, Joseph Laudato, Samar Rezq, Juhi Singhal and Trace Thome. From graduate students to young faculty, E&M section awardees are the best of the new generation of scientists that will keep our field alive and energized.

Read more about E&M awardees and their outstanding research in this newsletter.

Thanks to outgoing E&M Steering Committee members
Joshua Anthony, Charles Lang, Wolfgang Langhans, Patricia Molina, Labros Sidossis and Licy Yanes Cardozo. We thank them for their invaluable service to the E&M section and wish them the best in their endeavors.

Welcome incoming E&M Steering Committee members Kamesh Badri, Grant Kolar, Chad Paton, Rick Samson and Jeffery Tessem. We thank them for their commitment to service at the E&M section. You will find more details about E&M Steering Committee members positions and contact information in the last page of this newsletter.

Recent events in the U.S. and all around the world have reminded us of the racial inequalities that affect our communities. The E&M section Steering Committee is fully committed to foster an equitable and inclusive environment for all members at our section. We are working together with APS in multiple initiatives towards a more diverse and inclusive Society.

Finally, it is a great honor to serve as the E&M section Chair and I am committed to do my best to ensure that the E&M section remains playing a leading role in the field of Endocrinology & Metabolism and the APS. Please do not hesitate to contact me with ideas or concerns.

Keep safe and healthy.

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**AJP-Endocrinology and Metabolism call for papers:**

- **Browning and Beiging of Adipose Tissue - Its Role in the Regulation of Energy Homeostasis and as a Potential Target for Alleviating Metabolic Diseases**
  **Deadline: June 30, 2020**

- **Immunometabolic Cross-Talk and Regulation of Endocrine and Metabolic Functions**
  **Deadline: June 30, 2020**

- **Mitochondria Dysfunction in Aging and Metabolic Diseases**
  **Deadline: June 30, 2020**

- **Role of Gut Microbiota, Gut-Brain and Gut Liver Axes in Physiological Regulation of Inflammation, Energy Balance, and Metabolism**
  **Deadline: June 30, 2020**

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**Support the Endocrinology and Metabolism Section**

Follow the link for donation to support E&M Section sponsored awards and activities.

A monthly recurrent donation can have a huge impact promoting the field of E&M at APS.
Endocrinology & Metabolism 2020 Awardees

As we were not able to meet together for Experimental Biology 2020 this year, we wanted to take a moment and highlight our E&M Section awardees.

2020 Endocrinology and Metabolism Section New Investigator Award
Jennifer L. Sones, DVM, PhD - Louisiana State University

*EB2020 abstract:* Obese Preeclamptic–like BPH/5 Female Mice Have Evidence of Hepatic Steatosis with Progression to Non–Alcoholic Fatty Liver Disease and Steatohepatitis with Pregnancy That Is Partially Reversed by Maternal Weight Loss

[https://doi.org/10.1096/fasebj.2020.34.s1.07168](https://doi.org/10.1096/fasebj.2020.34.s1.07168)

*Terminal degree obtained:* PhD, Reproductive Physiology and genomics, Cornell University

*Affiliation:* Veterinary Clinical Sciences, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803

*Biography:* I am an Assistant Professor of Theriogenology at Louisiana State University (LSU) School of Veterinary Medicine. I received my Bachelor of Science in 2004 and Doctor of Veterinary of Medicine degree in 2008, both from LSU. At Cornell University, I received a PhD in reproductive physiology and genomics with Dr. Robin Davisson, completed a postdoctoral fellowship in reproductive immunology, and residency training in comparative Theriogenology. My PhD studies focused on the early pregnancy origins of preeclampsia and fetal growth restriction in a mouse model, BPH/5. Building on that, my NIH-funded laboratory at LSU now investigates pre-conception risk factors (obesity and non-alcohol fatty liver) and interventions, such as maternal weight loss, as a means to prevent adverse pregnancy outcomes in women.

2020 Virendra B. Mahesh Award of Excellence in Endocrinology
Jacob E. Pruett, BS - University of Mississippi Medical Center

*EB2020 abstract:* The Impact of SGLT–2 Inhibition on Obesity and the Metabolic Profile in a PCOS Rat Model

[https://doi.org/10.1096/fasebj.2020.34.s1.05261](https://doi.org/10.1096/fasebj.2020.34.s1.05261)

*Terminal degree obtained:* BS, Chemistry with Biochemistry Emphasis, University of Southern Mississippi

*Affiliation:* University of Mississippi Medical Center - Department of Cell & Molecular Biology

*Mentor’s name and affiliation:* Licy L Cardozo, University of Mississippi Medical Center - Department of Cell & Molecular Biology

*Biography:* Jacob Pruett is a fourth year MD-PhD student studying at the University of Mississippi Medical Center (UMMC). He graduated Summa Cum Laude from the University of Southern Mississippi with a BS in
Chemistry with Biochemistry Emphasis where he worked under Douglas Masterson. He is currently studying under Licy Yanes Cardozo, a physician scientist who has dual appointments in the Department of Medicine and the Department of Cell & Molecular Biology at UMMC. His research focuses on the impact of sodium-glucose cotransporter-2 inhibition on cardiometabolic risk factors in polycystic ovary syndrome. During his time at UMMC, he has been inducted into the Alpha Omega Alpha Honor Medical Society and the Gold Humanism Honor Society. He is an active member of the American Physiological Society, the American Physician Scientist Association, and the American Society of Nephrology.

**2020 Endocrinology and Metabolism Section Research Recognition Award**

Mona G. Elgazzaz, MD - Louisiana State University Health Science Center

**Terminal degree obtained:** MD, MS, Suez Canal University, Egypt

**EB2020 abstract:** Perinatal Epigenetic Modulation of the Brain Renin Angiotensin System Programs Cardiometabolic Diseases [https://doi.org/10.1096/fasebj.2020.34.s1.02348](https://doi.org/10.1096/fasebj.2020.34.s1.02348)

**Affiliation:** Department of Pharmacology and Experimental Therapeutics, Louisiana State University Health Sciences Center, New Orleans, LA, Southeast Louisiana Veterans Health Care System, New Orleans, LA

**Biography:** Mona Elgazzaz is a PhD student at Louisiana State University Health Sciences Center. Mona earned her degree in medicine with honors from Suez Canal University, Egypt in 2010. She received her master’s degree in medical genetics from the same university in 2016. Mona’s research interest is focused on studying genetic and epigenetic changes associated with cardiovascular and metabolic diseases. She had publications on genetic variations association with diabetes, bronchial asthma and cancer. Currently, Mona is working on the epigenetic modulations during development and its effects on susceptibility to cardiometabolic disease.

**2020 Endocrinology and Metabolism Section Research Recognition Award**

Samuel I. Bloom, BS - University of Utah

**Terminal degree obtained:** BS, Health and Exercise Sciences, Skidmore College

**EB2020 abstract:** Induction of Telomere Uncapping in Adipocytes Results in Cellular Senescence and Metabolic Dysfunction [https://doi.org/10.1096/fasebj.2020.34.s1.03353](https://doi.org/10.1096/fasebj.2020.34.s1.03353)

**Affiliation:** Department of Nutrition and Integrative Physiology, University of Utah, Salt Lake City, Utah
Mentor’s name and affiliation: Anthony J. Donato, Department of Nutrition and Integrative Physiology, Internal Medicine, Biochemistry, University of Utah, Salt Lake City, Geriatric Research, Education and Clinical Center, Salt Lake City Veterans Affairs Medical Center, Salt Lake City, Utah.

Biography: My name is Sam Bloom and I am currently a PhD candidate in the Translational Vascular Physiology Lab at the University of Utah. I am working under the guidance of Dr. Anthony J. Donato in the Department of Nutrition and Integrative Physiology. My research is aimed at elucidating the mechanisms that regulate biological aging of the cardiovascular system and adipose tissue at the cellular and molecular level. Specifically, I am interested in understanding the consequences/origins of chronic low-grade inflammation and oxidative stress, which ultimately leads to vascular and metabolic dysfunction. These consequences include the induction of DNA damage response pathways and cellular senescence, as well as telomere dysfunction and changes in the shelterin complex. Furthermore, I am interested in the relationship between vascular function, adipose tissue and metabolic dysfunction. Coming from a background in exercise physiology, I am also interested in understanding how lifestyle factors such as exercise and diet are able to mitigate many of the physiological consequences of aging.

2020 Research Recognition Award
Samar Rezq, PhD - University of Mississippi Medical Center

EB2020 abstract: Depot-Specific Response of White Adipose Tissue to MicroRNA-21 Ablation in Polycystic Ovary Syndrome
https://doi.org/10.1096/fasebj.2020.34.s1.03522

Terminal degree obtained: PhD, Pharmacology and Toxicology, Brody School of Medicine, East Carolina University

Affiliation: University of Mississippi Medical Center, Department of Cell and Molecular Biology

Mentor’s name and affiliation: Damian G. Romero, University of Mississippi Medical Center, Department of Cell and Molecular Biology

Biography: Samar Rezq was born in Zagazig, Egypt in 1983. She got her B.Sc. and M.Sc. in Pharmaceutical Sciences from Faculty of Pharmacy, Zagazig University, Egypt, and PhD in Pharmacology and Toxicology from Brody School of Medicine, East Carolina University, NC, USA. She worked as a Lab-instructor, an Assistant lecturer, and a Lecturer of Pharmacology and Toxicology at Faculty of Pharmacy, Zagazig University, Egypt. She is working as a Postdoctoral fellow in the Department of Cell and Molecular Biology, University of Mississippi Medical Center, Jackson, MS, USA. She was awarded a PhD Scholarship to USA from the Egyptian Ministry of Higher Education. She got the 15th Annual ECU Neuroscience Symposium award, NC, USA. She was recognized as the best oral presenter at the School of Pharmacy 6th scientific conference, Zagazig University, Egypt. She was awarded the Endocrinology and Metabolism Section 2020 Research Recognition Research Award. She has 15 publications, three of which are as a first author.
**2020 Research Recognition Award**

Trace Thome, BS, MS - *University of Florida*

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**EB2020 Abstract:**
Chronic Kidney Disease Causes Skeletal Mitochondrial Myopathy Through Disruption of the Electron Transport System

[https://doi.org/10.1096/fasebj.2020.34.s1.05775](https://doi.org/10.1096/fasebj.2020.34.s1.05775)

**Terminal degree obtained:** MS, BS, Applied Physiology and Kinesiology, University of Florida

**Affiliation:** University of Florida, Department of Applied Physiology and kinesiology

**Mentor’s name and affiliation:** Dr. Terence E. Ryan, University of Florida, Department of Applied Physiology and Kinesiology

**Biography:** Trace Thome is currently a PhD student in Dr. Terence Ryan’s lab at the University of Florida. He earned his Bachelor’s and Master’s Degree at the University of Florida in the Department of Applied Physiology and kinesiology, where he continued his studies under Dr. Ryan in molecular biology and metabolism. In the midst of studying Peripheral arterial disease and its pathophysiology in muscle, the lab stumbled into studying the bioenergetics and myopathy associated with chronic kidney disease. Here, Trace has moved forward into elucidating the mechanisms how uremia plays a role in muscle and mitochondrial dysfunction.

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**2020 Research Recognition Award**

Juhi Singhal, BSA - *University of Texas at Austin*

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**EB2020 abstract:**
Postpartum Maternal Vascular Function in a Rat Model of Gestational Obstructive Sleep Apnea

[https://doi.org/10.1096/fasebj.2020.34.s1.03615](https://doi.org/10.1096/fasebj.2020.34.s1.03615)

**Terminal degree obtained:** BSA, University of Texas at Austin

**Affiliation:** University of North Texas Health Science Center, Department of Physiology and Anatomy

**Mentor’s name and affiliation:** Styliani Goulopoulou, University of North Texas Health Science Center, Department of Physiology and Anatomy

**Biography:** I am a second year medical student at the Texas College of Osteopathic Medicine. I was raised in Austin, TX and I am the oldest of three siblings. I became interested in research while working at the Waggoner Center for Alcohol and Addiction Research at the University of Texas at Austin. I was fortunately given an opportunity to study post-partum maternal vascular function by Dr. Goulopoulou after my first year of medical school. I hope to pursue a residency in OBGYN in the future. In my free time I enjoy hiking, watching basketball (go Spurs!), baking, and spending time with my friends and family!
2020 Research Recognition Award
Joseph A. Laudato, BS, MS - Florida State University

EB2020
abstract: Dietary Composition Exacerbates Sex Differences in Skeletal Muscle Myopathy following Chronic Alcohol Intake
https://doi.org/10.1096/fasebj.2020.34.s1.05150

Terminal degree obtained: MS, Exercise Science, Kent State University

Affiliation: Florida State University, Department of Food, Nutrition & Exercise Sciences

Mentor’s name and affiliation: Jennifer L. Steiner, Florida State University, Department of Food, Nutrition & Exercise Sciences

Biography: I am currently a first year PhD student at Florida State University. I received both my B.S. and M.S. at Kent State University studying exercise physiology in human populations. With a background in human exercise physiology, I wanted to gain a deeper understanding of how nutritional interventions may influence skeletal muscle physiology and am now investigating both the acute and chronic effects of alcohol on skeletal muscle protein synthesis and function in animal models. Following my time at FSU I plan to continue a career in research and have interest in clinical populations experiencing skeletal muscle loss of function.
Kudos to APS Postdoctoral Fellow Dr. Nathan C. Winn

APS Primary Affiliation: Endocrinology and Metabolism Section

Terminal degree obtained: PhD, Exercise Physiology, University of Missouri

Affiliation: Department of Molecular Physiology and Biophysics, Vanderbilt University

Mentor’s name and affiliation: Alyssa H. Hasty, Department of Molecular Physiology and Biophysics, Vanderbilt University

Biography: I am a physiologist specializing in the rapidly growing field of immunometabolism with particular emphasis in the context of obesity and metabolic disease. I completed my doctoral training at the University of Missouri, where I used translational research approaches that encompassed small and large animal models and humans to understand the physiological network between physical activity/inactivity and metabolic disease. After completing my doctoral work, I transitioned to the Department of Molecular Physiology and Biophysics at Vanderbilt University as a postdoctoral fellow. My current research is focused on understanding the physiological and mechanistic links between tissue-resident immune cell function – namely macrophages – inflammation, and metabolic disease and the extent to which diet-induced weight loss and/or exercise reshapes these interactions. I am pursuing a career in research, with the ambition to fully characterize the molecular and physiological mechanisms underlying tissue-specific immunometabolic dysfunction in obesity-associated metabolic disease.

Congratulations to Caroline tum Suden/ Frances Hellebrandt Awardees from the Endocrinology and Metabolism section.

David A. Hutton – University of Colorado Boulder
Increased Large Elastic Artery Stiffening with The Anthracycline Chemotherapy Drug Doxorubicin: Potential Role of Excess Mitochondrial Superoxide
https://doi.org/10.1096/fasebj.2020.34.s1.04407

Jesse D Moreira - Boston University
Microglial–Mediated PVN Inflammation Precedes Sympathoexcitation but not Hypertension in the Development of Gαi2 Protein–Dependent Salt Sensitive Hypertension
https://doi.org/10.1096/fasebj.2020.34.s1.02616
Thank you for your service!

Thanks to outgoing committee members for their outstanding service to the Endocrinology and Metabolism Section.

Joshua C. Anthony, Ph.D. (Advocacy Committee Representative, Mlumn)
Charles Lang, Ph.D. (APS Council Liaison; Penn State University)
Wolfgang Langhans, D.V.M. (Councilor, ETH Zurich)
Patricia E. Molina, M.D., Ph.D. (Committee on Committees Representative, Louisiana State University)
Labros S. Sidossis, Ph.D. (Awards Committee Chair, Rutgers University)
Licy L. Yanes Cardozo, M.D. (Councilor, University of Mississippi Medical Center)

Endocrinology & Metabolism 2020 Advocacy Activities

Each year the APS makes recommendations for the budgets of the National Institutes of Health, National Science Foundation, VA Medical and Prosthetic Research, and life sciences research at NASA. These recommendations for fiscal year (FY) 2021 were sent to Congress in the form of written testimony statements, and are posted on the APS website. Future messages to Congress will have additional information about the crucial role of physiology in understanding how COVID-19 affects the systems of the body.

The APS Science Policy Committee (SPC) was scheduled to meet in Washington, DC in May of this year to go to Capitol Hill and advocate for research funding. Because that meeting was canceled and there is no firm timeline for Congress’s return to Washington, the committee is beginning to plan remote advocacy activities for this spring and summer. Those messages will focus on what the community needs to restore research and training programs after COVID-related restrictions are lifted, and what the agencies need for FY 2021. Once the committee has developed materials and protocols for these advocacy activities, there may be an opportunity to invite the general membership to participate.
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