Message from Section Chair

Dear Members,

It has been a long time since we were able to meet in person. The last year has been a challenging time that has impacted our professional and personal lives to all of us. There is light at the end of the tunnel but we still have to do our part to get safe to the other side and be able to resume our regular lives, if that at all possible.

Experimental Biology 2021 (EB2021) will be entirely virtual with an exciting program that will allow us to enjoy hundreds of presentations covering the most recent developments and hot topics in Physiology.

The E&M section has an exciting program for EB2021. The Solomon Berson Lecturer Dr. Robert S. Balaban will deliver his lecture after one year in the waiting. Following his lecture, Dr. Balaban will participate in a Trainee chat, see more details in this newsletter. We will also have exciting Symposia and Featured Topics with presenters ranging from trainees to senior researchers. The New Investigator Awardee Dr. Paul M. Titchenell will present in a special virtual session; see more details in this newsletter, and do not delay your free registration for this event. The Virendra B. Mahesh awardee Alexandra M. Huffman and other E&M section awardees will present at the Virendra B. Mahesh Memorial Awards Session. We encourage our members to attend as many sessions as possible where you will have the opportunity to interact live with all presenters.

Thanks to outgoing E&M Steering Committee members Lauren M. Stein and Michael Christe. We thank them for their invaluable service to the E&M section and wish them the best in their endeavors.

Please do not hesitate to contact me or any of the E&M Steering Committee members with ideas, suggestions or concerns.

Keep safe and healthy, and encourage your colleagues, relatives, friends to do the same.

Damian G. Romero
The Endocrinology and Metabolism Section will have an exciting program at Experimental Biology 2021 to be held virtually on April 27-30, 2021. Please find below the highlights of the Endocrinology and Metabolism Section sessions (in chronological order). For detailed Endocrinology and Metabolism Section program information at EB2021 follow this link. For the overall APS program at EB2021 which including hundreds of sessions follow this link. Hope to see you virtually at our annual meeting at EB2021.

Grant R. Kolar, M.D., Ph.D.
E&M representative Joint Program Committee

Developmental Origins of Health and Disease: Exercise Metabolism
Symposium - Tuesday, April 27, 2021 - 10:00 AM - 11:30 AM - Virtual Session, Room APS-9
Chair: Zhen Yan - Co-Chair: Margaret Morris

Exercise During Pregnancy Mitigates Negative Effects of Parental Obesity on Metabolic Function in Adult Offspring
Zhen Yan - School of Medicine, University of Virginia

Intervening in Maternal Obesity - Exercise and Other Therapeutic Interventions to Improve Offspring Outcomes
Margaret Morris - School of Medical Sciences, University of New South Wales

Maternal Exercise Mitigates the Effects of Gestational Diabetes on Offspring Vascular Function and Beta Cell Function
Angela Devlin - Pediatrics, The University of British Columbia, BC Children's Hospital Research Institute

Epigenomics in Metabolic Health and Disease
Symposium - Tuesday, April 27, 2021 - 2:00 PM - 3:30 PM - Virtual Session, Room APS-9
Chair: Zhiyong Cheng - Co-Chair: Danielle E. Levitt

An Unfolding Epigenetic Catastrophe in Undernutrition
David T. Auble - Department of Biochemistry and Molecular Genetics, University of Virginia Health System

RNA Methylation and Aging
Sreekumaran Nair - Department of Internal Medicine, Mayo Clinic

Maternal Diet Regulates Insulin Action by Epigenetic Mechanisms
Susan E. Ozanne - Research Laboratories and MRC Metabolic Diseases Unit, University of Cambridge

Epigenomic Mechanisms of Alcohol-Induced Impaired Skeletal Muscle Function
Liz Simon - Department of Physiology, Louisiana State University Health Sciences Center-New Orleans

Solomon Berson Distinguished Lectureship of the APS Endocrinology and Metabolism Section
Lecture - Tuesday, April 27, 2021 - 4:00 PM - 5:30 PM - Virtual Session, Room APS-9
Chair: Gina L.C. Yosten - Co-Chair: Damian G. Romero

Energy Metabolism Design of Striated Muscle
Robert S. Balaban - National Heart, Lung, and Blood Institute, National Institutes of Health
Trainee chat with Dr. R. S. Balaban
Tuesday, April 27, 2021 - 5:30 PM - 6:30 PM
Follow link in the program to join and have the opportunity to chat with Solomon Berson awardee Dr. R.S. Balaban.

**Metabolic Adaptation and Heterogeneity in Physiology and Disease**
Featured Topic - Wednesday, April 28, 2021 - 10:00 AM - 11:30 AM - Virtual Session, Room APS-9
Chair: Alexander Pfeifer - Co-Chair: Shingo Kajimura

**Metabolic Flexibility of the Adipocyte - Impact on Diabetes**
Philipp Scherer - Touchstone Diabetes Center, The University of Texas Southwestern Medical Center

**Regulation of Brown Adipose Tissue and beige fat by the Adenosine A2B Receptor 8.5.5**
Thorsten Gnadt - Pharmacology & Toxicology, University of Bonn

**Intermittent Ambient Cold Exposure Is Not an Effective Obesity Treatment in Mice Housed at Thermoneutrality**
Greg L. McKie - Human Health and Nutritional Sciences, University of Guelph

**Proinflammatory CD8+ T-Cells Contribute to Age-Related Glucose Intolerance**
David J. Buckley - The University of Texas at Arlington

**Senolytic Drugs, Dasatinib and Quercetin, Attenuate Adipose Tissue T Lymphocyte Infiltration and Improve Metabolic Function in Old Mice**
Md Torikul Islam - Nutrition and Integrative Physiology, University of Utah

**Nuclear Receptors and Metabolism**
Featured Topic - Wednesday, April 28, 2021 - 2:00 PM - 3:30 PM - Virtual Session, Room APS-9
Chair: Terry D. Hinds - Co-Chair: David E. Stec

**Roles of PPARs in Liver Health and Diseases**
Walter Wahl - Center for Integrative Genomics, University of Lausanne

**Bilirubin Nanoparticles Activate PPARalpha to Remodel the Hepatic Lipidome and Produce Hepatic Ketones in Obese Mice, Improving Liver Function**
Justin F. Creeden - Neurosciences, University of Toledo College of Medicine and Life Sciences

**PPARα in Osteocytes Regulates Marrow Fat**
Amit S. Chougule - Bone and Joint Center, Henry Ford Health System

**PXR and Metabolism**
Taosheng Chen - Chemical Biology and Therapeutics, St. Jude Children’s Research Hospital

**Early Life Stress Enhances the Obesogenic Response in Female Mice Via Mineralocorticoid Receptor (MR) Signaling**
Jacqueline Renee Leachman - Pharmacology & Nutritional Sciences, University of Kentucky

**Virendra B. Mahesh Memorial Awards Session in Endocrinology and Metabolism**
Featured Topic - Wednesday, April 28, 2021 - 4:00 PM - 5:30 PM - Virtual Session, Room APS-9
Chair: Grant Kolar - Co-Chair: Jennifer Steiner

**SARS-CoV-2 Viral Entry Proteins in Hyperandrogenemic Female Mice: Implications for Women with Polycystic Ovary Syndrome (PCOS) and COVID-19**
Alexandra M. Huffman - Cell and Molecular Biology, University of Mississippi Medical Center
Glucose-Derived Extracellular Endothelial Microvesicles Induce a Pathologic Endothelial Phenotype
Vinicius P. Garcia - Integrative Physiology, University of Colorado Boulder

Knockout of the Endothelin B Receptor in Adipocytes Improves Insulin Sensitivity and the Metabolic Profile of Male Mice Fed a High Fat Diet
Osvaldo Rivera-Gonzalez - Physiology and Biophysics, University of Mississippi Medical Center

Drinking Off(s) the Clock: Chronic Alcohol Suppresses Skeletal Muscle Molecular Clock
Abigail Tice - Nutrition, Food, and Exercise Science, Florida State University

Central Feminization of Male Mice Reduces Metabolic Syndrome
Katherine Blackmore - Pharmacology and Physiology, George Washington University School of Medicine and Health

Endocrinology and Metabolism New Investigator Award Lecture and Awards Recognition Session
Lecture - Friday, April 30, 2021 - 4:00 PM - 5:00 PM - Virtual Session, Room Zoom Meeting
Chair: - Co-Chair: Chair: Jennifer Steiner - Co-Chair: Grant Kolar

Recognition to Endocrinology and Metabolism section awardees
Endocrinology and Metabolism New Investigator Award Lecture
Liver Insulin Action and Lipid Metabolism
Paul M. Titchenell - Perelman School of Medicine at the University of Pennsylvania

This session is free and will occur outside of the EB 2021 virtual platform. Registration is required following this link.

Nominate an Outstanding Mid-Career or Senior investigator for the Berson award from the EM section today!

Solomon Aaron Berson (1918-1972) was an American physician and scientist whose discoveries ensued in major advances in clinical biochemistry. This award to his honor is presented to a distinguished scientist for his/her outstanding contributions to the areas of Endocrinology and Metabolism. The Berson lecturer presents a one hour lecture on a topic of their choice. Berson awardees are also expected to attend and participate in the Endocrinology and Metabolism awards meeting which is held on the evening of the day of the Berson lecture. Individuals may be nominated for the Berson Distinguished Lectureship by APS members in good standing with a primary affiliation in the Endocrinology and Metabolism Section. Self-nominations will not be accepted. The recipient receives a $1,000 honorarium and up to $2,000 to cover travel and per diem expenses incurred during the meeting.

Application Materials: CV and nomination letter
For detailed award information and nominations follow this link.
Questions? Contact Damian G. Romero, Chair of EM Section (dromero@umc.edu) or Jennifer Steiner, Awards Representative of EM section (jsteiner2@fsu.edu)
**Call for Postdoctoral Fellowship Applications**

In an effort to enhance the benefits of our early-career members and to develop careers in physiological research worldwide, APS has coordinated the Postdoctoral Fellowship Program. The program will provide funding to five fellows for one year from November to October. Funds can be used for stipend and/or travel (restricted to APS sponsored conferences) not to exceed $50,000 total. No indirect costs allowed.

Get more information on eligibility, criteria and conditions following this [link].


Make sure our section is represented between the APS Postdoctoral Fellows applying to this outstanding opportunity.

Joseph T Brozinick, Ph.D.
E&M representative Awards Committee

**News from the Trainee Advisory Committee**

The Endocrinology and Metabolism Section Trainee Advisory Committee (TAC) subcommittee is actively working to engage our section trainees. If you are interested in joining this subcommittee do not hesitate to contact our section TAC representative Deborah Osikoya.

Current E&M TAC subcommittee members:
- Mona Elgazzaz, Louisiana State University Health Sciences Center
- Joseph Laudato, Florida State University
- Jacob E. Pruett, University of Mississippi Medical Center
- Samar Rezq, University of Mississippi Medical Center
- Juhi Singhal, University of North Texas Health Science Center
- Nathan Winn, Vanderbilt University

Deborah Osikoya, Ph.D.
E&M representative Trainee Advisory Committee

**EB 2021 Symposium: activists’ threats to research**

Be sure to tune into the Animal Care and Experimentation Committee’s EB 2021 symposium on “Addressing the Increasing Threat of Animal Rights Activism to Research.” Anti-research groups are deploying increasingly sophisticated tactics such as social media to undermine the legitimacy of research. In addition to laboratory infiltrations, they are mounting shrewd efforts to pass legislative restrictions on research in Congress as well as a number
of states. The symposium will be streamed on Tuesday, April 27, from 4:30-5:30 Eastern in virtual session Room APS-10. For more information, see the listing on the APS EB Meeting website.

Jennifer Steiner, Ph.D.
E&M representative Animal Care and Experimentation Committee

News from the Physiology Educators Committee

The Physiology Educators Community of Practice (PECOP) is hosting a series of monthly webinars focused on topics including education best practices, synchronous and/or asynchronous teaching, establishing inclusive classrooms, and publishing. Past webinars can be viewed here.

Dr. Barb Goodman is seeking bloggers for the PECOP blog, to write about any topic of their choice related to physiology education. To inquire about contributing, contact Dr. Goodman at Barb.Goodman@usd.edu.

The Medical Physiology Refresher Course that is typically associated with EB will be held virtually on Friday, April 23 (pre-conference). This year’s topic is “Sleep Physiology and Sleep Disorders. The course will be held outside the meeting platform and although there is no fee associated with attending, separate registration is required. Get more information following this link and register at this Zoom link.

The Physiology Educators Committee recently reviewed applications for the Barbara A. Horwitz and John M. Horowitz Undergraduate Research Awards, Summer Undergraduate Research Fellowships (SURFs), and ADI McKnight Innovative Educator Awards.

Robert (Bob) S. Bowen, Ph.D. (E&M representative to Physiology Educators Committee)

Danielle E. Levitt, Ph.D. (E&M representative to Physiology Educators Committee)

News from the Diversity, Equity & Inclusion Committee

The Diversity, Equity & Inclusion Committee (DEI) has produced a series of Webinars addressing DEI in multiple topics that are available to all APS members. Don’t miss this opportunity learn more on DEI and APS efforts to foster a diverse, equal and inclusive environment.

DEI in Clinical Trials
Picture a Scientist Panel and Film Discussion
Storytelling: Celebrating Hidden Figures in Physiology

Damian G. Romero, Ph.D.
E&M representative DEI Committee

News from AJP-ENDO

This year marks the 100th anniversary of the discovery of insulin, and AJP-Endocrinology & Metabolism (AJP-Endo) will publish several outstanding invited Review articles throughout the year. In his Editorial “The fascinating physiology of insulin: celebrating a centennial hormone” (in the January issue), Editor in Chief André Marette provides some background: "The American Journal of Physiology was at the forefront of the discovery of insulin in
Toronto during the early 1921–1923 period. The seminal data showing that a pancreatic extract pure enough to consistently lower blood glucose in diabetic dogs was first presented by Banting and Macleod at the American Physiological Society’s 34th Annual Meeting in December of 1921, and the abstract was published in the American Journal of Physiology in 1922. This was followed by a series of key investigations performed in normal and hyperglycemic rabbits that were published in the Journal in 1922 and more studies reported by the Toronto team at the annual meeting of the Society in 1923 [reviewed by Goldfine and Youngren in the American Journal of Physiology in 1998]. This major achievement was recognized with the Nobel Prize in Physiology or Medicine in 1923 that was awarded jointly to Frederick Banting and John Macleod, who shared their award with Charles Best and James Collip, respectively." So far this year, AJP-Endo has published such outstanding articles as “100th Anniversary of the discovery of Insulin Perspective: Insulin and Adipose Tissue Fatty Acid Metabolism” by André Carpentier, and most recently, “The Promising Future of Insulin Therapy in Diabets Mellitus” by Remi Rabasa-Lhoret and colleagues. Many more Review articles are planned for this year, plus there is a Call for Papers through December entitled “Insulin’s First 100 Years - Where Next?” We encourage submissions for this Call, and more information is available here: https://journals.physiology.org/ajpendo/insulins-first-100-years.

André Marette, Ph.D.
AJP-Endocrinology and Metabolism Editor-in-Chief

CALL FOR PAPERS AJP-ENDOCRINOLOGY AND METABOLISM
Chronicity in Metabolism
Deadline: December 31, 2021

Deciphering the Contribution of the Gastrointestinal Tract on Glucose, Lipid, and

Energy Metabolism
Deadline: December 31, 2021

Deconstructing Organs: Single-Cell Analyses, Decellularized Organs, Organoids, and Organ-on-a-Chip Models
Deadline: December 31, 2021

GPCR-Mediated Regulation of Fuel and Energy Metabolism in Peripheral Tissues
Deadline: December 31, 2021

Insulin’s First 100 Years – Where Next?
Deadline: December 31, 2021

News from Physiological Reviews

Physiological Reviews continues to be the #1 ranked publication in Physiology according to Clarivate Journal Citation Reports and Google Scholar, earning a 2019 Impact Factor of 32.15. In 2020, Physiological Reviews published 41 Invited Reviews and 3 Letters to the Editor. Most articles are invited by the Editor following detailed consideration by the Associate Editors at the Spring and Fall meetings. Occasionally “unsolicited proposals” submitted by individual scientists make it past the scrutiny of the Editors and are commissioned. All aspects of modern physiology research are considered appropriate for Physiological Reviews and the Editors have placed great emphasis on commissioning reviews with a translational focus. All articles are published ahead of print in their accepted form within two weeks from acceptance. Please see our editorial outlining our plans to increase the impact of Physiological Reviews on the scientific community, and checkout our COVID-related minireviews online following this link.

The five most highly cited reviews published in 2020 reveal the breadth of the journal: Ji et al. Elevated plasmin(ogen) as a common risk factor for Covid.
News from AJP-REGU

Greetings from AJP-Regu! Our editorial team assumed leadership of the Journal on July 1, 2020, as our previous Editor-in-Chief, Willis K. Samson, Ph.D., and his team stepped down. We are grateful for the continued support of the previous editorial team, especially Dr. Samson and former Deputy Editor-in-Chief, Dr. Wolfgang Langhans, who have both graciously agreed to continue on with AJP-Regu as Consulting Editors. Our new editorial team is led by myself and our new Deputy Editor-in-Chief, Dr. Jennifer Sasser, and includes nine additional Associate Editors:

- Rita de Cassia Aleixo Tostes Passaglia
  University of São Paolo, Ribeirão Preto, Brazil
- Zachary J. Schlader
  Indiana University School of Public Health, Bloomington, Indiana
- Karolina P. Skibicka
  The Pennsylvania State University, University Park, Pennsylvania
- Audrey J. Stone
  University of Texas at Austin, Austin, Texas
- Andrea Zsombok
  Tulane University School of Medicine, New Orleans, Louisiana

The primary goals of our team are to support the careers of Early Career Physiologists, and to uphold the commitment of the American Physiological Society to diversity, equity, and inclusion. Our team has therefore implemented several exciting initiatives that we would like to share:

**Early Career Reviewer Program**
Last Fall, we implemented the Early Career Reviewer Program. In this Program, Early Career Physiologists attend training on how to construct an excellent manuscript review through a 1.5 hour, live training session. Following this training session, participants receive a certificate of their training, and are added to a list of trained early career physiologists who are available to review manuscripts. After successful completion of a manuscript review, individuals are added to the Early Career Review Board for a 3 year term (or until they are no longer early career investigators, whichever comes first). We anticipate that the next training session will be offered in May 2021, so stay tuned and follow us on Twitter (@AJPRegu) and Facebook for more information!

**New Collections**
We have started three new Special Collections of manuscripts to highlight black, Hispanic, and female authors. New manuscripts are being added to these collections all the time, so check back often! Would you like your manuscript highlighted in
one of these Special Collections? When you submit your work to AJP-Regu at this [link], check the appropriate box under the “Classifications” tab, in the “Special Collections” section!

- Black History Month Collection
- International Women’s Day Collection
- National Hispanic Heritage Month Collection

New Investigator Review Award
We are soliciting review articles to be submitted for the New Investigator Review Award, which will be awarded in April 2021. To enter, construct a review article on a topic of your choosing as a single author, and submit via the AJP-Regu submission site at [https://ajpregu.msubmit.net](https://ajpregu.msubmit.net) and select “AJP Regu New Investigator Review Award” in the “Category” drop down menu, under the “Classifications” tab. The author of the winning review article will receive a monetary award and promotion on our social media sites. Don’t have enough time to enter for this year’s award cycle? No problem, we are receiving entries in a rolling cycle, with awards given every year in April.

New Call for Papers: Don’t Deny Your Inner Environmental Physiologist: Investigating Physiology with Environmental Stimuli
We have an exciting new Call for Papers for manuscripts related to research studies that utilize environmental stimuli to expand knowledge about physiology and pathophysiology. Manuscripts submitted for this call will be handled by Guest Editors Dr. Blair D. Johnson ([bj33@indiana.edu](mailto:bj33@indiana.edu)) and Dr. Daniel Gagnon ([daniel.gagnon.3@umontreal.ca](mailto:daniel.gagnon.3@umontreal.ca)). For detailed information on these Call and submission instructions, please follow the [link]

**Deadline for submission: December 31, 2021**

Thank you!
Lastly, and most importantly, I want to thank YOU for your continued support of AJP-Regu through submission of you work and especially for your service as peer reviewers—we couldn’t do it without you! If you have any questions, comments, or ideas for AJP-Regu, please be sure to reach out to me at [gina.yosten@health.slu.edu](mailto:gina.yosten@health.slu.edu)

Gina L. C. Yosten, Ph.D.
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