



## Neural Control and Autonomic Regulation Section Newsletter

Fall 2018



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### MESSAGE FROM THE CHAIR

It is that time again to begin preparing for EB 2019 in Orlando, Florida. This year the meeting will be one day shorter beginning Saturday and ending on Tuesday. This will mean more planning but certainly more bang for your buck since so much will be packed into the 3.5 days. We have several novel sessions planned for NCAR that are described below along with other interesting sessions.



Please be sure to review all the NCAR topics as well as the Featured Topics to find the best fit for your research. Be sure to check the poster and oral presentation option in case your poster is chosen for oral presentation. Finally, be sure you and your trainees carefully review the numerous award categories to help offset the costs of the meeting for our newer members of NCAR. This is a great way to promote your research and develop your career, in addition to reducing your expenses.

This year, Sue Barman will receive the Carl Ludwig Award. She will present a review of her many contributions during her career to our understanding of central neural rhythms controlling autonomic cardiorespiratory regulation.

Regarding the many awards we are offering for trainees, please be aware that we have begun a major drive to fund our awards by a campaign to raise \$50,000 for the Michael J. Brody Award Fund, the source of our funds for NCAR. While we are very grateful to AD Instruments, DSI and Attoquant for their support of several NCAR awards, we want to establish all of our awards and add more by building our principle. The APS is contributing also since they will match up to \$50,000. We can make this happen with your support, particularly from those of us, like me, who were trained by Dr. Brody and recall his passion for training the next generation of biomedical scientists in autonomic regulation. Please consider a donation at: <https://ebus.the-aps.org/PersonifyEbusiness/Default.aspx?TabID=1515&ProductId=3849120>

There are several positions open on the steering committee of NCAR. These include Committee on Committees representative, Science Policy and Communication Liaison, and Secretary/Treasurer. Katherine Blackmore will replace Amanda Miller as the next Trainee Representative. We sincerely thank Amanda, Yumei Feng (Secretary/Treasurer) and Rasna Sabharwal

(Member-at-Large/Awards Chair) for their service. This is an opportunity for you to participate more in NCAR, develop leadership skills, and meet more scientists in the APS.

I look forward to seeing you all in Orlando!

Mark Knuepfer

### CARL LUDWIG DISTINGUISHED LECTURESHIP FOR 2019

The NCAR Steering Committee is honored to announce that Susan Barman Ph.D., FAPS, has been named the Carl Ludwig Distinguished Lecturer for EB 2019. Sue began her biomedical research career in the laboratory of Robert Wurster at Loyola University in Chicago. She moved to Michigan State University for a post-doctoral position with Gerard Gebber, then joined the faculty and continued her collaboration with Dr. Gebber. They were a formidable team applying novel approaches to identify the central origins of rhythmicity in autonomic outputs that underlie the regulation of vascular tone, cardiorespiratory activity and many other autonomic functions. In addition, Sue has served in many other capacities for the Society, including President of the APS, editorial boards, and promoted the development of research in autonomic regulation throughout her career. We all look forward to a fascinating presentation defining these seminal studies on the sources of sympathetic rhythms. The Carl Ludwig Lecture by Dr. Barman will be delivered on **Monday, April 8, 2019 at 1:30 PM** in Room W308AB and is entitled "What can we learn about neural control of the circulation by studying rhythms in sympathetic nerve activity?"



### NCAR SPONSORED SYMPOSIA AT EB 2019

Chair: Virginie Aubert (Loyola Univ)

#### **Autonomic Control of Metabolism**

Speakers: Mohamad Mokadem (Univ of Iowa); Darleen Sandoval (Univ of Michigan); Laurent Gautron (UT Southwestern)

Sunday, April 7, 3:30-5:00 PM in Room W311B

Chairs: Jacqueline K. Limberg (Univ Missouri) and Virend K. Somers (Mayo Clinic)

#### **Neural Circulatory Mechanisms Linking Sleep Loss to Hypertension** (Cosponsored by AJP - Heart and Circulatory Physiology)

Speakers: Monica Andersen (Univ Federal de São Paulo); Naima Covassin (Mayo Clinic); Jason Carter (Michigan Technological Univ)

Monday, April 8, 8:30-10:00 AM in Room W311G

### NCAR SPONSORED FEATURED TOPICS AT EB 2019

**Reminder-** featured topics (FT) include selected abstracts to be orally presented during the session. If your research relates to the FT areas, submit an abstract to that topic category. (NOTE: if selected for inclusion in a FT, abstracts will be presented twice: once as a poster and once in the oral session.)

Chairs: Grace Pham (Univ of North Texas HSC at Fort Worth) and Sailesh Harwani (Univ of Iowa)

#### **Autonomic Anti-inflammatory Mechanisms: Which Branch Trumps?**

Keynote speaker: Patrice Guyenet (University of Virginia) "C1 neurons mediate a stress-induced anti-inflammatory reflex in mice"

Sunday, April 7, 1:30-3:00 PM in Room W311D

Chairs: Charlotte Usselman (McGill Univ) and Nina Stachenfeld (Yale School of Medicine)

#### **Autonomic Function in Normal and Preeclamptic Pregnancies**

Keynote speaker: Charlotte Usselman (McGill University) "Sympathetic neurovascular function in postpartum women following preeclamptic pregnancies"

Tuesday, April 9, 8:30-10:00 AM in Room W311B

Chairs: John S. Floras (Univ Health Network, Toronto) and Philip J. Millar PhD (Univ of Guelph)

#### **Regulation of muscle sympathetic outflow during exercise**

Keynote speaker: Catherine F. Notarius (Univ Health Network, Toronto) "Control of muscle sympathetic

activity during acute and chronic exercise in humans with and without heart failure”  
Tuesday, April 9, 1:30-3:00 PM in Room W311D

Chair: Rodrigo Del Rio (Pontifical Catholic Univ of Chile)

**NCAR Young Investigator Awards**

Sunday, April 7, 8:30-10:00 AM in Room W311B

Chair: Amanda Miller (Pennsylvania State University)

**Data NCARnation**

Saturday, April 6, 3-5:00 PM in Room W311G

**NCAR SPONSORED POSTER TOPICS AT EB 2019**

- 1245-APS Cellular and molecular basis of autonomic control
- 1246-APS Sympathetic regulation in heart failure
- 1247-APS Sympathetic regulation in hypertension
- 1248-APS Sympathetic regulation in diabetes and obesity
- 1249-APS Differences in autonomic regulation in aging or sex
- 1250-APS Autonomic circuitry in thermoregulation or metabolism
- 1251-APS Sympathetic control of circulation
- 1252-APS Arterial baroreflex function and blood pressure regulation
- 1253-APS Chemoreflex function and autonomic regulation
- 1254-APS Sympathetic and parasympathetic regulation in disease
- 1255-APS Autonomic balance: sympathetic and parasympathetic
- 1256-APS Central regulation of autonomic control: Hypothalamus
- 1257-APS Central regulation of autonomic control: Brain stem
- 1258-APS Central regulation of autonomic control: CNS
- 1259-APS Inflammation, immune system and autonomic regulation
- 1260-APS Autonomic and respiratory interactions
- 1261-APS Autonomic regulation of neuroendocrine and fluid volume
- 1262-APS Autonomic adjustments to behavioral stress
- 1263-APS Autonomic adjustments to exercise
- 1264-APS Enteric nervous system, digestion and metabolic function
- 1265-APS Autonomic control of cerebral and coronary blood flow

**NCAR SECTION AWARDS 2019**

**Application materials for the awards must be completed online by Nov 14, 2018.** Go to the NCAR Awards Page (<http://www.the-aps.org/mm/awards/sections/ncar.aspx>) to apply. Please adhere to all eligibility and submission requirements. Note that APS members can apply for multiple awards each year, BUT applicants are eligible to receive only one abstract-based award from the Society each year.

**Neural Control and Autonomic Regulation Section New Investigator Award** (\$1,000 plus reimbursement of the advance registration fee) made possible by APS Strategic Partner ADInstruments, recognizes an outstanding investigator in the early stages of his/her independent career. Candidates should be investigators who have made meritorious contributions to the area represented by the NCAR Section. They should not be above the rank of Assistant Professor or a comparable position in a research track at an academic institution or in industry. Eligible candidates must not have held the rank of Assistant Professor or equivalent for more than 3 years from the date of award application deadline. Applicants also must not have held an advanced degree (PhD, MD, DVM or equivalent) for more than 8 years from the date of award application deadline. The applicant must be an APS member in good standing with a primary affiliation in the NCAR Section. Submit: (1) NCAR Biosketch; (2) NCAR New Investigator Award Submission Form; (3) two letters of nominations from regular APS members; (4) three reprints from published articles; and (5) First- or senior-author abstract submitted to a NCAR topic.

Candidates will be evaluated on the quality and impact of their publications, the relation of their publications to neural autonomic regulation, evidence of independence and promise (grant funding, peer review activities, etc.), and letters of nomination. Although this is not an abstract-based award, the awardee will be expected to present a talk at the NCAR Young Investigator Award FT and be recognized at the NCAR Reception. Individuals can re-apply but can win the award only once.

**The Michael J. Brody Young Investigator Award** (\$500 plus reimbursement of the advance registration fee) recognizes a promising young investigator who has made significant research contribution to the understanding of neural control and autonomic regulation. The award is open to graduate students (post-candidacy exams) and to postdoctoral and clinical fellows or equivalent (within 3 years from degree [month/year] at the application deadline). The applicant must be an APS member in good standing with a primary affiliation in NCAR Section. Submit: (1) NCAR Biosketch; (2) Brody Award Submission form; (3) a first-authored abstract submitted to a NCAR topic; (4) documentation of date of post-candidacy exam (graduate student applicant) or date of completion of the doctoral degree (postdoctoral applicant); and (5) two letters of recommendation, including one from the applicant's advisor. The awardee will be expected to present their abstract at the NCAR Young Investigator Award FT at EB 2019 and will be recognized at the NCAR Reception. Individuals can re-apply but can win the award only once.

**Neural Control and Autonomic Regulation Research Recognition Awards** (\$500 plus reimbursement of the advance registration fee) provide travel support to 1 graduate student, 2 postdoctoral research fellows and 1 early career investigator to present meritorious research at the annual EB meeting. Graduate students, postdoctoral research fellows and early career investigators are encouraged to apply. Eligibility for the candidates is as follows: the graduate student must have completed post candidacy exams, as certified in the advisor/chair letter; the postdoctoral or clinical fellows must be within 5 years of degree [month/year] by the date of award reception and the early career investigator must have completed postdoctoral training with an academic rank not higher than that of Assistant Professor or equivalent and be within 2 years of appointment [month/year] by the date of award reception. Research focus should be in the area of neural control and autonomic regulation. Applicants must be APS members in good standing with primary affiliation to the NCAR Section. Submit: (1) a first-authored abstract submitted to any NCAR topic at the EB meeting; (2) NCAR Biosketch; (3) NCAR Research Recognition Award Submission Form; (4) Documentation of date of candidacy exam (graduate student) or degree (post doc) or appointment (early career); and (5) letter of recommendation from advisor or departmental head. Award criteria will be based on current work reflected in the abstract, overall contributions to the field and letter of recommendation. Awardees will be expected to present their abstract at the NCAR Young Investigator Award FT at EB and be recognized at the NCAR Reception. While there is no limit to the number of times an individual can apply for these awards, the winner is eligible to win this award once only within the same category (i.e., graduate student, postdoc, or early career). If the applicant previously won the award, the personal statement should clarify that (s)he is competing in a different category.

**Neural Control and Autonomic Regulation Data Sciences Outstanding Graduate Student Award** (\$500 plus reimbursement of the advance registration fee), provides travel support to one graduate student to present meritorious research at the annual EB Meeting. Graduate students working towards a PhD degree (post-candidacy exams) in the area of neural control and autonomic regulation are eligible to apply. The applicant must be an APS member in good standing with a primary affiliation in the NCAR Section. Submit: (1) NCAR Biosketch; (2) NCAR DSI Outstanding Graduate Student Award Submission Form; (3) a first-authored abstract submitted to any NCAR topic at the EB meeting; (4) documentation of date of candidacy exam [month/year]; and (5) letter of recommendation from advisor. Award criteria will be based on current work reflected in the abstract, research accomplishments and letter of recommendation. The awardee will be expected to present her/his abstract at the NCAR Young Investigator Awards FT at EB and be recognized at the NCAR Reception. While there is no limit to the number of times an individual can apply for this award, the winner is eligible to win this award once only.

**Neural Control and Autonomic Regulation Experimental Biology Trainee Award** has been made possible from donations collected from the NCAR membership and corporate sponsors, which was given for the first time in 2017. This award(s) provides travel support to graduate student or postdoctoral research fellow to present meritorious research in a designated area of the poster session at the annual EB Meeting. Award winners will be selected from the applications received for the Research Recognition Award, therefore no separate application is required.

### **NCAR FACEBOOK PAGE!**

Did you know that NCAR has a Facebook page? The Steering Committee will continue to post NCAR-related news and events, in addition to highlights and notices for our members. Follow this link to like our page: [https://www.facebook.com/NCAR-Section-of-the-American-Physiological-Society-172687666139054/\[facebook.com\]](https://www.facebook.com/NCAR-Section-of-the-American-Physiological-Society-172687666139054/[facebook.com])

### **SERVING ON APS COMMITTEES**

Congratulations to the following two NCAR members who were recently approved by APS Council to be on the following committees:

<b>NAME</b>	<b>UNIVERSITY</b>	<b>APS COMMITTEE</b>
Phillip Millar	University of Guelph	Communications
Alicia Shiller	University of Nebraska	Women in Physiology

### ***Would you like to become active in the society and promote NCAR interests?***

One of the best predictors of successful section committee appointments is the number of candidate applications. We need nominations from NCAR to insure good future representation on APS committees. Below are some APS committees that are underrepresented by NCAR members:

- Animal Care and Experimentation Committee
- Awards Committee
- Career Opportunities in Physiology Committee
- Conference Committee
- International Committee
- Porter Physiology Development Committee
- Science Policy Committee

Applications for various APS and NCAR committees are due in mid-January 2018. Nominees will be voted on at the EB 2019 meeting, and appointments will begin in January 2020. Descriptions of the committees and nomination process can be found at: <http://www.the-aps.org/mm/hp/Audiences/APS-Committees/nominations>.

### **NCAR STEERING COMMITTEE OPENINGS**

#### ***Would you like to serve the APS by being engaged in your section?***

The NCAR Committee is in search of three new committee members: a Committee on Committee Representative, Science Policy and Communication Liaison, and Treasurer/Secretary. Please send your NIH-style biosketch with a short description of why you would like to serve to Keisa Mathis ([keisa.mathis@unthsc.edu](mailto:keisa.mathis@unthsc.edu)) and Mark Knuepfer ([mark.knuepfer@health.slu.edu](mailto:mark.knuepfer@health.slu.edu)) by November 1, 2018. The committee will vote on the applications and announce the new steering committee members shortly after.



# NCAR Trainee

# Page



## MESSAGE FROM THE TRAINEE REPRESENTATIVE

Amanda Miller, Pennsylvania State University, [aross1@hmc.psu.edu](mailto:aross1@hmc.psu.edu)

Hey Trainees! It's been great serving you for the past 3 years and this is the last newsletter I will send out. I know your new representative Katherine Blackmore will do a great job!

On another note, EB 2019 will be here soon! Here are some things to remember as you prepare your abstracts and award applications for EB 2019:

Data NCARnation is a trainee only session to highlight the future of NCAR. To be considered for this session all you need to do is submit your abstract to any NCAR featured topic or NCAR poster topic and **select oral presentation** as your presentation style preference. You are eligible to present in Data NCARnation as long as you are not chosen for another oral presentation at EB and have not previously won an NCAR award. We choose the top 6 student and top 6 post-doc/resident abstracts for 5 minute presentations in this session to compete for awards. Note that this session occurs on Saturday, the 1<sup>st</sup> day of EB so make your travel plans accordingly.

Don't forget to apply for awards when you submit your abstract! To apply for any APS awards your APS membership must be active at the time of application (in 2018). To win some of the NCAR awards, you must have NCAR listed as your **primary** affiliation on your APS account so please read the award descriptions carefully in the awards section of this newsletter or at <http://www.the-aps.org/mm/awards/sections/ncar>

There are also several awards for trainees offered through the APS and in other APS sections (<http://www.the-aps.org/mm/awards>), FASEB (check EB 2019 website), and other societies at EB.

### Important Deadlines

Nov 14, 2018 - **Experimental Biology Abstract Submission Deadline**

Nov 14, 2018 - **Award deadline for NCAR awards and most APS abstract-based awards** (Note: some section award deadlines are earlier)

### Additional Trainee Resources

- Subscribe to the **APS Trainee Listserv** <http://www.the-aps.org/mm/hp/Audiences/students>
- Check out the **APS Professional Skills Courses** here: <http://www.the-aps.org/PST>
- For information on all **APS conferences**: <http://www.the-aps.org/mm/Conferences/APS-Conferences>
- Like the “**APS Trainees**” and “**American Physiological Society**” pages on **Facebook**
- Follow [@APSEducation](https://twitter.com/APSEducation) and [@APSPHYSIOLOGY](https://twitter.com/APSPHYSIOLOGY) on **Twitter**
- Email me at [aross1@pennstatehealth.psu.edu](mailto:aross1@pennstatehealth.psu.edu) if you have any questions or comments regarding your trainee membership in the APS

## **WELCOME TO NCAR: NEW MEMBERS FEBRUARY 2018 TO AUGUST 2018**

### **Regular Members, Primary Affiliation**

Carie R. Boychuk, UT Health, San Antonio, TX  
Ana Carolina R. Dias, Pontificia Universidad Catolica de Chile, Chile  
Jeung Ki Yoo, Institute for Exercise and Environmental Medicine, Dallas, TX  
Chloe E. Taylor, Western Sydney University, Australia  
Mazher Mohammed, Oregon Health Science University, Portland, OR  
Shin Jae Lee, ETH Zurich, Switzerland  
Florent Elefteriou, Baylor College of Medicine, Houston, TX  
Peregrine B. Osborne, University of Melbourne, Australia  
Ida T. Fonkoue, Emory University, Decatur, GA  
Brent Shell, University of Massachusetts, Lowell, MA  
Brane Gavranic, NYU Langone Medical Center, Astoria, NY  
Meghan Huber, Massachusetts Institute of Technology, Cambridge, MA  
Heidi Schambra, NYU School of Medicine, New York, NY

### **Regular Members, Secondary Affiliation**

David J. Bennett, University of Alberta, Canada  
Anouk De Brouwer, Queens University, Canada  
Sue Ritter, Washington State University, Pullman, WA  
Janet Casagrand, University of Colorado, Boulder, CO  
Adam C. Pallus, Washington National Primate Research Center, Seattle, WA  
Julia A. Moffitt, Arkansas College of Osteopathic Medicine, Fort Smith, AR  
Xianghong Arakaki, Huntington Medical Research Institute, Pasadena, CA  
Charalambos Costas, NYU Langone Medical Center, New York, NY  
Irrum F. Niazi, Trine University, Fort Wayne, IN  
Wannipat Buated, Thammasat University, Thailand  
John H. Kindred, Medical University of South Carolina, Columbia, SC  
Jean-Bapiste Cavin, University of Calgary, Canada  
Keisuke Shinohara, Kyushu University, Japan  
Dinu S. Chandran, AIIMS, India  
Alex E. Davila, Pontifical Catholic University of Peru, Peru  
Christian Leukel, University of Freiburg, Germany  
Sandra A. Billinger, University of Kansas Medical Center, Kansas City, KS

### **Student Members, Primary Affiliation**

Mona Nazzal, University of Manitoba, Canada  
Alain Riveros, Charite Universitatsmedizin, Germany  
Ben Holloway, University of Virginia, Charlottesville, VA  
Keven J. Laboy-Juarez, University of California, Berkeley, CA  
Joshua E. Gonzalez, Michigan Technological University, Houghton, MI  
Obed Paundralingga, University of North Texas Health Science Center, Fort Worth, TX  
Renata W. Martins, University of Sao Paulo, Brazil  
Sarah L. Schlichte, University of Nebraska Medical Center, Omaha, NE  
Katrina E. Armstrong, University of Manitoba, Canada  
Daniel E. Masur, Fluminense Federal University, Brazil  
Claudia A. Melipillan Cardenas, Corporacion de Rehabilitacion Club de Leones Cruz del Sur, Chile  
Daniella Thorsdottir, University of Vermont, Williston, VT  
Joseph V. Watts, University of Florida, Gainesville, FL  
Caleb J. Worker, University of Nevada, Reno, NV  
Zhiqiu Xia, University of Nebraska Medical Center, Omaha, NE  
Umema Zafar, Khyber Medical College, Pakistan  
Alyssa C. Bonillas, Portland State University, Portland, OR

Meeraal Zahher, Vassar College, Poughkeepsie, NY  
Rashi S. Bhatt, John Hopkins University, North Brunswick, NJ  
Max I. Myers, University of Pittsburgh, Pittsburgh, PA  
Pamela Best, Stony Brook University, Stony Brook, NY  
Ting-Chieh Yen, Michigan State University, Okemos, MI

***Student Members, Secondary Affiliation***

Michael Odom, East Carolina University, Greenville, NC  
Eden Delahunty, Griffith University, Australia  
Obaid Khurram, Mayo Clinic, Rochester, MN  
Kiefer Kious, Des Moines University, Dwight, IL  
Gerard L. Nguyen, San Jose State University, San Jose, CA  
Jacob Thorstensen, Griffith University, Australia  
Bailey Sanderson, Kansas State University, Manhattan, KS  
Aaron L. Silverstein, University of Kentucky, Lexington, KY  
Daimen Stoltz, University of Kentucky, Lexington, KY  
Giovanna R. Ferreira, Federal University of Sao Paulo, Brazil  
Elizabeth Trujillo, University of Texas, El Paso, TX  
Zhuldyz Zhanzak, Nazabayev University, Kazakhstan  
Kamelah Noel, Vanguard University, Costa Mesa, CA

**FUTURE EVENTS OF INTEREST**

- 29<sup>th</sup> International Symposium on the Autonomic Nervous System 2018: October 24<sup>th</sup> – October 27<sup>th</sup>, Newport Beach Marriott Resort and Hotel, CA. Additional information is available at: <http://americanautonomicsociety.org/2018-annual-aas-conference/>
- American Heart Association, Scientific Sessions 2018: November 10<sup>th</sup> – November 12<sup>th</sup>, Chicago, IL. Additional information is available at: [https://professional.heart.org/professional/EducationMeetings/MeetingsLiveCME/ScientificSessions/UCM\\_316900\\_Scientific-Sessions.jsp](https://professional.heart.org/professional/EducationMeetings/MeetingsLiveCME/ScientificSessions/UCM_316900_Scientific-Sessions.jsp)
- Physiology 2019: July 8<sup>th</sup> – July 10<sup>th</sup>, Aberdeen, United Kingdom. Additional information is available at: <http://www.physoc.org/physiology2019/>
- International Society for Autonomic Neuroscience (ISAN) 2019: July 25<sup>th</sup> – July 27<sup>th</sup>, Los Angeles, CA. Additional information is available at: [http://autonomicneuroscience.info/ISAN/ISAN\\_2019.html](http://autonomicneuroscience.info/ISAN/ISAN_2019.html)
- American Heart Association, Hypertension 2019: September 5<sup>th</sup> – September 8<sup>th</sup>, New Orleans, LA. Additional information is available at: [https://professional.heart.org/professional/EducationMeetings/MeetingsLiveCME/UCM\\_475321\\_Meetings.jsp](https://professional.heart.org/professional/EducationMeetings/MeetingsLiveCME/UCM_475321_Meetings.jsp)
- Annual American Autonomic Society (AAS) Conference 2019: November 6<sup>th</sup> – November 9<sup>th</sup>, Clearwater Beach, FL. Additional information is available at: <http://americanautonomicsociety.org>

### PLEASE SUPPORT NCAR FINANCES

Please help us keep our awards alive by either contributing directly to NCAR M. J. Brody Endowment Fund or assisting in recruiting a corporate sponsor. An important mission of our section is to engage new investigators in the field, through presentation of section awards and functions such as Data NCARnation. Donations can be made using the link below.

<https://ebus.the-aps.org/PersonifyEbusiness/Default.aspx?TabID=1515&ProductId=3849120>

### BENEFACTORS OF NCAR

Thank you sponsors for your contributions to the Neural Control & Autonomic Regulation Section Fund!



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