

## Newsletter – Spring 2019 Edition

### Message from the Section Chair, **Scott Kirkton**



I hope everyone has made housing and travel plans for the Experimental Biology 2019 meeting in Orlando (April 6-9, 2019). As always, CEPS will be well represented in Orlando with several Featured Topics, Poster Sessions and Symposia (see page 2) that are of interest to our section members. We will again sponsor a CEPS Abstract-Driven Trainee Featured Topics session and host the Krogh Distinguished Lectureship, presented by Dr. Terrie Williams, University of California, Santa Cruz, who will speak on “On the Cardio-Neural Trail of Stranded Whales and Wounded Warriors: An August Krogh Investigation.” Dr. Williams’ lecture will be held Monday April 8th, 3:30 – 4:30 pm.

In addition to the strong scientific program, the CEPS Trainee Advisory Committee will host the annual ‘Trainee Mixer’ on Monday, April 8<sup>th</sup> from 5:00 – 7:00 pm at the Copper Canyon Grill Orlando (9101 International Drive, Suite 1220 Orlando, FL 32819), followed by the CEPS Banquet/Business Meeting, 7:00 to 10:00 pm. Tickets are available to purchase at <http://www.the-aps.org/mm/hp/Audiences/Sections/banquets/CEPSBanqWeb.pdf>. No tickets will be sold at the door.

This is an exciting event that will give us a chance to socialize and to honor several members and trainees of our section on their scientific accomplishments. I look forward to seeing you all at this event! Our section has had some recent turnover on the Steering Committee. Dr. Heidy Contreras (University of La Verne), CEPS Treasurer and Dr. Sinya Benyajati (University of Oklahoma Health Sciences Center), Awards Chair will both step down at the end of this year’s Experimental Biology meeting. We will honor both Heidy and Sinya at the Business meeting for their outstanding service to our section. If you are interested in being involved with the CEPS Steering Committee, please contact me.

As I sat down to write this newsletter, I cannot help but think about the wonderful APS Intersociety Comparative Physiology Meeting last October in New Orleans. On behalf of the section, I wanted to thank Dane Crossley and his organizing committee for their tremendous efforts to make the meeting a reality. I have heard from many of you that the combination of science quality, camaraderie, and location made it the best Intersociety Meeting yet. If you are interested in being involved with planning the 2022 APS Intersociety Meeting, please contact me.

### 2019 Krogh Distinguished Lectureship

This section’s distinguished lectureship for 2019, the August Krogh Award, will be presented by Dr. Terrie M. Williams. She is a comparative wildlife physiologist at the University of California- Santa Cruz and Director of the Center for Marine Mammal Research and Conservation at UCSC. Her research has investigated the physiology of large mammalian predators. Specifically, Dr. Williams and her students are trying to understand “how animals survive” in a world that is constantly changing. By examining the functional relationships between animals and their environment, these researchers hope to understand the ecological significance of a species and the physiological adaptive changes that may be necessary for its survival. Her publication credits include over 100 scientific articles a recent book, “[The Odyssey of KP2](#)” (Penguin Press) detailing her efforts to save the endangered Hawaiian monk seal. From: <http://williams.eeb.ucsc.edu/lab-members/>





## Report from CEPS Program Officer and Joint Program Committees Representative, Dane Crossley

### Summary of EB 2019 CEPS Program

Our program for EB 2019 Orlando meeting is exciting and consists of two symposia and a featured topic trainee session. The first symposium will be held on Monday, April 8 at 1:30 pm entitled “From the brainstem to the heart: cardio-respiratory control in ectothermic vertebrates.” The second symposium will be held on Tuesday the 9<sup>th</sup> at 1:30 pm entitled “Causes and consequences of inter-individual physiological variation”. This year’s annual August Krogh lecture is titled ‘On the Cardio-Neural Trail of Stranded Whales and Wounded Warriors: An August Krogh Investigation’.

This year there are two poster sessions, the Scholander Trainee Highlights Poster Session to be held on Sunday April, 7<sup>th</sup> and the general featured topics session to be held on Tuesday April, 8<sup>th</sup>.

Our program for this year.

1. **Featured Topic — Sunday, April 7, 2019 — 8:30 AM - 10:00 AM — Convention Center, Room W312A**  
*Comparative & Evolutionary Physiology Section* — Chair: Dane Alan Crossley —

#### Speakers

- Michael William Country — *Biology, University of Ottawa.*
- Christian Damsgaard — *Department of Zoology, University of British Columbia.*
- Cornelia E. Fanter — *Biology, Saint Louis University.*
- Alex E. Mohr — *College of Health Solutions, Arizona State University.*

2. **From the Brainstem to the Heart: Cardio-Respiratory Control in Ectothermic Vertebrates Symposium — Monday, April 8, 2019 — 1:30 PM - 3:00 PM — Convention Center, Room W312B**  
*Comparative & Evolutionary Physiology Section* — Chair: Tara Janes — Co-Chair: Justin Conner.

#### Speakers

- **How and Why Vertebrates Match Ventilation and Perfusion of Their Respiratory Systems**  
Tobias Wang — *Department of Bioscience - Zoophysiology, Aarhus University*
- **Temperature-Dependence of Respiratory Control in Air Breathing Vertebrates**  
Lynn Hartzler — *Biological Sciences, Wright State University*
- **Chemoreception and Reflex Control of Cardiorespiratory Function in Fish**  
Steven Perry — *Department of Biology, University of Ottawa*
- **Modulation of the Lamprey Respiratory Rhythm by Neuronal and Glial Mechanisms**  
Donatella Mutolo — *Department of Experimental and Clinical Medicine, University of Florence*

3. August Krogh Distinguished Lectureship of the APS Comparative and Evolutionary Physiology Section (Supported by Novo Nordisk Fonden)

**Lecture — Monday, April 8, 2019 — 3:30 PM - 4:30 PM — Convention Center, Room W308CD**

*Comparative & Evolutionary Physiology Section* — Chair: Terrie Williams — Co-Chair:

- **On the Cardio-Neural Trail of Stranded Whales and Wounded Warriors: An August Krogh Investigation**

Terrie Williams — *Dept. of Ecology and Evolutionary Biology, Univ. of California, Santa Cruz*

4. Causes and Consequences of Inter-Individual Physiological Variation

**Symposium — Tuesday, April 9, 2019 — 1:30 PM - 3:00 PM — Convention Center, Room W312B**

*Comparative & Evolutionary Physiology Section* — Chair: Bernard Rees — Co-Chair:

**Speakers**

- **Polymorphisms with Major Effects on Organismal Traits and Ecological Dynamics**  
James H. Marden — *Department of Biology, Penn State University*
- **Polygenic Physiological Adaptation: the Consequences of Individual Variation Within and Among Populations**  
Doug Crawford — *Rosenstiel School of Marine & Atmospheric Science, University Miami*
- **Causes and Consequences of Inter-Individual Variation in Developmental Stress Physiology**  
Andrea Liebl — *Biology, University of South Dakota*

**Poster Sessions**

**Scholander Award Poster Session**

**Location:** Convention Center, Exhibit Hall-West Hall B

**Date:** Sunday, Apr 7 9:00 AM

**Duration:** 7 hours

**Poster Manning Time:** 10:15 AM-12:15 PM

**Comparative Poster Session**

**Location:** Convention Center, Exhibit Hall-West Hall B

**Date:** Monday, Apr 8 9:00 AM

**Duration:** 7 hours

**Poster Manning Time:** 10:15 AM-12:15 PM



## Report from Treasurer: **Heidi Contreras**

It is almost time for all of us to see each other again at this year's Experimental Biology Meeting in Orlando. Don't forget to buy your 2019 CEPS Business Dinner Tickets which will be held on Monday, April 8 at Cooper Canyon Grill (walking distance from our meeting). We will have a delicious buffet style dinner with mixed green salad, chicken, salmon, pasta, vegetables, mashed potatoes, coffee, tea, soft drinks and a dessert platter! But, best of all, we will all be able to get together and talk science!

CEPS members, post-doctoral fellows, students and friends of CEPS are all encouraged to attend and meet this year's Krogh Distinguished Lecturer and honored guest, Dr. Terrie Williams. During our dinner we will celebrate the accomplishments of this year's recipients of the CEPS Research Recognition Award, New Investigator Award, Dr. Doolittle Travel Award, Scholander Award, and Novo Nordisk Foundation Travel Fellowship. You will also get to hear about the work the CEPS committee is doing for your section.

Your CEPS Steering Committee is excited to see you all this year at EB! See you in sunny Orlando!

## Report from Science Policy Liaison Committee Representative:



### **Daniel Warren**

The APS Science Policy Committee is planning an NSF-centered Hill Day for May of 2019. We are recruiting 15 APS members with a history of NSF funding to visit the offices of Senators who serve on the Commerce, Justice, and Science (CJS) Committee, the Senate body that controls the budget appropriations for NSF. We are especially interested in recruiting constituents of the CJS Committee members, who represent the following states: Alabama, Alaska, Arkansas, California, Delaware, Florida, Hawaii, Louisiana, Maine, Maryland, New Hampshire, Rhode Island, South Carolina, Tennessee,

Vermont, West Virginia

Any NSF-funded (past or present) APS members that are registered to vote in these states, who are interested in visiting their Senator's offices in May, and wish to make their case that NSF budget increases are needed, should contact either Dan Warren ([daniel.warren@slu.edu](mailto:daniel.warren@slu.edu)) or Rebecca Osthus ([rosthus@the-aps.org](mailto:rosthus@the-aps.org)) for more information. Even if you are not from one of these states, but have been NSF-funded and are interested in this effort, please still contact us. There may be a place for you.

**Follow APS on Facebook:** <https://www.facebook.com/AmericanPhysiologicalSociety>

**Follow the APS I SPY PHYSIOLOGY BLOG:** <http://ispyphysiology.com>

**Follow Life Lines by Dr. Doolittle at:** <http://scienceblogs.com/lifelines/>



## Report from Trainee Advisory Committee Representative: **Liz Cambron**

Fellow Trainees! Please join us for a mixer before the CEP section dinner/business meeting at EB. This is a great chance to catch up and meet other members, especially new ones. As the incoming Trainee Advisory Committee (TAC) rep for our section, I do hope you'll stop by and say hi!

Comparative and Evolutionary Physiology Section Trainee Mixer (APS)  
Copper Canyon Grill Orlando 9101 International Drive, Suite 1220  
Orlando, FL 32819

The Trainee Advisory Committee (TAC) will be sending out a needs assessment survey after this year's Experimental Biology. The purpose of this survey is to make sure the needs of trainees are being addressed by sections and the APS, as well as to provide feedback for how TAC can better serve our trainee members. Please keep an eye out for a future email with the survey!

The [APS Postdoctoral Fellowship](#) seeks to enhance the benefits of early career members and to develop careers in physiological research world-wide. The program will provide grants to five fellows for one year from November 2019 – October 2020. Funds can be used for stipend and/or travel (restricted to APS sponsored conferences) not to exceed \$50,000 total. No indirect costs are allowed. **Fellow applicants must:** hold a PhD, MD or equivalent degree; a postdoctoral research position at their institution; and be an APS member. The Fellow applicant is eligible up to 3 years after obtaining terminal degree or completion of clinical training at the time of full application.

**The applicant's advisor/PI must have:** a minimum of three consecutive years APS membership and past experience as a mentor/sponsor. If the applicant's advisor/PI is an Assistant Professor or equivalent, the application is required to include an established co-mentor/sponsor or a mentoring team of experienced investigators. The program is limited to one application from the same mentor/sponsor within each program cycle.

### The two-phase application process is as follows:

1. Letter of Intent
2. Invitation by the applicant's primary Section to submit a full application.

### Important deadlines:

Date	Application	Decision
April 1, 2019	Letter of Intent	May 15, 2019
August 1, 2019	Full application (by invitation only)	October 1, 2019

For full details on the application eligibility and criteria, see the [Request for Applications \(RFA\) document](#).

## Updates from the Career Opportunities in Physiology Committee: Kelly Hyndman

The Career Opportunities in Physiology Committee supports a number of APS programs to foster the career development of physiologists of all ages:

### **EB Symposium: “The Hidden Job: Skills for a Career in Physiology”**

Join us Sunday, Monday, and Tuesday, 7:00am-8:00am in the Orlando Convention Center, Room W311D for a light breakfast and a series of discussions on hidden job skills. Careers in science require several skills and proficiencies that extend beyond the normal training practices. These include such things as negotiation skills, scientific society involvement, moving between academia and industry, and many others. The focus will be on those skills that are not a common aspect of training. Speakers will address these issues from a perspective of “what I wish I knew before I started this job” and “things no one told me I needed to know before I started.” This symposium will have an interactive format facilitated by leaders in academic, industry, teaching, governmental, and society roles. The targeted audience of trainees and established investigators alike will be exposed to the perspectives of the facilitators and will be able to incorporate the non-traditional training advice of the facilitators into their individual career plans. Visit [www.the-aps.org/the-hidden-job](http://www.the-aps.org/the-hidden-job) for more information.

### **Experimental Biology Undergraduate Orientation and Poster Sessions**

Open to all undergraduate students attending EB, the Undergraduate Orientation session serves as a primer to help the students get the most out of their EB experience, and includes award presentations for various APS-sponsored undergraduate research programs. This will be held at the Hyatt Regency Orlando, Plaza International Ballroom J/K from 3:00-5:00pm, April 6. There is also a special poster session for undergraduate students at EB, held from 3:30-5:00pm (undergrad presenters must arrive by 2:00pm to check-in and hang posters) on April 7 in the Orange County Convention Center, Valencia Ballroom D – please stop by and meet the next generation of physiologists!

### **Experimental Biology PhUn Week Poster Session**

Physiology Understanding (PhUn) week is a nationwide outreach program that builds connections between scientists and their local schools. During PhUn week, APS members engage students in interactive, hands-on physiology activities. Please stop by the PhUn Week poster session, open to all APS members, held from 7:00-9:00am on April 7 in the Orange County Convention Center, Valencia Ballroom C, to see how your colleagues helped promote physiology outreach and to see how you can get involved with PhUn week.

### **The APS Local Undergraduate Research Award in Physiology (LURAP)**

LURAP allows APS Members to recognize excellence in physiology research by undergraduates at their home institutions. The award fosters interest in physiological research for undergraduates, encourages them to continue with physiological studies, and provides networking with APS members at their home institutions. The LURAP is presented by an APS member to an undergraduate at the member’s home institution’s research showcase event. The award package includes a certificate, an APS t-shirt, and a free one-year undergraduate membership. Visit [www.the-aps.org/lurap](http://www.the-aps.org/lurap) for more information.

Please note, room locations are subject to change. Check the final program on the EB app for room assignments.



## Report from Awards Chair: **Sinya Benyajati**

We are delighted to congratulate the following 2019 EB award winners from the CEPS of the APS!

**August Krogh Distinguished Lectureship:** Terrie Williams, University of California, Santa Cruz

**New Investigator Award:** Jason Breves, Skidmore College

**Novo Nordisk Travel Awards:** Anthony Basile, Arizona State University; Lizzette Cambron, North Dakota State University

**Research Recognition Awards:** Matthew Regan, University of Wisconsin, Madison; Christian Damsgaard, University of British Columbia; Tara Janes, University of Quebec

**Dr. Dolittle's Travel Award:** Alex Mohr, Arizona State University

## Book advertisement by book co-editor and Trainee Subcommittee Representative: **Bridget Martinez**



NEUROMETHODS: Stroke Biomarkers. A Series by Springer Nature 2018

I. EDITORS INFORMATION

Names:

Dr Philip Peplow

Dr Bridget Martinez

Prof. Svetlana Dambinova

### Synopsis

Advances in brain biomarkers development for stroke are revolutionizing the way to study and early diagnose disease. Development of reliable biomarkers for brain disorders would dramatically accelerate research on the etiology, pathophysiology, and disease progression of a number prevalent and devastating nervous system diseases. International experts in the field of stroke research both experimental and clinical will contribute chapters to this volume that discuss the latest achievements in cutting-edge and well-established medical technologies for stroke.

### Scope of Volume

There is an increasing incidence of stroke in adults, and this is expected to increase even further due to changing demographics as improved medical care and health provision leads to extended life expectancy in developed and developing countries. In the book, biomarkers are described in terms of conventional, new and emerging analytes, techniques, platforms and applications. It covers the latest knowledge, trends and innovations in area of stroke assessments. This issue offers theoretical background in conjunction with tested protocols reproducing experimental, clinical laboratory and instrumental methods educating graduate students in biochemistry and pharmacology, clinical chemists, physicians, and medical residents. This book presents readers with a road map of the medical application of brain and blood-borne biomarkers through neuromethods development.

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