News from the WEH Section Chair  
Kathryn Sandberg  

Philadelphia, Here I Come!  

Not talking about the 1964 Irish play – I’m talking about Experimental Biology 2022 and how much I am looking forward to seeing IN-PERSON all my WEH friends at the City Winery on Sunday at 11:15 AM for our annual luncheon and business meeting. Our Secretary/Treasurer, Dr. Aaron Polichnowski, has picked the perfect location for the record turnout – fortunately Aaron was able to negotiate a few more tickets at the last minute. Thanks Aaron!

Prepare yourself. We will be busy -VERY busy catching up with all our colleagues in between celebrating the first in-person annual meeting since the pandemic began presided by our very own WEH friend and colleague Jennifer Pollock. Kudos Jennifer for being the APS President that brings us back together after this difficult historic period in all our lives.

Our minds will be exceptionally busy digesting all the amazing science we will hear including our WEH programming feature event - the Ernest Starling Distinguished Lecture given by Bina Joe on Sunday at 1:30 PM. Congratulations again Dr. Joe – we can’t wait!

On Saturday at 2:15 PM, our WEH rising star and Data Science International New Investigator Awardee, Dr. Tengis Pavlov, will be kicking off the Predoctoral and Postdoctoral Trainee Competition followed by our jam-packed Data Diuresis session. Thank you Ruisheng Liu, Meena Madhur and Michael Hultström for organizing these WEH highlights. What a great start to a meeting packed with exciting programming organized by Zhongjie Sun, our Joint Program Committee Representative.

Thanks to Abigail Colburn, Daniel Fehrenbach and Lindsay Ramirez, our Trainee Advisory Committee members, the Mentor-on-the-Go program has paired WEH 19 trainees with 34 mentors. Bravos to the next WEH generation!

Be sure to check out the newsletter tribute to the great scientist Robert W. Berliner, written by our WEH Historian, Helmut Gottlieb. Dr. Berliner made many early contributions to our understanding of water and electrolyte balance. Thank you, Helmut, for this memoir.

Be on the lookout this spring for an email from David Brooks on the APS Fellows Program and what it takes to achieve this honor and become a Fellow of the APS (FAPS).

In new news - WEH will now have a Program Committee, a Nominating Committee and a FAPS Review Committee to help the Chairs with these important tasks. Read all about it from Jean Regal, our Parliamentarian.

Lastly, I speak for all of us, when I say we are with our Ukrainian colleagues in these horrific times and imploring that this madness comes to a close as soon as possible.
WEH Section Joint Programming Committee
Zhongjie Sun, WEH Joint Programming Committee Representative

We are looking forward to a terrific program at EB 2022 thanks to the creativity of the WEH membership!!!! See you in April!

Questions? Contact Dr. Zhongjie Sun (zsun10@uthsc.edu).

Saturday April 2, 2022
12:30–2:00 PM EDT Room 204A
Hemorrhage and Ischemic Injury: An Update
Session Chairs: Dr. Lusha Xiang and Dr. John Clemmer

2:15–5:15 PM EDT Room 204C
WEH New Investigator Award Lecture, Trainee Competition, and Data Diuresis
Session Chairs: Dr. Ruisheng Liu and Dr. Michael Hultström

Sunday April 3, 2022
1:30–3:00 PM EDT Room 201A
Ernest H. Starling Distinguished Lecture
Session Chair: Dr. Kathryn Sandberg

3:30–5:00 PM EDT Room 304CC
Diseases that Impact the Black Community: This is Our Why
Session Chairs: Dr. Keisa Mathis and Dr. Adrienne King

3:30–5:00 PM EDT Room 202B
Role of Immune Cells in Fluid Balance and Blood Pressure Control
Session Chairs: Lindsey Ramirez and Dr. Erin Taylor

WEH Poster Sessions
9:00 AM – 4:00 PM EDT (Manned Time: 10:15 AM – 12:15 PM EDT)
561 Sex differences in blood pressure and fluid volume homeostasis
627 Translational physiology in water and electrolyte homeostasis research

Monday April 4, 2022
1:30–3:00 PM EDT Room 201A
New Concepts in the Regulation of Kidney Function, Fluid Balance, and Blood Pressure
Session Chairs: Dr. Zhongjie Sun and Dr. Alejandro Chade

WEH Poster Sessions
9:00 AM – 4:00 PM EDT (Manned Time: 10:15 AM – 12:15 PM EDT)
719 Developmental programming and cardiorenal function in adults
720 Adverse outcomes borne from preeclampsia: updates on research and interventions
721 Diseases that impact the black community: this is our why
722 Role of immune cells in fluid balance and blood pressure control
723 Cardiovascular and renal mechanisms in diabetes and metabolic syndrome
724 Renin-angiotensin-aldosterone system in regulation of blood pressure and renal function
Tuesday April 5, 2022

8:30–10:00 AM EDT  Room 304CC
Adverse Outcomes Borne from Preeclampsia: Updates on Research and Interventions
Session Chairs: Dr. Frank Spradley and Dr. Bhavisha Bakrania

8:30–10:00 AM EDT  Room 204A
If These (Gut) Walls Could Talk – Crosstalk Between the Gut Microbiota and Inflammation in Hypertension
Session Chairs: Dr. John Henry Dasinger and Dr. Jeanne Ishimwe

3:30–5:00 PM EDT  Room 203A
Endothelial Dysfunction in Preeclampsia and Fetal Programming
Session Chairs: Dr. Jessica Faulkner and Dr. Stella Goulopoulou

WEH Poster Sessions
9:00 AM – 4:00 PM EDT  (Manned Time: 10:15 AM – 12:15 PM EDT)
859 Blood pressure and fluid volume regulation in pregnancy
863 New concepts in the regulation of kidney function, fluid balance, and blood pressure
864 Gut, microbiota, and inflammation
968 WEH last chance poster session

WEH Secretary/Treasurer
Aaron J Polichnowski, WEH Secretary/Treasurer

I am really looking forward to seeing you all in Philadelphia at the final EB meeting!

Please make plans to attend the WEH Section Trainee Award and Data Diuresis sessions on Saturday, April 2nd, from 2:15 – 5:15 PM in Room 204C. In addition to providing a great opportunity to visit with friends and listen to presentations from WEH trainees, the Data Diuresis session is a major WEH Section fundraising event at EB. The WEH Section finances continue to be strong thanks to the generous donations from our community. At this year’s Data Diuresis session, I will be managing the “donation station”, where you can donate to any of the APS funds that directly support WEH members. Information for these funds can be found at: https://give.the-aps.org/give/234794/#!/donation/checkout. Your donations play a major role in supporting trainees in the WEH section and are truly appreciated!

The WEH Section Annual Luncheon and Business Meeting is a go! Based on ticket sales, we are anticipating a great turnout. Please note that the luncheon starts earlier than previous years.

Date: Sunday, April 3rd, 2022
Time: 11:15 AM – 1:15 PM
Location: City Winery
990 Filbert St., Philadelphia, PA 19107
~ 5-minute walk from the Convention Center

Finally, representatives of DSI and Portland Press will be attending many of the WEH functions at EB. Their continued support of the WEH Section sessions and awards is greatly appreciated!
Congratulations to all awardees!

Bina Joe, PhD
The University of Toledo
2022 Ernest H. Starling Distinguished Lecture

Sunday, April 3rd, 2022, 1:30 – 1:35 PM, Room 201A
The Climate Change Within: Microbiota and Metabolites

Tengis Pavlov, PhD
Henry Fold Health System
2022 DSI New Investigator Award

Saturday, April 2nd, 2022, 2:15 – 2:45 PM, Room 204C
Pannexin-1 Contributes to Renal Cysts Growth in PKD

Trainee Award Competition

We are pleased to announce that the finalists for the WEH Portland Press Predoctoral Research Recognition Award are Emily Burns (Augusta University), Owen Herrock (University of Mississippi Medical Center), and Nathan Campbell (University of Mississippi Medical Center). The finalists for the Juan Carlos Romero Postdoctoral Research Recognition Award are Luciana Veiras (Cedars Sinai Medical Center), Daniel Fehrenbach (Vanderbilt University Medical Center), and Ranjan Roy (Georgia State University). These finalists will be giving an oral presentation on April 2, 2022 at Pennsylvania Convention Center Room 204C. The presentations will be judged and a final winner announced for each category. Finalists receive $300 (predoc) or $500 (postdoc) and a complimentary ticket to the WEH luncheon in 2022. The overall winner in each category will receive an additional $300 (predoc) or $500 (postdoc), and one-year APS membership dues paid.

Research Recognition Awards:

Natalia Mathieu (Medical College of Wisconsin), Samuel Walton (Augusta University), Mohammad Saleem (Vanderbilt University Medical Center), Cailin Kellum (University of Alabama at Birmingham), Benjamin Bhunu (Tulane University), Yu Tao (University of North Texas Health). RRA awardees will receive a certificate of recognition, advanced-rate meeting registration reimbursement, complimentary admission to the WEH luncheon and a prize of $500.
Steven M. Horvath Professional Opportunity Award

Maria Venegas (University of Kentucky). Awardee will receive a certificate of recognition, advanced-rate meeting registration reimbursement, complimentary admission to the WEH luncheon and a prize of $500.

Trainee Competition
Saturday, April 2nd, 2022, 2:45 – 3:45 PM, Room 204C

Predoctoral Award Finalist Presentations
(Sponsored by Portland Press)

2:45 PM  CD14 deletion amplifies Dahl Salt-Sensitive hypertension and renal damage through a NOX2-dependent mechanism
Emily Burns, Augusta University

3:00 PM  Maternal B Cell Depletion Reduces Blood Pressure and Improves Fetal Weights in Male Offspring of a Rat Model of Preeclampsia
Nathan Campbell, University of Mississippi Medical Center

3:15 PM  The role of B cells in mediating hypertension in preeclampsia or COVID-19 infection during pregnancy
Owen Herrock, University of Mississippi Medical Center

Break: 3:30 – 3:50 PM

Postdoctoral Award Finalist Presentations
(Sponsored by the Juan Carlos Romero Fund)

3:50 PM  ROCK2 Specific Inhibition Attenuates DOCA Salt-Induced Cardiac Fibrosis and Renal T Cell Infiltration
Daniel Fehrenbach, Vanderbilt University Medical Center

4:05 PM  Inverse Neurovascular Coupling Contributes to Vasopressin Neuronal Activation in Response to Systemic Homeostatic Challenge
Ranjan Roy, Georgia State University

4:20 PM  Renal Tubular IL-1β Induces Salt Sensitivity in Diabetes by Activating Renal Macrophages
Luciana Veiras, Cedars Sinai Medical Center

Break: 4:35 – 4:55 PM

Data Diuresis and Discussion will immediately follow WEH Trainee Award Session

WEH Awards Committee

Finally, we would like to thank all the members of the WEH Awards Committee for their hard work in scoring and ranking abstracts: Magdalena Alonso, Peter Bie, David Brooks, Mattias Carlstrom, Carmen de Miguel, Ahmed El-Marakby, Eric George, Justin Grobe, Rajesh Mohandas, Carol Moreno Quinn, Jorge Giani, Analia Loria, Andreas Patzak, Joshua Scallan, and Richard Wainford.
I hope that you are planning to attend the always entertaining WEH Data Diuresis Session at EB 2022. This session will be held on Saturday April 2, 2022, 4:35 – 5:15 PM, Room 204C (immediately following the WEH Trainee Award Sessions). The Data Diuresis session provides an opportunity for investigators to “advertise” their research during a short 3-minute presentation prior to their poster presentation. We had a great mix of abstracts to choose from this year and would like to give a special thanks to our reviewers for helping select a diverse group of excellent presentations. As always, this joint session aims to provide plenty of time for new and established WEH investigators to mix and mingle and to discuss some of the great science currently being undertaken by members of our society that submitted abstracts to WEH topics! The selected speakers, presentation titles, and schedule for this year’s Data Diuresis session are listed below. Please join us in a relaxed forum with refreshments combined with excellent science from our colleagues.

### Data Diuresis Presentations
(Sponsored by Data Sciences International, Inc.)
Saturday, April 2nd, 2022, 4:35 – 4:55 PM, Room 204C

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
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<tbody>
<tr>
<td>4:35 PM</td>
<td>IL-25 Supplementation Induces M2 Macrophage Polarization, Reduces Blood Pressure, and Improves Fetal Weight in Placental Ischemic Rats</td>
<td>Corbin Shields</td>
<td>University of Mississippi Medical Center</td>
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<tr>
<td>4:40 PM</td>
<td>Endothelial Cell Mineralocorticoid Receptor (ECMR) deletion improves fetal growth and vascular function in the RUPP mouse model of preeclampsia</td>
<td>Desmond Moronge</td>
<td>Augusta University</td>
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<tr>
<td>4:45 PM</td>
<td>Sex Differences in Insulin Sensitivity and Glomerular Function in African Green Monkeys</td>
<td>Maria Venegas</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>4:50 PM</td>
<td>CD4+ T Cells Cause Increased Glucose, Mitochondrial Dysfunction, and Hypertension in a Novel Pregnant Rodent Model of Gestational Diabetes Mellitus</td>
<td>Evangeline Deer</td>
<td>University of Mississippi Medical Center</td>
</tr>
<tr>
<td>4:55 PM</td>
<td>In Utero Morphine Exposure Induces Hypertension and Opioid Receptor-Mediated Angiotensin II Sensitization</td>
<td>Nermin Ahmed</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Discussion</td>
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NEW COMMITTEES!!
Any member of the WEH section (regular, postdoc, graduate student, undergrad student) is eligible to serve on these WEH Committees, whether primary, secondary, or tertiary membership. Committee members are appointed by the WEH Chair Kathryn Sandberg with the assistance of the Steering Committee.

Please reach out to Kathryn Sandberg or any Steering Committee member if you are interested in participating.

The WEH Steering Committee has established 3 new committees:
- WEH Program Committee – Chaired by the Joint Program Committee (JPC) representative
  o This committee will assist the JPC representative in expanding and broadening our innovative programming at the Society’s annual meeting
- WEH Nominating Committee – Chaired by the Committee on Committees (CoC) representative
  o This committee will work with the CoC representative to identify WEH members to serve on APS Committees. This is a great opportunity to help increase the influence of WEH in APS.
- WEH FAPS Review Committee – Chaired by the Fellow of the APS (FAPS) Committee representative
  o This committee will increase our impact by increasing the number of WEH members that become Fellows of the APS.

NOMINATIONS WELCOME for Steering Committee
Work with some great scientists!! Self-nominations welcomed.
We are now soliciting nominations for the following WEH Steering Committee positions:
- Councilor at Large Membership
- Councilor at Large Parliamentarian
- Councilor at Large Translational
- Data Diuresis Coordinator
- Trainee Advisory Subcommittee Members
Terms for all of these positions will begin at the close of EB2022. The Executive Committee will identify eligible candidates from those nominated, and they will be elected by ballot by the Steering Committee.

We also need nominations for Secretary-Treasurer Elect (Currently Aaron Polichnowski) and Joint Program Committee Representative – Elect (Currently Zhongjie Sun).
We will be holding an election for the Secretary-Treasurer-Elect and Joint Program Committee Representative-Elect prior to the expiration of their predecessor's term (May 1, 2023). This timing provides the newly-elected officers time to obtain valuable experience and ensure continuity in the Steering Committee.
Secretary-Treasurer shall keep the minutes of the Steering Committee and the WEH membership list, prepare and send the newsletter to the membership of the Section, coordinate the annual WEH business meeting, and maintain fiscal records.

Joint Program Committee Representative coordinates the efforts of the Section to program its oral and poster sessions and symposia at the Society’s annual meeting, and also represents the Section at meetings of the JPC.

Councilor at Large Membership works with the APS office to solicit members and welcome them to the section. They also work with the Committee on Committees Representative to nominate members for APS and section committees.

Councilor at Large Parliamentarian will ensure the WEH Section’s Statement of Organization and Procedure and WEH Section Handbook are updated regularly and ensure that decisions are consistent with these documents. The Parliamentarian also tracks when new Steering Committee member elections are needed.

Councilor at Large Translational will work with the Joint Programming Committee for programming ideas for the society’s meetings, and work with other APS sections for joint sponsorship of symposia and workshops.

Data Diuresis Coordinator works with the Joint Programming Committee representative to choose abstracts for the data diuresis session and to program them in a timely manner, and organize an efficient program.

Trainee Advisory Committee Representative shall chair the WEH Section Trainee sub-committee and coordinate communications with trainee members such as maintaining the WEH Section’s Facebook page. They will represent the WEH Section on the APS Trainee Advisory Committee and appoint up to 2 members of a trainee sub-committee.

If you would like to serve in any of these positions or would like to nominate someone for the position, please send names to sandberg@georgetown.edu This is a great way to get involved and an excellent opportunity for networking.

APS Fellow Program

David Brooks, WEH Section FAPS Representative

I would like to urge members of the section who are not yet APS Fellows, to consider applying for election. The rank of Fellow of the American Physiological Society (FAPS) is an elite member status reserved to honor distinguished leaders who have demonstrated excellence in science, have made significant contributions to physiological sciences and related disciplines and have served the Society. The criteria for election are being refined and should be available prior to the EB meeting. I will provide these as soon as they are available. The deadline for applications will likely be in July. As the section’s representative to the FAPS Committee, I will work with any member who wishes to apply to ensure that their application provides the best possible opportunity for election.
Our section keeps growing stronger! We have a total of 617 members that chose our WEH section as primary, secondary or tertiary APS affiliation. We are also attracting more trainees to our section, and we have now 109 postdoctoral fellow, graduate student and undergraduate members. We want to continue expanding our membership, so please do not hesitate to contact me with ideas for increasing interest in our section. Also remember to tell your colleagues and friends about the many benefits of being a member of our section at all career stages, but especially the many opportunities for trainee travel awards that our section offers. Looking forward to see you all at Philly!
Dr. Robert M. Berliner was born on March 10, 1915, in New York City and grew up on Long Island. Dr. Berliner began attending Yale in 1932 and graduated in 1936. He then earned his M.D. from Columbia University in 1939. After earning his M.D., Berliner stayed at Columbia University to pursue further training in internal medicine at Goldwater Memorial Hospital.

Dr. Berliner became a dominant figure in the field of renal physiology. Robert Loeb, a highly respected internist, was one of the people who sparked Berliner’s curiosity regarding kidney function. His questions began when he wondered about the kidney’s role in abnormal water and electrolyte balance. One of Berliner’s first publications was about paroxysmal nocturnal dyspnea, where he tracked the movement of extracellular fluid from the extravascular spaces in the extremities to the intravascular thoracic circulation and the lungs while the subject was lying down (recumbency). The development of accurate fluorometric techniques allowed him to investigate the excretion and reabsorption of potassium under a variety of stimuli, e.g., steroid hormones, diuretics, and changes in potassium intake. Taking in consideration that these studies were based solely on clearance experiments, it took outstanding methodology, analysis and thought process to achieve the correct deductions.

After the war ended, Dr. Berliner remained working with Goldwater and became an assistant professor at Columbia University in 1947 for three years before joining with the National Institute of Health (NIH) in 1950 where he served as the chief of kidney and electrolyte metabolism. He later served as the director of intramural research at the National Heart Institute from 1954 to 1968. Dr. Berliner was then appointed the deputy director for science at the NIH for the remainder of his time working there. During his time with the NIH, he continued a study which made significant contributions to renal physiology, in particular renal electrolyte and fluid transport.

Dr. Berliner resigned from the NIH in 1978 to become the dean of Yale School of Medicine and remained there until 1984. He finished his career by serving as the director of the Pew Scholars Program in Biomedical Sciences from 1984 to 1991. In Dr. Berliner’s long career, he has earned numerous awards. Some of those awards include the PHS Distinguished Service Award (1968), The Homer W. Smith Award (1965), the Modern Medicine Award for Distinguished Achievement (1969), and the American Heart Association’s Research Achievement Award (1970).

Apart from his passion for renal physiology, Dr. Berliner was an avid bird watcher as well as a major league baseball enthusiast and a lover of classical music. He was a skilled enough flutist to earn a spot in Mark Ellsworth’s NIH Symphony Orchestra now known as the NIH Community Orchestra (NIHCO). He was also a regular solver of the newspaper’s crossword puzzles, double acrostics, concurrent multiplication, etc. Above all else, Berliner has left behind a substantial legacy full of scientific achievement in the field of renal physiology. He was survived by his wife Leah Silver.
Support the WEH Section!

Please consider making a tax-deductible donation to support the activities of the WEH section. There are three APS Funds that directly support WEH members:

- Juan Carlos Romero Memorial Fund
- Leonard Share Endowment Fund (APS will match your donation)
- Water & Electrolyte Homeostasis Section General Fund

You can always donate online. Just copy and paste this link in your browser: https://give.the-aps.org/give/234794#!/donation/checkout

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