Message from the Renal Section Chair

Heddwen Brooks

It has been an honor to serve as Renal Section Chair for the past three years. Renal Section members are always active in APS and this makes the job of the steering committee easier. Our membership is strong and our trainee section continues to grow. As my term ends, it is my pleasure to congratulate Don Kohan who was elected, by the membership, as the Renal Section Chair for 2014-2017. Don is the Margaret A. Amundsen Endowed Professor of Medicine and Pharmaceutical Chemistry at the University of Utah Health Sciences Center. Don has been an outstanding Treasurer and will be an excellent leader. Please welcome Don as our next Chair when you see him at EB!

Enjoy this newsletter, which will provide an overview of all the exciting talks and awards that are coming up at this year’s Experimental Biology, and I look forward to seeing everyone in San Diego!

2014 Robert Berliner Award Excellence in Renal Physiology

Dr. Mark A Knepper

The Renal Section of the American Physiological Society is proud to announce Mark A Knepper as the 2014 Robert W. Berliner Awardee for Excellence in Renal Physiology. Mark is an internationally recognized leader in renal physiology. He has made extensive contributions to the field of vasopressin signaling in the renal collecting duct, where he has defined novel pathways for the regulation of aquaporins, urea transporters and sodium transporting proteins. He has published over 400 peer-reviewed papers, in addition to book chapters on renal physiology, hypertension, nephrology, and systems biology. Mark has also been a strong advocate for mentoring future renal physiologists as demonstrated by his many trainees who now hold leadership positions in physiology and nephrology at various institutions across the world. Mark received a B.S. in chemical engineering from the University of Michigan in 1970, before attending Case Western Reserve University and receiving his PhD in biomedical engineering (1975), and an M.D. (1976). In 1978 Mark was recruited as a staff fellow to the Laboratory of Kidney and Electrolyte Metabolism at the National Heart, Lung and Blood Institute (NHLBI) at NIH in Bethesda, Maryland and is currently a Senior Investigator in the Intramural Program and Head of the Epithelial Systems Biology Laboratory. Mark Knepper has utilized systems-biology approaches, i.e. integration of computational techniques with data acquisition techniques, to discover physiological principles involved in the control of renal excretion of water. His early mathematical modeling of water and urea transport processes during his PhD led to his discovery in the 1980s that urea transport in the renal collecting duct occurs via specialized urea channel proteins, leading to a progression of studies demonstrating the role of urea channels in the renal concentrating mechanism, culminating in gene knockouts. In the 1990s, he carried out seminal studies on a family of water channels called “aquaporins” (a term coined by him), including experimental and mathematical modeling studies showing that vasopressin alters osmotic water transport in kidney collecting duct cells by regulating trafficking of aquaporin-2 water channels to and from the plasma membrane. His studies also demonstrated long-term vasopressin-mediated regulation of aquaporin-2 abundance through a combination of transcriptional regulation and regulation of protein stability. In recent years, he has used large-scale data acquisition methodologies, chiefly protein mass spectrometry with associated computational approaches, to discover the core signaling pathways involved in vasopressin-mediated regulation of aquaporin-2. In addition to the classical cyclic AMP/PKA pathway, his work demonstrated a key role for dynamic calcium mobilization and myosin regulatory light chain...
phosphorylation in renal principal cells, which he proved to be critical for aquaporin-2 trafficking. He has pioneered methods for application of phosphoproteomics (using LC-MS/MS) to physiological signaling systems revealing the kinase classes activated and inactivated by vasopressin; work which has laid the foundation for numerous hypothesis-driven research endeavors in various laboratories worldwide.

Mark’s research has been recognized by numerous awards including the Carl W. Gottschalk Distinguished Lectureship (1996) given by the Renal Section of the American Physiological Society, the Hugh Davson Distinguished Lectureship given by the Cell Section of the American Physiological Society (2012) and the Homer W. Smith Award (2001) from the American Society of Nephrology. Mark has also been a leader in the American Physiological Society (APS), previously serving as editor of AJP-Renal Physiology and Chair of the Renal Section.

Mark is an outstanding mentor and scientist and is a deserving recipient of the Berliner Award, established by the Renal Section of the American Physiological Society to recognize distinguished lifetime achievements in renal physiological research.

This year’s Robert W. Berliner Award Committee was composed of Hedwwen Brooks (Renal Section Chair), Darwin Bell (Editor of AJP-Renal Physiology), and Volker Vallon (Chair of Renal Awards Committee).

2014 Carl W. Gottschalk Lecturer
Dr. Susan Wall

Susan M. Wall, MD, will present this year’s Carl W. Gottschalk Distinguished Lectureship, and will be honored at the Renal Section Dinner. Dr. Wall received her undergraduate degree in Chemistry from the University of Seattle and then her M.D. from St. Louis University School of Medicine. She did her post graduate medical training in Internal Medicine and then in Nephrology at the University of California, Los Angeles hospitals. Dr. Wall’s interest in acid-base transport in the kidney began during her research fellowships at U.C.L.A. and then at the National Heart Lung and Blood Institute (NHLBI) of the National Institutes of Health (NIH). Dr. Wall joined the faculty at the University of Texas, Health Sciences Center in 1991 and then moved to Emory University in 2003. Dr. Wall is currently Professor of Medicine and Physiology at Emory University School of Medicine in Atlanta.

For the past 25 years Dr. Wall has studied the renal physiology of H+/OH- transporters along the collecting duct. She observed that Na,K-ATPase-mediated NH4 uptake across the basolateral membrane of the terminal inner medullary collecting duct is an important source of H+ for net acid secretion by this segment during hypokalemia. This work provided a new paradigm for the mechanism of ammonia secretion along the collecting duct. Over the past decade her focus has been on the role of Cl-transporters in the cortical collecting duct in the renal regulation of blood pressure. In particular, she showed that the Cl-/HCO3- - exchanger, pendrin, is highly regulated by aldosterone and that pendrin-mediated transport plays a critical role in the pressor response to aldosterone.

Susan has been an active contributor to the APS Renal Section for many years. She served as Renal Section treasurer from 1999-2002, as Renal Section Chair from 2002-2005, and as an Associate Editor of AJP-Renal from 2001-2013. The Gottschalk Selection Committee for the 2014 Award was composed of Hedwwen Brooks (Chair of the Renal Section), Thomas Kleyman (Editor, AJP Renal) and Jen Pluznick (Joint Program Committee representative).

Please join us for the 2014 Carl W. Gottschalk Distinguished Lectureship:
“Role of Pendrin in the Pressor Response to Aldosterone”
Monday, April 28, 2014 — 3:15 PM. Room 24
Fredrik Palm, Ph.D. is the recipient of the Renal Section Young Investigator Award for 2014. Dr. Palm earned his Ph.D. in the labs of Drs. Peter Hansell and Per Liss in 2004. He focused on renal oxygen metabolism and renal hypoxia that occurs in diabetes. Much of his subsequent work has searched for the cause and significance of renal diabetic hypoxia. In addition to his discovery of diabetic renal hypoxia, he has targeted mitochondrial function as a potential contributor to this disorder. He has shown that mitochondrial dysfunction can lead to formation of reactive oxygen species, which can impact cellular oxygen consumption. He has localized the key gene/protein in this possible sequence as uncoupling protein-2 (UCP2) and shown that knockdown of UCP2 decreased oxidative stress in the diabetic rat kidney. His more recent work has now confirmed that this pathway may be a major source of superoxide in the normal and diseased kidney. After completion of his Ph.D., Dr. Palm sought further training as a post-doctoral fellow with Dr. C.S. Wilcox at Georgetown University, where he learned single nephron function, oxygen metabolism techniques and advanced his imaging experiences. During this time he spent 6 weeks in the lab of Dr. Harold Swartz at Dartmouth College to learn to quantify ROS in biological fluids. His first faculty position was in the Division of Nephrology at Georgetown University in 2008, where he continues to have an adjunct appointment. In 2011 he was recruited to Linkoping University in Sweden as a Professor in Experimental Renal Medicine to start research program in this unit. He also maintains a lab at Uppsala University. This year’s YIA Committee was composed of Don Kohan (Renal Section Treasurer), and Paul Welling and Jennifer Pluznick, (Joint Program Representatives)

Please join us for the 2014 Young Investigator Award:
“Hypoxia as a Unifying Mechanism for Kidney Disease “
Sunday, April 27, 2014 — 10:30 AM. Room 27

As in previous years, the APS Renal Section Awards Committee received high numbers of applications in every category. The abstracts and applications were of high quality and competition was strong. In addition to the finalists and awardees listed, there were many other highly meritorious applicants that the Committee was unable to recognize individually. Thank you very much to all participants in this year’s competition.

Finalists for this year's Renal Section Predoctoral Excellence in Renal Research Award are Maria Gerasimova (VMRF/UC San Diego), Malgorzata Kasztan (Medical University of Gdansk), Dennis Pollow Jr (University of Arizona), Jacob Richards (University of Florida), and Nathan Rudemiller (Medical College of Wisconsin).

Finalists for this year’s Renal Section Postdoctoral Excellence in Research Award are Gustavo Ares (Henry Ford Hospital), Daniel Collier (University of Iowa Carver College of Medicine), Hana Itani (Vanderbilt University), Blythe Shepard (Johns Hopkins University School of Medicine), and Donghai Wen (University of Nebraska Medical Center).

All finalists for the Renal Section’s pre- and postdoctoral awards above are scheduled to present their work at the Posters & Professors Session to be held at 5:30-7:30 pm on Sunday, 27 Apr 2014 (San Diego Marriott Marquis & Marina; Marina Ballroom DE) during EB2014. Winners in these categories will be announced at the Annual Renal Section Banquet to be held on Monday, 28 April, 2014.

Other awards to be presented at the Renal Section Banquet will include the 2014 Renal Section New
Investigator Award to Michelle Gumz (University of Florida) and 2014 Renal Section Research Recognition Awards to Md Abdul Khan (Medical College of Wisconsin), Mariela Mendez (Henry Ford Hospital), and Owen Woodward (University of Maryland School of Medicine). The 2014 Renal Section Awards Committee is composed of Mitsi Blount (Emory University), Carolyn Ecelbarger (Georgetown University), Robert Fenton (Co-Chair; Aarhus University), Fred Palm (Uppsala University), Nuria Pastor Soler (University of Pittsburgh), Oleh Pochynyuk (University of Texas Health Science Center Houston), Alexander Staruschenko (Medical College of Wisconsin), and Volker Vallon (Chair; University of California San Diego). Heddwenn Brooks (Renal Section Chair; University of Arizona), Pablo Ortiz (Past Awards Committee Chair; Henry Ford Hospital) and Brooks Robey (Past Awards Committee Chair; Dartmouth Medical School), provided the Committee with valuable assistance in its deliberations. We thank Catherine Ohnmacht for her administrative support.

Joint Programming Committee Report
Drs. Paul Welling and Pablo Ortiz

We extend our gratitude to all the members who submitted abstracts to renal section topics for EB 2014. As testament to the strength and vibrancy of the Renal Section, we had an excellent submission rate. Not only does this help promise to make EB ’14 a great success, it also places our section in excellent shape for EB ’15. Please be aware that APS uses the abstract submission numbers as the sole metric to assess the number of symposia that will be awarded to the sections in following years.

In the Renal section, top scoring abstracts are featured as talks, and receive an award. All abstracts are presented as posters. First author trainees on the two highest scoring abstracts are given free meeting registration and are invited to co-chair a session. This year, the honors go to James Burford of University Southern California and Blythe Shepard of Johns Hopkins. Congratulations James and Blythe! Please make sure to visit the posters and attend as many featured topics, symposia and abstract-driven as you can. The Renal section is very pleased and excited about this year’s program:

Young Investigator Awardee: Fredrik Palm, Linkoping University, Sweden
Featured Topic Title: Hypoxia as a Unifying Mechanism for Kidney Disease
Chair: Fredrik Palm, Co-Chair: Chris Wilcox. Sunday 10:30am, Room 27

Symposia: RAAS Regulation of the Sodium Chloride Cotransporter
Chairs: Ko and Subramanya. Sunday 3:15pm, Room 27

Cross Sectional Symposium: Sex Differences in Physiology and Pathophysiology
Sunday, 10:30 AM-12:30 PM, Ballroom 20A

Abstract-driven Talks Recent Developments in Renal Physiology & Kidney Disease I
Chairs: Jen Pluznick and James Burford. Monday 8-10 am, Room 25B

Symposia: Advances in Regulation of Epithelial Transport by Protein Glycosylation
Chairs: Chen and Hughey. Monday 10:30am, Room 26

Carl Gottschalk Awardee: Susan Wall, Emory University
Lecture Title: Role of Pendrin in the Pressor Response to Aldosterone. Monday 3:15pm, Room 24

Abstract-driven Talks Recent Developments in Renal Physiology & Kidney Disease II
Chairs: Pablo Ortiz and Blythe Shepard. Tuesday 8-10 am, Room 25B

Cross Sectional Symposium: Origins of Hypertension: The CNS, the Kidney and Beyond
Tuesday, 10:30 AM-12:30 PM, Ballroom 20A

Symposia: Tumor Necrosis Factor: A Two-faced Cytokine?
Chairs: Vanesa Ramseyer and Nick Ferreri. Tuesday, 3:15pm, Room 25B
The entire program can be found at: http://www.apsebmeeting.org/program-day.html
There is still time to submit a proposal for Renal Section Symposia at the Experimental Biology Meeting '15. We especially encourage junior investigators to organize these sessions. No grey hair required.

This is a great opportunity to ask friends, enemies, or scientific competitors to give talks highlighting their work. Speakers and Chairs get complimentary registration and there are additional funds to help with travel expenses. The process is easy. There is a form (EB Section-Sponsored Symposia Form) available for download at the following website: http://www.the-aps.org/mm/Conferences/EB. Simply send (email) the completed form to one of us (portiz1@hfhs.org, pwelling@umaryland.edu) by April 7, 2014 for consideration in EB 2015, so that we have time for discussion at EB ’14. Symposia are evaluated on theme, diversity of speakers/chairs (gender, race, stage of career), and potential impact. After review, selection, and final revision, your Renal JPC representatives will submit the selected symposia to APS. Please do not send the form directly to APS.

We would like to see more proposals from renal section members for the Cross Sectional Symposia, which focus on topics that have broad interest (more than two APS sections/groups). Please consider working with colleagues in other sections to propose one of these highly attended symposia. Deadline for these is earlier (early March), but that means you have time to put your ideas into action for EB ’16. Please talk to your JPC reps, Paul and Pablo, at EB ’15 to get feedback so that you put together a successful proposal.

Finally, if you have ideas for inclusion of other Renal Section Topics for EB 2015, please let us know. Addition of a few hot topics might help increase our abstract submission rate even further. See you at EB in San Diego!

From the Treasurer
Dr. Don Kohan

Renal Dinner - 2014
WHERE: Harbor House Restaurant
831 W. Harbor Dr.
San Diego, CA 92101

WHEN: Monday, April 28, 2014
Reception: 6:30 - 7:15 PM
Banquet: 7:15 - 11:00 PM

We increased the number of tickets from 200 to 225 this year to try to meet the high demand. It is possible we will still sell out, so if you have a spare ticket, please contact Donald Kohan, MD (donald.kohan@hsc.utah.edu) or (801) 581-2726.

Trainee Advisory Committee (TAC) Report
Dr. Vanesa Ramseyer

Greetings from your TAC representatives! The TAC’s charge is to help APS assist and support trainees (students, postdocs, and junior faculty as well as trainee positions in industry and government). Here are some of the activities geared for trainees at EB 2013: Renal Section trainee’s mixer will take place at the Posters and Professors Reception on Sunday 27 from 5:30 to 7:30 pm at the San Diego Marriott Marquis & Marina, Marina Ballroom DE.
This is a unique opportunity to interact with peers and renowned scientists! **Sign up by April 7th** to participate in a special **networking activity** with PIs: send us your name, institution, position, the name of one or more Professors/Scientists you would like to meet at the mixer and their e-mail addresses to aps.renalsection@gmail.com and write in the subject “trainee”. We will send you more details of the event through the listserv. Other activities will include:

**Publishing 101: How to Get Your Work Published and Avoid Ethical Minefields**  
**Sponsored by the AJP Publications Committee.** Sunday, April 27 -10:30am. Room 25C

**Conscious Choice and Serendipity in Your Career Trajectory:** A Panel Discussion.  
**Sponsored by: Careers in Physiology Committee.** Tuesday, April 29 - 8:00am. Room 25C

**Ahead of the Curve: Taking the Lead**  
**Sponsored by: Women in Physiology Committee,** Wednesday, April 30 - 8:00am. Room 28A

**The Other Side of the Submit Button: The Ins and Outs of the Manuscript Review Process**  
**Sponsored by: Trainee Advisory Committee.** Wednesday, April 30— 10:30am. Room 28A

**APS Nobel Lecture in Physiology or Medicine: Bruce Beutler**  
Wednesday, April 30 - 4:45pm. Ballroom 20A

**New!** The Renal Section will soon have its **Facebook** page! Look for **APS Renal section** and like us to get the latest on activities by the section!  
Please, e-mail me (vramseye@med.wayne.edu) or the other members of the TAC Debra Irsik (dirsik@unmc.edu), Daria Ilatovskaya (daria.ilatomska@gmail.com) and Pablo Cabral (pxc273@case.edu) if you have questions or suggestions to help improve the trainee experience. See you in San Diego!

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**Physiologists in Industry Committee (PIC) Report**  
**Dr. Daniel Levy**

The APS PIC is sponsoring a Symposium at EB’ 2014 entitled “NO, CO and H2S: Toxic Gases, Gasotransmitters and Therapeutic Targets” (chaired by Kenneth R. Olson, Ph.D. and Catherine G. Clark, Ph.D.) on Sunday, April 27, 8:00-10:00 am in Room 24 of the San Diego Convention Center. The PIC Novel Disease Model Award is granted to a graduate student and a postdoctoral fellow who submit the best abstracts that describe a novel disease model. The model can be in vitro or in vivo but should clearly emphasize the potential utility of the system for future research related to a disease. Note that the deadline to submit your application now coincides with the EB abstract date. The award is $500 for the graduate student and $800 for the postdoctoral fellow categories, respectively, and will be presented at the APS Business Meeting. [http://www.the-aps.org/mm/awards/Other-APS-Awards](http://www.the-aps.org/mm/awards/Other-APS-Awards). You’re invited!

Come meet, eat and socialize with your fellow Physiologists who are working in the corporate, industrial, academic, or government sector. The 13th Annual Physiologists in Industry Committee Mixer will feature free hors d’oeuvres along with information on the roles of Physiologists in Industry - please check upcoming announcements for details.

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**AJP-Renal Physiology**  
**NEWS FROM THE AJP RENAL JOURNAL EDITOR – Dr. Darwin Bell**

It has been a very good, almost, first year for your Editor and the new team of Associate Editors. We have handled 367 manuscripts and AJP: Renal has not seen the drop in submissions that has occurred in several other AJP journals. We are extremely happy with the overall quality of both the research articles and reviews that have been submitted for publication. Please drop by the AJP booth at EB and also don’t forget to visit our Facebook
page at: https://www.facebook.com/AJPRenal you are welcome to post comments or suggest articles; this site is for all of us who are interested in the journal. We are delighted to announce that AJP Renal will be supporting the Young Investigator Award at EB. Finally, we extended the deadlines for the current Call for Papers until June 30th and add a new one on Renal Hypoxia.

We congratulate Hayo Castrop, Yashpal Kanwar, and Tianxin Yang who were selected as Star Reviewers for 2013! Although we appreciate everyone who takes the time and effort to participate in the review process, a special thanks to those who go above and beyond the call of duty! Awardees will be recognized at EB! We also congratulate Eva Dizin, Udo HaslerStellor Nlandlu Khodo, Marc Fila, Isabelle Roth, Thomas Ernandez, Alain Doucet, Pierre-Yves Martin, Eric Feraille and Sophie de Seigneux for having their paper, “Albuminuria induces a proinflammatory and profibrotic response in cortical collecting ducts via the 24p3 receptor”, chosen as the AJP: Renal Paper of the Year. Dr. Eva Dizin will be recognized with a certificate at the APS Renal Dinner at EB. Please keep sending your best work to AJP Renal Physiology!

Committee on Committees Report
Dr. John Lorenz

Please consider submitting your nomination for one of the APS Committees. Representing your Renal Section colleagues on these important committees is critical for maintaining the vitality of our section and our society, and a great way to be involved in the APS. A web page providing committee position descriptions and responsibilities can be found at: http://www.the-aps.org/mm/hp/Audiences/APSCommittees/nominations/positiondescriptions.html

The application takes only a little time and effort; you just need to submit a brief Candidate Form, and one other person must fill out an Endorsement Form to highlight your qualifications for a particular committee. A description of the committee nomination process can be found on the APS website (http://www.the-aps.org/mm/hp/Audiences/APS-Committees/nominations). Here you will also find nomination forms, endorsement forms, and current roster information with a list of available positions (http://www.the-aps.org/mm/hp/Audiences/APS-Committees/nominations/vacancy.html). The deadline for submitting the forms is announced in the AJP website each cycle. Please send both forms electronically to nominations@www.the-aps.org and to me, at john.lorenz@uc.edu.

From the APS Science Office of Science Policy

Science Policy News, a monthly electronic publication from the APS Office of Science Policy features opportunities to advocate for research along with news on policy issues of interest to physiologists. To sign up, send an email with “Subscribe” in the subject line to sciencepolicy@the-aps.org. For more information see http://www.theaps.org/mm/SciencePolicy and on Twitter! @SciPolAPS
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