



**SSCI Nephrology Young Investigators' Forum**  
**Paul W. Sanders, MD, Program Chair**  
**February 12, 2020**



The 19<sup>th</sup> Annual Southeastern Regional Nephrology Young Investigators' Forum (NYIF), sponsored by the Southern Society for Clinical Investigation (SSCI) with generous support from an educational grant from AstraZeneca Pharmaceuticals, was held February 12, 2020, in New Orleans, LA. The NYIF served as a pre-course to the Annual Southern Regional/Southern Society for Clinical Investigation Meetings, which occurred February 13-15, 2020.

Postdoctoral fellow trainees in nephrology programs throughout the Southeast were invited to present their research at the NYIF, which continued in the pattern of previous meetings with all of the presentations representing superior quality research. This year, sixteen fellows representing nine academic medical centers in eight states (Alabama, Tennessee, Georgia, Florida, Texas, North Carolina, Louisiana, and Virginia) were selected to participate. The research presentations were divided into basic and clinical research categories with the morning devoted to clinical research presentations and the afternoon program dedicated to basic science talks. We had eight preclinical abstracts and 8 clinical/translational abstracts. All those present contributed to a lively and constructive question-and-answer session following each of the presentations.

The event was initiated with a particularly excellent and relevant lecture entitled "Renal Pathophysiology: A Bridge to an Academic Career" presented by David W. Ploth, MD, Distinguished University Professor at the Medical University of South Carolina. Dr. Ploth's research has been funded by the National Institutes of Health and the Department of Veterans Affairs. Dr. Ploth elegantly described his illustrious career, emphasizing critical junctures in his life that affected him and how he coped with the decisions he entertained. The young researchers who are initiating their careers were appreciative of the advice he provided.

Subsequent presenters all performed at a very high level, and their knowledge of their area of research and the background literature was impressive. Similarly, their ability to address wide-ranging and probing questions from the audience was equally impressive. This year's program, as with past programs, continued to reflect the superior investigative talent in nephrology training programs in the Southeast.

This year, awards were presented to the four top-rated presentations in each of the Clinical Science and Basic Science categories. An alternate was also selected in each category. The winners advanced to the National Nephrology Young Investigators Forum that will be held in conjunction with the 2020 Spring National Kidney Foundation Clinical Meeting. This year's award winners are listed below.

**Basic Science Research Awardees**

**First Place** - Jin Wei, PhD, University of South Florida

Macula Densa Relaxin Receptor 1 in Normal Pregnancy and Preeclampsia

**Second Place** - Fabian M. Bock, MD, PhD, Vanderbilt University Medical Center

Rac1 Regulates Renal Epithelial Integrity in Part Via Lipid Raft Dependent Pak1 Induction

**Third Place** - Brian Czaya, BSc, University of Alabama at Birmingham  
Hyperphosphatemia Contributes to Inflammation and Iron Dysregulation in Models of Normal and Impaired Renal Function

**Fourth Place** - Paramita Pati, PhD, University of Alabama at Birmingham  
Time Restricted Feeding to the Active Period Reduces Vascular Disease and Oxidative Stress in Mice on a Chronic High Fat Diet

**Alternate** - Jie Zhang, PhD, University of South Florida  
Macula Densa SGLT1-NOS1-Tubuloglomerular Feedback Pathway, a New Mechanism for the Sex Differences in Diabetic Glomerular Hyperfiltration and Kidney Injury

### **Clinical Science Research Awardees**

**First Place** - Justin D. Sprick, PhD, Emory University  
Aerobic Exercise Training Reduces Blood Pressure and Improves Endothelial Function in Chronic Kidney Disease

**Second Place** - Matthew R. Sinclair, MD, Duke University  
Differences in Clinical Phenotype and Outcomes in Hemodialysis-Dependent Patients in the Staphylococcus aureus Bacteremia Group Prospective Cohort Study (SABG-PCS)

**Third Place** - Ajai S. Rajabalan, MD, Emory University  
High Ultrafiltration Rate In-Center Hemodialysis Patients – A Single Center Experience

**Fourth Place** - Dinushika Mohottige, MD, MPH, Duke University  
A Tale of Two Neighborhoods: Association of Neighborhood-Level Social and Environmental Contexts With High CKD Prevalence

**Alternate** - Hannah Gardner, MD, University of Alabama at Birmingham  
Viruses, Rhabdo, and AKI... Oh My!

The value of this NYIF for the trainee participants is extraordinary. This unique setting provides a forum where fellows can present original research orally to a small group of peers. Often this is the first extramural opportunity for the trainee to present his/her work at a formal meeting. This setting provides a novel, non-threatening environment for presentation and discussion for fellows and among fellows from different training programs in the region. There are no other meeting venues or environments that allow this high level of oral presentation and personal interaction for this level of training. Between and after sessions, trainees are afforded the extraordinary opportunity to interact personally with their peer group of researcher-trainees from the region and nationally if selected to advance to the national meeting. They also interact with a panel of judges who comprise a group of senior nephrologists and program leaders in the Southeast. They have the opportunity to network with other trainees in the region and nationally. It should also be noted that a number of trainee presenters at earlier NYIF programs have graduated to become our new young academic faculty for a number of nephrology programs in the Southeast and elsewhere.

Participants uniformly commented that this type of forum is strongly needed by the community and offered a great opportunity for networking. Many of the trainees spontaneously remarked that the meeting was a resounding success and an outstanding event for fellow participation. All recommended participation in this forum for future nephrology fellows.

The presenters, parent institutions, and titles of their presentations follow.

- 8:30 – 8:45 AM      **Welcome & Opening Remarks**  
*Paul Sanders, MD*  
*Thomas E. Andreoli Endowed Chair in Nephrology*  
*Director, Nephrology Research & Training Center*  
*University of Alabama at Birmingham*
- 8:45 – 9:30 AM      **Keynote Address**  
*“Renal Pathophysiology: A Bridge to an Academic Career”*  
*David W. Ploth, MD*  
*Distinguished University Professor*  
*Medical University of South Carolina*
- 9:30 – 9:45 AM      **BS-01** – *Fabian M. Bock, MD, PhD, Vanderbilt University Medical Center*  
Rac1 Regulates Renal Epithelial Integrity in Part Via Lipid Raft Dependent  
Pak1 Induction
- 9:45 – 10:00 AM      **BS-02** – *Brian Czaya, BSc, University of Alabama at Birmingham*  
Hyperphosphatemia Contributes to Inflammation and Iron Dysregulation in  
Models of Normal and Impaired Renal Function
- 10:00 – 10:15 AM      **BS-03** – *Paramita Pati, PhD, University of Alabama at Birmingham*  
Time Restricted Feeding to the Active Period Reduces Vascular Disease and  
Oxidative Stress in Mice on a Chronic High Fat Diet
- 10:15 – 10:30 AM      **Break**
- 10:30 – 10:45 AM      **BS-04** – *Megan K. Rhoads, PhD, University of Alabama at Birmingham*  
Food Availability Affects Diurnal Mean Blood Pressures in Rats
- 10:45 – 11:00 AM      **BS-05** – *Vikram Sabapathy, PhD, University of Virginia*  
Delineating Role of ST2/IL-33 Axis in Kidney Injury
- 11:00 – 11:15 AM      **BS-06** – *Rohit Upadhyay, PhD, Tulane University School of Medicine*  
Effect of Bortezomib on Proximal Tubule Cells Exposed with Urinary Free  
Light Chains Isolated from Multiple Myeloma Patients
- 11:15 – 11:30 AM      **BS-07** – *Jin Wei, PhD, University of South Florida*  
Macula Densa Relaxin Receptor 1 in Normal Pregnancy and Preeclampsia

- 11:30 – 11:45 AM **BS-08** – *Jie Zhang, PhD, University of South Florida*  
Macula Densa SGLT1-NOS1-Tubuloglomerular Feedback Pathway, a New Mechanism for the Sex Differences in Diabetic Glomerular Hyperfiltration and Kidney Injury
- 11:45 – 12:45 pm **Lunch**
- 12:45 – 1:00 pm **CR-01** – *Hannah Gardner, MD, University of Alabama at Birmingham*  
Viruses, Rhabdo, and AKI... Oh My!
- 1:00 – 1:15 PM **CR-02** – *Cesar Hernandez-Arroyo, MD, Ochsner Medical Center*  
Improvement in Kidney Function After Discontinuation of Fenofibrate in Outpatient Nephrology Consultation for Chronic Kidney Disease
- 1:15 – 1:30 PM **CR-03** – *Dinushika Mohottige, MD, MPH, Duke University*  
A Tale of Two Neighborhoods: Association of Neighborhood-Level Social and Environmental Contexts With High CKD Prevalence
- 1:30 – 1:45 PM **CR-04** – *Sayna Norouzi, MD, Baylor College of Medicine*  
Delayed Nocturnal Dipping in Patients with Chronic Kidney Disease
- 1:45 – 2:00 PM **CR-05** – *Ajai S. Rajabalan, MD, Emory University*  
**High Ultrafiltration Rate In-Center Hemodialysis Patients – A Single Center Experience**
- 2:00 – 2:15 PM **Break**
- 2:15 – 2:30 PM **CR-06** – *Arun Rajasekaran, MD, University of Alabama at Birmingham*  
Effect of Lactated Ringer’s Solution Use on Serum Potassium in Advanced Kidney Disease
- 2:30 – 2:45 PM **CR-07** – *Matthew R. Sinclair, MD, Duke University*  
Differences in Clinical Phenotype and Outcomes in Hemodialysis-Dependent Patients in the *Staphylococcus aureus* Bacteremia Group Prospective Cohort Study (SABG-PCS)
- 2:45 – 3:00 PM **CR-08** – *Justin D. Sprick, PhD, Emory University*  
Aerobic Exercise Training Reduces Blood Pressure and Improves Endothelial Function in Chronic Kidney Disease
- 6:00 PM **Dinner & Awards Presentations**

**I will update this following the National YIF**

## **ADDENDUM TO EXECUTIVE SUMMARY**

The SSCI NYIF participants in the National YIF on May 8 in conjunction with the NKF Spring Clinical Meetings held in Boston did very well.

### **Clinical Research**

**2nd place:** Daniel Edmonston, MD, Duke University School of Medicine, Durham, NC  
*Pulmonary Hypertension Subtypes and Mortality in Chronic Kidney Disease*

### **Basic Science**

**1st place:** Shinji Tanaka, MD, PhD, University of Virginia, Charlottesville, VA  
*Optogenetic Stimulation of the Vagus Nerve Identified Distinct Pathways that Mediate Tissue Protection from Renal Ischemia- Reperfusion Injury*

**3rd place:** Sunil Rangarajan, MBBS, University of Alabama at Birmingham, Birmingham, AL  
*Immunoglobulin in Free Light Chains Cause Progressive Kidney Damage and Fibrosis Via STAT1-Dependent Mechanisms*

The National Young Investigators Forum was sponsored by an educational grant from Amgen and AstraZeneca.