# **KidneyCurrent**

The Quarterly KidneyCure e-Newsletter

#### April 2022



#### 2022 Grant Application Review Update

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The <u>Grants Review Committee</u>, chaired by Bruce C. Kone, MD, FASN, and Ambra Pozzi, PhD, DrPH, met virtually on Monday, March 14 to review more than 110 KidneyCure research grant applications submitted in December 2021 for the 2022 application cycle. The committee's recommendations will be reviewed by the KidneyCure Board of Directors in April. Thanks in large part to supporters like you, up to 26 new investigators will join the esteemed roster of KidneyCure grant recipients this year and we look forward to announcing the new recipients soon. Supported grants will start July 1.

#### Grant Recipient Spotlight: Gentzon Hall, MD, PhD

Gentzon Hall, MD, PhD, received the inaugural <u>American Society of</u> <u>Nephrology-Harold Amos Medical Faculty Development Program Award</u> in 2016. An Assistant Professor of Medicine at Duke University School of Medicine, Dr. Hall studies the molecular underpinnings of podocyte injury and dysfunction in nephrotic syndrome (NS). He aims to employ novel discoveries in renal genetics to develop therapies and diagnostic tools for patients with NS.



Learn more about Dr. Hall's work, influences, and inspirations here.

#### **Grant Recipients at Work**

Current and former KidneyCure grant recipients are working across the research spectrum to advance our understanding and treatment of kidney diseases. Find highlights of recent publications, press, etc. as submitted by former KidneyCure grant recipients <u>here</u>.

If you have any questions, please contact us at kidneycure@asn-online.org or 202-640-4660.





American Society of Nephrology 1401 H Street, NW, Suite 900 | Washington, DC 20005 www.asn-online.org Gentzon Hall, MD, PhD, received the inaugural <u>American Society of</u> <u>Nephrology-Harold Amos Medical Faculty Development Program</u> Award in 2016 for his project titled, "Novel Gene Discovery in African Americans with Hereditary Focal Segmental Glomerulosclerosis." An Assistant Professor of Medicine at Duke University School of Medicine, Dr. Hall studies the molecular underpinnings of podocyte injury and dysfunction in nephrotic syndrome (NS) with a goal to employ novel discoveries in renal genetics to develop therapies and diagnostic tools for patients with NS. In the following interview recorded in April 2022, Dr. Hall shares more about his research, inspirations, and how receiving the award in 2016 impacted his career.



### How did you develop an interest in medicine and what led you to focus on kidney research?

I've always loved science, but I became interested in medicine in middle school. I am from Baltimore, MD and at the time, there was a health reporter, Dr. Winnie King, who appeared on the local nightly news. She is an ER physician, and I really enjoyed her presentations on various health-related subjects. I was captivated by her presentations—she was smart and funny—and I wanted to know more about what life was like for her. My parents managed to arrange for me to shadow her in the ER and the experience inspired me. She did everything you would need to do to capture a young kid's interest. She had a white coat waiting for me when I arrived at the ER and introduced me as "future Dr. Hall." I observed her interactions with nursing staff and other physicians and her manner with patients left an indelible impression on me. Prior to that experience, I was primarily interested in oceanography, but after my experiences with Dr. King, I began to focus on the pursuit of medicine.

In high school I got an opportunity to participate in a NIH-sponsored summer internship program at the University of Maryland at Baltimore. The first mentor I worked with was a nephrologist, Dr. Michael Hise. He was a really smart African American physician scientist with a basic science laboratory focused on tubular physiology and cellular signaling. At the time, I thought that I wanted to be a cardiac surgeon, but over the course of the summer, he encouraged me to consider nephrology and basic science research. He allowed me to shadow him in clinic which provided me with my first opportunity to see how clinical and research activities could come together. The experience was transformative, and it fueled a new ambition to pursue dual degree training, MD/PhD. I participated in other NIH-sponsored summer internship programs throughout high school and college, which highlights the value of early investment. Dr. Jordan Warnick at the University of Maryland coordinated the programs and I owe him a great deal for his support. My real interest in nephrology came when I got to Duke for Internal Medicine residency. They had what was called an Intern-Only Service at that time. This was an immersive experience where interns would cover the renal service overnight, and then report to the attending physician and fellow the next morning. It was, by far, the most impactful experience I had during residency. It was during this rotation that I first met Michelle Winn. Michelle came along as the attending physician during my second or third week on service. She shepherded me through my Nephrology rotation, making sure I knew I had support. That was not something that had happened up to that point; it was impressive. We discussed my research interests and the work of her lab. Sometime before the end of her time on service, Michelle told me, "You're going to do great here. You'll probably go on to do a nephrology fellowship and come work in my lab." She was right and I joined her lab in 2010.

More information on Michelle Winn, MD, FASN, and her groundbreaking work, including a tribute by Dr. Hall, can be found here: <u>https://www.kidneynews.org/view/post/features/recognizing-those-</u> <u>who-have-changed-nephrology--michelle-winn--md--fasn.xml</u>.

What led you to apply for the ASN-Harold Amos Medical Faculty Development Program? I applied to the Harold Amos program during a difficult time of transition. Michelle had passed away the year before, and I was unsure about my research direction without her sponsorship. I decided to apply to the program when I looked at the list of National Advisory Committee members and recognized many names that Michelle had mentioned over the years. Her senior mentee at the time, Dr. Rasheed Gbadegesin, agreed that it was a great opportunity and supported me in preparing the application.

I was invited to come in for an interview, the second phase of the application process, and was nervous the entire time. I felt the science was good and representative of Michelle and her research program, but I wanted to give the committee a true sense of my commitment to the families with kidney disease that we study and how my work could help them. I think I managed to convince them. It was really generous of them to support the work, and it gave me a huge boost of confidence in her absence.

I have been telling people about the program ever since. It is the type of award and the type of experience that I think every minority investigator should have. Of course, it is a competitive award, but the support that the program provides is invaluable. The NAC members and the AMFDP administrative staff are fully committed to nurturing you and helping you to develop into the scientist that you want to be. It was exactly what I needed at that point in time.

You received the ASN-Harold Amos Medical Faculty Development Program Award in 2016 for your project titled, "Novel Gene Discovery in African Americans with Hereditary Focal Segmental Glomerulosclerosis." Has your research stayed on this path? How did receiving the grant impact your career and subsequent research? My research is still focused on the genetics and biochemistry of podocyte injury in nephrotic syndrome. Of the work that I initially proposed for the award, some has been completed and other aspects have matured and continue to grow. The award allowed me to establish a broad network of collaboration across the country and in other areas of the world, including India, China, and Germany. Through these partnerships, I have managed to enroll more families in our FSGS study, and enhance the sophistication of our functional biochemical analyses.

The prestige of the Amos award also expanded my opportunities in intangible ways. Sponsorship by the program amplifies your voice so you can be heard in spaces that might otherwise be difficult to access. Collaboration is essential to move science forward in this current environment, and the Amos award has been tremendously helpful to me in establishing these partnerships.

#### How do you keep patients at the core of your work?

Prior to the pandemic I had young learners coming into the lab regularly. One of the things I love to do is get young people excited about science, nephrology in particular. I invite high school students to do longitudinal studies with me for a year, usually during their senior year. In addition to providing them with a general understanding of what a podocyte is, what it does, and why it's important, I try to get them to embrace the families that we are studying. I've found that personalizing the work in this way helps them to invest in the projects, and it builds an attitude of enthusiasm and endurance. No matter what contribution students make to the larger effort, they recognize it as a service to families and it becomes rewarding for them. That was one of the main lessons I learned from Michelle.

#### What are other ways the kidney community can support research and investigators?

The experience I had as an Amos Scholar is one I wish was available for every URiM (underrepresented in medicine) junior faculty member interested in the biomedical sciences. It can be a struggle for URiM faculty to navigate academic environments, which can be hostile and predatory, especially at vulnerable points of transition. In addition to good mentorship, sponsorship is critical for the long-term success of URiM junior faculty. This is where I found the Amos program to be most helpful. Continued support of the Amos program and other programs of this type should be prioritized so that URiM faculty can develop and contribute in academic environments.

## You currently serve on ASN's Policy and Advocacy Committee and the Kidney360 Editorial Board. What excites you about this work?

I honestly feel like I owe it to Michelle to work beyond the lab. With the <u>Policy and Advocacy</u> <u>Committee (PAAC)</u>, it is a real honor to partner with patients in advocating for their needs with law makers. My time with the PAAC has exposed me to another component of the broader kidney health mission that I believe will remain a part of the way that I serve. As for <u>*Kidney360*</u>, I enjoy being a part of the scientific process at all levels. My role on the editorial board affords me the opportunity to evaluate the scientific literature and participate in processes that promote research integrity and scientific advancement.

#### What are your other interests and hobbies?

Most of my hobbies revolve around my children. Luckily, they're a lot of fun. They are hard to put to bed, but the hours they are supposed to be awake are really fulfilling and I'm grateful for them. My wife Rasheed Hall and I are both music enthusiasts. We love to read and spend quite time together when we can steal it. Hopefully, as things return to normal, we can resume some of the activities we enjoy the most, traveling to the beach and visiting family.

## KidneyCure

### **Grant Recipients at Work**

Highlights of recent works and publications as submitted by current and former KidneyCure grant recipients. Grant award year is indicated in parentheses.

#### Matthew K. Abramowitz, MD, MS, FASN (2013)

• Step Length and Fall Risk in Adults with Chronic Kidney Disease: A Pilot Study

#### David J. Askenazi, MD, MS, FASN (2011)

- Maternal Hypertension Disorders and Neonatal Acute Kidney Injury: Results from the AWAKEN
  <u>Study</u>
- <u>Gestational Age, Sex, and Time Affect Urine Biomarker Concentrations in Extremely Low</u> <u>Gestational Age Neonates</u>
- <u>Retrospective Analysis Comparing Complication Rates of Centrifuge Vs Membrane-Based</u>
  <u>Therapeutic Plasma Exchange in the Pediatric Population</u>

#### Massimo Attanasio, MD (2010)

• <u>A Splice Site Mutation in The TSEN2 Causes a New Syndrome with Craniofacial and Central</u> Nervous System Malformations, and Atypical Hemolytic Uremic Syndrome

#### Ulf H. Beier, MD, DrMed (2017)

<u>Kynurenine Induces T Cell Fat Catabolism and Has Limited Suppressive Effects In Vivo</u>
 <u>Catabolism: A novel target for kynurenine?</u>

#### Wei Chen, MD, MS, FASN (2017)

<u>Cardiometabolic Syndrome and Vascular Calcification</u>

#### Irene Chernova, MD, PhD (2020)

Lupus Nephritis and Beyond: Kidney-Intrinsic Genetic Risk for Antibody Deposition

#### Tushar Chopra, MD, FASN (2019)

• Pathophysiology, Evaluation, and Treatment of Hypokalemia. Nephrology Self-Assessment Program; Electrolytes and Acid-Base Disorders

#### Samira S. Farouk, MD, MS, FASN (2020)

- Reenvisioning the Kidney Donor Risk Index without Race
- <u>#NephMadness 2022: Meet the Gamemakers</u>
- Making Challenging Topics Engaging, One Tweet at a Time

#### Alexander H. Flannery, PharmD, PhD (2020)

• RAS Inhibition and Sepsis-Associated Acute Kidney Injury

Mark R. Hanudel, MD, MS, FASN (2020)

• <u>A Review of Ferric Citrate Clinical Studies, and the Rationale and Design of the Ferric Citrate</u> and Chronic Kidney Disease in Children (FIT4KiD) Trial

Caroline M. Hsu, MD (2021)

- Publications:
  - <u>Kidney Recovery and Death in Critically III Patients With COVID-19-Associated Acute</u> <u>Kidney Injury Treated with Dialysis: The STOP-COVID Cohort Study</u>
  - Seroresponse to SARS-CoV-2 Vaccines among Maintenance Dialysis Patients over 6 Months
- Press:
  - Egfr, Urine Output Linked with Lack of Kidney Recovery Among ICU Patients with COVID-19
  - o New Data on the Effects Of COVID-19 Vaccination in Patients on Dialysis

Sarah C. Huen, MD, PhD (2016)

• Fasting-Induced Renal HMGCS2 Expression Does Not Contribute to Circulating Ketones

Eirini Kefalogianni, PhD (2021)

- Identification Of Kidney Injury Released Circulating Osteopontin as Causal Agent of Respiratory
  Failure
- Soluble Forms of Cytokine and Growth Factor Receptors: Mechanisms of Generation and Modes of Action in the Regulation of Local and Systemic Inflammation

#### Eugene Lin, MD, MS, FASN (2021)

- Publications:
  - Patient Frailty and Functional Use of Hemodialysis Vascular Access: A Retrospective Study of the US Renal Data System
  - Time to Invest in the Future: Assessing the Cost-Effectiveness of Empagliflozin in Diabetic Kidney Disease
  - Four Policies that Every Nephrologist Should be Aware of in 2022. Kidney News. American Society of Nephrology
- Press:
  - Frailty Correlates with Longer Times to Vascular Access Functional Use
  - o Higher Frailty May Delay Vascular Access Maturation in Dialysis Patients

Amar J. Majmundar, MD, PhD (2018, 2020)

• <u>A Novel form of Familial Vasopressin Deficient Diabetes Insipidus Transmitted in an X-linked</u> <u>Recessive Manner</u>

Roy O. Mathew, MD, FASN (2000)

- Coronary Artery Disease in Chronic Kidney Disease: Need for a Heart-Kidney Team-Based Approach
- Advanced CKD, Delta Troponins, Mortality: A Step Toward a Customized Approach During a <u>Perilous Transition?</u>

Tanecia Mitchell, PhD (2021)

<u>Acclimation to a High-Salt Diet Is Sex Dependent</u>

#### Naoka Murakami, MD, PhD, FASN (2019)

- Publications:
  - <u>Overexpression of PD-1 on T cells Promotes Tolerance in Cardiac Transplantation via</u> <u>ICOS-Dependent Mechanism</u>
  - o Inpatient Kidney Palliative Care for Kidney Transplant Recipients with Failing Allografts
- New Article:
  - o More Research Examining Palliative Care in Patients with Allograft Failure Needed

Javier A. Neyra, MD, MS, FASN (2014)

• RAS Inhibition and Sepsis-Associated Acute Kidney Injury

Aneta J. Przepiorski, PhD (2019)

- Modeling Oxidative Injury Response in Human Kidney Organoids
- Validation Of HDAC8 Inhibitors as Drug Discovery Starting Points to Treat Acute Kidney Injury

Rhiannon Deierhoi Reed, DrPH (2018)

- <u>A Lay Navigator-Led, Early Palliative Care Intervention for African American and Rural Family</u> <u>Caregivers of Individuals with Advanced Cancer (Project Cornerstone): Results of a Pilot</u> <u>Randomized Trial</u>
- First Clinical-Grade Porcine Kidney Xenotransplant Using a Human Decedent Model
- Donor-Reported Barriers to Living Kidney Donor Follow-Up

#### Fahad Saeed, MD, MBBS, FASN (2019)

- Publications:
  - o <u>Outcomes Following In-Hospital Cardiopulmonary Resuscitation in People Receiving</u> <u>Maintenance Dialysis</u>
    - Editorial: <u>In-Hospital Cardiopulmonary Resuscitation in Patients Receiving</u> <u>Maintenance Dialysis: Glass Half Full or Half Empty?</u>
  - Enabling Patient Choice: The "Deciding Not to Decide" Option for Older Adults Facing Dialysis Decisions

#### Dorry L. Segev, MD, PhD (2009)

- Publications:
  - SARS-Cov-2 Antibody Testing for Transplant Recipients: A Tool to Personalize <u>Protection Versus COVID-19</u>
  - Prevalence and Durability of SARS-Cov-2 Antibodies Among Unvaccinated US Adults by History of COVID-19
  - <u>Revision of Frailty Assessment in Kidney Transplant Recipients: Replacing Unintentional</u> <u>Weight Loss with CT-Assessed Sarcopenia in the Physical Frailty Phenotype</u>
- Press:
  - The Millions of People Stuck in Pandemic Limbo
  - o For Millions of Vulnerable People, COVID-19 is Far From Over
  - When Three Shots Are Not Enough
- Op-Ed: How to Make the Pandemic Better for the Immune Compromised

#### Nikolaos Skartsis, MD, PhD (2017)

• <u>IL-6 and TNFα Drive Extensive Proliferation of Human Tregs Without Compromising Their</u> <u>Lineage Stability or Function</u>  Outcomes Among CMV-Mismatched and Highly Sensitized Kidney Transplants Recipients Who Develop Neutropenia

Sri Lekha Tummalapalli, MD, MBA, FASN (2019)

- <u>A Mobile Health–Based Survey to Assess COVID-19 Vaccine Intent and Uptake Among</u>
  <u>Patients on Dialysis</u>
- <u>Capitated Versus Fee-For-Service Reimbursement and Quality of Care for Chronic Disease: A</u> <u>US Cross-Sectional Analysis</u>
- Coverage, Formulary Restrictions, and Affordability of Sodium-Glucose Cotransporter 2 Inhibitors by US Insurance Plan Types

#### Astrid Weins, MD, PhD, FASN (2016)

 Discovery of Autoantibodies Targeting Nephrin in Minimal Change Disease Supports a Novel Autoimmune Etiology

Yan Xie (2020)

- Publications:
  - o Long-Term Cardiovascular Outcomes Of COVID-19
  - o Risks Of Mental Health Outcomes in People with Covid-19: Cohort Study
- News Articles:
  - <u>Heart-Disease Risk Soars After COVID Even with a Mild Case</u>
  - <u>COVID-19 Patients Face Higher Risk of Brain Fog and Depression, Even 1 Year After</u> Infection
  - The COVID Heart—One Year After SARS-CoV-2 Infection, Patients Have an Array of Increased Cardiovascular Risks