

## Welcome to Day 1

- 9:50 a.m. – 10:00 a.m. **Welcome and Day 1 Introduction**  
Terry Watnick, M.D., Professor of Medicine, Joan B. and John H. Sadler Professor in Nephrology, and Principal Investigator, PKD RRC Coordinating Site, University of Maryland School of Medicine
- 10:00 a.m. – 11:15 a.m. Session 1: Novel Aspects of Polycystin Function and Signaling**
- Session Chairs: Markus Delling, Ph.D., Assistant Professor, University of California San Francisco  
Francisco Altamirano, Ph.D. Assistant Professor, Houston Methodist
- 10:00 a.m. – 10:20 a.m. **The Energetic Landscape of Opening the Polycystin Pore**  
Paul DeCaen, Ph.D., Assistant Professor, Northwestern University
- 10:20 a.m. – 10:25 a.m. *Questions*
- 10:25 a.m. – 10:45 a.m. **Lessons from the Adhesion GPCR field for PKDs**  
Demet Araç, Ph.D., Associate Professor, The University of Chicago
- 10:45 a.m. – 10:50 a.m. *Questions*
- 10:50 a.m. – 11:10 a.m. **Blood Pressure Regulation by Vascular Polycystin Proteins**  
Jonathan Jaggar, Ph.D., Professor, The University of Tennessee Health Science Center
- 11:10 a.m. – 11:15 a.m. *Questions*
- 11:15 a.m. – 11:20 a.m. Break**
- 11:20 a.m. – 12:35 p.m. Session 2: Latest Advances in Pediatric Polycystic Kidney Disease (PKD)**
- Session Chairs: Melissa Cadnapaphornchai, M.D., Pediatric Nephrology, Rocky Mountain Pediatric Kidney Center  
Ashima Gulati, M.D., Ph.D., Assistant Professor, Children’s National
- 11:20 a.m. – 11:40 a.m. **ARPKD: Natural History Insights from the ARegPKD Study**  
Max Liebau, M.D., Head of Translational Pediatric Nephrology, University of Cologne
- 11:40 a.m. – 11:45 a.m. *Questions*
- 11:45 a.m. – 12:05 p.m. **New Therapeutic Concepts Form Nephronophthisis and Related Ciliopathies**  
Sophie Saunier, Ph.D., Head of the Laboratory of Hereditary Kidney Diseases, IMAGINE Institute in Paris
- 12:05 p.m. – 12:10 p.m. *Questions*
- 12:10 p.m. – 12:30 p.m. **Advancing in the Research of Pediatric Autosomal Dominant Polycystic Kidney Disease (ADPKD)**  
Djalila Mekahli, M.D., Ph.D., Professor, UZ Leuven, Belgium
- 12:30 p.m. – 12:35 p.m. *Questions*
- 12:35 p.m. – 1:05 p.m. Lunch Break**

**1:05 p.m. – 1:45 p.m. Trainee Short Communications**

Session Chairs: Neera Dahl, M.D., Ph.D., Professor, Yale School of Medicine  
Kenneth Hallows, M.D., Ph.D., Professor, University of Southern California

1:05 p.m. – 1:13 p.m. **Navin Gupta**, et al. “Human Organoid-on-a-Chip Model for Therapeutic Development in ARPKD”

1:13 p.m. – 1:21 p.m. **Yu Ishimoto**, et al. “A Novel Organoid Model for Autosomal Dominant Polycystic Kidney Disease Based on Mouse Nephron Progenitor Cells (NPCs)”

1:21 p.m. – 1:29 p.m. **Thomas Naert**, et al. “Xenopus Animal Models for Autosomal Polycystic Kidney Disease with Automated Deep Learning Analysis of Cystogenesis”

1:29 p.m. – 1:37 p.m. **Inna Nikonorova**, et al. “Identification of Novel Polycystin-Associated Cargo of Extracellular Vesicles (EVs) in *Caenorhabditis elegans*”

1:37 p.m. – 1:45 p.m. **Cynthia J. Sieben**, et al. “Comparative PKD1 and PKD2 Missense Variant Profiling Aids Molecular Diagnoses Across the ADPKD Spectrum and Reveals Common Pathomechanisms ”

**1:45 p.m. – 2:45 p.m. Technology Session: -Omics, Finding a Needle in a Haystack**

Session Chairs: Whitney Besse, M.D., Assistant Professor, Yale School of Medicine  
Brittany Lasseigne, Ph.D., Assistant Professor, The University of Alabama at Birmingham

1:45 p.m. – 2:05 p.m. **Defining Cellular Complexity in Human Autosomal Dominant Polycystic Kidney Disease by Multimodal Single Cell Analysis**  
Benjamin Humphreys, M.D., Ph.D., Professor, Washington University in St. Louis

2:05 p.m. – 2:25 p.m. **Reconciling Sample Size and Accuracy in Genetic Studies for Kidney Disease**  
Simone Sanna-Cherchi, M.D., Associate Professor, Columbia University

2:25 p.m. – 2:45 p.m. **Panel Discussion:** Luis Menezes, Maria Irazabal Mira and Kurt Zimmerman

**2:45 p.m. – 2:50 p.m. Break**

**2:50 p.m. – 3:20 p.m. Community Feedback—Critical Needs**

Breakout sessions will be hosted by each of the consortium divisions and focused on feedback from the community on what their critical needs are for new models and tools.

**Breakout 1: *In Vitro* Models, Chairs: Darren Wallace and Paul Welling**

**Breakout 2: Animal Models, Chairs: CJ Haycraft and Patricia Outeda Garcia**

**Breakout 3: Clinical Resources, Chairs: Steve Seliger and Alan Yu**

**3:20 p.m. Adjournment**

## Welcome to Day 2

9:50 a.m. – 10:00 a.m. **Welcome and Day 2 Introduction**  
Brad Yoder, Ph.D., UAHSF Endowed Chair in Biomedical Research, Professor and Chair of the Department of Cell, Developmental and Integrative Biology, The University of Alabama at Birmingham

## 10:00 a.m. – 11:15 a.m. Session 1: Cool New Tools

Session Chairs: Dagmar Wachten, Ph.D., Professor, University of Bonn  
Ryuji Morizane, M.D., Ph.D., Assistant Professor, Harvard Medical School

10:00 a.m. – 10:20 a.m. **PKD1 mRNA Cis-Inhibition in ADPKD**  
Vishal Patel, M.D., Associate Professor, The University of Texas Southwestern Medical Center

10:20 a.m. – 10:25 a.m. *Questions*

10:25 a.m. – 10:45 a.m. **Delivering Insights into Organ Homeostasis and Regeneration Through *In-Vivo* Genome-Wide Screens**  
Kristin Knouse, M.D., Ph.D., Assistant Professor, Massachusetts Institute of Technology

10:45 a.m. – 10:50 a.m. *Questions*

10:50 a.m. – 11:10 a.m. **Peptide-Based Micelles for PKD**  
Eun Ji Chung, Ph.D., Associate Professor, University of Southern California

11:10 a.m. – 11:15 a.m. *Questions*

## 11:15 a.m. – 12:15 p.m. Session 2: Hot Takes in Energy Utilization

Session Chairs: Alessandra Boletta, Ph.D., Head of Unit, San Raffaele Scientific Institute  
Laura Onuchic, M.D., Postdoctoral Associate, Yale School of Medicine

11:15 a.m. – 11:35 a.m. **Listening in on the Conversation Between Polycystins and Mitochondria**  
Michael Caplan, M.D., Ph.D., Professor, Yale School of Medicine

11:35 a.m. – 11:55 a.m. **Harnessing NAD<sup>+</sup> to Restore Energy Metabolism in AKI**  
Samir Parikh, M.D., Professor, The University of Texas Southwestern Medical Center

11:55 a.m. – 12:15 p.m. **Panel Discussion:** Demetri Maxim and Gregory Germino

## 12:15 p.m. – 1:00 p.m. Lunch Break

## 1:00 p.m. – 3:00 p.m. Trainee Workshop: Meet with Successful Young Investigators

1:00 p.m. – 1:20 p.m. Introduction- Meet with our panel members

1:00 p.m. – 1:05 p.m. Christine Maric-Bilkan, Ph.D., Program Director, NIDDK  
1:05 p.m. – 1:10 p.m. Katharina Hopp, Ph.D., Assistant Professor, University of Colorado  
1:10 p.m. – 1:15 p.m. Ronak Lakhia, M.D., Assistant Professor, UT Southwestern  
1:15 p.m. – 1:20 p.m. Kurt Zimmerman, Ph.D., Assistant Professor, University of Oklahoma Health Sciences Center

1:20 p.m. – 2:50 p.m. Q & A session- Learn from the experts

2:50 p.m. – 3:00 p.m. Closing remarks

## 1:00 p.m. – 3:00 p.m. PKD RRC Investigator Retreat

Closed session meeting

3:00 p.m. **Adjournment**  
**Thank you for attending our Second Annual Virtual PKD-RRC Symposium!**