

14th Annual Acute Kidney Injury Symposium

Thursday, November 14, 2024

7:30 am – 3:00 pm

Starzl Biomedical Science Tower Conference Room S120

200 Lothrop Street, Pittsburgh, PA 15261

Symposium Purpose

To continue to foster cross-campus research collaboration on acute kidney injury and further AKI awareness, education, and advocacy.

Planning Committee

Raghavan Murugan, MD

Program for Critical Care Nephrology, CRISMA, Department of Critical Care Medicine

Roderick Tan, MD, PhD

Pittsburgh Center for Kidney Research-O'Brien Center, Renal-Electrolyte Division

Martin Oberbarnscheidt, MD

Thomas E. Starzl Transplantation Institute, Department of Surgery

Jacqueline Ho, MD

UPMC Children's Hospital of Pittsburgh, Division of Nephrology

Keynote Speakers

Ashita Tolwani, MD

Professor of Medicine

Associate Nephrology Fellowship Director

Associate Director of ICU Nephrology

University of Alabama at Birmingham

Dennis Moledina, MD, PhD, FASN

Assistant Professor of Internal Medicine – Nephrology

Director, Kidney BioBank

Yale School of Medicine

Event

7:30-7:50am

Registration/Breakfast

7:50-8:00am

Welcome

Drs. Murugan, Tan, Oberbarnscheidt, and Ho

Session I

Scientific Presentations

8:00 – 8:15am

Deciphering the Renal Consequences of Intravascular Hemolysis in Sickle Cell Disease

Speaker: Samit Ghosh, PhD

Assistant Professor of Medicine

Vascular Institute

8:15 – 8:30am

MEnD-AKI Update: After the Intervention has Begun

Speaker: Sandra Kane-Gill, PharmD, MS, FCCM, FCCP

Professor of Pharmacy and Therapeutics

University of Pittsburgh School of Pharmacy

14th Annual Acute Kidney Injury Symposium

Thursday November 14, 2024

7:30 am – 3:00 pm

Starzl Biomedical Science Tower Conference Room S120

200 Lothrop Street, Pittsburgh, PA 15261

8:30 – 8:45am *An Appraisal of early acute T-cell mediated rejection after Kidney Transplantation*

Speaker: Aravind Cherukuri, MBBS, PhD, MRCP

Assistant Professor of Medicine

Assistant Professor of Surgery, Secondary Appointment

Renal-Electrolyte Division

8:45 – 9:00am *Tertiary Lymphoid Organs in Transplantation*

Speaker: Martin Obserbarnscheidt, MD, PhD

Assistant Professor of Surgery

Thomas E. Starzl Transplantation Institute, Department of Surgery

9:00 – 9:10am Discussion / Q&A Moderator: Jackie Ho

9:10 – 9:15am **Break**

Session II

Abstract Presentations

9:15 – 9:20am Introduction by Roderick Tan

9:20 – 9:30am *Endotoxin Activity and SOFA scores defines Severity in Septic Shock (EDEN trial)*

Presenter: Kaley El-Arab, MD

EM- Critical Care Medicine, PGY-5

University of Pittsburgh Medical Center

9:30 – 9:40am *Sex-Specific Differences in Kidney Injury in Aging Megalin (Lrp2) KO Mice*

Presenter: Elynna Youm, BA

PhD Candidate, Weisz Lab, Renal-Electrolyte Division

University of Pittsburgh School of Medicine

9:40 – 9:50am *Signal detection analysis of natural products and potential kidney related adverse reactions using a database of spontaneously reported adverse events*

Presenter: Caiden Joseph Lukan, PharmD

Nephrotoxin Stewardship Fellow

Department of Pharmacy & Therapeutics

9:50 – 10:00am *Tubular epithelial cell microRNA-17~92 regulates JAK/STAT signaling to protect females from acute kidney injury*

Presenter: Amanda Suda, MS, BS

Doctoral Candidate, Butterworth Lab

Integrative Systems Biology Program, Department of Cell Biology

University of Pittsburgh School of Medicine

10:00 – 10:10am *SCD1 estimated enzyme activity is associated pediatric sepsis phenotypes and organ injury*

Presenter: Ivan Saraiva, MD, MS

14th Annual Acute Kidney Injury Symposium

Thursday November 14, 2024

7:30 am – 3:00 pm

Starzl Biomedical Science Tower Conference Room S120

200 Lothrop Street, Pittsburgh, PA 15261

CRISMA Center Post-Doctoral Scholar

Clinical Instructor of Critical Care Medicine

10:10 – 10:20am *Model Predictive Control Regulates Blood Pressure During Simulated Kidney Replacement Therapy*

Presenter: Annabelle Lint, BS

Graduate Student Researcher, Parker Lab

Department of Chemical and Petroleum Engineering, University of Pittsburgh

10:20 – 10:30am *Development of transient versus persistent severe acute kidney injury during extracorporeal membrane oxygenation: a retrospective cohort study*

Presenter: Bethany Hileman, BS

Medical Student, Class of 2026

University of Pittsburgh School of Medicine

10:30 – 10:40am Discussion/Q&A Moderator: Roderick Tan

10:40 – 10:55am **Abstract Voting/Break**

Session III

Keynote Addresses

10:55- 11:00am Introduction of Ashita Tolwani, MD, MSc by Raghavan Murugan, MD

11:00 – 11:40am **Keynote Address: From Innovation to Implementation: Building a Successful Continuous Renal Replacement Therapy (CRRT) Program**

Ashita Tolwani, MD, MSc

Professor of Medicine

University of Alabama at Birmingham

[Teams Webinar Link](#)

11:40 – 11:50am Discussion/Q&A Moderator: Raghavan Murugan

11:50 – 12:05pm **Lunch**

12:05 – 12:10pm Introduction of Dennis Moledina, MD, PhD, FASN by Roderick Tan, MD

12:10 – 12:50pm **Keynote Address: Tools for non-invasive diagnosis of acute interstitial nephritis**

Dennis Moledina, MD, PhD, FASN

Assistant Professor of Internal Medicine – Nephrology

Director, Kidney BioBank

Yale School of Medicine

[Teams Webinar Link](#)

12:50 – 1:00pm Discussion/Q&A Moderator: Roderick Tan

1:00 – 1:05pm **Break**

14th Annual Acute Kidney Injury Symposium

Thursday November 14, 2024

7:30 am – 3:00 pm

Starzl Biomedical Science Tower Conference Room S120

200 Lothrop Street, Pittsburgh, PA 15261

Session IV

Scientific Presentations

- | | |
|---------------|---|
| 1:05 – 1:20pm | <i>Immune Checkpoint Inhibitors related kidney injury: novel diagnostic tools</i>
Speaker: Pooja Amarapurkar, MD
Assistant Professor of Medicine
Renal-Electrolyte Division |
| 1:20 – 1:35pm | <i>Succinating the damage out of Kidney Injury</i>
Speaker: Sunder (Sunny) Sims-Lucas, PhD
Associate Professor
Department of Pediatrics |
| 1:35 – 1:50pm | <i>Treating endotypes in critical illness: The case for metabolic reprogramming and metformin in sepsis associated AKI</i>
Speaker: Hernando Gomez, MD, MPH
Associate Professor of Critical Care and Emergency Medicine
Director, Cardiopulmonary Research Laboratory |
| 1:50 – 2:05pm | <i>Are essential fatty acids essential for AKI?</i>
Speaker: Ivan Saraiva, MD
CRISMA Center Post-Doctoral Scholar
Clinical Instructor of Critical Care Medicine |
| 2:05 – 2:20pm | <i>Stressed Out! The Unfolded Protein Response and Acute Kidney Injury</i>
Speaker: Aidan Porter, MD
Assistant Professor of Pediatrics |
| 2:20 – 2:35pm | <i>Novel Renal Fibrosis Therapeutic Insights: AI-Driven CB2 Ligand Design and Cryo-EM CB2/drug Signaling Complex to Combat Renal Fibrosis</i>
Speaker: Xiang-Quan (Sean) Xie, PhD, EMBA
Professor of Pharmaceutical Sciences
Associate Dean for Research Innovation
Director of CCGS & CDAR Centers
University of Pittsburgh School of Pharmacy |
| 2:35 – 2:45pm | Discussion/Q&A Moderator: Martin Oberbarnscheidt |
| 2:45 – 2:50pm | Announcement of Abstract Awards / Group Photo |
| 2:50 – 3:00pm | Closing Remarks |

14th Annual Acute Kidney Injury Symposium

Thursday November 14, 2024

7:30 am – 3:00 pm

Starzl Biomedical Science Tower Conference Room S120

200 Lothrop Street, Pittsburgh, PA 15261

Program Overview, Learning Objectives, Target Audience

This symposium will promote clinical knowledge related to diagnosis and personalized treatment of acute kidney injury (AKI). It will help to improve the care of critically ill patients who develop or are at risk for AKI. It will also promote communication and collaboration among experts and specialists treating and researching AKI. The understanding of AKI and the effective strategies for developing, implementing, and performing protocols for managing the condition will be enhanced. The symposium is targeted for doctors, fellows, researchers, and professionals in the medical and research fields of critical care medicine, transplantation, nephrology, and the renal-electrolyte division. The symposium also serves as a platform to spread kidney awareness and to educate and share resources with patients and the community.

Faculty & Staff Listing

1. **Pooja Amarapurka, MD** – Assistant Professor of Medicine, Renal-Electrolyte Division, University of Pittsburgh
2. **Aravind Cherukuri, MBBS, PhD, MRCP** – Assistant Professor of Medicine, Renal-Electrolyte Division, University of Pittsburgh
3. **Maria Delesio, ABA, AGS** – Business Admin Manager, Renal-Electrolyte Division, University of Pittsburgh
4. **Kaley El-Arab, MD** – 2nd year Adult Emergency Medicine Critical Care Medicine Fellow, Department of Critical Care Medicine, University of Pittsburgh
5. **Susan Fancsali, MBA** – Project Specialist, Department of Critical Care Medicine, University of Pittsburgh
6. **Samit Ghosh, PhD** – Assistant Professor of Medicine, Vascular Institute, University of Pittsburgh
7. **Hernando Gomez, MD, MPH** – Associate Professor of Critical Care and Emergency Medicine, Department of Critical Care Medicine, University of Pittsburgh
8. **Bethany Hileman, BS** – Medical Student, University of Pittsburgh School of Medicine
9. **Jacqueline Ho, MD** – UPMC Children's Hospital of Pittsburgh, Division of Nephrology
10. **Sandra Kane-Gill, PharmD, MS, FCCM, FCCP** – Professor of Pharmacy and Therapeutics, University of Pittsburgh School of Pharmacy
11. **Annabelle Lint, BS** – Graduate Student Researcher, Department of Chemical and Petroleum Engineering, University of Pittsburgh
12. **Caiden Joseph Lukan, PharmD** – Postdoctoral Fellow, Department of Pharmacy & Therapeutics, University of Pittsburgh
13. **Dennis Moledina, MD, PhD, FASN** – Assistant Professor of Internal Medicine, Nephrology, Yale School of Medicine
14. **Stephanie K. Montgomery, BS, MS** – Director, Scientific Services, Department of Critical Care Medicine, University of Pittsburgh
15. **Raghavan Murugan, MD** – Program for Critical Care Nephrology, CRISMA, Department of Critical Care Medicine, University of Pittsburgh
16. **Karen Nieri, BA** – Assistant Director, Scientific Services, Department of Critical Care Medicine, University of Pittsburgh
17. **Martin Oberbarnscheidt, MD** – Thomas E. Starzl Transplantation Institute, Department of Surgery, University of Pittsburgh
18. **Aidan Porter, MD** – Assistant Professor of Pediatrics, Children's Hospital of Pittsburgh
19. **Ivan Saraiva, MD** – CRISMA Center Post-Doctoral Scholar, Clinical Instructor, Department of Critical Care Medicine, University of Pittsburgh
20. **Sunder (Sunny) Sims-Lucas, PhD** – Associate Professor, Department of Pediatrics, Children's Hospital of Pittsburgh

14th Annual Acute Kidney Injury Symposium

Thursday November 14, 2024

7:30 am – 3:00 pm

Starzl Biomedical Science Tower Conference Room S120

200 Lothrop Street, Pittsburgh, PA 15261

21. **Amanda Suda, MS, BS** – Doctoral Candidate, Integrative Systems Biology Program, Department of Cell Biology, University of Pittsburgh School of Medicine
22. **Roderick Tan, MD, PhD** – Pittsburgh Center for Kidney Research-O'Brien Center, Renal-Electrolyte Division, University of Pittsburgh
23. **Ashita Tolwani, MD** – Professor of Medicine, University of Alabama at Birmingham
24. **Xiang-Quan (Sean) Xie, PhD, EMBA** – Professor of Pharmaceutical Sciences, University of Pittsburgh School of Pharmacy
25. **Elynn Youm, BA** – PhD Candidate, Renal-Electrolyte Division, University of Pittsburgh School of Medicine

Accreditation Statement:

In support of improving patient care, the University of Pittsburgh is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

The University of Pittsburgh designates this live activity for a maximum of 6.5 AMA PRA Category 1 Credit[s]™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Other health care professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.

Faculty Disclosure

All individuals in a position to control the content of this education activity including members of the planning committee, speakers, presenters, authors, and/or content reviewers have disclosed all relevant financial relationships with any entity producing, marketing, re-selling, or distributing health care goods or services, used on, or consumed by, patients.

The following relevant financial relationships were disclosed:

1. Dr. Aravind Cherukuri is a consultant and on the advisory board for Verici diagnostics and Biohope Pharmaceuticals.
2. Dr. Samit Ghosh has grant/research support from Pfizer, Inc.
3. Ms. Annabelle Lint was a paid intern for Amgen during the summer of 2024. This relationship has ended.
4. Dr. Dennis Moledina is a consultant for Biohaven, Inc. and is a stockholder (**privately held) for Predict AIN, LLC.
5. Dr. Raghavan Murugan was previously a paid consultant for Baxter Inc. This relationship has ended.
6. Dr. Ashita Tolwani is a consultant for Baxter, Inc.

No other members of the planning committee, speakers, presenters, authors, content reviewers and/or anyone else in a position to control the content of this education activity have relevant financial relationships with any companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

We gratefully acknowledge support from Baxter Healthcare Corporation for their educational grant.