



3rd Clinical and Scientific Advances in Urinary Tract Infections

June 28-30, 2019
Hyatt Regency Columbus

Friday, June 28

3:00 – 7:00 pm

Registration

Foyer of the Hayes/McKinley Conference Rooms-First Floor

4:00 – 5:45 pm

Opening Reception and Cash Bar

Sponsored by Ocean Spray

5:45 – 6:00 pm

Welcome, Opening Remarks and Announcements

John Barnard, MD, President, Research Institute at Nationwide Children's and
Chair, Pediatrics

Swaine Chen, MD, PhD, National University of Singapore

Opening Keynotes:

6:00 – 6:45 pm

Targeting Bacterial Toxins to Combat Sepsis and Urinary Tract Infections

Mathew Mulvey, PhD, University of Utah

6:45 – 7:30 pm

Tracking Uropathogenic E. coli Infection Dynamics and Innate Resistance

Mark Schembri, PhD, University of Queensland

Saturday, June 29

7:00 am – 5:00 pm

Registration

Foyer of the Hayes/McKinley Conference Rooms-First Floor

7:00 – 8:00 am

Continental Breakfast

7:55 – 8:00 am

Welcome

Sheryl Justice, PhD, Nationwide Children's Hospital

8:00 – 8:20 am

UTI Research – Who Should Care?

Tamara Bavendam, MD, National Institutes of Health

Panel I: The Many Faces of UTI

Moderator: Elizabeth Lucas, MD, Nationwide Children's Hospital

8:20 – 9:20 am

Panel

Amanda Rounds, PhD, MedStar Health Research Institute

Jeffrey Caterino, MD, The Ohio State University

Bilal Chughtai, MD, Weill Cornell University

Shannon Novosad, MD, Centers for Disease Control and Prevention

9:20 – 9:30 am

Discussion

9:30 – 9:45 am

Break

Session I: Microbial Pathogenesis

Moderator: John David Spencer, MD, Nationwide Children's Hospital

9:45 – 10:05 am

Renal Epithelial Response to UPEC

Brian Becknell, MD, PhD, The Research Institute at Nationwide Children's

10:05 – 10:25 am

Respiratory heterogeneity in biofilm formation and UTI

Maria Hadjifrangiskou, PhD, Vanderbilt University

10:25 – 10:45 am

Urinary Catheterization: Microbial Window of Opportunities

Ana Flores-Mireles, PhD, Notre Dame University

10:45 – 10:52 am

TGF β 1 Orchestrates Renal Fibrosis Following Escherichia coli Pyelonephritis

Teri Hreha, PhD, Washington University in St. Louis

10:52 – 10:59 am

Invasion of Vaginal Epithelial Cells by Uropathogenic Escherichia coli

John R Brannon, PhD, Vanderbilt University Medical Center

Session II: Diagnosis of UTI

Moderator: Rama Jayanthi, MD, Nationwide Children's Hospital

11:00 – 11:20 am

Diagnosis of Pediatric UTI: Why Getting It Right Matters

Joshua Watson, MD, Nationwide Children's Hospital

11:20 – 11:40 am

Computational Approaches to Microbiome Characterization with Metagenomic Data

Keith Crandall, PhD, George Washington University

11:40 am – 12:00 pm

Asymptomatic Bacteriuria and Pyuria in Pre-Menopausal Women

Ann Stapleton, MD, University of Washington

12:00 – 12:07 pm

Capsule-independent Mechanisms Controlling Klebsiella pneumoniae Hypermucoviscosity

Laura Mike, PhD, University of Michigan

12:07 – 12:14 pm

Epigenetic Changes Made in the Bladder Epithelial Stem Cells Upon Chronic Infection

Seongmi Kim, PhD, Washington University in St. Louis

12:15 – 1:00 pm

Lunch

Session III: Impact of the Microbiome

Moderator: *Christina Ching, MD*, Nationwide Children's Hospital

1:00 – 1:20 pm

Temporal Dynamics of the Lower Urinary Tract Microbiota: A Clue to Sex-Associated UTI?

Alan Wolfe, MD, Loyola University

1:20 – 1:40 pm

Metagenomic Insights into the Gut-Bladder Axis of Recurrent Urinary Tract Infections

Ashlee Earl, PhD, Broad Institute

1:40 – 2:00 pm

Improving the Diagnosis of UTI in Children with Neuropathic Bladder: Can the Urine Microbiome Help?

Catherine Forster, MD, Children's National Hospital

2:00 – 2:07 pm

Characterizing the Female Urethral Microbiota in an Attempt to Deconstruct Voided Urine

Baylie Hochstedler, BS, Loyola University

2:07 – 2:14 pm

The Emerging Roles of Neutrophils and Macrophages in Experimental Acute Pyelonephritis

Juan de Dios Ruiz-Rosado, PhD, Nationwide Children's Hospital

Poster Session

2:15 – 4:15 pm

[Please visit Posters in the McKinley room](#)

Session IV: Casualties of UTI

Moderator: *Nima Baradaran, MD*, The Ohio State University

4:15 – 4:35 pm

Polymicrobial Interactions during CAUTI Modulate Urolithiasis and Secondary Bacteremia

Chelsie Armbruster, PhD, University of Buffalo

4:35 – 4:55 pm

Copper is a Protective Effector Against Urinary Tract Infection

Sargurunathan Subashchandrobose, PhD, Texas A & M University

4:55 – 5:15 pm

The PRC2-Dependent Trained Immunity in Urinary Tract Infection

Sean Li, PhD, Boston Children's Hospital

5:15 – 5:35 pm

Implementing Precision Medicine for the Diverse Conditions Known as UTI: an Impossible Task?

Mike Hsieh, MD, PhD, Children's National Hospital

5:35 pm

Adjourn

Dinner on your own

Sunday, June 30

7:00 – 8:00 am

Continental Breakfast

Session V: Selected from Abstracts

Moderator: *Kirk McHugh, PhD*, Nationwide Children's and The Ohio State University

8:00 – 8:15 am

Novel Immunotherapies for Urinary Tract Infections

Alexandra Paharik, PhD, Washington University in St. Louis

- 8:15 – 8:30 am **Urothelial-specific Insulin Receptor Deletion Disrupts Urothelial Barrier Integrity and Suppresses Immune Defenses of the Urinary Tract**
Laura Schwartz, PhD, Nationwide Children's Hospital
- 8:30 – 8:45 am **A Nonsterilizing Th1 and Th17 Adaptive Immune Response Develops During Urinary Tract Infection**
Matthieu Rousseau, PhD, Institut Pasteur
- 8:45 – 9:00 am **Mast Cells Contribute to Bladder Dysfunction Following Recurrent Urinary Tract Infections**
Byron Hayes, Duke University
- 9:00 – 9:15 am **Urinary Tract Colonization is Enhanced by an Endogenous Plasmid that Regulates Chromosomal Genes in Uropathogenic *Acinetobacter baumannii***
Gisela Di Venanzio, PhD, Washington University in St. Louis

Panel II: Global Impact of UTI/Advanced Therapeutics

Moderator: Christina Khoo, PhD, Ocean Spray

- 9:15 – 9:30 am **Reducing Bacterial Adherence May Lessen Morbidity and Mortality caused by Urinary Tract Infections**
Gary Eldridge, President and CEO, Sequoia Sciences
- 9:30 – 10:00 am **New Strategies for Combating Urinary Tract Infections: Targeting Bladder Mucosal Remodeling and Bacterial Virulence**
Tom Hannan, DVM, PhD, Fimbrion, Washington University in St. Louis
- 10:00 – 10:15 am **Proanthocyanidin Interferes with Intrinsic Antibiotic Tolerance Mechanisms of Gram-negative Bacteria**
Mathias Gallique, PhD, McGill University
- 10:15 – 10:30 am **Break**

Closing Keynotes:

Moderator: Hans Pohl, MD, Children's National

- 10:30 – 11:15 am **Sex Influence on Pathogenesis and Sequelae of Pyelonephritis**
David Hunstad, MD, Washington University in St. Louis
- 11:15 am – 12:00 pm **Imprecision Medicine: Challenges in Diagnosis, Treatment, and Antibiotic Stewardship for UTI**
Barbara Trautner, MD, PhD, Baylor College of Medicine
- 12:00 pm **Closing Remarks and Adjournment**
Hans Pohl, MD, Children's National