

# **CURRICULUM VITAE**

**John David Spencer, MD**

## **PRESENT TITLE AND AFFILIATION**

### **DUAL/JOINT APPOINTMENT:**

Professor with Tenure  
Department of Pediatrics  
The Ohio State University College of Medicine  
Columbus, OH

Principal Investigator  
The Kidney and Urinary Tract Center  
The Abigail Wexner Research Institute  
Nationwide Children's  
Columbus, OH

Pediatric Nephrologist  
Chief, Division of Nephrology and Hypertension  
Nationwide Children's  
Columbus, OH

## **CITIZENSHIP AND VISA STATUS**

U.S. Citizen

## **OFFICE ADDRESS**

Division of Nephrology and Hypertension  
The Kidney and Urinary Tract Center  
The Abigail Wexner Research Institute  
Nationwide Children's  
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Columbus, OH 43205-2696  
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## **EDUCATION**

### **UNDERGRADUATE EDUCATION**

09/1997 – 05/2001	Wabash College Crawfordsville, IN	Bachelor of Science
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### **GRADUATE EDUCATION**

09/2001 – 05/2005	Indiana University School of Medicine Indianapolis, IN	Doctor of Medicine
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### **POST-GRADUATE EDUCATION & TRAINING**

2005 – 2008	Le Bonheur Children's Hospital Memphis, TN	Pediatric Residency Program
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2008 – 2009	Le Bonheur Children's Hospital Memphis, TN	Pediatric Chief Residency
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2009 – 2012	Nationwide Children's Hospital Columbus, OH	Pediatric Nephrology Fellowship
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## **ACADEMIC APPOINTMENTS**

2012 – 2017	Assistant Professor Department of Pediatrics The Ohio State University College of Medicine Columbus, OH
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2017 – 2022	Associate Professor Department of Pediatrics The Ohio State University College of Medicine Columbus, OH
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2023 – Present	Professor with Tenure Department of Pediatrics The Ohio State University College of Medicine Columbus, OH
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## **STATE LICENSURE AND CERTIFICATIONS**

### **LICENSURE**

2009	Ohio (active)
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### **CERTIFICATIONS**

2004	American Board of Pediatrics (recertification 2019)
2014	American Board of Pediatrics, Pediatric Nephrology

## **SERVICE**

### **INSTITUTIONAL/LOCAL ACTIVITIES**

- 2013            Member  
Nationwide Children’s Research Day Organization Committee  
The Research Institute at Nationwide Children’s Hospital  
Columbus, OH
- 2013 – 2020    Member  
Nationwide Children’s Bench to Outcome Seminar Series Committee  
The Research Institute at Nationwide Children’s Hospital  
Columbus, OH
- 2015            Member  
Nationwide Children’s Resident Research Day Organization Committee  
The Research Institute at Nationwide Children’s Hospital  
Columbus, OH
- 2015 – 2019    Chairperson  
Nationwide Children’s Bench to Outcome Seminar Series Committee  
The Research Institute at Nationwide Children’s Hospital  
Columbus, OH
- 2015 – Present    Champion  
Nationwide Children’s Residency Research Committee  
The Research Institute at Nationwide Children’s Hospital  
Columbus, OH
- 2016 – 2017    Member  
Nationwide Children’s Residency Mentoring Program  
Nationwide Children’s Hospital  
Columbus, OH
- 2017 – 2021    Member  
Nationwide Children’s Clinical and Translational Intramural Funding Committee  
Nationwide Children’s Hospital  
Columbus, OH
- 2017 – 2019    Director of Research  
Division of Pediatric Nephrology  
Nationwide Children’s Hospital  
Columbus, OH

2019 – Present Division Chief  
Division of Pediatric Nephrology & Hypertension  
Nationwide Children’s Hospital  
Columbus, OH

2019 Member  
Clinical Urinary Tract Infection Pathway  
Nationwide Children’s Hospital  
Columbus, OH

2019 – Present Faculty Search Committee Member  
Perinatal Research Center Director  
Nationwide Children’s Hospital  
Columbus, OH

2019 – Present Faculty Search Committee Member  
Rheumatology Faculty  
Nationwide Children’s Hospital  
Columbus, OH

2020 Faculty Search Committee Member  
Center for Clinical & Translational Research Faculty  
Abigail Wexner Research Institute at Nationwide Children’s Hospital  
Columbus, OH

2020 – Present Board Member  
National Kidney Foundation  
Central Ohio Chapter  
Columbus, OH

2020 Committee Member  
Genetically Modified Mouse Core  
The Ohio State University College of Medicine  
Columbus, OH

2020 – Present Steering Committee Member  
Nephrology and Urology Research Affinity Group  
Abigail Wexner Research Institute at Nationwide Children’s Hospital  
Columbus, OH

2021 Faculty Search Committee Member  
Cardiac Intensive Care Unit Director  
Nationwide Children’s Hospital  
Columbus, OH

- 2021 – 2023      Program Director  
Kidney and Urinary Tract Physiology Series  
Abigail Wexner Research Institute at Nationwide Children’s Hospital  
Columbus, OH
- 2022 – Present    Director  
Kidney and Urinary Tract Center  
Nationwide Children’s Hospital  
Columbus, OH
- 2022                Chair, Faculty Search Committee Member  
Chief of Cardiology, Director of the Heart Center  
Nationwide Children’s Hospital  
Columbus, OH
- 2023 – Present    Clinical Scholars Committee Member  
Nationwide Children’s Hospital  
Columbus, OH
- 2023 – Present    Board Member  
Pediatric Academic Association  
Nationwide Children’s Hospital  
Columbus, OH
- 2023 – Present    Member  
Division Chief’s On-boarding program  
Nationwide Children’s Hospital  
Columbus, OH

**NATIONAL ACTIVITIES**

- 2010 – 2012      Chairperson  
Pediatric Fellows in Nephrology Association (pFeNA)  
American Society of Pediatric Nephrology  
The Woodlands, TX
- 2010 – 2015      Member  
Workforce Committee  
American Society of Pediatric Nephrology  
The Woodlands, TX
- 2011 – Present    Member  
Public Policy Committee  
American Society of Pediatric Nephrology  
The Woodlands, TX

- 2012 – 2014 Elected National Scholar  
John E. Lewy Foundation Advocacy Scholar’s Program  
American Society of Pediatric Nephrology  
The Woodlands, TX
- 2014 – 2016 Chairperson  
Public Policy Committee  
American Society of Pediatric Nephrology  
The Woodlands, TX
- 2018 – Present Member  
Research Committee  
American Society of Pediatric Nephrology  
The Woodlands, TX
- 2020 Chairperson  
Kidney Week Abstract Committee (Pediatric Nephrology)  
American Society of Nephrology  
Washington D.C.
- 2021 Panelist  
National Kidney Foundation Research Round Table  
National Kidney Foundation  
New York, NY
- 2024 Steering Committee  
Urinary Tract Infection Global Alliance International Meeting  
Urinary Tract Infection Global Alliance  
Columbus, OH

**STUDY SECTIONS**

- 2016-Present *Ad hoc* reviewer  
NIH/NIDDK Diabetic Complications Consortium (Diacomp)
- 2017 *Ad hoc* reviewer  
Medical Research Council (UK)
- 2019 *Ad hoc* reviewer  
The Ohio State University CTSA (K12)
- 2019 (Feb) *Ad hoc* reviewer  
NIH/NIDDK Urology and Urogynecology Special Emphasis Panel (ZRG1  
DKUS-B)

- 2019 - present     *Standing* reviewer  
NIH/NIDDK Kidney, Urology, and Hematology (KUH) Fellowship  
Application Review Committee
- 2019 (Oct)         *Ad hoc* reviewer  
NIH/NIDDK Urology and Urogynecology Special Emphasis Panel (ZRG1  
DKUS-B90(s))
- 2021 (Oct)         *Ad hoc* reviewer  
NIH/NIDDK U54 Urology O'Brien Center Opportunity Pool Award Program
- 2022 - present     *Standing* reviewer  
NIH/NIDDK Innovative Science Accelerator Program

### **HONORS AND AWARDS**

- 2012                 Trainee Publication of the Year  
Nationwide Children's Hospital / The Research Institute at Nationwide  
Children's Hospital
- 2012                 Best Research Abstract  
The Research Institute at Nationwide Children's Hospital
- 2012                 John E. Lewy Patient Advocacy Scholar  
American Society of Pediatric Nephrology
- 2013                 Pediatric Nephrology Leadership Development Course  
American Society of Pediatric Nephrology
- 2013                 Loan Repayment Program  
National Institutes of Health
- 2016                 Leadership Development Program  
Nationwide Children's Hospital
- 2017                 Fellow, American Academy of Pediatrics
- 2018                 Fellow, American Society of Nephrology
- 2019                 Elected member, Society of Pediatric Research
- 2021                 Faculty Investigator of the Year, Abigail Wexner Research Institute  
Nationwide Children's Hospital
- 2023                 John E. Fisher Endowed Chair, Clinical and Translational Research,  
Nationwide Innovation Fund





The proposal evaluates the impact of neutrophils and macrophages on the clearance of bacteria during pyelonephritis and the mechanisms in which these cells contribute to kidney scarring.

**Role: Mentor**

NIH K01 DK126991-01A1 Jackson, Ashley 9/1/2021 – 5/31/2026

**Defining the renal urothelium progenitor and its regulation during development and repair**

This proposal was designed to evaluate the impact of the renal urothelium and cellular repair in the prevention of obstructive nephropathy.

**Role: Mentor**

**COMPLETED RESEARCH (listed in reverse chronological order)**

Nationwide Children's Intramural Funding Stonebrook, Emily 5/1/2021 – 3/1/2023

**Defining the effect of obesity on pediatric urinary tract infections**

This training application was designed to evaluate the impact of obesity on urinary tract infection susceptibility.

**Role: Mentor**

NIH F32 DK130521 Stonebrook, Emily 9/1/2021-8/31/2023

**Defining the effect of obesity on pediatric urinary tract infections**

This training application was designed to evaluate the impact of obesity on urinary tract infection susceptibility.

**Role: Mentor**

NIH R01 DK113142 Hains, D. 5/2/2018 – 3/30/2023

**Genetic Regulation, Tubular Processing, and Clinical Relevance of Collecting Duct Alpha-Defensins 1 – 3**

The goal of this study is to evaluate the contributions of alpha defensins to urinary tract sterility, the molecular mechanisms that regulate alpha defensin secretion, and how genetic variations regulate their expression.

**Role: Co-PI**

Nationwide Children's Intramural Funding Hill, Ellie 12/2017 – 12/2019

**Novel Urine Biomarkers to Distinguish UTI from Sterile Pyuria**

This project is designed to evaluate candidate urine proteins as biomarkers for UTI and determine if that can distinguish between infection and colonization.

**Role: Co-I/Mentor**

R01DK106286 Schwaderer, AL 6/2015 – 3/2019

**The Interface Between Critical Acid-Base Mediators and the Renal Bacterial Defense**

The proposed research will provide the foundation to include understanding the role of renal intercalated cells in host defense and evaluate how acid-base mediators can be used in the treatment of pyelonephritis management, expanding treatment scope beyond antibiotics.

**Role: Co-I**

NIH R03DK109242 Spencer, John D. 4/1/2016 – 3/31/2019  
**Novel Mouse Models to assess the *in vivo* Significance of Ribonuclease 7 in Urinary Tract Defense**

The goal of this proposal is to develop novel transgenic mouse models to investigate the impact of RNase 7 overexpression on the developing urinary tract *in vivo*.

**Role: PI**

K08 DK094970 (NIDDK) Spencer, John D. 8/2012 – 6/2017  
**Ribonuclease 7: Antimicrobial Activity in the Human Kidney and Urinary Tract**

The goal of this proposal is to study the structure, function, and biological relevance of ribonuclease 7, a novel AMP that has potent antimicrobial properties in the human urinary tract.

**Role: PI**

Diabetic Complications Consortium/NIDDK Spencer, John D. 8/2015 – 8/2016  
**The Impact of Diabetes Mellitus on Antimicrobial Peptide Production and Renal Bacterial Defense**

The goal of this pilot and feasibility study is to evaluate how insulin bioavailability and sensitization regulate AMP production in the urinary tract.

**Role: PI**

Norman Siegel Scholar Grant Spencer, John D. 4/1/2016 – 3/31/2018  
American Society of Nephrology

**Insulin Signaling, Antimicrobial Peptide Production, and the Intercalated Cell's Antibacterial Defenses**

The proposed research will evaluate the role of intercalated cell insulin signaling and PI3K/AKT activity in the regulation of antimicrobial peptides and urine sterility.

**Role: PI**

Nationwide Children's Intramural Funding Dhingra, Neha 7/2016 – 7/2018  
**Evaluation of Antimicrobial Peptides and Peritonitis in Dialysis Patients**

This proposed research investigates the role of the Ribonuclease A Superfamily and the prevention of peritonitis in patients receiving peritoneal dialysis

**Role: Co-I**

American Academy of Pediatrics Korbelt, L. 12/2017 – 12/2018  
**An Evaluation of Ribonuclease 4 Expression and Function in the Human Kidney and Bladder**

The goal of this study is to evaluate the expression of Ribonuclease 4 in human samples and *in vitro*.

**Role: Mentor**

**PENDING RESEARCH SUPPORT (listed in reverse chronological order)**

NIH NIDDK R01 Becknell, B Submitted Feb. 2024  
**The impact of RNase 3, RNase 6, and Ribonuclease Inhibitor on Urinary Tract Infection**

The goal of this proposal is to define the contributions of Ribonuclease 3, Ribonuclease 6, and their inhibitor on UTI antibacterial defenses.

**Role: Co-PI**

NIH NIDDK R03

Ching, C

Submitted Sept. 2024

**The impact of IL-6 and Stat3 signaling on urothelial UTI defenses**

The goal of this proposal is to develop a urothelial organoid model and test how IL-6 and Stat3 impact susceptibility to uropathogenic *E. coli*

**Role: Mentor**

NIH R01DK136510

Schwaderer, AL

7/1/23-6/30/2028

**A mechanistic approach to intercalated cell phagocytosis**

The goal of this proposal is to define the mechanisms kidney intercalated cells utilize to prevent pyelonephritis and infection outcomes.

Score: 20%

**Role: MPI**

NIH R01DK117934

Hains, D

3/1/23-8/1/2028

**Collecting Duct alpha defensins 1-3 shielding effect against Uropathogenic *E. coli***

The goal of this proposal is to define the mechanisms and genetic variations in alpha defensin 1-3 impact on urinary tract infection defenses.

Score: 47%

**Role: MPI**

**PUBLICATIONS**

**ARTICLES IN PEER REVIEWED JOURNALS (listed in chronological order)**

**^ publications with a trainee**

1. **Spencer JD**, Hastings MC, Rye AK, English BK, Ault BH. Gastroenteritis caused by *Edwardsiella tarda* in a pediatric renal transplant recipient. *Pediatr Transplant*. 2008 Mar;12(2):238-41. Epub 2007 Dec 16. PMID: 18086238.
2. **Spencer JD**, Sanders JT, Ault BH. Two cases of hematuria with hemoglobin C trait. *Pediatr Nephrol*. 2009 Dec;24(12):2455-7. Epub 2009 Aug 11. PMID: 19669800.
3. **Spencer JD**, Schwaderer A, McHugh K, Hains DS. Pediatric urinary tract infections: an analysis of hospitalizations, charges, and costs in the USA. *Pediatr Nephrol*. 2010 Dec;25(12):2469-75. Epub 2010 Aug 14. PMID: 20711740.
4. **Spencer JD**, Bates CM, Mahan JD, Niland ML, Staker SR, Hains DS, Schwaderer AL. The accuracy and health risks of a voiding cystourethrogram after a febrile urinary tract infection. *J Pediatr Urol*. 2010 Dec 1. Epub 2010 Dec 3. PMID: 21126919.
5. **Spencer JD**, Schwaderer A, McHugh K, Vanderbrink B, Becknell B, Hains DS. The demographics and costs of inpatient vesicoureteral reflux management in the USA. *Pediatr Nephrol*. 2011 May 10. Epub 2011 May 10. PMID: 21556713.
6. Janjua, H, Ayoob, R, **Spencer JD**. Hypertension in a Toddler with Bell's Palsy. *Consultant for Pediatrics*. 2011; 10(6): 203.

7. **Spencer JD**, Schwaderer AS, DiRosario JA, McHugh KM, McGillivray G, Justice S, Carpenter A, Baker P, Harder J, Hains DS. Ribonuclease 7 is a potent antimicrobial peptide within the human urinary tract. *Kidney Int.* 2011 Apr 27. Epub 2011 Apr 27. PMID: 21525852.
8. **Spencer JD**, Hastings MC, Wyatt RJ, Ault BH. Has the Incidence of Steroid Sensitive Nephrotic Syndrome Changed? *Clin Nephrol.* 2012 Aug;78(2):112-5. PMID: 22790455.
9. Becknell B, Hains DS, Schwaderer AL, Vanderbrink BA, **Spencer JD**, Reagan PB, McHugh KM. Impact of urinary tract infection on inpatient healthcare for congenital obstructive uropathy. *J Pediatr Urol.* 2012 Oct;8(5):470-6. Epub 2011 Nov 25. PMID: 22119410.
10. **Spencer JD**, Hains DS, Porter E, Bevins CL, DiRosario J, Becknell B, Wang H, Schwaderer AL. Human alpha defensin 5 expression in the human kidney and urinary tract. *PLoS One.* 2012;7(2):e31712. Epub 2012 Feb 16. PMID: 22359618; PMCID: PMC3281003.
11. Wang H, Schwaderer AL, Kline J, **Spencer JD**, Kline D, Hains DS. Contribution of Structural Domains to Ribonuclease 7's Activity Against Uropathogenic Bacteria. *Antimicrob Agents Chemother.* 2012 Nov 26. Epub 2012 Nov 26. PMID: 23183439.
12. **Spencer JD**, Schwaderer AL, Wang H, Bartz J, Kline J, Eichler T, Desouza KR, Sims-Lucas S, Baker P, Hains DS. Ribonuclease 7, an antimicrobial peptide up-regulated during infection, contributes to microbial defense of the human urinary tract. *Kidney Int.* 2013 Jan 9. doi: 10.1038/ki.2012.410. Epub 2013 Jan 9. PMID: 23302724.
13. Becknell B, **Spencer JD**, Carpenter AR, Chen X, Singh A, Ploeger S, Kline J, Ellsworth P, Li B, Proksch E, Schwaderer AL, Hains DS, Justice SS, McHugh KM. Expression and antimicrobial function of beta-defensin 1 in the lower urinary tract. *PLoS One.* 2013 Oct 21;8(10):e77714. eCollection 2013. PMID: 24204930; PMCID: PMC3804605.
14. **Spencer JD**, Schwaderer AL, Becknell B, Watson J, Hains DS. The innate immune response during urinary tract infection and pyelonephritis. *Pediatr Nephrol.* 2014 Jul;29(7):1139-49. Epub 2013 Jun 5. PMID: 23732397; PMCID: PMC3800267.
15. **Spencer JD**, Schwaderer AL, Eichler T, Wang H, Kline J, Justice SS, Cohen DM, Hains DS. An endogenous ribonuclease inhibitor regulates the antimicrobial activity of ribonuclease 7 in the human urinary tract. *Kidney Int.* 2014 May;85(5):1179-91. Epub 2013 Oct 9. PMID: 24107847; PMCID: PMC3981961.
16. Becknell B, Eichler TE, Beceiro S, Li B, Easterling RS, Carpenter AR, James CL, McHugh KM, Hains DS, Partida-Sanchez S, **Spencer JD**. Ribonucleases 6 and 7 have antimicrobial function in the human and murine urinary tract. *Kidney Int.* 2014 Jul 30. Epub 2014 Jul 30. PMID: 25075772.
17. Skandarajan, A, **Spencer JD**, Cohen D, Kline J, Hains DS, Schwaderer, AL. Urinary Tract Infections, Familial Occurrence and Association with Other Infections. *J of Clin Ped Nephrol.* 2014 2(1).

18. Korbel L<sup>^</sup>, **Spencer JD**. Diabetes mellitus and infection: an evaluation of hospital utilization and management costs in the United States. *J Diabetes Complications*. 2014 Nov 25. pii: S1056-8727(14)00332-8. Epub 2014 Nov 25. PMID: 25488325.
19. Becknell B, Schober M, Korbel L, **Spencer JD**. The diagnosis, evaluation and treatment of acute and recurrent pediatric urinary tract infections. *Expert Rev Anti Infect Ther*. 2015 Jan;13(1):81-90. Epub 2014 Nov 25. PMID: 25421102.
20. Schnaper HW, Schubert K, Perlman SA, Clark SL, Hains DS, Roach JL, Skversky AL, **Spencer JD**, Springel T, Swartz SJ, Norwood VF, Satlin LM. Training the next generation of pediatric nephrology advocates: the John E. Lewy foundation advocacy scholars program. *J Pediatr*. 2015 Feb;166(2):218-219.e1. PMID: 25620507
21. Becknell B, Schwaderer A, Hains DS, **Spencer JD**. Amplifying renal immunity: the role of antimicrobial peptides in pyelonephritis. *Nat Rev Nephrol*. 2015 Nov;11(11):642-55. Epub 2015 Jul 7. PMID: 26149835.
22. Watson JR, Sánchez PJ, **Spencer JD**, Cohen DM, Hains DS. Urinary Tract Infection and Antimicrobial Stewardship in the Emergency Department. *Pediatr Emerg Care*. 2016 Feb 6. [Epub ahead of print] PMID: 26855344.
23. **Spencer JD**, Jackson AR, Li B, Ching CB, Vonau M, Easterling RS, Schwaderer AL, McHugh KM, Becknell B. Expression and Significance of the HIP/PAP and RegIII $\gamma$  Antimicrobial Peptides during Mammalian Urinary Tract Infection. *PLoS One*. 2015 Dec 10;10(12):e0144024. eCollection 2015. PMID: 26658437.
24. Watson JR, Hains DS, Cohen DM, **Spencer JD**, Kline JM, Yin H, Schwaderer AL. Evaluation of Novel Urinary Tract Infection Biomarkers in Children. *Pediatr Res*. 2016 Jun; 79(6):934-9. Epub 2016 Feb 17. PMID: 26885759.
25. Schwaderer AL, Wang H, Kim S, Kline JM, Liang D, Brophy PD, McHugh KM, Tseng GC, Saxena V, Barr-Beare E, Pierce KR, Shaikh N, Manak JR, Cohen DM, Becknell B, **Spencer JD**, Baker PB, Yu CY, Hains DS. Polymorphisms in  $\alpha$ -Defensin-Encoding DEFA1A3 Associate with Urinary Tract Infection Risk in Children with Vesicoureteral Reflux. *J Am Soc Nephrol*. 2016 Mar 3. pii: ASN.2015060700. [Epub ahead of print] PMID: 26940096.
26. Becknell B, **Spencer JD**. A Review of Ribonuclease 7's Structure, Regulation, and Contributions to Host Defense. *Int J Mol Sci*. 2016 Mar 22;17(3). pii: E423. Review. PMID: 27011175; PMCID: PMC4813274.
27. Eichler TE, Becknell B, Easterling RS, Ingraham SE, Cohen DM, Schwaderer AL, Hains DS, Li B, Cohen A, Metheny J, Tridandapani S, **Spencer JD**. Insulin and the phosphatidylinositol 3-kinase signaling pathway regulate Ribonuclease 7 expression in the human urinary tract. *Kidney Int*. 2016 Sep;90(3):568-79. doi: 10.1016/j.kint.2016.04.025.

28. Li B, Haridas B, Jackson AR, Cortado H, Mayne N, Kohnken R, Bolon B, McHugh KM, Schwaderer AL, **Spencer JD**, Ching CB, Hains DS, Justice SS, Partida-Sanchez S, Becknell B. Inflammation Drives Renal Scarring in Experimental Pyelonephritis. *Am J Physiol Renal Physiol*. 2016 Oct 19;ajprenal.00471.2016. doi: 10.1152/ajprenal.00471.2016. PubMed PMID: 27760770.
29. Saxena V, Hains DS, Ketz J, Chanley M, **Spencer JD**, Becknell B, Pierce KR, Nelson RD, Purkerson JM, Schwartz GJ, Schwaderer AL. Cell specific qRT-PCR of renal epithelial cells reveals a novel innate immune signature in murine collecting duct. *Am J Physiol Renal Physiol*. 2017 May 3;ajprenal.00512.2016. doi:10.1152/ajprenal.00512.2016. [Epub ahead of print] PubMed PMID: 28468965.
30. Korbel L<sup>^</sup>, Howell M, **Spencer JD**. The clinical diagnosis and management of urinary tract infections in children and adolescents. *Paediatr Int Child Health*. 2017 Oct 5:1-7. doi: 10.1080/20469047.2017.1382046. [Epub ahead of print] PubMed PMID: 28978286.
31. Korbel L<sup>^</sup>, Easterling RS, Punja N, **Spencer JD**. The burden of common infections in children and adolescents with diabetes mellitus: A Pediatric Health Information System study. *Pediatr Diabetes*. 2017 Nov 2. doi: 10.1111/pedi.12594. [Epub ahead of print] PubMed PMID: 29094435. PubMed PMID: 27401534.
32. Schwartz L<sup>^</sup>, Cohen A, Thomas J, **Spencer JD**. The Immunomodulatory and Antimicrobial Properties of the Vertebrate Ribonuclease A Superfamily. *Vaccines (Basel)*. 2018 Nov 20;6(4). pii: E76. doi: 10.3390/vaccines6040076. Review. PMID: 30463297; PubMed Central PMCID: PMC6313885.
33. Murtha MJ<sup>^</sup>, Eichler T, Bender K, Metheny J, Li B, Schwaderer AL, Mosquera C, James C, Schwartz L, Becknell B, **Spencer JD**. Insulin receptor signaling regulates renal collecting duct and intercalated cell antibacterial defenses. *J Clin Invest*. 2018 Dec 3;128(12):5634-5646. doi: 10.1172/JCI98595. Epub 2018 Nov 12. PubMed PMID: 30418175; PubMed Central PMCID: PMC6264632.
34. Watson JR, Sánchez PJ, **Spencer JD**, Cohen DM, Hains DS. Urinary Tract Infection and Antimicrobial Stewardship in the Emergency Department. *Pediatr Emerg Care*. 2018 Feb;34(2):93-95. doi: 10.1097/PEC.0000000000000688. PubMed PMID: 26855344.
35. Saxena V, Fitch J, Ketz J, White P, Wetzel A, Chanley MA, **Spencer JD**, Becknell B, Pierce KR, Arregui SW, Nelson RD, Schwartz GJ, Velazquez V, Walker LA, Chen X, Yan P, Hains DS, Schwaderer AL. Whole Transcriptome Analysis of Renal Intercalated Cells Predicts Lipopolysaccharide Mediated Inhibition of Retinoid X Receptor alpha Function. *Sci Rep*. 2019 Jan 24;9(1):545. doi:10.1038/s41598-018-36921-z. PubMed PMID: 30679625; PubMed Central PMCID: PMC6345901.
36. Perisa MP<sup>^</sup>, Rose MJ, Varga E, Kamboj MK, **Spencer JD**, Bajwa RPS. A novel SAMD9 variant identified in patient with MIRAGE syndrome: Further defining syndromic phenotype

and review of previous cases. *Pediatr Blood Cancer*. 2019 Mar 21:e27726. doi: 10.1002/pbc.27726. [Epub ahead of print] PubMed PMID: 30900330.

37. Kusumi K<sup>^</sup>, Ketz J, Saxena V, **Spencer JD**, Safadi F, Schwaderer A. Adolescents with urinary stones have elevated urine levels of inflammatory mediators. *Urolithiasis*. 2019 Apr 16. doi: 10.1007/s00240-019-01133-1. [Epub ahead of print] PubMed PMID: 30993354.

38. Desloges I, Taylor JA, Leclerc JM, Brannon JR, Portt A, **Spencer JD**, Dewar K, Marczynski GT, Manges A, Gruenheid S, Le Moual H, Thomassin JL. Identification and characterization of OmpT-like proteases in uropathogenic *Escherichia coli* clinical isolates. *Microbiologyopen*. 2019 Sep 8:e915. doi: 10.1002/mbo3.915. PubMed PMID: 31496120.

39. Pottanat ND<sup>^</sup>, Brook AC, Bartosova M, Cortado H, Gupta S, Li B, Jackson AR, Vonau M, Cohen S, Ferrara M, Ching CB, **Spencer JD**, Brauner A, Fraser DJ, Schmitt CP, Eberl M, Ayoob R, Becknell B. Analysis of the Ribonuclease A Superfamily of Antimicrobial Peptides in Patients Undergoing Chronic Peritoneal Dialysis. *Sci Rep*. 2019 May 23;9(1):7753. doi: 10.1038/s41598-019-44219-x. PubMed PMID:31123272; PubMed Central PMCID: PMC6533318.

40. Eichler T, Bender K, Murtha MJ, Schwartz L, Metheny J, Solden L, Jagers RM, Bailey MT, Gupta S, Mosquera C, Ching C, La Perle K, Li B, Becknell B, **Spencer JD**. Ribonuclease 7 Shields the Kidney and Bladder from Invasive Uropathogenic *Escherichia coli* Infection. *J Am Soc Nephrol*. 2019 Jun 25. pii: ASN.2018090929. doi: 10.1681/ASN.2018090929. [Epub ahead of print] PubMed PMID: 31239387.

41. Becknell B, Ching C, **Spencer JD**. The Responses of the Ribonuclease A Superfamily to Urinary Tract Infection. *Front Immunol*. 2019 Nov 29;10:2786. doi: 10.3389/fimmu.2019.02786. eCollection 2019. Review. PubMed PMID: 31849967; PubMed Central PMCID: PMC6901906.

42. Stonebrook E<sup>^</sup>, Hoff M, **Spencer JD**. Congenital Anomalies of the Kidney and Urinary Tract: A Clinical Review. *Curr Treat Options Pediatr*. 2019;5(3):223-235. doi: 10.1007/s40746-019-00166-3. Epub 2019 Jun 11. PMID: 32864297; PMCID: PMC7451090.

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56. Cunningham TW<sup>^</sup>, Bai S, Krawczeski CD, Spencer JD, Phelps C, Yates AR. Acute kidney injury in hypoplastic left heart syndrome patients following the comprehensive stage two palliation. *Cardiol Young*. 2023 Aug 11:1-7. doi: 10.1017/S1047951123002974. Epub ahead of print. PMID: 37565360.

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60. Ruiz-Rosado JD<sup>^</sup>, Cortado H, Keresmar M, Li B, Ballash G, Cotzomi-Ortega I, Sanchez-Zamora YI, Gupta S, Ching C, Boix E, Jackson AR, Spencer JD, Becknell B. Human Ribonuclease 6 Has a Protective Role during Experimental Urinary Tract Infection. *J Innate Immun*. 2023;15(1):865-875. doi: 10.1159/000534736. Epub 2023 Nov 18. PMID: 37980892; PMCID: PMC10699853.

61. Marsh MC, Junquera GY, Stonebrook E, Spencer JD, Watson JR. Urinary Tract Infections in Children. *Pediatr Rev*. 2024 May 1;45(5):260-270. doi: 10.1542/pir.2023-006017. PMID: 38689106. (co-senior author)

62. Simoni A<sup>^</sup>, Schwartz L, Junquera GY<sup>^</sup>, Ching CB, Spencer JD. Current and emerging strategies to curb antibiotic-resistant urinary tract infections. *Nat Rev Urol*. 2024 May 7. doi: 10.1038/s41585-024-00877-9. Epub ahead of print. PMID: 38714857.

63. Mattoo TK, Spencer JD. Biomarkers for urinary tract infection: present and future perspectives. *Pediatr Nephrol*. 2024 Mar 14. doi: 10.1007/s00467-024-06321-9. Epub ahead of print. PMID: 38483594.

64. Cortado H, Kercksmar M<sup>^</sup>, Li B, Vasquez-Martinez G, Gupta S, Ching C, Ballash G, Cotzomi-Ortega I, Sanchez-Zamora YI, Boix E, Zepeda-Orozco D, Jackson AR, Spencer JD, Ruiz-Rosado JD, Becknell B. Murine Ribonuclease 6 Limits Bacterial Dissemination during Experimental Urinary Tract Infection. *J Innate Immun.* 2024;16(1):283-294. doi: 10.1159/000539177. Epub 2024 May 14. PMID: 38744252; PMCID: PMC11250601.

65. Schwartz L, Simoni A<sup>^</sup>, Yan P, Salamon K, Turkoglu A<sup>^</sup>, Vasquez Martinez G<sup>^</sup>, Zepeda-Orozco D, Eichler T, Wang X, Spencer JD. Insulin receptor orchestrates kidney antibacterial defenses. *Proc Natl Acad Sci U S A.* 2024 Jul 16;121(29):e2400666121. doi: 10.1073/pnas.2400666121. Epub 2024 Jul 8. PMID: 38976738; PMCID: PMC11260129.

### INVITED ARTICLES (NON-PEER REVIEWED)

1. 2010: Beyond the Abstract - Pediatric urinary tract infections: An analysis of hospitalizations, charges, and costs in the USA. *UroToday.com*. Published November 2010.

### BOOK CHAPTERS

1. 2015: AAP Textbook of Pediatric Care (6<sup>th</sup> Revised Edition). “Chapter 51: Use of Urinalysis and Urine Culture in Screening”. **John David Spencer** & David S. Hains. Editors: T. McInerney, H. Adam, D. Campbell, D. Kamat, K. Kelleher. American Academy of Pediatrics (pub).
2. 2015: Antimicrobial Peptides – Role in Human Health and Disease. “Antimicrobial Peptides and Urinary Tract Infection.” Brian Becknell & **John David Spencer**. Editor: J. Harder. Springer Publishing.
3. 2021: Pediatric Nephrology (8<sup>th</sup> Revised Edition). “Urinary Tract Infections in Children.” Giovanni Montini, **John David Spencer**, Ian Hewitt. Springer Publishing.

### JOURNAL REVIEWER

2010 – Present	<i>Ad Hoc</i> Reviews for <i>Pediatrics</i>
2010 – Present	<i>Ad Hoc</i> Reviews for <i>Pediatric Nephrology</i>
2013	<i>Ad Hoc</i> Reviews for <i>PLoS ONE</i>
2014 – Present	<i>Ad Hoc</i> Reviews for <i>Science Translational Medicine</i>
2015 – Present	<i>Ad Hoc</i> Reviews for <i>Journal of Urology</i>
2015	<i>Ad Hoc</i> Reviews for <i>Molecular Microbiology</i>
2015 – Present	<i>Ad Hoc</i> Reviews for <i>AJP Renal</i>
2016	<i>Ad Hoc</i> Reviews for <i>Pathogens</i>
2016	<i>Ad Hoc</i> Reviews for <i>Clinical Epidemiology</i>
2016	<i>Ad Hoc</i> Reviews for <i>Journal of Endocrinology</i>
2016 – Present	<i>Ad Hoc</i> Reviews for <i>Kidney International</i>
2018 – Present	<i>Ad Hoc</i> Reviews for <i>Scientific Reports</i>
2018	<i>Ad Hoc</i> Reviews for <i>Clinical and Experimental Immunology</i>
2019	<i>Ad Hoc</i> Reviews for <i>Archives of Medical Research</i>
2020	<i>Ad Hoc</i> Reviews for <i>Journal of Innate Immunity</i>
2021	<i>Ad Hoc</i> Reviews for <i>Journal of Molecular Medicine</i>

2023 – Present *Ad Hoc* Reviews for *Journal of American Society of Nephrology*  
2023 – Present *Ad Hoc* Reviews for *The Journal of Clinical Investigation*  
2023 – Present *Ad Hoc* Reviews for *Journal of Pediatrics*

## **TEACHING**

### **Didactic Lecture to Students, Residents, and Fellows**

03/2012 Evaluation and Treatment of Urinary Tract Infection (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

06/2012 Evaluation of Hematuria and Proteinuria (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

06/2012 The Immune Response with Glomerular Disease (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

06/2012 IgA Nephropathy (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

06/2013 Evaluation of Rapidly Progressive Glomerulonephritis (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

01/2014 Nephrology Board Review (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

03/2014 Hypertension Emergencies (Pediatrics and Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

04/2014 Evaluation of Nephrology Disorders in the NICU (Neonatology)  
Nationwide Children's Hospital  
Columbus, OH

01/2015 Congenital Disorders of the Kidney and Urinary Tract (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

07/2015 The Impact of Lupus on the Kidney (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

10/2015 A Primer to Navigating Meetings and Conferences (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

01/2016 Pediatric Board Review (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

07/2016 Nephritis (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

08/2016 Hypertension Emergencies (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

01/2017 Congenital Urinary Tract Anomalies (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

12/2017 Writing Scientific Abstracts (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

02/2018 Lupus Nephritis (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

05/2018 Polycystic Kidney Disease/Case Based Conference (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

01/2019 Pediatric Nephrology Board Review (Pediatrics)  
Nationwide Children's Hospital  
Columbus, OH

06/2019 Primary Hyperoxaluria (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

10/2019 The Life of an Academic Pediatrician  
Nationwide Children's Hospital  
The Ohio State University  
Columbus, OH

01/2020 Pediatrics Board Review (Pediatrics Residency)  
Nationwide Children's Hospital  
Columbus, OH

3/2020 Hyper and Hyponatremia (Pediatric Residency)  
Nationwide Children's Hospital  
Columbus, OH

6/2020 Acute Kidney Injury – what's new? (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

01/2021 Pediatrics Board Review (Pediatrics Residency)  
Nationwide Children's Hospital  
Columbus, OH

03/2021 Mechanisms of Kidney Stone Formation (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

6/2021 Hyper- and Hyponatremia (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

2/2022 Pediatrics Board Review (Pediatric Residency)  
Nationwide Children's Hospital  
Columbus, OH

- 11/2022 Kidney and bladder functions (Graduate Students)  
Department of Anatomy  
The Ohio State University  
Columbus, OH
- 1/2023 Pathogenesis of Urinary Tract Infections (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH
- 8/2023 Hyponatremia (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH
- 11/2023 Kidney and bladder functions (Graduate Students)  
Department of Anatomy  
The Ohio State University  
Columbus, OH
- 1/2024 Hepatorenal syndrome (Pediatric Nephrology)  
Nationwide Children's Hospital  
Columbus, OH

#### **OTHER EDUCATIONAL PROGRAMS**

- 2015-2019 Introduction to Basic Science Research  
Nationwide Children's Hospital  
Pediatric Nephrology Fellowship Program  
Columbus, OH
- 2015-Present The Ohio State University College of Medicine  
Medical Student Longitudinal Practice Program  
Columbus, OH
- 2015-Present The Ohio State University College of Medicine  
AMRCC Chronic Care for Fourth Year Medical Students  
Columbus, OH
- 2020-Present Director, Kidney Pathology and Physiology Seminar Series  
The Abigail Wexner Research Institute  
Columbus, OH
- 2020-Present Director, Pediatric Nephrology Grand Rounds  
Nationwide Children's Hospital  
Columbus, OH

#### **LECTURES/PRESENTATIONS (scientific conferences)**

##### **Local/Regional/National Presentations (Invited)**

- 2011 Ribonuclease 7 protects the human kidney and urinary tract from  
microbial insult.  
The Center for Microbial Interface Biology

The Ohio State University  
Columbus, OH

- 2011 AMPed Up! RNase 7 is a potent antimicrobial peptide in the human urinary tract  
**Nephrology and Research Grand Rounds**  
Le Bonheur Children's Hospital  
Memphis, TN
- 2012 AMPed Up! RNase 7 is a potent up-regulated antimicrobial peptide in the human urinary tract  
**Herman B. Wells Center for Pediatric Research Grand Rounds**  
Indiana University School of Medicine  
Indianapolis, IN
- 2013 The UTI Epidemic: A perspective from the urgent care, the bench, and your primary care clinic  
**Medical University of South Carolina Pediatric Grand Rounds**  
Charleston, SC
- 2013 The best offense is a good defense: the role of antimicrobial peptides in urinary tract infection prevention. **Invited Science Presentation**  
The Gordon Research Conference on Antimicrobial Peptides  
Ventura, CA
- 2015 The Innate Immune Response During Pyelonephritis: a focus on antimicrobial peptides. **Invited Science Presentation**  
American Society of Nephrology Kidney Week  
San Diego, CA
- 2017 The innate defenses of the kidney and urinary tract: a focus on host defense peptides and proteins  
**Indiana University School of Medicine Research Seminar**  
Indianapolis, IN
- 2017 The contributions of Ribonuclease 7 to urothelial antibacterial defense.  
**Invited Science Presentation**  
Gordon Antimicrobial Peptide Research Conference  
Ventura, CA
- 2018 The innate defenses of the kidney and urinary tract  
**Frontiers in Pediatrics Research Symposium**  
University of Iowa/Carver College of Medicine  
Iowa City, IA
- 2018 The utility of antimicrobial peptides in UTI prevention

American Society of Pediatric Nephrology national meeting  
**Invited Plenary Presentation**  
Toronto, CA

2019 Urine Trouble: Urinary tract infections and the therapeutic potential of innate urothelial defenses  
**Pediatric Grand Rounds**  
Akron Children's Hospital  
Akron, OH

2019 Insulin resistance promotes epithelial innate immune dysfunction and risk for urinary tract infection  
**The Columbia O'Brien Center Urology Symposium**  
Columbia University  
New York, NY

2020 The roles of the Ribonuclease A Superfamily in immune protection from urinary tract infection  
**Society of Basic Urology Research, Invited Science Presentation**  
San Antonio, TX (changed to virtual)

2021 Urine Trouble: The impact of Urinary Tract Infections on Child Health  
**DeVos Children's Hospital Pediatric Grand Rounds**  
Grand Rapids, MI (changed to virtual)

2021 Intercalated cells are a primary source of urinary antimicrobial peptides  
American Society of Nephrology Kidney Week  
**Invited Science Presentation**  
San Diego, CA (changed to virtual)

**International Presentations (Invited)**

2018 The contributions of Ribonuclease 7 to urinary tract sterility.  
Molecular Mechanisms of Urinary Tract Infection  
Lund University  
Lund, Sweden

2020 The translational potential of antimicrobial peptides for UTI  
Belgium Society of Pediatric Nephrology  
Brussels, Belgium (changed to virtual)

2021 Linking insulin resistance to urinary tract infection risk  
\*Presented by Dr. Laura Schwartz (trainee)  
Urinary Tract Infection Global Alliance  
Paris, France  
Virtual Presentation

- 2021            The pathophysiology of urinary tract infection across the ages  
International Society of Nephrology/International Pediatric Nephrology  
Association  
Paris, France  
Virtual Presentation
- 2022            The Ribonuclease A Superfamily in UTI Prevention  
International Pediatric Nephrology Association
- 2024            Taking a look at Kidney Imaging  
American Society of Pediatric Nephrology  
Fellows National Training Conference  
Virtual Presentation

**Institutional Presentations (Invited)**

- 2010            Ribonuclease 7: expression and function in the human urinary tract  
Nephrology and Urology Research Affinity Group  
Nationwide Children’s Hospital  
Columbus, OH
- 2014            The Effects of Diabetes Mellitus on Antimicrobial Peptides  
Nephrology and Urology Research Affinity Group  
Nationwide Children’s Hospital  
Columbus, OH
- 2016            Insulin Receptor Deletion, PI3K/AKT Activity, and Host Defense  
Nephrology and Urology Research Affinity Group  
Nationwide Children’s Hospital  
Columbus, OH
- 2018            Linking antimicrobial peptide expression to urine sterility  
Nephrology and Urology Research Affinity Group  
Nationwide Children’s Hospital  
Columbus, OH
- 2018            Urine Trouble: When uropathogens encounter antimicrobial peptides  
Bench to Outcome Seminar Series  
Nationwide Children’s Hospital  
Columbus, OH
- 2019            The pen and the knife: medical and surgical collaborations to facilitate  
research and improve surgical outcomes  
Pediatric Surgery Grand Rounds  
Nationwide Children’s Hospital  
Columbus, OH



- 2021            The role of kidney principal cells in health and disease  
Kidney Physiology Seminar Series  
Nationwide Children’s Hospital  
Columbus, OH
- 2021            \*The responses of the kidney collecting duct to injury  
Kidney Physiology Seminar Series  
Nationwide Children’s Hospital  
Columbus, OH
- 2022            This Girl is on Fire  
Nephrology and Urology Research Affinity Group  
Nationwide Children’s Hospital  
Columbus, OH

**DIRECT SUPERVISION/MENTORSHIP**

**Faculty**

- 2023 – Present    Sarah C. Linn, DVM PhD  
University of Tennessee  
Knoxville  
Sarah is a veterinary pathologist who completed her PhD work in my lab investigating the immune responses of kidney intercalated cells.
- 2022 – Present    Benjamin Spector, MD  
Medical College of Wisconsin  
Madison, WI  
Ben is a pediatric nephrologist and physician scientist investigating immunological mechanisms of kidney transplant rejection. I serve as his mentor through the American Society of Pediatric Nephrology and sit on his advisory committee for a K23 application.
- 2020 – Present    Tahagod Mohamed, MD  
Nationwide Children’s  
Columbus, OH  
Dr. Mohamed is a pediatric nephrologist and developmental biologist. She is investigating the utility of kidney biomarkers in neonatal acute kidney injury. I serve as the chair of her advisory committee and scientific mentor. She will be submitting a K23 in 2024.
- 2019 – Present    Ashley Jackson, PhD  
The Abigail Wexner Research Institute at Nationwide Children’s  
Columbus, OH  
Dr. Jackson is urothelial biologist. I serve as a co-mentor on her K01 application which is investigating the role of the kidney urothelium in obstructive uropathy and kidney injury.

- 2019 – Present Juan de Dios Ruiz Rosado, PhD  
The Abigail Wexner Research Institute at Nationwide Children’s  
Columbus, OH  
Dr. Ruiz Rosado is an immunologist. I serve as a co-mentor on his K01 application which is investigating the role neutrophils and macrophages in pyelonephritis and kidney scarring.
- 2016 – Present Christina Ching, MD  
Nationwide Children’s Hospital  
Columbus, OH  
Dr. Ching is a pediatric urologist. I serve as a co-mentor on her K08 application which is investigating the role of IL-6 in UTI.

**Medical/Graduate Students, Residents, Fellows, Post-Doctoral Investigators.**

- 2023 – Present Natalie Holdsworth  
Nationwide Children’s Hospital/Ohio University College of Medicine  
Columbus, OH  
Natalie is a second-year medical student who rotated in my lab investigating how obesity impacts innate immunity. She has co-authored one publication and is presenting a podium presentation at the 2024 PAS meeting.
- 2023 – Present Guillermo Yepes, MD  
Nationwide Children’s Hospital  
Columbus, OH  
Guillermo is an infectious diseases fellow and is working in my lab testing the effects of novel compounds on uropathogenic *E. coli*.
- 2020 – 2023 Sarah C. Linn, DVM  
Nationwide Children’s Hospital/The Ohio State University College of Veterinary Medicine  
Columbus, OH  
Sarah is a veterinary pathologist who is completing her PhD work in my lab investigating the immune responses of kidney intercalated cells.
- 2019 – 2023 Jahir Islam MBBS  
Louisiana State University  
Lafayette, LA  
Jahir is a graduate student investigating how diabetes mellitus impacts the transcriptional profiles of uropathogenic *E. coli*. I serve on his graduate committee.

2017 – Present Claudia Mosquera-Vasquez, MD  
Nationwide Children’s Hospital  
Columbus, OH  
Claudia is a Pediatric Nephrology Fellow. Prior to starting her residency, she worked in my laboratory. She continues to work under my mentorship and has co-authored several publications. I am the chair of her scholarly oversight committee.

2016 – 2022 Matthew Murtha, MD  
Nationwide Children’s Hospital/The Ohio State University College of Medicine  
Columbus, OH  
Matthew is currently Urology resident. Working in my laboratory, he was awarded the MWSPR student research award (2017) and an OSU medical student research award (2018). He has a first author publication in JCI as well as several co-authored publications.

2012 – 2018 Lindsey Korbel, MD  
Nationwide Children’s Hospital  
Columbus, OH  
Lindsey was a senior pediatric resident and has three first author manuscripts and was awarded an AAP research grant. She is now a practicing neonatologist.

2015 – 2015 Martin Vonau, MD  
The Ohio State University College of Medicine  
Columbus, OH  
Martin was awarded the SPR national student research award (2014). He is now a critical care fellow at the Cleveland Clinic.

**Undergraduate**

2022 – Present Andrew Kauffman  
Tulane University  
New Orleans, LA  
Drew is rotated two summers in my lab studying insulin signaling in the urinary tract. He has one co-authored publication and is applying to medical school.

2015 – 2019 Ariel Cohen  
Wellesley College  
Boston, MA  
Ariel was awarded a platform presentation at the PAS/ASPN national meeting (2015). She is now a urology resident.

**Additional Clinical Residents and Fellows**

2012 - 2013	Stephen Cha (Nephrology)
2013 – 2016	Arwa Nada (Nephrology)
2013 – 2016	Kirsten Kusumi (Nephrology)
2014 – 2015	Analisa Meadows (Nephrology)
2014 – 2016	Joshua Watson (Infectious Diseases)
2015 – 2017	Rachel Millner (Nephrology)
2015 – 2017	Neha Dhingra (Nephrology)
2016 – 2019	Ryan Heksch (Endocrinology)
2018 – 2020	Ellie Hill (Emergency Medicine)
2022 – Present	Claudia Mosquera Vasqueze (Nephrology)

### **PROFESSIONAL MEMBERSHIPS AND ACTIVITIES**

2005 – Present	American Academy of Pediatrics
2009 – Present	American Society of Pediatric Nephrology (ASPN)
2009 – Present	American Society of Nephrology
2017 – Present	Fellow, American Academy of Pediatrics
2017 – Present	Fellow, American Society of Nephrology
2018 – 2022	American Society of Urology
2021 – Present	Society of Pediatric Research