

CURRICULUM VITAE
David Sullivan Hains



Address: 

Phone: 

Email: 

Education:

1996 – 2000	Butler University Indianapolis, Indiana B.S., <i>cum laude</i> Major: Biology
2000 – 2004	Indiana University School of Medicine Indianapolis, Indiana, M.D.
7/2004 – 6/2007	Pediatrics Residency Program Nationwide Children’s Hospital Ohio State University College of Medicine Columbus, Ohio
7/2007 –6/2010	Pediatric Nephrology Fellowship Department of Pediatrics Nationwide Children’s Hospital Ohio State University College of Medicine Columbus, Ohio
12/2014-6/2015	Harvard University Harvard Business School Program for Leadership Development Boston, MA
9/2019-3/2020	Indiana University Kelley Business School Physician Leadership Course in Business Acumen
1/2020	Children’s Healthcare of Atlanta Ultrasonography for Nephrologists
8/2021-5/2023	Indiana University Kelley School of Business Masters of Business Administration, Business of Medicine
2/2023	Lean Six Sigma Green Belt

Awards/Honors:

2004	Lyman T. Meiks Research Award for Pediatrics, Indiana University School of Medicine. Indianapolis, IN.
2006	American Society of Nephrology Resident Travel Grant. Philadelphia, PA.
2006	American Society of Pediatric Nephrology Trainee Research Award.
2006	Certificate of Research Distinction. Columbus Children's Hospital.
2007	Ohio State University Medical Center Research Day Poster Travel Grant Award.
2007	Society for Pediatric Research House Officer Research Award
2007	AAP Travel Grant
2007	Code Busters Award-Outstanding Senior Resident Award. Columbus Children's Hospital.
2007	NIH Loan Repayment Award.
2008	Pediatric Academic Society Travel Grant
2009	Top Basic Science Presentation. Midwest Nephrology Fellows Research Day.
2009	Outstanding Housestaff Publication Award. Nationwide Children's Hospital.
2010-2011	John E. Lewy Foundation Advocacy Scholars Program, American Society of Pediatric Nephrology
2011-2012	American Society of Pediatric Nephrology Program for Leadership Development
2012	NIH Loan Repayment Award
2013	NIH Loan Repayment Award
2014	Harvard Business School Program for Leadership Development Fellowship Award
2019	Alpha Omega Alpha Medical Honor Society
2020	Bryon P. and Frances D. Hollett Professor of Pediatrics
2021	Evans Fellow in Healthcare Leadership

Board Certification:

American Board of Pediatrics, Certified in Pediatrics (10/16/2007), recert 2017
American Board of Pediatrics, Certified in Pediatric Nephrology (3/27/2012)

Licensure:

Medical, IN, 01078296A, issued: 3/23/2017, active

University/Hospital Appointments:

6/2023-	Medical Director of Ambulatory Services Riley Hospital for Children Indiana University Health
6/2020-	Adjunct Professor Department of Microbiology and Immunology Indiana University School of Medicine
2/2020-6/2020	Interim Medical Director Pediatric Dialysis Unit Riley Hospital for Children Indianapolis, IN
6/2017-	Professor Department of Pediatrics Indiana University School of Medicine Indianapolis, IN
6/2017-	Chief, Division of Nephrology Riley Hospital for Children Indianapolis, IN
6/2017-	Adjunct Professor Department of Medical and Molecular Genetics Indiana University School of Medicine
12/2013-6/2017	Associate Professor Section of Nephrology/Dept of Pediatrics Le Bonheur Children's Hospital University of Tennessee Memphis, TN
12/2013-6/2017	Training Program Director Nephrology Fellowship Program Le Bonheur Children's Hospital Memphis, TN
12/2013-6/2017	Director Innate Immunity Translational Research Center Le Bonheur Children's Hospital Memphis, TN
7/2014-6/2017	Director Biorepository and Integrative Genomics (BIG) Initiative Le Bonheur Children's Hospital

Memphis, TN

2/2014-6/2017	Consulting Physician St. Jude's Children's Research Hospital Memphis, TN
7/2016	Award of Tenure University of Tennessee
9/2013-12/2013	Associate Professor Section of Nephrology/Dept of Pediatrics Center for Clinical and Translational Research The Research Institute at Nationwide Children's Hospital Columbus, OH
7/2010-8/2013	Assistant Professor Section of Nephrology/Dept of Pediatrics Center for Clinical and Translational Research The Research Institute at Nationwide Children's Hospital Columbus, OH
3/2013-12/2013	Biomedical Sciences Graduate Program Faculty The Ohio State University
7/2012-7/2013	Associate Program Director Nephrology Fellowship Program Nationwide Children's Hospital
7/2010-7/2013	Director Integrated Research Pathway Residency Nationwide Children's Hospital
7/2009-6/2010	Clinical Instructor Center for Clinical and Translational Research The Research Institute at Nationwide Children's Hospital Columbus, OH

Visiting Professorships and Invited Lectures:

2006	Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction. Pediatric Academic Society/Society for Pediatric Research. San Francisco, CA.
2006	Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction. Montreal Children's Hospital.
2007	Deletion of FGFR2 from the Metanephric Mesenchyme

- Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. Pediatric Academic Society/Society for Pediatric Research. Toronto, Canada
- 2008 Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. Pediatric Academic Society/Society for Pediatric Research. Honolulu, Hawaii.
- 2008 Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. American Society of Nephrology. Philadelphia, PA.
- 2008 Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. Indiana University School of Medicine. Indianapolis, IN.
- 2008 Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. Children's Hospital of Iowa. Iowa City, IA.
- 2009 Kidney Development Section. Embryological Origin of Human Birth Defects (Anatomy 911.03). Division of Anatomy. The Ohio State University.
- 2009 Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. Midwest Nephrology Fellows Research Day. Indianapolis, IN.
- 2009 Deletion of FGFR2 from the Metanephric Mesenchyme Results in Ectopic Ureteric Bud Induction and Vesicoureteral Reflux. National Young Investigator's Forum. National Kidney Foundation Spring Clinical Meeting. Nashville, TN.
- 2009 Journal Club Workshop. "NGAL is an Early Predictive Biomarker of Contrast-Induced Nephropathy in Children". Pediatric Academic Society/Society for Pediatric Research. Baltimore, Maryland.
- 2010 CNVs and the Innate Defense of the Urinary Tract. NIH Workshop on the Genetics of GU Tract Malformations. Washington, DC.
- 2010 CNVs in Antimicrobial Peptides and the Innate Defense of the Urinary Tract. Genetics Mini-Symposia. Nationwide Children's Hospital.
- 2010 The Innate Defense of the Kidney and Urinary Tract. Child Health Research Centers' Annual Retreat. Philadelphia, PA.
- 2011 New Frontiers in the Pathophysiology of Vesicoureteral Reflux. Grand Rounds at Helen Devos Children's Hospital. Grand Rapids, MI.
- 2011 Spencer JD (trainee), Hains D. RNase 7 Expression in the Human Kidney and Urinary Tract. Pediatric Academic Society/Society for Pediatric Research. Denver, CO.

- 2011 The Innate Defense of the Urinary Tract in Preventing Infections. Grand Rounds at Nationwide Children's Hospital.
- 2012 New Frontiers in the Pathophysiology of UTIs. Spinal Cord Injury Center Grand Rounds. Louis Stokes Cleveland VA Medical Center. Cleveland, OH.
- 2012 On Being a John E Lewy Advocacy Scholar. American Society of Pediatric Nephrology Business Meeting. Boston, MA.
- 2012 Multidisciplinary Approach to Nephrourologic Patients. Steve Koff Day. Nationwide Children's Hospital.
- 2012 Genetic Variations and the Development of Vesicoureteral Reflux and Sequelae. RIVUR Study Steering Committee, Principal Investigators, and Coordinators Meeting. Baltimore, MD.
- 2012 The Innate Defense of the Urinary Tract in Preventing Infections. Renal Grand Rounds at The Children's Hospital at Montefiore. Bronx, NY.
- 2013 The Urinalysis. The Ohio State University College of Medicine. Course #664. Med III and IV – Clinical Medicine.
- 2013 A Novel Biomarker to Improve Diagnosis of UTI. Technology Showcase Conference. Nationwide Children's Hospital. Columbus, OH.
- 2013 New Frontiers in Vesicoureteral Reflux. Foundation Development Board. Nationwide Children's Hospital. Columbus, OH
- 2013 Genetic Variations and the Development of Vesicoureteral Reflux and Sequelae. RIVUR Study Steering Committee, Principal Investigators, and Coordinators Meeting. Baltimore, MD.
- 2013 Not Little Adults: How Policy Impacts Pediatric Nephrology Patients from Medicare Funding to NIH Research Priorities. Advocacy in Pediatric Nephrology Workshop. Pediatric Academic Society/Society for Pediatric Research. Washington DC.
- 2013 Spencer JD (presenter) and Hains DS (senior). "The Antimicrobial Activity of Ribonuclease 7 is blocked by an Endogenous Ribonuclease Inhibitor in the Human Urinary Tract." American Society of Nephrology. Atlanta, GA.
- 2014 Hains Lab and Urinary Tract Infections. Le Bonheur 101 Foundation Group. Memphis, TN.
- 2014 New Frontiers in Urinary Tract Infections. Memphis Bioworks Lunch and Learn. Memphis, TN.
- 2014 In Defense of the Urinary Tract: Innate Mechanisms for Maintaining Sterility. Pediatric Academic Society/Society for Pediatric Research. Vancouver, Canada.
- 2014 Genetic Variations in alpha-Defensin 1-3, Not beta-Defensin Confer UTI Risk in Children with Vesicoureteral

- Reflux. Pediatric Academic Society/Society for Pediatric Research. Vancouver, Canada.
- 2014 Genetic Variations in Vesicoureteral Reflux and its Sequelae. Etteldorf Conference. Memphis, TN.
- 2014 Innate Mechanisms for Maintaining Sterility of the Kidney and Urinary Tract. First International UTI Symposia. Lund, Sweden.
- 2014 New Directions in Vesicoureteral Reflux. Pediatric Research Day. Le Bonheur Children's Hospital
- 2015 Watson (trainee). Urine Antimicrobial Peptides: Novel Biomarkers To Improve Urinary Tract Infection Diagnosis. Pediatric Academic Society Annual Meeting. San Diego, CA.
- 2016 New Directions in Vesicoureteral Reflux. Herman B. Wells Center for Pediatric Research. Riley Hospital for Children. Indianapolis, IN.
- 2016 DNA Copy Number Variations Associated with Vesicoureteral Reflux and Its Sequelae (Dong Liang, trainee first author). American Society of Nephrology Kidney Week. Chicago, IL.
- 2016 Polymorphisms in Antimicrobial Peptide, Ribonuclease 7, Associate with Urinary Tract Infection Risk. (Keith Pierce, trainee first author). American Society of Nephrology Kidney Week. Chicago, IL.
- 2017 New Approaches to Recurrent/Complicated UTIs in the Pediatric Setting. Infectious Diseases ID Week. San Diego, CA.
- 2017 Advances that Should Drive Improvements in Care of Children with Urinary Tract Disorders. American Society of Nephrology Kidney Week. New Orleans, LA.
- 2018 Pediatric Nephrology: Dealing with the Guidelines. Riley Children's Health Conference. Indianapolis, IN.
- 2018 Down RIVUR: what are the next steps in translational research surrounding UTI? Pediatric Academic Society/Society for Pediatric Research. Toronto, Canada.
- 2018 Genetic Variations in Children with UTI. Molecular UTI Conference. Lund, Sweden
- 2018 Designing a Crystal Ball to Predict UTI Risk in 10 Easy Steps. Nationwide Children's Hospital.
- 2020 Innate Defenses of the Kidney and Urinary Tract. Department of Microbiology and Immunology Grand Rounds. Indiana University School of Medicine.
- 2020 The History of Advocacy in the American Society of Pediatric Nephrology. Virtual Pediatric Academic Society Meeting Webinar Series.
- 2020 Building a Business Plan to Execute on Your Mission/Vision. American Society of Pediatric Nephrology

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| | Leadership Development Program. |
| 2021 | Kidney and Urinary Tract Innate Immunity: A Translational Tale. Eggleston Grand Rounds. Emory University. |
| 2021 | Pediatric Nephrology Advocacy. Emory University |
| | Pediatric Nephrology Fellows Conference. |
| 2023 | American Society of Pediatric Nephrology Small Group Seminar: Contracts and Negotiations. |

Committees and Offices Held:

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| 2009- | American Society of Pediatric Nephrology (ASPN) Research Committee |
| 2009-2013 | Nationwide Children's Hospital Continuous Renal Replacement Therapy Quality Improvement Committee |
| 2010-2012 | John E. Lewy Foundation Advocacy Scholars Program |
| 2010- | ASPN Public Policy Committee |
| 2011-2012 | ASPN Leadership Development Program |
| 2012 | Nationwide Children's Hospital Promotion and Tenure Tenure Track Metrics Committee |
| 2012 | ASPN Nominating Committee for Council position (3 members) |
| 2012-2013 | ASPN Research Committee Co-Chair |
| 2013-2014 | ASPN Research Committee Chair |
| 2013-2017 | Children's Foundation Research Institute Space Allocation Cmt |
| 2014 | Children's Foundation Research Institute Research Day Planning Cmt Member |
| 2014-2016 | University of Tennessee Health Science Center Molecular Resource Center Advisory Board Member |
| 2014- | John E. Lewy Foundation Advocacy Scholars Program Chair |
| 2014-2017 | UTHSC Department of Pediatrics Mentor Program |
| 2015-2016 | American Society of Nephrology Research Advocacy Committee |
| 2015-2017 | Children's Foundation Research Institute Research Day Planning Cmt Co-Chair |
| 2015-2017 | Program Oversight Committee for the iRISE KL2 Career Development Program at UTHSC |
| 2016-2019 | American Academy of Pediatrics Nephro PREP Editorial Board |
| 2017 | University of Memphis School of Biomedical Engineering Advisory Board member |
| 2018- | Morris Green Scholars Program Executive Committee Member |
| 2018 | American Board of Pediatrics Nephrology Standard Setting Committee |
| 2018-2019 | American Society of Pediatric Nephrology Council |
| 2019-2020 | American Academy of Pediatrics Henry Barnett Award Selection Committee (Chair 2020). |

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2020	American Board of Pediatrics MOCA Nephrology Standard Setting Committee
2020-2020-2021	Riley Hospital Reputation Strategy Committee member Chair, Pediatric Endocrinology Division Chief Search Committee
2021-	Riley Hospital Urinary Tract Infection Clinical Pathway Committee
2021-2023	Indiana University Health Physicians Finance Committee member
2021- 2022	Pediatric Critical Care Division Chief Search Committee
2022-	Riley Hospital Physician Strategy Committee
2022-2023	Pediatric Heme/Onc Division Chief Search Committee
2022-	Physician Lead for Riley Hospital for Children US News and World Report Survey
2023-	IU School of Medicine LCME Accreditation Cmt

Fellows/Residents/Graduate Students Trained:

2009-2013	John David Spencer, former Pediatric Nephrology Fellow that worked in Hains Lab. Successful K08 application. Primary Mentor: Hains .
2010-2013	Brian Becknell, former Pediatric Nephrology Fellow. Chair of SOC. Successful K08 application. National Mentor: Hains
2010	Ryan Brislin, former Medical Resident
2010-2013	Domenico Pietropalo, former Pediatric Infectious Disease Fellow, member of SOC.
2010-2013	Emily Stonebrook, medical student (first year). Mentored American Society of Nephrology summer research grant award. Current Peds Nephro fellow.
2011-2013	Lindsay Gould, Emergency Medicine Fellow, member of SOC
2011-2013	Stephen Cha, Nephrology Fellow, Chair of SOC
2011-2012	Stella Shin, former Medical Resident, current Pediatric Nephrology Faculty at Emory.
2011-2013	Annalisa Meadows, former Medical Resident, former Pediatric Nephrology Fellow
2011-2013	Lindsey Korbel, Medical Student. Summer research project in 2012 in Hains Lab. Mentored American Society of Nephrology summer research grant award.
2011-2013	Laura (Wright) Walawender, Medical Student (MS1). Summer research project in 2012 in Hains Lab. Mentor for Ohio State University Bennett Scholarship for summer research award. Current Peds Nephro fellow.
2011-2015	Joshua Watson, Infectious Diseases Fellow. Mentor for fellowship scholarly work in Hains lab. Current Peds ID faculty at Nationwide Childrens.

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2012	Mu'az Shaharom. Royal College of Surgeons. Ireland, UK. Summer research project in 2012 in Hains Lab.
2012-2013	Martin Vonau. Summer research project in 2012 in Hains Lab. Won 2013 Society for Pediatric Research Medical Student Research Award.
2013	Kieran Feeley, Medical Student. Summer research project in 2013 in Hains Lab. Mentored American Society of Nephrology summer research grant award.
2013-2014	Victoria Adegboye, Medical Student. Summer research project in 2013 in Hains Lab. Mentored APS/SPR Student Research Program grant award.
2013-	Keith Pierce, Medical Student. Lab technician, graduate student, medical student and now pediatric resident working on projects for Hains Lab.
2014	Stephanie Martinez, Medical Student. Summer research project in Hains Lab.
2014	Cat Park, Pediatric Resident. Summer research project in Hains Lab. Current Pediatric Nephrology Fellow at Emory.
2014	Lauren Robinson, Medical Student. Fourth Year Medical Student Research Project with Hains and Russell Chesney.
2015	Mike Hook, Medical Student. Medical Student Research Fellowship Awardee. Summer research project in Hains Lab. Best Summer Student Poster Award at Pediatric Research Day, UTHSC.
2015	Annie Ameha, Medical Student. Medical Student Research Fellowship Awardee. Summer research project in Hains Lab.
2015-2019	Aslam Qureshi, Pediatric Nephrology Fellow. Primary Scholarly Work during fellowship in Hains Lab.
2015	Derrick Johnston, Pediatric Urology Fellow. Primary Scholarly Work during fellowship in Hains Lab.
2016-2020	Ashley Rawson, Pediatric Resident and Nephrology Fellow. Resident/fellow research project in Hains Lab.
2016	Lauren Dunavant, rising Medical student. Summer research project in Hains Lab. Started medical school in 2019.
2018-2021	Elizabeth Spiwak, Pediatric Nephrology Fellow. Scholarly project in Schwaderer Lab.
2018-	Sarah Lipp, MD/PhD Student. Co-mentor of PhD project.
2019	Anushay Ansari, rising medical student.
2019-	Jorge Canas, PhD student. PhD project in Hains Lab.
2021-	Claire Liepmann, MD. Peds ID Fellow. Scholarly project on T32. Hains mentor.
2022-	Matt Solomon, MD. Peds Critical Care. Scholarly project on T32. Hains mentor.

Grants (current in chronologic order):

- 2/2018-1/2024 1R01DK115737-01 “The Contribution of Ribonuclease 7 to Urinary Tract Antibacterial Defense”. PI: Spencer. **Co-I: Hains** (5% effort)
- 4/2018-2/2024 1R01DK114035-01A1. “Linking Insulin Signaling to Antimicrobial Peptide Production and the Kidney's Antibacterial Defenses.” PI: Spencer. **Co-I: Hains** (5% effort).
- 9/2022-8/2025 1R01DK132366-01. “Harnessing the acid-base cellular machinery of intercalated cells in the bacterial defense of the kidney.” **MPI: Hains** (10% effort).
- Grants (previous):**
- 6/2016-6/2023 1R01AG050801-01A1. “Urine antimicrobial proteins in older adults: aging, infection, & innate immunity.” PI: Caterino. **Co-I: Hains** (5% effort).
- 6/2018-4/2023 1R01DK117934-01. “Genetic Regulation, Tubular Processing, and Clinical Relevance of Collecting Duct alpha-Defensins 1-3”. **MPI: Hains** (30% effort).
- 6/2015-7/2021 1R01DK106286-01. “The interface between critical acid-base mediators and the renal bacterial defense.” **Multi-PI: Hains** (15% effort).
- 7/2015-6/2020 1K08DK102594-01A1. “Role of urothelium in epithelial integrity and innate defense of the kidney.” PI: Becknell. **National Mentor: Hains**
- 7/2016-6/2019 NIDDK: Human Kidney Annotation and Ontology as a supplement to the GenitoUrinary Development Molecular Anatomy Project (GUDMAP). **Multi-PI: Hains** (8% effort)
- 4/1/2016-4/2018 1R03DK109242-01. “Novel Mouse Models to Assess the in vivo Significance of Ribonuclease 7 in Urinary Tract Defense.” PI: Spencer. **Co-I: Hains** (2.5% effort).
- 7/2012-6/2017 1 K08 DK094970-01. “Ribonuclease 7: Antimicrobial Activity in the Human Kidney and Urinary Tract.” National Institutes of Health. PI: Spencer. **Primary Mentor: Hains.**
- 4/1/2016 “Evaluation of reflux nephropathy using contrast enhanced

ultrasound.” Investigator Initiated Research. Bracco (Italy). Cost of drug awarded.

- 10/1/2015 15GHSU2512. "The Impact of Diabetes Mellitus on Antimicrobial Peptide Production and Renal Bacterial Defense." PI: Spencer. **Co-I: Hains** (2.5% effort).
- 9/2010-9/2014 1RC4DK090937-01 (GRANT10559490). “Genetic Variations and Development of Vesicoureteral Reflux and Sequelae.” National Institutes of Health. **PI: Hains**. Total Award: \$1,500,000. Ancillary study to the RIVUR study analyzing DNA copy number variations in genes critical to innate immunity in patients with vesicoureteral reflux.
- 2013 American Society of Nephrology Student Research Grant: “Physiological determinants of HNP1-3’s activity against uropathogens.” PI: Kieran Feeley. **Mentor: Hains**
- 2012 American Society of Nephrology Student Research Grant: “The relation between SNPs in antimicrobial peptide RNase7 and increased UTI susceptibility.” PI: Lindsey Korbel. **Mentor: Hains**
- 2012 COM Medical Student Research Scholarship (MDSRS) Bennett Scholarship: “Genetic Variations in *DEFB1* in Patients with Urinary Tract Infections.” PI: Laura Wright. **Mentor: Hains**
- 2011 American Society of Nephrology Student Research Grant: “Genetic variation and biological relevance of human beta-defensin 1 in the innate defense of the kidney and urinary tract.” PI: Emily Stonebrook. **Mentor: Hains**
- 2009-2010 K12 HD043372-08 Child Health Research Career Development Awards. CHRCDA's objective is to provide pediatric research institutions with a greater capacity for mentoring junior investigators and, ultimately, to foster translational research on clinically relevant questions while accelerating progress in the diagnosis, prevention, & treatment of these conditions. PI: Michael Brady, M.D. Role: Scholar
- 2006 – 2008 AAP Resident Research Grant: “Temporal Relationship of Hypertension and Renal Failure due to Low Nephron Number”. PI: **Hains** Mentor: Carlton Bates, M.D.
- 2001 NIH T35 Training Grant: Short Term Training for Student Research. Mentor: **Howard Edenberg, Ph.D.** Developed a more cost-effective protocol for microarray spotting and probe preparation at Indiana University School of Medicine.
- 2000 NIH T35 Training Grant: Short Term Training for Student

1999

Research. Mentor: **Robert Hromas, M.D.** Worked on project to clone the human and murine homologues of interleukin 17 at Indiana University School of Medicine. NIH T35 Training Grant: Short Term Training for Student Research. Mentor: **Gayle Vance, M.D.** I quantitated the abundance of isochromosomes of the short arm of the twelfth chromosome in germ cell tumors using FISH.

Grants Pending:

1R01DK117934 (renewal). “Genetic Regulation, Tubular Processing, and Clinical Relevance of Collecting Duct alpha-Defensins 1-3”. **MPI: Hains** (30% effort). A1 to be submitted in February 2024.

R01: “A mechanistic approach to intercalated cell phagocytosis”. **MPI: Hains** (15% effort). A0 given a 20 percentile. A1 submitted in June 2023. 8th percentile in October 2023.

Patents:

2010	2 provisional patents filed for urinary tract infection genetic risk panels.
2011	Provisional patent filed for biomarker of pyelonephritis.
2011	Provisional patent filed for biomarker of urinary tract Infection.
2012	Provisional patent filed for antimicrobial peptide fragment.
2012	Formal patent application filed for Ribonuclease 7 as biomarker for differentiated acute infection versus colonization of urinary tract.
2013	PCT/US2013/036993 patent filed on RNase 7 fragments as novel antimicrobials.
2015	Disclosure filed for IP regarding use of contrast enhanced ultrasound for evaluation of reflux nephropathy.
2015	Disclosure filed for provisional patent for genetic panel for antibiotic efficacy for children with vesicoureteral reflux.
2016	PCT/US2016/025824 patent submission filed on HNP1-3 and HD-5 as urinary tract infection diagnostic biomarkers.
2020	Provisional patent filed for biopsy needle guide for point of care ultrasound iButterfly.

FDA:

2016	IND approval for use of Lumason (Bracco) in Contrast Enhanced Ultrasound for Evaluation of Reflux Nephropathy.
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Reviewer (NIH and other):

6/2011	Reviewer for NIDDK R01 applications “Ancillary Studies
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	to Ongoing Clinical Studies in Areas of Interest to NIDDK” ZDK1 GRB-J (M4) 1
11/2011	Reviewer for NIDDK R01 applications “Ancillary Studies to Ongoing Clinical Studies in Areas of Interest to NIDDK”
4/2012	Reviewer for Binational (US-Israel) Science Foundation Grants
11/2012	Reviewer for NIDDK R01 applications “Ancillary Studies to Ongoing Clinical Studies in Areas of Interest to NIDDK”
7/2013	Reviewer for NIDDK R01 applications “Ancillary Studies to Ongoing Clinical Studies in Areas of Interest to NIDDK”
2/2014	Reviewer for Deutsche Forschungsgemeinschaft (German Research Foundation).
7/2014	Reviewer for Special Emphasis Panel 2014/10 ZDK1 GRB-7 (O2) for George M. O'Brien Urology Cooperative Research Centers Program (U54)
7/2015	Reviewer for Special Emphasis Panel ZDK1 GRB-3 (O1) George M. O'Brien Urology Cooperative Research Centers Program (U54)
7/2016	Reviewer for Special Emphasis Panel ZDK1 GRB-3 (O2) George M. O'Brien Urology Cooperative Research Centers Program (U54)
10/2016	Reviewer for Total Cost Fellowships Grant Proposals for Medical Research Council (United Kingdom)
1/2017	Reviewer for ZDK1 GRB-S (M1) 1 NIDDK Central Repositories Sample Access (X01)
3/2017	Reviewer for Biotechnology and Biological Sciences Research Council (UK) Research Proposals
7/2017	Reviewer for Special Emphasis Panel ZDK1 GRB-3 (O1) George M. O'Brien Urology Cooperative Research Centers Program (U54)
2/2018	National Children’s Research Centre Pediatric Research Project Grant Reviewer (Ireland).
7/2018	Reviewer for Special Emphasis Panel ZDK1 GRB-3 (O1) George M. O'Brien Urology Cooperative Research Centers Program (U54).
6/2019	Reviewer for Special Emphasis Panel Urologic and Urogynecologic ZRG1 DKUS-B (90) R01/R21 Study Section.
7/2019	Acting Chair for Special Emphasis Panel ZDK1 GRB-3 (O1) George M. O'Brien Urology Cooperative Research Centers Program (U54).
6/2020	Study Section Member for ZRG1 DKUS-90B Urologic and Urogynecologic Applications (R01/R21).
8/2020	Study Section Member for ZCA1 GRB-I (A) SARS-CoV-2

8/2022

Serological Sciences Centers of Excellence
German Research Foundation DFG (Deutsche
Forschungsgemeinschaft) Grant Reviewer

Reviewer/Editorial Activities (Journals):

2007-	<i>Ad hoc</i> reviewer for <u>American Journal of Physiology-Renal Physiology</u>
2007-	<i>Ad hoc</i> reviewer for <u>Pediatric Nephrology</u>
2009-	<i>Ad hoc</i> reviewer for <u>Translational Research</u>
2010-	<i>Ad hoc</i> reviewer for <u>Pediatrics</u>
2011-	<i>Ad hoc</i> reviewer for <u>PLoS ONE</u>
2011-	<i>Ad hoc</i> reviewer for <u>International Journal of Nephrology</u>
2012-	<i>Ad hoc</i> reviewer for <u>Journal of Perinatology</u>
2012-	<i>Ad hoc</i> reviewer for <u>Journal of Clinical Microbiology</u>
2013-	<i>Ad hoc</i> reviewer for <u>Biochemical Journal</u>
2013-	<i>Ad hoc</i> reviewer for <u>Clinical Pediatrics</u>
2014-	<i>Ad hoc</i> reviewer for <u>Kidney International</u>
2014-	<i>Ad hoc</i> reviewer for <u>Physiologic Genomics</u>
2014-	<i>Ad hoc</i> reviewer for <u>JAMA Pediatrics</u>
2015-	<i>Ad hoc</i> reviewer for <u>Journal of the American Society of Nephrology</u>
2015-	<i>Ad hoc</i> reviewer for <u>Pathogens</u>
2015-	<i>Ad hoc</i> reviewer for <u>Journal of Pediatrics</u>
2015-	<i>Ad hoc</i> reviewer for <u>Science Translational Medicine</u>
2015-	<i>Ad hoc</i> reviewer for <u>Scientific Reports</u>
2015-	<i>Ad hoc</i> reviewer for <u>Journal of Urology</u>
2015-	<i>Ad hoc</i> reviewer for <u>Journal of Infectious Diseases</u>
2015-	<i>Ad hoc</i> reviewer for <u>Nephron Clinical Practice</u>
2015-	<i>Ad hoc</i> reviewer for <u>Journal of Diabetes and its Complications</u>
2015-	<i>Ad hoc</i> reviewer for <u>Kidney and Blood Pressure Research</u>
2016-	<i>Ad hoc</i> reviewer for <u>International Journal of Molecular Sciences</u>
2016-	<i>Ad hoc</i> reviewer for <u>BMC Health Services Research</u>
2016-	<i>Ad hoc</i> reviewer for <u>BMC Infectious Diseases</u>
2016-	<i>Ad hoc</i> reviewer for <u>International Journal of Environmental Research and Public Health</u>
2016-	<i>Ad hoc</i> reviewer for <u>Journal of Pediatric Infectious Diseases</u>
2016-	<i>Ad hoc</i> reviewer for <u>Pediatric Research</u>
2016-	<i>Ad hoc</i> reviewer for <u>Journal of Clinical Investigation</u>
2017-	<i>Ad hoc</i> reviewer for <u>BMC Urology</u>
2018-	<i>Ad hoc</i> reviewer for <u>Molecules</u>
2019-	<i>Ad hoc</i> reviewer for <u>Frontiers in Immunology</u>
2019-	<i>Ad hoc</i> reviewer for <u>Genes</u>
2020-	<i>Ad hoc</i> reviewer for <u>Nutrients</u>
2020-	<i>Ad hoc</i> reviewer for <u>Epidemiology & Infection</u>

- 2020- *Ad hoc* reviewer for International Journal of Infectious Diseases
- 2021- *Ad hoc* reviewer for Journal of Molecular Medicine
- 2021- *Ad hoc* reviewer for Journal of Clinical Investigation Insights
- 2022- *Ad hoc* reviewer for The New England Journal of Medicine
- 2023- *Ad hoc* reviewer for Trends in Immunology

Poster Presentations:

Upon request. Removed for brevity.

Peer Reviewed Publications:

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Other Publications:

2008

AAP Textbook of Pediatric Care (5th Revised Edition).
 “Chapter 51: Use of Urinalysis and Urine Culture in Screening”. **David S. Hains, M.D.** & Hiren P. Patel, MD.

- 2010 Editors: T. McInerney, H. Adam, D. Campbell, D. Kamat, K. Kelleher. American Academy of Pediatrics (pub). Beyond the Abstract (UroToday.com). Pediatric urinary tract infections: An analysis of hospitalizations, charges, and costs in the USA, by John David Spencer, MD, and David S. Hains, MD.
- 2012 AAP Textbook of Pediatric Care (6th 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).

Graduate-Level Courses Taught:

- 2009 ANAT 911.03 Advanced Human Embryology/Kidney and Urinary Tract Development. The Ohio State University.
- 2013 Advance Topics in Pediatrics. The Ohio State University College of Medicine.
- 2014 Engineering Applications to Pediatric Nephrology. University of Memphis School of Engineering.
- 2015 Recent Advances Critical Review in Biomedical Engineering. University of Memphis School of Engineering.
- 2015 Pediatric Nephrology Board Review. University of Memphis School of Engineering.