



**6TH ANNUAL
PEDIATRIC
EARLY
CAREER
RESEARCHER
CONFERENCE**

CONFERENCE PROGRAM

Tuesday, August 27, 2024

Health Sciences Research Building I
Emory University



Children'sSM
Healthcare of Atlanta



EMORY
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Sponsored by the NICHD-supported Atlanta Pediatric Scholars Program K12HD072245

WELCOME

Dear Colleagues,

We welcome you to the 6th Annual Pediatric Early Career Researcher Conference. We are so excited to have you here with us, and we look forward to an informative and engaging day.

This year's conference features highly impressive abstracts from 46 of our talented trainees and junior faculty members. We have a packed agenda of oral and poster presentation sessions that will explore child health-related research happening at Emory University, Children's Healthcare of Atlanta and beyond.

We are delighted to have our new Chief Research Officer and Executive Vice Chair for Research of the Emory + Children's Pediatric Institute, Dr. Kristy Murray, DVM, PhD, as our keynote presenter. As a scientist, her research over the past 20+ years has been focused on both laboratory- and clinically-based studies related to emerging infectious diseases, including West Nile virus, dengue, rickettsia, Chagas disease, Zika virus, COVID-19, and rabies. Her field studies are predominately based in global health settings. Given her unique background in veterinary medicine, Dr. Murray's presentation, "Academic Alchemy: Transforming Unforeseen Paths into a Scholarly Journey," is sure to be an inspiration for clinical and basic scientists alike.

In addition to the formal sessions, we also have several social events planned which will give you the opportunity to network with other attendees and make new connections. We hope that you will take advantage of these opportunities to build relationships and collaborate on future projects.

We know that you have busy schedules, so we appreciate you taking the time to attend this conference. We believe that the investment of your time will be well worth it, and we are confident that you will leave feeling motivated and full of new ideas.

Thank you again for joining us!

Sincerely,



Stacy Heilman, PhD

*Conference Co-Chair
Associate Professor
Vice Chair for Research
Operations
Department of Pediatrics
Emory University School of
Medicine
Children's Healthcare of
Atlanta*



Claudia Morris, MD, FAAP

*Conference Co-Chair
Professor of Pediatrics and
Emergency Medicine
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Distinguished Faculty Chair for
Clinical & Translational Research
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**Benjamin Kopp, MD, MPH,
FAAP, ATSF**

*Conference Co-Chair
Associate Professor of Pediatrics
Co-Director, Center for Cystic
Fibrosis and Airway Disease (CF-
AIR)
Director, Pulmonary Sickle Cell
Program
Director of Pulmonary and Sleep
Physician Research
Co-Director, Pediatric Residency
Investigative Scholars at Emory
(PRISE)
Division of Pulmonary, Asthma,
Cystic Fibrosis, and Sleep
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Maria (Stefi) Barbian, MD

*Conference Co-Chair
Assistant Professor of
Pediatrics
Division of Neonatal-
Perinatal Medicine
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Medicine
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KEYNOTE SPEAKER



Kristy Murray, DVM, PhD
*Executive Vice Chair of Research
Professor of Pediatrics
Department of Pediatrics
Emory University School of Medicine*

*Chief Research Officer
Children's Healthcare of Atlanta*

Dr. Kristy Murray is the newly named Chief Research Officer at Children's Healthcare of Atlanta and Professor and Executive Vice Chair of Research in the Department of Pediatrics at Emory University. Prior to her new appointment, she served as the Vice-Chair for Research for the Department of Pediatrics and Professor of Pediatrics in the Pediatric Tropical Medicine section at Baylor College of Medicine and Texas Children's Hospital. She also served as the Assistant Dean for Faculty and Academic Development for the National School of Tropical Medicine and Director of the Center for Human Immunobiology at Texas Children's Hospital.

Dr. Murray received her doctorate in Veterinary Medicine from Texas A&M University and her PhD in Preventative Medicine and Community Health, Clinical Investigations track, at the University of Texas Medical Branch. She spent the first five years of her career at the Centers for Disease Control and Prevention (CDC), including two years as an Epidemic Intelligence Service Officer conducting outbreak investigations, including the initial outbreak of West Nile virus in New York City in 1999, bubonic plague in Wyoming, and

unexplained illness and deaths in injection drug users in Ireland. She also had the opportunity to work on the polio eradication campaign in Bangladesh and research lyssaviruses in the Philippines. She received several awards at CDC including the Secretary's Award for Distinguished Service for her work on the West Nile virus Encephalitis Investigation Team and for the Anthrax Investigation Emergency Response Team.

In 2002, Dr. Murray returned to Texas and joined the faculty in the Center for Infectious Diseases at the University of Texas Health Science Center at Houston, School of Public Health (2002-2012). In 2012, she was recruited to Baylor College of Medicine as a founding faculty member of the National School of Tropical Medicine. Her research over the past 20+ years has been focused on both laboratory- and clinically-based studies related to emerging infectious diseases, including West Nile virus, dengue, rickettsia, Chagas disease, Zika virus, COVID-19, and rabies. Her field studies are predominately based in global health settings, including Nicaragua, Belize, El Salvador, and the Philippines. She teaches graduate-level courses on epidemiology and infectious diseases and advises master's and PhD-level students. Dr. Murray has received several awards for her work in academia, including the Innovation in Health Science Education Award from the UT Academy of Health Science Education, Dean's Award for Teaching Excellence, the UT Health Science Center Young Investigator Award, and the Texas A&M College of Veterinary Medicine's Distinguished Alumni Award. In 2013, she received the Bailey Ashford Medal from the American Society of Tropical Medicine and Hygiene for her work in tropical medicine, and she was elected to the American Pediatric Society. Dr. Murray is an Associate Editor for PLoS Neglected Tropical Diseases and serves on the editorial board of the journal *Epidemiology and Infection* and has authored more than 160 scientific and technical papers.

MORNING AGENDA

Time	Presentation
	Career Development Power Hour/Breakfast with the Experts (Café Area)
8:00 - 8:55 am	<p>Grab breakfast and settle in. Sit at an area labeled with a topic in which you are interested. Subject matter experts will represent each topic to learn and network. Bell chimes will be used to maximize your time and signal when you may wish to move through the Power Hour, allowing you the potential to engage with all the experts.</p> <p>Networking Topics:</p> <p>Collaboration/Finding Subject Matter Expertise for Research Projects (Topic A) <i>Ann Chahroudi, MD, PhD</i>; Director, Atlanta Pediatric K12 Scholars Program <i>Samantha Hill, MD, MPH</i>; Attending Physician, Adolescent Medicine <i>Nael McCarty, PhD</i>; Director, Emory + Children’s Cystic Fibrosis Center of Excellence <i>Benjamin Kopp, MD, MPH</i>; Co-Director, Pediatric Residency Investigative Scholars at Emory (PRISE)</p> <p>Early Career Grant Opportunities (Topic B) <i>Julie Hawk, PhD</i>; Grant Proposal Development Associate <i>Maria “Stefi” Barbian, MD</i>; Atlanta Pediatric K12 Scholar 2021-2023 <i>Claudia Morris, MD, FAAP</i>; Director, Center for Clinical and Translational Research</p> <p>Negotiating for a Position (Self-Advocacy) (Topic C) <i>Lou Ann Brown, PhD</i>; Director, Office of Postdoctoral and Mentored Trainee Education <i>Liz McCarty, MS, CRA</i>; Executive Administrator & Vice Chair for Administration <i>Brenda Poindexter, MD</i>; Division Chief, Neonatology <i>Stacy Heilman, PhD</i>; Vice Chair for Research Operations</p>
8:55 - 9:00 am	Enter the Auditorium

Time	Presentation
Welcome and Opening Remarks	
<p data-bbox="164 317 354 342">9:00 - 9:15 am</p>  	<p data-bbox="500 317 1338 569">Maria (Stefi) Barbian, MD - Atlanta Pediatric K12 Scholar 2021-2023 Conference Co-Chair Assistant Professor Division of Neonatology Department of Pediatrics Emory University School of Medicine Children’s Healthcare of Atlanta</p> <p data-bbox="505 611 821 636">Our Research Enterprise</p> <p data-bbox="500 667 1243 873">Lucky Jain, MD, MBA Principal Investigator, Atlanta Pediatric K12 Scholars Program George W. Brumley, Jr. Professor and Chair Department of Pediatrics Emory University School of Medicine Chief Academic Officer, Children’s Healthcare of Atlanta</p>
Overview of Career Development Opportunities in Pediatrics	
<p data-bbox="164 999 354 1024">9:15 - 9:30 am</p> 	<p data-bbox="500 999 1200 1283">Ann M. Chahroudi, MD, PhD Program Director, Atlanta Pediatric K12 Scholars Program Vice Chair for Basic Science Research Professor Department of Pediatrics Emory University School of Medicine Division of Infectious Diseases Children’s Healthcare of Atlanta</p>
Basic Science and Translational Research Oral Presentations	
<p data-bbox="164 1472 354 1497">9:30 - 9:45 am</p>	 <p data-bbox="716 1409 1341 1545">Christina Caruso, MD Less Deformable Erythrocyte Subpopulations Biomechanically Induce Endothelial Inflammation in Sickle Cell Disease.</p>
<p data-bbox="164 1671 354 1696">9:45 - 10:00 am</p>	 <p data-bbox="716 1629 1390 1734">Andrea Colarelli, MD Antenatal Butyrate Supplementation Improves Intestinal Barrier in Neonatal Murine Offspring.</p>
<p data-bbox="164 1818 354 1843">10:00 - 10:15 am</p>	BREAK
<p data-bbox="164 1923 354 1948">10:15 - 11:00 am</p>	<p data-bbox="500 1906 1365 1969">Basic Science and Translational Research Poster Mini-Presentations <i>14 Poster Mini-Presentations (2-minute presentations)</i></p>

Basic Science and Translational Research Oral Presentations (continued)	
11:00 - 11:15 am	<div style="display: flex; align-items: center;">  <div> <p>JaNise Jackson, PhD Utilizing Ribosome-directed Small Molecules and Nucleotide-based Approaches to Overcome Distinct Subclasses of CFTR Variants.</p> </div> </div>
11:15 - 11:30 am	<div style="display: flex; align-items: center;">  <div> <p>Justin Yoo, MD Improving the Sickle Bone Marrow with 601.</p> </div> </div>
11:30 - 12:15 pm	<p>Basic Science & Translational Research Poster Session, Set A (Café Area)</p> <p>A1. Identifying Changes in the Lymphoma Tumor Immune Landscape in Response to the Checkpoint Molecule Siglec-15. Dailia Francis, MD, PhD</p> <p>A2. Head Injury Type Influences Serum Biomarker Cyclosporin A Treatment Response in a Swine Model. Colin Huber, PhD</p> <p>**A3. MERTK Inhibition Induces an Anti-Leukemia Dendritic Cell - T Cell Axis While TYRO3 Inhibition Protects by a Separate Mechanism. Justus Huelse, PhD</p> <p>A4. Epitranscriptional Regulation of Endothelial-to-Mesenchymal Transition in CF Lung Disease. Bum-Yong Kang, PhD</p> <p>**A5. Neat1 Inhibition Alleviates the Pathology of Duchenne Muscular Dystrophy. Kyungmin Kim, PhD</p> <p>A6. Ethanol Exposure During Differentiation of Human-induced Pluripotent Stem Cells Reduces Cardiomyocyte Generation and Alters Metabolism. Kun Man, PhD</p> <p>A7. RNA-seq Analysis of the Effects of Elexacaftor/Tezacaftor/Ivacaftor in Cystic Fibrosis. Hazel Ozuna, PhD</p> <p>A8. Red Cell Rheology and Blood Viscosity in Pediatric Individuals Having Received Allogenic Hematopoietic Stem Cell Transplantation or <i>Ex Vivo</i> Autologous Gene Therapy for Sickle Cell Disease. Ashwin Patel, PhD</p> <p>**A9. Role of Insulin-like Growth Factor Binding Protein-3 (IGFBP3) in Fetal Hemoglobin Induction in Primary CD34+ Hematopoietic Stem and Progenitor Cells from Patients with Sickle Cell Anemia. Anupama Priyadarshini, PhD</p>

A10. Peripheral Mitochondrial Respiration in Pre-Adolescent Hispanic Children at Risk of MASLD.

Ana Ramirez, MD

A11. The Uremic Milieu Induces Aortic Cellular Reprogramming in the 5/6 Nephrectomy Mouse Model of Chronic Kidney Disease.

Loretta Reyes, MD

****A12.** Enhancing Oro-nasal Fistula Healing: Targeted Treatment with Probiotic Bacterial Supernatant.

Keerthi Priya Chinniampalayam Sekar, PhD

A13. Tumor Neurons Cooperate with Astrocytes to Uncouple Nucleotides Synthesis from DNA Methylation via Transsulfuration.

Andrey Tikunov, PhD

****A14.** Micronutrients Associated with Anemia in School-Age Children and Adolescents: BRINDA Project.

Rochelle Werner, PhD

****** Poster Finalist

12:15 - 12:55 pm

Lunch Break - Boxed lunches served in HSRB Café

AFTERNOON AGENDA

12:55 - 1:00 pm	Announce winners for Best Basic Science and Translational Research Oral and Poster Presenters	
1:00 - 2:00 pm	Keynote Presentation	
	<p>Academic Alchemy: Transforming Unforeseen Paths into a Scholarly Journey</p> <p>Kristy Murray, DVM, PhD Executive Vice Chair of Research Professor Department of Pediatrics Emory University School of Medicine Chief Research Officer Children's Healthcare of Atlanta</p>	
Time	Presentation	
Overview of Research Resources in Pediatrics		
	<p>Jason Yustein, MD, PhD Recruitment Officer, Atlanta Pediatric K12 Scholars Program Director, Medical Scientist Training Program (MSTP) Professor Department of Pediatrics Emory University School of Medicine Director, Solid Tumor Research Program Aflac Cancer and Blood Disorders Center Children's Healthcare of Atlanta</p>	
Clinical and Outcomes Research Oral Presentations		
2:15 - 2:30 pm		<p>Anand Salem, DO The Impact of Feeding on Intestinal Inflammation in Preterm Infants.</p>
2:30 - 2:45 pm		<p>Rawan Korman, MD Kyotorphin: A Novel Mechanism-of-action for Arginine Therapy Targeting Pain in Children with Sickle Cell Disease (SCD).</p>
2:45 - 3:00 pm	BREAK	
3:00 - 4:00 pm	Clinical and Outcomes Research Poster Mini-Presentations <i>16 Poster Mini-Presentations (2-minute presentations)</i>	

Clinical and Outcomes Research Oral Presentations (continued)	
4:00 - 4:15 pm	<div style="display: flex; align-items: center;">  <div> <p>Lauren Middlebrooks, MD Implementation of Opt-Out Human Immunodeficiency Virus Screening in Pediatric Emergency Departments.</p> </div> </div>
4:15 - 4:30 pm	<div style="display: flex; align-items: center;">  <div> <p>Chau Nguyen, MD The Incidence, Risk Factors and Outcomes of Acute Kidney Injury in Neonates Following Cardiac Surgery.</p> </div> </div>
4:30 - 5:15 pm Clinical and Outcomes Research Poster Session, Set B (Café Area)	
	<p>B1. Nurse-Performed Bladder Ultrasound Prior to Bladder Catheterization in the Pediatric Emergency Department. Tal Berkowitz, MD, MPH</p> <p>B2. Neonatal ECMO: Epidemiology According to Social Drivers of Health (SDoH). Swati Chandhoke, MD</p> <p>B3. Natural Airway Sedation for Pediatric Patients Receiving Iodine 131 MIBG Therapy in the Pediatric Intensive Care Unit. Jordann Dhuse, MD</p> <p>B4. Gun Violence Exposures Impact on Urban Youth School Performance. Kiesha Fraser-Doh, MD</p> <p>**B5. Impact of Annual PM_{2.5} Exposure on Clinical and Laboratory Outcomes in Children with Sickle Cell Disease: A Retrospective Cohort Study. Paul George, MD</p> <p>**B6. The Association Between Peri-operative Management Strategies and Post-operative Acute Kidney Injury in Surgical Neonates. Matthew Gillen, MD</p> <p>B7. Cobalamin (B12) Deficiency in Children with Sickle Cell Disease (SCD). Dunia Hatabah, MD</p> <p>B8. Characterizing Risk Factors of Pediatric Inflammatory Bowel Disease Severity. Christine Kaba, MD</p> <p>**B9. Malnutrition Diagnosis is Associated with Fat-free Mass in Critically Ill Term Newborns. Kera McNelis, MD, MS</p> <p>B10. Dear Diary, Today Feels Different: Exploring Intraindividual Dynamics in Pain and Relevant Correlates for Youth with Chronic Sickle Cell Disease Pain. Jan Mooney, PhD</p>

	<p>B11. The Clinical Significance of Non-Ebstenoid Fetal Tricuspid Valve Regurgitation. Daniel O’Meara, MD</p> <p>**B12. Does Risk Stratification of Fetuses with d-Transposition of the Great Arteries Shorten Time to Transport and Cardiac Intervention? Sanghee Ro, MD</p> <p>B13. Longitudinal Outcomes in Children with Trisomy 21 and Congenital Heart Disease after Cardiac Surgery. Ashish Saini, MD</p> <p>B14. Family-Centered Diet Intervention to Reduce Sugar Consumption in Latinx Children. Cristian Sanchez-Torres, MD</p> <p>B15. Impact of Sickle Cell Disease Modifying Therapies on Pediatric Sleep. Michelle Yoo, MD</p> <p>**B16. Pediatric Age-Labeling in AI/ML-Enabled Medical Devices. Grzegorz Zapotoczny, PhD</p> <p>** Poster Finalist</p>
<p>5:15 pm</p>	<p>Announce winners for Best Clinical and Outcomes Research Oral and Poster Presenters and Closing Remarks (Café Area)</p>
<p>5:15 - 6:00 pm</p>	<p>Reception / Networking Hour (Café Area)</p>

ACKNOWLEDGEMENTS

We would like to thank the K12 Executive Committee and Conference Co-Chairs* for sponsoring and organizing this event.

Lucky Jain, MD, MBA
Maria (Stefi) Barbian, MD*
Ann Chahroudi, MD, PhD
Stacy Heilman, PhD*
Clint Joiner, MD, PhD
Benjamin Kopp, MD, MPH*

Claudia Morris, MD, FAAP*
Sunil Raikar, MD
Vivien Sheehan, MD, PhD
Michelle Wallace, MD
Jason Yustein, MD, PhD

We thank our faculty judges and poster visitors for their time and expertise ensuring our early career researchers receive the recognition they deserve.

Kristy Murray, DVM, PhD
David Archer, PhD
Maria "Stefi" Barbian, MD*
Holly Bauser-Heaton, MD, PhD
Ann Chahroudi, MD, PhD
Paul Dawson, PhD, FAASLD
Christopher Doering, PhD
Karen Effinger, MD, MS
Tim Gershon, MD, PhD
Stacy Heilman, PhD*
Ilanit Itzhaki, PhD
Clint Joiner, MD, PhD
Rheinallt Jones, PhD

Lazaros Kochilas, MD
Ben Kopp, MD, MPH*
Jordan Marchak, PhD, ABPP
Tamara Miller, MD, MSCE
Claudia Morris, MD, FAAP*
Kathryn Oliver, PhD
Katherine Pickard, PhD
Jennifer Stapel-Wax, PsyD
Rabindra Tirouvanziam, PhD
Chia-shi Wang, MD
Kirsten Marie Williams, MD
Jason Yustein, MD, PhD

A special thanks to our esteemed faculty and staff for their contributions, time, and expertise in organizing this important event.

Carla Armour
Maryam Ehteshami, PhD
Mary Anne Geryak, MS
Debra Hamilton, MA, PsyS
Julie Hawk, PhD

Sarah Marie Huber, MA, CIP, CHRC
Mimi Le, PhD
Clovis Sarmiento, MD
Megan Stewart, MS, BCPA
Tracy Willoughby, MPH



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THANK YOU

We are extremely grateful for all our presenters, attendees, and partners who helped make this year's event an unforgettable experience! Thank you so much for being a part of it!

Please take about five minutes to complete our [Feedback Survey](#).
We look forward to your input.



We'll see you next year!