

7TH ANNUAL PEDIATRIC EARLY CAREER RESEARCHER *Conference*

Tuesday, September 9, 2025

Health Sciences Research Building
Emory University



CONFERENCE PROGRAM



Sponsored by the NICHD-supported Atlanta Pediatric Scholars Program K12HD072245



EMORY
UNIVERSITY

WELCOME

Dear Colleagues,

We welcome you to the 7th Annual Pediatric Early Career Researcher (ECR) Conference. We are so excited to have you here with us, and we look forward to an informative and engaging day.

The ECR conference features highly impressive abstracts from 78 of our talented trainees and junior faculty members. This year the abstract call was extended to undergraduate and graduate students, as well as post baccalaureates and we are excited for the new contributions! We have a packed agenda of oral, mini- (rapid-fire), 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 the Chair and O. Wayne Rollins Distinguished Professor of the Department of Health Policy and Management, Dr. Stephen Patrick, as our keynote presenter. As a scientist, his research has focused on improving outcomes for pregnant people with opioid use disorder and their infants. He has served as an advisor to the White House, Centers for Disease Control and Prevention, and the US Food and Drug Administration. As a clinician, he is a practicing neonatologist. Given his unique background in pediatrics, neonatology, and health services research, Dr. Patrick's presentation, "*The Kids Are Why We Stay: Lessons in Resilience from a Career in Child Health Research*," 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
The Wilbur Fisk Glenn Jr. Distinguished
Faculty Chair for Clinical &
Translational Research
Research Director, Division of Pediatric
Emergency Medicine
Director, Center for Clinical and
Translational Research
Emory University School of Medicine
Children's Healthcare of Atlanta



**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
Emory University School of Medicine
Children's Healthcare of Atlanta



Satheesh Chonat, MD

Conference Co-Chair
Associate Professor of
Pediatrics, Hematology
Director, RBC Disorders and
Thrombotic
Microangiopathies Program
Emory University School of
Medicine
Children's Healthcare of
Atlanta

KEYNOTE SPEAKER



Stephen W. Patrick, MD, MPH, MS, FAAP

*O. Wayne Rollins Distinguished Professor and Chair
Department of Health Policy and Management
Co-Director, Center for Health Services Research
Rollins School of Public Health
Emory University
Neonatologist
Children's Healthcare of Atlanta*

Dr. Stephen Patrick is Chair and O. Wayne Rollins Distinguished Professor of the Department of Health Policy and Management at the Rollins School of Public Health at Emory University, Co-Director of the Emory Health Services Research Center, and a practicing neonatologist at Children's Healthcare of Atlanta. He is also an Adjunct Physician Policy Researcher at RAND Corporation. Dr. Patrick joined Rollins from Vanderbilt University Medical Center as Professor of Pediatrics and Health Policy, the William R. Long Director of Child Health Policy at the Vanderbilt Center for Child Health Policy, and Executive Director of Firefly. Dr. Patrick is a graduate of the University of Florida, Florida State University College of Medicine, and Harvard School of Public Health. Dr. Patrick completed his training in pediatrics, neonatology and health services research as a Robert Wood Johnson Foundation Scholar at the University of Michigan.

Dr. Patrick's National Institutes of Health-funded research focuses on improving outcomes for pregnant people with opioid use disorder and their infants. He previously served as Senior Policy Advisor to the White House Office of National Drug Control Policy where he led an interagency policy process that resulted in the Administration's action plan to improve outcomes for pregnant people with substance use disorder and their infants. He also previously served as a Guest Researcher at the Centers for Disease Control and Prevention, is a member of the American Academy of Pediatrics Committee on Substance Use and Prevention, and has been a voting member on several US Food and Drug Administration Advisory Boards focused on opioid use in children. He has testified about the impact of the opioid crisis on pregnant people and infants before committees in both the US House of Representatives and the US Senate. Dr. Patrick's awards include the American Medical Association Foundation Excellence in Medicine Leadership Award, the Nemours Child Health Services Research Award, the Society for Pediatric Research Young Investigator Award and the Gale and Ira Drukier Prize in Children's Health Research. He has published more than [140](#) peer review articles including in leading scientific journals including the *New England Journal of Medicine*, *JAMA*, *Pediatrics* and *Health Affairs*.

MORNING AGENDA

Time	Presentation
	Career Development Power Hour (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 rung halfway through the Power Hour to signal when you may wish to move to another table.</p> <p>Networking Topics:</p> <p>Collaboration/Finding Subject Matter Expertise for Research Projects (Topic A) <i>Samantha Hill, MD, MPH</i>; Attending Physician, Adolescent Medicine <i>Kathryn Oliver, PhD, MS, CPTS</i>; Co-Director, Scientific Training & Enrichment Program, Center for CF & Airways Disease Research (CF-AIR) <i>Stacy Heilman, PhD</i>; Vice Chair for Research Operations <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>; Core Director, Pediatric Research Development Core <i>Megan Vallowe, PhD</i>; Co-Director, Pediatric Research Development Core <i>Satheesh Chonat, MD</i>; Atlanta Pediatric K12 Scholar 2019-2021 <i>Claudia Morris, MD, FAAP</i>; Director, Center for Clinical and Translational Research</p> <p>Manuscript Pitching, Writing, and Publishing (Topic C) <i>Ann Chahroudi, MD, PhD</i>; Director, Atlanta Pediatric K12 Scholars Program <i>Jason Yustein, MD, PhD</i>; Recruitment Officer, Atlanta Pediatric K12 Scholars Program <i>Chris Rees, MD, MPH</i>; Director, Global Health Office of Pediatrics at Emory (GHOPE)</p>
8:55 - 9:00 am	Enter the Auditorium

Time	Presentation	
	Welcome and Opening Remarks	
9:00 - 9:15 am 	Satheesh Chonat, MD – Atlanta Pediatric K12 Scholar 2019-2021 Conference Co-Chair Associate Professor Director, RBC Disorders and Thrombotic Microangiopathies Program Department of Pediatrics Emory University School of Medicine Children’s Healthcare of Atlanta	
	Our Research Enterprise	
	Kristy Murray, DVM, PhD Executive Vice Chair for Research Professor, Department of Pediatrics Emory University School of Medicine Chief Research Officer Children’s Healthcare of Atlanta	
	Overview of Career Development Opportunities in Pediatrics	
9:15 - 9:30 am 	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	
	Basic Science and Translational Research Oral Presentations (1-5)	
9:30 - 9:45 am		Venkata Viswanadh Edara, PhD Single-cell Transcriptomic Analysis Reveals Neuropathogenic Mechanisms of Brain Injury Following Infant Postnatal Zika Virus Infection.
9:45 - 10:00 am		Dailia Francis, MD, PhD Tumor Microenvironment-mediated Immune Evasion by the Immune Checkpoint Siglec-15 In Hematologic Malignancies.
10:00 - 10:15 am		Bum-Yong Kang, PhD miR-21/METTL3 Axis Regulates CFTR Expression in CF Lung Disease.

10:15 - 10:30 am		Jenny Shim, MD YAP Suppresses HRK Through the PRC2 Complex Leading to Neuroblastoma Cell Survival.
10:30 - 10:45 am		Karen Zimowski, MD Genetic Variants Associated with Factor V Deficiency May Affect FV-short Splicing.
10:45 - 11:00 am	BREAK	
	Clinical and Outcomes Research Oral Presentations (1-3)	
11:00 - 11:15 am		Akshaya Arjunan, MD Complement Dysregulation During Vaso-Occlusive Episodes Can Predict Development of Acute Chest Syndrome in Pediatric Sickle Cell Disease.
11:15 - 11:30 am		Brittney Baumert, PhD, MPH PFAS and Altered Glucose Homeostasis in Adolescents Following Bariatric Surgery.
11:30 - 11:45 am		Benson Ku, MD, PhD The Neighborhood Exposome and Persistently Distressing Psychotic-like Experiences.
11:45 - 12:55 pm	Lunch Break - Boxed lunches served in HSRB I Café	

AFTERNOON AGENDA

Time	Presentation
12:55 - 1:00 pm	Announce winners for Best Basic Science / Translational Research and Best Clinical / Outcomes Research Oral Presentations
1:00 - 2:00 pm	Keynote Presentation
	<p><i>The Kids Are Why We Stay: Lessons in Resilience from a Career in Child Health Research</i></p> <p>Stephen W. Patrick, MD, MPH, MS, FAAP O. Wayne Rollins Distinguished Professor and Chair Department of Health Policy and Management Co-Director, Center for Health Services Research Rollins School of Public Health Emory University Neonatologist Children's Healthcare of Atlanta</p>
	Overview of Research Resources in Pediatrics
<p>2:00 - 2:15 pm</p> 	<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>
2:15 - 2:30 pm	BREAK
2:30 - 4:00 pm	<p>Mini- (Rapid-Fire) Presentation Session</p> <p>Basic Science and Translational Research <i>20 Mini-Presentations (2-minute presentations)</i></p> <p>Clinical and Outcomes Research <i>6 Mini-Presentations (2-minute presentations)</i></p>
	Basic Science and Translational Research Mini-Presentations
	<p>A1. Integrin α_4 and CCR5 on IFNγ-activated MSC Determine Biodistribution to Critical Sites for aGVHD Prophylaxis in Mice. Elisabetta Manuela Foppiani, PhD</p> <p>A2. Defining and Targeting Gamma Delta ($\gamma\delta$) T Cell Therapy-induced Apoptosis in Neuroblastoma. Zuri Hudson, DO</p>

A3. Engineered Humanized L-Asparaginase Variants Demonstrate Potent Antileukemic Activity and Attenuated Immunogenicity.

Kristopher Knight, BS

A4. Parallel Ab-Seq and scRNA-Seq of Lung-Recruited Neutrophils in Human Cystic Fibrosis.

Zhuo Li, MS

A5. Hidden in Plain Sight: Rediscovering Mast Cells in Cystic Fibrosis.

Irina Miralda Molina, PhD

A6. Aberrant Catecholamine Utilization by Macrophages in Cystic Fibrosis.

Hazel Ozuna, PhD

A7. NeoCLIP: A Self-Supervised Foundation Model for the Interpretation of Neonatal Radiographs.

Puneet Sharma, MD

A8. Sex-Based Differences in Viral Outcomes of ART-treated SIV Infection.

Soham Sonawane, BA

A9. Mapping the HPV16 E6 Affinity Interactome.

Kathleen Weimer, PhD, MSc

A10. Experimental CD8 Cell Depletion in ART-Suppressed SIV-Infected Rhesus Macaque Infants to Define the Role of CD8+ T Cells in Pediatric HIV Reservoir Maintenance.

Shahab Zaki Pour, PhD

A11. Per- and Polyfluoroalkyl Substances (PFASs) Induce Cardiotoxicity and Alter ECM, Metabolism, and Mitochondrial Protein Profiles in Human Induced Pluripotent Stem Cell-derived Cardiomyocytes.

Wenhao Zhang, PhD

****A12.** Deep Neutrophil Phenotyping Unveils the Impact of Complement Activation in Sickle Cell Disease.

William Briones, BS

****A13.** Safety Evaluation of Temporal Interference (TI) Stimulation in Mouse Hippocampus.

Richard Hou

****A14.** Therapeutic Intervention with Meclizine Ameliorates Mitochondrial Ultrastructural Defects in the Phosphate Carrier Deletion Model of Primary Mitochondrial Cardiomyopathy.

Benjamin Huang

****A15.** Biomarkers of Endothelial Activation in Pediatric Sepsis and an *In Vitro* Sepsis Model.

Michael Ripple, MD, PhD

****A16.** Developing a Dual-Targeting CAR T-cell Strategy Against Pediatric Mixed Phenotype Acute Leukemia (MPAL).

Emily Sullivan, BS

****A17.** Investigating the Role of SIX1 and EYA2 in T-ALL Leukemogenesis using CRISPR-Cas9-Mediated Knockout in Jurkat Leukemia Cells.

Suhani Varma

****A18.** A Tale of Two Mutations: How PHF14 Loss and Gain Variants Disrupt Brain Development.

Yongji Wu, PhD

****A19.** Impact of a Novel Mobilizer EMU116 and an Anti-sickling Agent Osivelotor on Stem Cell Mobilization in the Sickie Mouse.

Justin Yoo, MD

****A20.** Adaptive Protein Synthesis in Genetic Models of Copper Deficiency and Childhood Neurodegeneration.

Alicia Lane, PhD

**** Rapid-Fire Finalist**

Clinical and Outcomes Research Mini-Presentations

****B1.** Clinically Distinct Metabotypes of Pediatric Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD).

Ana Ramirez Tovar, MD (presenting for Helaina Huneault, PhD)

****B2.** Impact of State-Level Food Insecurity on Overall and Cancer-Related Five-Year Survival in Children with Leukemia.

Caitlin Webster, MSN, RN, CPHON

B3. Determinants of Linkage to Care in a Novel Newborn Screening Program for Sickle Cell Disease in Ghana, West Africa.

Tarun Aurora, MD, MSCI

B4. Clinical Predictors of Fatality in Pediatric Rocky Mountain Spotted Fever Cases in Sonora, Mexico 2004-2024.

Stephanie Bellman, PhD

B5. Maternal SSRI Exposure During Pregnancy and Neonatal Cardiopulmonary Outcomes: A Systematic Review and Meta-Analysis.

Mahathi Chavali, MD












B6. Clinical Outcomes of a Dexamethasone and Nelarabine-based Institutional Approach in T-cell Acute Lymphoblastic Leukemia.

Ryan Summers, MD

**** Rapid-Fire Finalist**

4:00 - 5:00 pm	Poster Session and Reception / Networking Hour (HSRB II Atrium)
5:00 pm	Announce winners for Best Basic Science / Translational Research and Clinical / Outcomes Research Rapid-Fire Presenters and Closing Remarks

Click [here](#) to view the full Abstract Book, including all oral presentation abstracts, mini- (rapid-fire) presentation abstracts, and poster abstracts.

POSTER PRESENTATIONS BY THEME			
Poster Presentations			
Theme Icon	Theme Icon	Theme Icon	Theme Icon
 <p>Cancer and Immunotherapy (12)</p>	 <p>Cardiology and Mitochondrial Function (7)</p>	 <p>Cystic Fibrosis (8)</p>	 <p>Hematology / Sickle Cell Disease (9)</p>
 <p>Infectious Disease and Immunology (15)</p>	 <p>Medical Education and Health Literacy (1)</p>	 <p>Metabolism, Hepatology, and Endocrinology (2)</p>	 <p>Neonatology and Maternal-Fetal Health (3)</p>
 <p>Neurology and Brain Injury (7)</p>	 <p>Pediatric Behavioral Health and Social Services (4)</p>	 <p>Pediatric Public / Global Health (2)</p>	

ACKNOWLEDGEMENTS

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

Shari Barkin, MD, MSHS
Ann Chahroudi, MD, PhD
Satheesh Chonat, MD*
Stacy Heilman, PhD*
Benjamin Kopp, MD, MPH*
Claudia Morris, MD, FAAP*

Kristy Murray, DVM, PhD
Sunil Raikar, MD
Vivien Sheehan, MD, PhD
Michelle Wallace, MD
Jason Yustein, MD, PhD

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

Stephen Patrick, MD, MPH, MS, FAAP
Shasha Bai, PhD
Ann Chahroudi, MD, PhD
Satheesh Chonat, MD
Joy Feng, PhD
Stacy Heilman, PhD
Ilanit Itzhaki, PhD
Rheinallt Jones, PhD
Benjamin Kopp, MD, MPH

Tamara Miller, MD, MSCE
Claudia Morris, MD, FAAP
Kathryn Oliver, PhD, MS, CPTS
Sunil Raikar, MD
Jessica Raper, PhD
Michael Scheurer, PhD, MPH
Jason Yustein, MD, PhD
Patricia Zerra, MD

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

Marco Aguilar
Carla Armour
Maryam Ehteshami, PhD
Gillian Glauber
Debra Hamilton, MA, PsyS
Julie Hawk, PhD
Sarah Marie Huber, MA, CIP, CHRC

Mimi Le, PhD
Clovis Sarmiento, MD
Kevin Silva, MS, PMP, LSSBB
Megan Stewart, MS, BCPA
Megan Vallowe, PhD
Tracy Willoughby, MPH
Mikayla Zachos, MA



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!