

CF-AIR & CF@LANTA NEWSLETTER

Cystic Fibrosis Center of Excellence

Emory University - Children's Healthcare of Atlanta -
Georgia Tech - Augusta Univ. - Georgia State - UGA



MARCH 2026

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Director's Update

Dr. Nael McCarty

Hello to our colleagues, friends, and supporters,

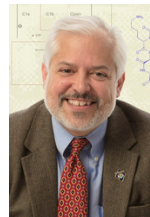
I hope you've had a wonderful Q1 2026 and are surviving the yellow scourge of pollen in Atlanta.

This week included the Research Advisory Council Retreat, where all Center Directors shared metrics from calendar year 2025. Here is a summary:

The 97 faculty members in the CF-AIR Research Center boasted \$59.6M in federal and non-federal grants for research, including 58 new awards. We published 286 papers, and held 44 research seminars in town. We had 37 speakers and 62 posters at the annual North American CF Conference in Seattle. We continue to push the envelope on identifying new therapeutic targets, and in improving access to existing therapeutics like Trikafta and Alyftrek. We continue to train outstanding young people, including welcoming 13 new trainees from four partner institutions to our innovative CF Scholars Program. Keep up the great work, team! We appreciate all you do.

Congrats to Drs. Hunt and Sarmiento for recognition by the CFF in February (photos adjacent).

-Nael



Mark Your Calendar

North American Cystic Fibrosis Conference (NACFC) October 6-10, 2026 in Atlanta, Georgia

We are excited to welcome the cystic fibrosis research and care community to Atlanta for the North American Cystic Fibrosis Conference (NACFC). In addition to the conference, we are hosting two special events on **Tuesday, October 6th**.



CF Data Science Workshop

Time: 8:00 AM – 4:00 PM

Location: National Center for Civil and Human Rights

This one-day workshop will explore how data science can advance cystic fibrosis research and care.

The program will highlight the Georgia CF Data Exchange & Warehouse (GACFDEW), a cloud-based platform that integrates longitudinal clinical, research, and biorepository data from people with CF across Georgia.

Sessions will cover:

- Data science needs and opportunities in CF
- Existing data resources and infrastructure
- Data integration, standardization, and ethics
- Real-world applications of data science

The workshop will conclude with a hands-on mini-hackathon using de-identified datasets.

Interested in attending?

Complete the interest survey to receive registration updates:

<https://bit.ly/4sv0hw4>

CF@LANTA Welcome Reception

Time: 4:00 PM – 9:00 PM

Location: National Center for Civil and Human Rights

Join us as we welcome our team to NACFC, national leaders to Atlanta, and connect with colleagues across the CF community.

The reception will include:

- Opening remarks from CF@LANTA leadership
- A celebration of key milestones across our research, adult clinical, and pediatric clinical programs
- Networking with researchers, clinicians, trainees, and community partners

Full details coming soon.

Research Highlight

Therapeutics Development Network

Cystic Fibrosis Clinical Trials at Children's + Emory: Children's Healthcare of Atlanta and Emory University continue to play a key role in the national Cystic Fibrosis Therapeutics Development Network (TDN). The Cystic Fibrosis TDN is the largest CF clinical trials network in the world, bringing together experts from across the country to evaluate the safety and effectiveness of new CF therapies through clinical studies.

The Therapeutics Development Network Center at Children's Healthcare of Atlanta and Emory University (combined pediatric and adult patients) ranked 6th in the country out of all Therapeutics Development Network Centers, for subjects newly enrolled into Cystic Fibrosis Foundation-sanctioned studies in 2025, accounting for study complexity (these rankings represent weighted subject units - which give more weight to a more complex study). This is our highest ranking to date, thanks to strong collaboration between our pediatric and adult programs, dedicated research teams, and highly engaged patients. This ranking reflects both the complexity of the studies we conduct and our commitment to expanding access to cutting-edge CF treatments in Georgia.

Some of the highly complex studies that we are currently involved with include a trial testing a fully automated 'bionic pancreas' for people with cystic fibrosis related diabetes, a phase 2 study of an inhaled mRNA therapy for individuals who cannot take current CFTR modulators, a trial of modulator therapy in 2-5 year olds, and a trial comparing early antibiotics versus increased airway clearance for CF children with worsening respiratory symptoms. Our center is uniquely suited for a continued strong collaboration with the TDN due to our large and diverse patient population and our many talented investigators.

In addition, we are proud to share that a new video featuring James, one of our remarkable young patients taking part in the Alyftrek study for children ages 6–11, is now live. Click [here](#) to watch his story and experience his inspiring journey firsthand.

“*We're incredibly proud of our trial enrollment successes this past year. We are grateful to our clinical trials research team, especially our stellar research coordinators, as well as the dedicated study participants and their families. This achievement underscores our center's commitment to advancing new CF therapies and making innovative trials available here for Children's + Emory patients.*



Dr. Rachel Linnemann

Associate Professor of Pediatrics,
Emory University School of Medicine
Director, Children's Healthcare of
Atlanta and Emory University Cystic
Fibrosis Care Center
Co-Director, Emory Cystic Fibrosis
Foundation Therapeutics
Development Center

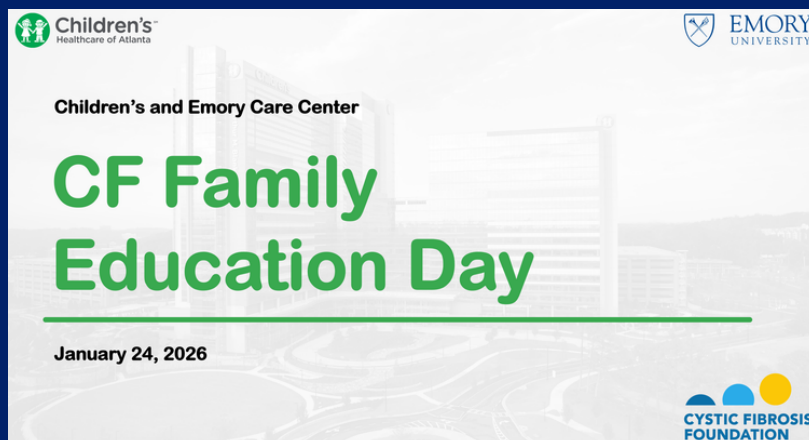


Dr. Arlene Stecenko

Co-Director of the CF Center of
Excellence, Co-Director of CF-AIR,
Marcus Professor of Pulmonology,
Director, Cystic Fibrosis Biospecimen
Repository & The Georgia Cystic
Fibrosis Data Warehouse, and
Director, Emory Cystic Fibrosis
Foundation Therapeutics
Development Center

Recent News and Updates

CF Family Education Day



The **Children's Healthcare of Atlanta and Emory University Cystic Fibrosis Care Center** presented the **CF Family Education Day on Saturday, January, 24, 2026**, held virtually due to the winter storm watch in the area. The morning kicked off with **Associate Director of the Children's Healthcare of Atlanta and Emory University Cystic Fibrosis Care Center, Matt Hazen, MD** providing an overview and state of the center. Dr. Hazen noted that the Center cares for 800 patients, commenting on the advancements in patient care, as well as the Center's significant presence at NACFC 2025, leadership in the national Cystic Fibrosis setting, and the recent 2025 CF Foundation site visit and accreditation. Noted strengths for the Center included the collaboration between the pediatric and adult programs, as well as the robust basic, translational and clinical research, and our #1 ranking in NIH funding in 2024.

Our keynote speaker, **David Fedele, PhD, ABPP of Nemours Children's Health in Jacksonville, Florida**, spoke on "Navigating Mental Health in CF: Science, Strategies, and Support." Dr. Fedele's talk focused on the concept of normalizing the reality of mental health challenges in the context of CF and everyday life. He discussed a variety of topics, including caregiver burden and the challenge of balancing work, school, relationships and other activities, as well as self-care strategies and options for support. Dr. Fedele answered questions from participants, and his talk provided an informative overview of this important topic.

The session provided time for break-out sessions for participants to have an opportunity to meet-and-greet. **Rachel Linnemann, MD, Director of the Children's and Emory CF Care Center, Co-Director of the Atlanta CFF Therapeutic Development Center, and the Hertz Professor of CF Care**, and **Arlene Stecenko, MD, Director of the Cystic Fibrosis Biospecimen Repository, the Georgia Cystic Fibrosis Data Exchange and Warehouse and Emory Therapeutics Development Center**, provided research updates. **Brandi Middour-Oxler, DNP, PNP**, then spoke about "Transition of Care," highlighting the process to transition from pediatric to adult care and discussing details around the Transition Program. CF Family Education Day concluded with break-out sessions on Genetic Counseling (**Arika Akin, CGC**), Mental Health (**Anna Hiott, LCSW and Emily Seibert, LPC, RPT**), CF Environmental Exposures (**Jessica Alvarez, PhD, RD**), Liver Ultrasound Screening (**Vivek Shenoy, MD**), and Prenatal CF Treatment (**Rachel Linnemann, MD**).

Thank you to all of our attendees, as well as the Cystic Fibrosis Foundation and the Children's + Emory Care Center team members, for making this a successful event!

Recent News & Updates

Confronting the Roadblocks in Medical Technology Innovation

Georgia Tech Panel with Dr. Lokesh Guglani Examines Why Medical Devices Fail to Reach Patients

On January 27, 2026, Lokesh Guglani, MD, FAAP (CF Clinician-Researcher) was invited to join experts from Georgia Tech for a panel discussion on medical technology translation at the “Boundaries and Breakthroughs” Panel. The sobering reality: approximately 75% of medical device start-ups never achieve meaningful clinical adoption—a challenge particularly acute for rare pediatric respiratory diseases like cystic fibrosis and primary ciliary dyskinesia.

Key Insights

The Hidden Bottleneck of Workflow Integration: Devices often fail not due to engineering or regulatory issues, but because no one “owned” the workflow integration problem. Solutions must involve clinic staff and patient families in design from the earliest phases—not just in final validation.

Economic Reality of Rare Disease Innovation: Venture capital optimizes for market size, making devices for conditions affecting 1:15,000–1:40,000 patients economically unfeasible. The solution requires hybrid funding models (NIH SBIR/STTR, DARPA) that do not rely on traditional venture returns, plus transparency from payers that some devices serve populations too small for conventional ROI.

Premature Innovation vs. Excessive Conservatism: In pediatric pulmonology, premature innovation poses greater danger than excessive conservatism. A marginally accurate screening tool creating false confidence can be worse than no tool—especially when diagnostic odysseys already stretch 5–10 years. The threshold: “Would I want this used on my own children without justification?”

AI and Data Scarcity: Outpatient pediatric pulmonology remains fundamentally data-scarce—quarterly spirometry, subjective reports, sporadic imaging. AI claims must acknowledge this reality. We need home monitoring infrastructure for continuous data before deploying AI-based clinical decision tools.

Implications for CF Research:

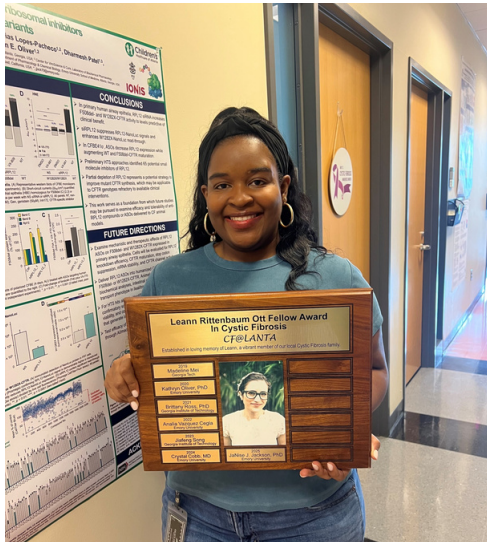
- Early clinical integration: Involve CF center staff and families before prototypes are finalized.
- Data infrastructure first: Establish home monitoring before AI deployment.
- Alternative funding: Pursue government mechanisms bypassing venture capital.
- Interface literacy: Train researchers to bridge physiology, engineering, regulation, and data science.

Full details available at: <https://research.gatech.edu/confronting-roadblocks-medical-technology-innovation>

Questions or collaboration? Contact Dr. Lokesh Guglani at Lokesh.guglani@emory.edu



Recent News & Updates



Congratulations to JaNise Jackson, PhD, who received the 2025 Leann Rittenbaum Ott Fellow Award.



Dr. Lokesh Guglani and Dr. Rachel Linnemann joined the Rare Disease Day Symposium sponsored by the Emory Division of Medical Genetics on February 27, 2026, where cystic fibrosis was a highlighted topic. Dr. Linnemann presented on newborn screening and clinical trials.



Congratulations to Clovis Sarmiento, MD, who received "2025 Outstanding Care Center Partnership Award" from the Georgia Chapter of the Cystic Fibrosis Foundation on February 5, 2026.



Wishing Dr. Ben Kopp the best as he begins his new role as Division Chief, Pulmonary & Sleep Medicine, at Nationwide Children's in Columbus, Ohio.

Publications Since Our Last Newsletter



Kudos to our CF-AIR/CF@LANTA investigators

Food allergy severity across the world: A World Allergy Organization international survey, *World Allergy Organ J.* 2025 Nov 12.

Considerations for Endpoints in Lung Transplant Clinical Trials: An ISHLT Consensus Statement, *J Heart Lung Transplant*, 2025 Nov 14.

Microbial Primer: The R-pyocins of *Pseudomonas aeruginosa*, *Microbiology (Reading)*, 2025 Dec.

Mycobacterium abscessus CYP123 is a steroid hydroxylase with an implication in host infection, *Drug Metab Dispos*, 2025 Dec.

Early life elevations of methionine oxidation and ornithine track and predict cystic fibrosis structural lung disease, *ERJ Open Res.*, 2025 Dec 1.

Mechanoimmunology: past, present, and future perspectives, *Mechanobiol Med.*, 2025 Dec 2.

People with cystic fibrosis with high sputum neutrophil elastase on elexacaftor-tezacaftor-ivacaftor exhibit worse pulmonary function and pro-inflammatory airway milieu, *Sci Rep.*, 2025 Dec 8.

Reconstitution of CFTR ubiquitination identifies lysine-420 as a regulator of cell surface residence and current, *Biochem Biophys Res.*, 2025 Dec 8.

A microgel bone marrow model of mesenchymal stem cell paracrine signaling supporting hematopoietic stem cell retention, *bioRxiv [Preprint]*, 2025 Dec 9.

Human lung CD8⁺ tissue-resident memory T cell-derived interferon- γ orchestrates subset-specific antiviral programming in airway epithelial cells, *Immunity*, 2025 Dec 9.

Experimental evolution of gene essentiality in bacteria, *mBio*, 2025 Dec 10.

General trends in the calnexin-dependent expression and pharmacological rescue of clinical CFTR variants, *Elife*, 2025 Dec 11.

Asymmetrically glycosylated IgG1 antibodies are universal and drive human disease, *Nat Commun.*, 2025 Dec 12.

Barriers to the Pharmacologic Rescue of W1282X CFTR, *Biochemistry*, 2025 Dec 12.

Developing Antisense Oligomer Biotics "asobiotics" As Precision Antibacterials: Designs, Strategies, and Considerations for Future Success, *FEMS Microbiol Rev.*, 2025 Dec 12.

Methicillin-Resistant *Staphylococcus aureus* Bacteremia Relapses Show Diverse Genomic Profiles but Convergence in Bacteremia-Associated Genes, *J Infect Dis.*, 2025 Dec 20.

Free-floating long-term vascularized mesenchymal organoids, *iScience*, 2025 Dec 26.

From the pages of AllergyWatch, *Ann Allergy Asthma Immunol*, 2026 Jan.

Hospital Variations in Time-To-Crisis-Resolution Among Children and Adolescents With Sickle Cell Disease, *Am J Hematol.*, 2026 Jan.

Single cell transcriptional profiling of monocytes from asthma patients show a predisposition for an inflammatory response, *Cytotherapy*, 2026 Jan.

Sexual health experiences and care utilization of males with cystic fibrosis, *J Cyst Fibros.*, 2026 Jan.

Click to link to the publication. Full citations available at <https://cfatl.org/recent-publications>.

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Kudos to our CF-AIR/CF@LANTA investigators

Synthetic Hydrogels Incorporating Hydrolytic/Nonhydrolytic Macromer Ratios Exhibit Improved Tunability of In Vivo Degradation and Immune Responses, *Adv Healthc Mater*, 2026 Jan.

Clinical isolates from chronic wounds reveal strain-specific, alkyl-quinolone-independent competition in *Pseudomonas aeruginosa*-*Staphylococcus aureus* biofilms, *J Med Microbiol*, 2026 Jan.

Hyperglycemia differentially affects neutrophil transmigration across cystic fibrosis and wildtype bronchial epithelia, *J Cyst Fibros*, 2026 Jan.

Single-Cell Multiome Impact of Prenatal Heavy Metal Exposure on Early Airway Development, *Am J Respir Cell Mol Biol*, 2026 Jan 1.

Bronchial epithelial cell-derived extracellular vesicles drive inflammasome activation and NTHi infection in COPD, *Front Immunol*, 2026 Jan 2.

Developing antisense oligomer biotics "asobiotics" as precision antibacterials: designs, strategies, and considerations for future success, *FEMS Microbiol Rev*, 2026 Jan 2.

An Opto-Actuated Hydrogel for Cell Mechanoactuation and Real-Time Force Monitoring, *Adv Sci (Weinh)*, 2026 Jan 4.

Treatment of *Pseudomonas* by removal of cloaking antibodies: is common polysaccharide antigen a factor?, *J Infect Dis*, 2026 Jan 6.

Barriers to the Pharmacologic Rescue of W1282X CFTR, *Biochemistry*, 2026 Jan 6.

Suppressive Genetic Interactions Between Haploinsufficient Mitochondrial Genes Encoded in the 22q11.2 Microdeletion Locus Define Brain and Cardiac Phenotypes, *bioRxiv [Preprint]*, 2026 Jan 9.

From infestation to infection: a systematic review of arthropod-mediated microbial transmission in hospitals, *Antimicrob Steward Healthc Epidemiol*, 2026 Jan 12.

Long Non-Coding RNA MALAT1 Regulates HMOX1 in Sickle Cell Disease-Associated Pulmonary Hypertension, *Cells*, 2026 Jan 15.

Interrelationships among handgrip strength, body composition, physical activity, and quality of life in adults with cystic fibrosis: A cross-sectional study, *Nutr Clin Pract*, 2026 Jan 15.

FAK modulates immune response and fibroblast activation in biomaterial-induced fibrosis, *Biomaterials*, 2026 Jan 19.

Per- and Polyfluoroalkyl Substances Induce Cardiotoxicity and Alter Protein Profiles of Extracellular Matrix, Metabolism, and Mitochondrial Function in Human Cardiomyocytes, *Chem Res Toxicol*, 2026 Jan 19.

Efficacy and Safety of Ligelizumab in Individuals With Confirmed Peanut Allergy, *Allergy*, 2026 Jan 20.

Multicohort assessment of plasma metabolic signatures of tuberculosis disease in children: a retrospective cross-sectional study, *Sci Rep*, 2026 Jan 23.

Clinician Assessment for Acute Chest Syndrome in Febrile Children With Sickle Cell Disease Revisited, *Am J Hematol*, 2026 Jan 29.

Considerations for Endpoints in Lung Transplant Clinical Trials: Perspective on the ISHLT Consensus Statement, *J Heart Lung Transplant*, 2026 Feb.

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Hydrogel Microdroplet Based Glioblastoma Drug Screening Platform, *J Biomed Mater Res A*, 2026 Feb.

From the pages of AllergyWatch, *Ann Allergy Asthma Immunol.*, 2026 Feb.

Exploratory analyses of predictors and correlates of response to omalizumab therapy in patients with multiple food allergies, *J Allergy Clin Immunol.*, 2026 Feb.

Interdisciplinary clinical bronchopulmonary dysplasia programs: development, evolution, and maturation, *J Perinatol.* 2026 Feb.

Microphysiological Systems of Lymphatics and Immune Organs, *Adv Healthc Mater.*, 2026 Feb.

Increased Skeletal Muscle Oxidative Capacity Augments the Myokine Response to Whole Body Vibration, *Med Sci Sports Exerc.*, 2026 Feb 1.

Downregulation of ROR α by alcohol promotes TGF β and α -SMA expression in mouse lung fibroblasts, *Front Med (Lausanne)*, 2026 Feb 4.

When Medically Required Food Avoidance Goes Awry: A Conceptual Framework of ARFID as an Underrecognized Clinical Complication of Food Allergy, *Int J Eat Disord.*, 2026 Feb 6.

It's Not About Winning or Losing: How Consultants Navigate Disagreement in Serious Illness, *J Pain Symptom Manage*, 2026 Feb 9.

Endocrine care during transition in emerging adults with cystic fibrosis: a single center retrospective study, *Endocr Pract.*, 2026 Feb 12.

Variable Staphylothrombin Activity in Staphylococcus aureus Bloodstream Infections, *J Infect Dis.*, 2026 Feb 13.

Lipid nanoparticle GM-CSF replacement for autoimmune pulmonary alveolar proteinosis, *Proc Natl Acad Sci U S A*, 2026 Feb 17.

Studies toward Pestalachloride B: Synthesis of the 6/7/6 Tricyclic Scaffold, *Org Lett.*, 2026 Feb 19.

Respiratory Syncytial Virus Hospitalizations in Adults ≥ 50 Years of Age and Those with Congestive Heart Failure or Chronic Obstructive Pulmonary Disease Exacerbations, 2018-2020, *Clin Infect Dis.*, 2026 Feb 24.

Design, Synthesis, and Evaluation of Novel Inhibitors of Aminoglycoside-Resistance 16S Ribosomal RNA Methyltransferases, *ChemMedChem*, 2026 Feb 25.

Large variations in total and allele-specific transcript expression in a disease mutation-independent manner, *Sci Rep*, 2026 Feb 27.

Infection with Mycobacterium tuberculosis depletes host fatty acids in humans and non-human primates, *EBioMedicine*, 2026 Feb 27.

Oxygen Dilution Among Portable Home Ventilators in Children: The Influence of Prescribed Settings and Leak, *Pediatr Pulmonol.*, 2026 Mar.

Click to link to the publication. Full citations available at <https://cfatl.org/recent-publications>.

Community Events & Seminars



Atlanta Great Strides

Saturday, May 16th

8:30 am registration and 9:30 start

Suwanee Town Center

Great Strides towards a Cure for Cystic Fibrosis

Join us for a 3-mile walk to support our mission to cure cystic fibrosis. This Cystic Fibrosis Foundation community event brings together those working towards a cure for CF and raises awareness, support and funds. Great Strides is the CFF's largest national fundraising event.

Click [here](#) for more details and to register. When registering, please choose the "CF@LANTA" team.

Upcoming CF-AIR Seminar Series Spring Schedule

SPRING 2026 SCHEDULE			
Date	Time	Type	Presenter
2-Apr	1-2 PM	Guest Lecturer	Andrea Kelly, MD, MSCE (CHOP)
9-Apr	1-2 PM	Journal Club	Diego Moncada, PhD
16-Apr	1-2 PM	Trainee Focused	Nathan Boyd, PhD (NIH)
23-Apr	1-2 PM	Research Highlight	Drs. Lisa Staimez, David Reiter & Priya Vellanki
30-Apr	1-2 PM	Social	Birthdays/Spring Potluck
7-May	1-2 PM	Guest Lecturer	Michelle Hastings, PhD (Michigan)
14-May	1-2 PM	Journal Club	JaNise Jackson, PhD
21-May	1-2 PM	Trainee Focused	Malinda Wu, MD, MSCR (Johns Hopkins)
28-May	1-2 PM	Research Highlight	Colin Swenson, MD
1-June	1-2 PM	Special Event	Joint Seminar with CCIV

Please contact Megan Stewart at megan.stewart@emory.edu for questions or additional information on our Seminar Series

Around the Research Organization



Registration is now open—reserve your spot today!

8th Annual Pediatric Early Career Researcher Conference

Friday, May 15, 2026
Arthur M. Blank Hospital
Children's Healthcare of Atlanta

Featuring a Keynote by Dr. Shari Barkin and over 114 Abstracts from Early Career Investigators Across All Pediatric Disciplines



Shari Barkin, MD, MSHS
Pediatrician-in-Chief
Children's Healthcare of Atlanta
George W. Brumley Jr. Professor
Department of Pediatrics
Emory School of Medicine





Register today by scanning the QR code or visit our main conference page at bit.ly/ECR-Conference for more information.



15th Annual Southeastern Pediatric Research Conference

**Bench to Bedside and Beyond:
Risk Factors and Intervention Strategies
in Childhood Disease and Injury**

FRIDAY, AUGUST 28, 2026
8:00 AM - 5:00 PM EDT
Georgia Aquarium

Event Highlights

- ▶ Keynote Lectures
- ▶ Networking Opportunities
- ▶ Selected oral abstract presentations
- ▶ Poster sessions & competition
- ▶ Complimentary evening aquarium admission & door prizes

SUBMIT ABSTRACT

All child health research topics welcome!
Deadline: June 26, 2026

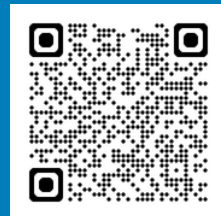
REGISTER HERE!

Early bird rate: Until Aug 14
\$125 General | \$75 Trainees
Regular rate: Aug 15 - 28
\$200 All (subject to availability)



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