13th Annual Southeastern Pediatric Research Conference

Pediatric Research in the Digital Age: Innovation, Collaboration, and Translation

CONFERENCE PROGRAM

June 7, 2024
Georgia Tech Hotel and Conference Center

PRESENTED BY

Children's Healthcare of Atlanta
EMORY UNIVERSITY
Georgia Institute of Technology
MOREHOUSE SCHOOL OF MEDICINE

13th Annual Southeastern Pediatric Research Conference

Welcome!

Dear Colleagues,

We would like to officially welcome you to the 2024 Annual Southeastern Pediatric Research Conference. Over the last 13 years, this conference has evolved from a small local event to a major regional conference bringing together clinicians, scientists, and engineers to highlight cutting edge child health research. We are pleased to welcome colleagues this year from throughout the United States, including Northwestern University and the University of Washington, as well as our colleagues throughout Georgia from institutions including Georgia State University and Mercer University.

This year's conference theme, "**Pediatric Research in the Digital Age: Innovation, Collaboration, and Translation**," explores the integration of technology into pediatric research and clinical practice. We will describe the current uses of digital health tools and artificial intelligence and discuss the ethical implications. We are also thrilled to welcome the first CRISPR treated patient, who will describe her gene therapy journey.

We extend our heartfelt gratitude to all participants, speakers, and sponsors for their invaluable contributions to this vital conversation. Together, let us explore, learn, and inspire as we navigate the exciting frontier of pediatric research in the digital age. We encourage you to take every opportunity to connect with fellow researchers today, forge new collaborations, and continue pushing the field of child health research.

Sincerely,

S. Lynn Gardner, MD, MBA, FAAP
Associate Professor and Chair
Director, Pediatric Residency Program
Department of Pediatrics
Morehouse School of Medicine

Vivien Sheehan, MD, PhD
Pediatric Hematologist/Oncologist
Aflac Cancer & Blood Disorders Center
Children's Healthcare of Atlanta
Associate Professor of Pediatrics
Emory University School of Medicine
Director of Translational SCD Research

W. Hong Yeo, PhD
Associate Professor and Woodruff Faculty Fellow of Mechanical Engineering and Biomedical Engineering
Director, Tech Semiconductor Electronics Center
Georgia Institute of Technology

TABLE OF CONTENTS

Accreditation Statement

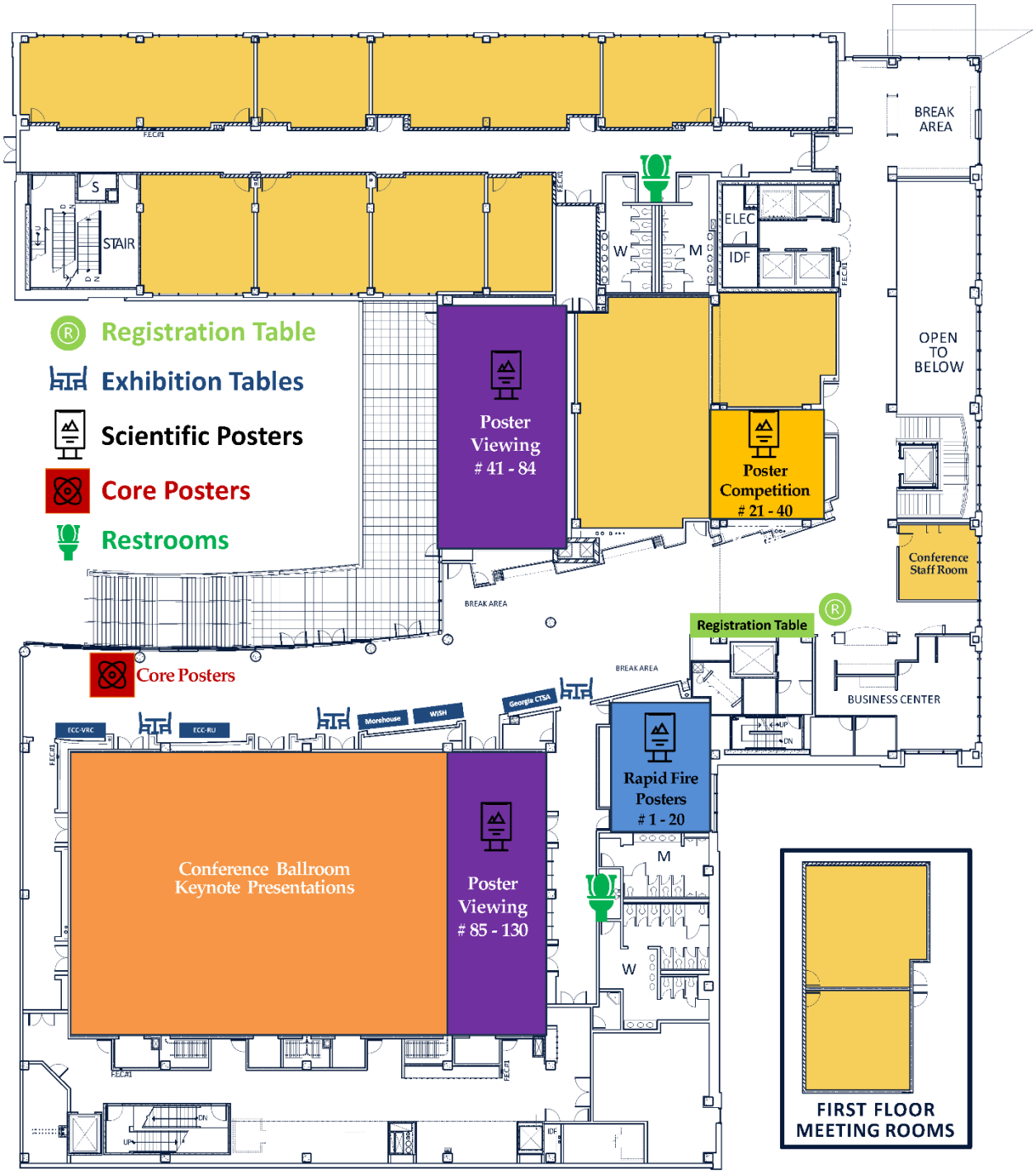
The Emory University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians. The Emory University School of Medicine designates this live activity for a maximum of ***5.5 AMA PRA Category 1 Credit(s)™.*** *Physicians should claim only the credit commensurate with the extent of their participation in the activity.*

@AtlPedsResearch | #pedsresearch2024

CONFERENCE MAP

2024 Conference Map

Please Note – Lunch will be served on the first floor



AGENDA

MORNING SESSION

7:00 – 8:00	**Registration and Continental Breakfast**
8:00 – 8:05	**Opening Remarks by Co-Chairs**
	S. Lynn Gardner, MD, MBA, FAAP Associate Professor and Chair Director, Pediatric Residency Program Department of Pediatrics Morehouse School of Medicine **Vivien Sheehan, MD, PhD** Pediatric Hematologist/Oncologist Aflac Cancer & Blood Disorders Center Children's Healthcare of Atlanta Associate Professor of Pediatrics Emory University School of Medicine Director of Translational SCD Research **W. Hong Yeo, PhD** Associate Professor and Woodruff Faculty Fellow of Mechanical Engineering and Biomedical Engineering Director, Tech Semiconductor Electronics Center Georgia Institute of Technology
8:05 – 8:15	**Welcome from Leadership**
	Lucky Jain, MD, MBA George W. Brumley, Jr. Professor and Chair Department of Pediatrics Emory University School of Medicine Chief Academic Officer, Children's Healthcare of Atlanta
8:15 – 8:25	**"Insights, Innovations, and Collaborations"**
	Kristy Murray, DVM, PhD Executive Vice Chair for Research and Professor, Department of Pediatrics, Emory University Chief Research Officer, Children's Healthcare of Atlanta

AGENDA

8:25 – 9:05	**"Soft Medical Wearables for Pediatric Care"**
	John Rogers, PhD Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Neurological Surgery (and by courtesy Electrical and Computer Engineering, Mechanical Engineering, Chemistry and Dermatology) Director of the Querrey Simpson Institute for Bioelectronics Departments of Materials Science and Engineering and Biomedical Engineering and Medicine McCormick School of Engineering Northwestern University
9:05 – 9:35	**"Immunophenotyping Pediatric Lung Diseases"**
	Ben Kopp, MD, MPH Associate Professor of Pediatrics Division of Pulmonology, Asthma, Cystic Fibrosis and Sleep (PACS) Co-Director, Center for Cystic Fibrosis and Airways Disease Research (CF-AIR) Co-Director, Pediatric Residency Investigative Scholars at Emory (PRISE) Director, Pulmonary Sickle Cell Program and Pulmonary & Sleep Physician Research Children's Healthcare of Atlanta Emory University School of Medicine
9:35 – 10:15	**Rapid-Fire Presentations**
10:15 – 11:00	**Break & Poster Session 1** – *Even Numbered Posters*
11:00 – 11:30	**"Gene Addition and Gene Editing Approaches as Transformative Therapies for Sickle Cell Disease"**
	Elizabeth Stenger, MD Assistant Professor Division of Hematology/Oncology/BMT - Bone Marrow Department of Pediatrics Emory University School of Medicine Medical Director, Cellular Therapy Laboratory Co-director, Sickle Cell Disease Curative Therapies Program Children's Healthcare of Atlanta
11:30 – 11:45	**"My Gene Therapy Journey"**
	Victoria Gray Patient Advocate and International Speaker
11:45 -1:00	**Lunch and Networking**

AGENDA

AFTERNOON SESSION

1:00 – 1:05	**Afternoon Welcome**
	Clint Joiner, MD, PhD Aflac Children's Chair for Hematology Director, Section of Hematology Aflac Cancer and Blood Disorders Center Professor of Pediatrics Emory University School of Medicine
1:05 – 1:45	**"In Vivo mRNA Delivery"**
	James Dahlman, PhD McCamish Foundation Early Career Professor Department of Biomedical Engineering Georgia Institute of Technology Emory University
1:45 – 2:25	**Rapid-Fire Presentations**
2:25 – 3:10	**Break & Poster Session 2** – *Odd Numbered Posters*
3:10 – 3:50	**"AI in Healthcare: Ensuring Actionable Insights and Equitable Implementation"**
	Yates Coley, PhD Associate Investigator Kaiser Permanente Washington Health Research Institute Affiliate Assistant Investigator in the Department of Biostatistics University of Washington
3:50 – 4:20	**"Health Equity Tracker"**
	Maisha Standifer, PhD, MPH Director, Health Policy Morehouse School of Medicine
4:20 – 4:25	**Presentation of Poster Awards**
4:25 – 4:30	**Closing Remarks**
4:30 – 5:00	**Reception with Door Prize Drawing at 4:45 PM** *Must be present to win*

SPEAKERS

Professor John A. Rogers obtained BA and BS degrees in chemistry and in physics from the University of Texas, Austin, in 1989. From MIT, he received SM degrees in physics and in chemistry in 1992 and the PhD degree in physical chemistry in 1995. From 1995 to 1997, Rogers was a Junior Fellow in the Harvard University Society of Fellows. He joined Bell Laboratories as a Member of Technical Staff in 1997 and then served as Director of the Condensed Matter Physics Research Department from the end of 2000 to 2002. He then spent thirteen years on the faculty at University of Illinois, most recently as the Swanlund Chair Professor and Director of the Seitz Materials Research Laboratory. In the Fall of 2016, he moved to Northwestern University where he is Director of the recently endowed Querrey-Simpson Institute for Bioelectronics. He has co-authored nearly 900 papers and he is co-inventor on more than 100 patents, more than 70 of which are licensed to large companies or to startups that have emerged from his labs. His research has been recognized by many awards, including a MacArthur Fellowship (2009), the Lemelson-MIT Prize (2011), the Smithsonian Award for American Ingenuity in the Physical Sciences (2013), the MRS Medal from the Materials Research Society (2018), the Benjamin Franklin Medal from the Franklin Institute (2019), a Guggenheim Fellowship (2021) and the IEEE Biomedical Engineering Award (2024). He is a member of the National Academy of Engineering, the National Academy of Sciences, the National Academy of Medicine and the American Academy of Arts and Sciences.

Benjamin Kopp, MD, MPH, ATSF, FAAP is an Associate Professor at Emory University, Director of the Pulmonary Sickle Cell Program and Director of Pulmonary and Sleep Physician Research at Children's Healthcare of Atlanta, Co-Director of the Cystic Fibrosis and Airway Disease (CF-AIR) Research Center, and Co-Director of the Pediatric Residency Investigative Scholars at Emory (PRISE). Dr. Kopp's NIH-funded research program focuses on innate immune regulation of chronic lung disease in children with CF and sickle cell. Dr. Kopp's advocacy and public health efforts center on increasing care for underserved populations and policies to prevent environmental impacts on respiratory health. Dr. Kopp graduated from Ohio State University School of Medicine and received his MPH from Ohio State University College of Public Health. He completed pediatrics residency and a pediatric pulmonology fellowship at Nationwide Children's Hospital.

Elizabeth Stenger, MD Msc is an Assistant Professor of Pediatrics in the Division of Pediatric Hematology/Oncology at Emory University School of Medicine. Dr. Stenger is Co-Director of the curative therapies program for sickle cell disease within the Aflac Cancer and Blood Disorders Center and Medical Director of the Cellular Therapies Laboratory at Children's Healthcare of Atlanta. Her research interests include improving outcomes and late effects following hematopoietic cell transplantation for sickle cell disease, and she has co-led multicenter investigator initiated clinical trials and registry-based studies through the Sickle cell Transplant Advocacy and Research (STAR) Alliance, where she also serves as medical director.

SPEAKERS

Victoria Gray is a mother of four from Forest, Mississippi, who in 2019 became the first patient with sickle cell disease to be treated with CRISPR gene editing. After a lifetime of pain and suffering caused by the disease, she has lived free of vaso-occlusive crises since the treatment. Today, she works full-time, enjoys family activities, and has been invited to speak nationally and internationally about her experience receiving the revolutionary gene-editing technique to treat a previously untreatable disease.

James Dahlman, PhD is the McCamish Early Career Professor in the Department of Biomedical Engineering at Georgia Tech and Emory School of Medicine. His lab works at the interface of chemical engineering, genomics, and gene editing by applying big data approaches to nanomedicine. His lab is known for developing DNA barcoded nanoparticles to measure how hundreds of nanoparticles deliver mRNA and siRNA in multiple cell types from a single animal in vivo. The lab uses these approaches to deliver RNA outside the liver. James was a co-founder and Board Chairman of Guide Therapeutics, which was acquired by Beam Therapeutics. His trainees have become investors, started companies, and work in some of the most cutting-edge organizations in RNA therapeutics. James received his Ph.D. in 2015 from the Harvard-MIT HST Program, where he studied with Robert Langer, and as a post-doc, studied CRISPR-Cas9 with Feng Zhang.

Yates Coley, PhD is an Associate Investigator in the Biostatistics Division of Kaiser Permanente Washington Health Research Institute and an Affiliate Assistant Professor with the University of Washington Department of Biostatistics. Dr. Coley's statistical research focuses on methods to develop and deploy clinical prediction models that are accurate, actionable, and equitable. They collaborate in many content areas including mental health, aging, cancer, health services, and health equity. Dr. Coley is particularly active in the emerging field of learning health system science and develops practical methods to enable rapid knowledge generation, synthesis, and application back into clinical practice to inform medical decision-making and improve care delivery. Dr. Coley was recently recognized with the Emerging Leader Award from the Committee of Presidents of Statistical Societies for their leadership in advancing statistical methods for learning health systems and clinical prediction models and in promoting equity, diversity, and inclusion in the profession and practice of statistics. Dr. Coley received a PhD and MS in biostatistics from the University of Washington and an AB in Environmental Science and Policy from Duke University.

SPEAKERS

Maisha Standifer, PhD, MPH has over 15 years of applied health program administration, evaluation and research expertise, including health policy development and analysis, mixed methods research and examining health disparities and inequalities domestically and globally. Her training as a Medical Anthropologist and public health practitioner has allowed her to apply unique insight within disparate and medically underserved populations. Her research focuses on the intersections between culture, health, and vulnerable communities. Her expertise is in qualitative and quantitative methods, research and evaluation, community engagement, women's healthcare, along with implementation and health services research. Dr. Standifer is also an Assistant Professor, and a Co-Investigator on multiple federally funded studies. Her research portfolio furthers production of community-based participatory research to create culturally tailored interventions that empower disenfranchised populations to make healthy informed decision-making life choices. Dr. Standifer continues to administer, develop and conduct studies and evidence-based prevention initiatives that effectively implement targeted strategies to reduce social determinants within vulnerable populations throughout the Diaspora. Dr. Standifer received her bachelor's degree at Spelman College, her master's degree in public health from Rollins School of Public Health at Emory University, and a doctorate in Applied Anthropology with a concentration in Medical Anthropology from the University of South Florida.

LUNCH NETWORKING SESSION

Join us for an enriching Lunch Networking Session for researchers seeking career development and valuable research resources. From 11:45 am to 1:00 pm, participants will have the opportunity to engage with leading professionals in the field, exchange insights, and explore avenues for collaboration. Whether you're looking to enhance your grant writing skills, pursue career growth opportunities, or access essential research tools, this session offers a dynamic networking and knowledge-sharing platform. Don't miss this prime opportunity to connect, learn, and expand your professional horizons.

RAPID-FIRE PRESENTATIONS

Click **here** to view the full Abstract Book, including all oral presentation abstracts and poster abstracts.

SESSION 1 – 9:35 – 10:15

Presenter	Title
2. Karina Bhattacharya, MS Research Scientist School of Industrial Design & School of Architecture Georgia Institute of Technology	Research and Retrofit of Powered Toy Cars to Develop Low-Cost Pediatric Mobility Solutions
4. Camilo Anthony Gacasan MD/PhD Student Rheinallt Jones Lab Emory University School of Medicine	The Beneficial Microbe, Lactococcus lactis Subspecies Cremoris, Drives Prevention of Metabolic Disease of Metabolic Disease and Hepatoprotection via Rewiring of Metabolic Pathways in the Gut and Liver
6. Jamie Kortanek Predoctoral Fellow Laura Edwards Lab Emory University School of Medicine Children's Healthcare of Atlanta	Preferential Attention to the Eyes of Others During Early Infancy Predicts Language Acquisition in Typically Developing Toddlers but Not in Autistic Toddlers
8. Luis Rene Mata Quinonez, MSME PhD Student Lakshmi Dasi and Holly Bauser-Heaton Labs Wallace H. Coulter Department of Biomedical Engineering at Emory University and Georgia Tech	Novel Computational Model for Planning Patent Ductus Arteriosus Stenting Procedure
10. Shanta Murthy, MS Bioinformatics Analyst Subra Kugathasan Lab Emory University School of Medicine	Making a Model: Examining Distinct Transcriptional Programs between Perianal Crohn's Disease Patient-Derived Organoids and Corresponding Mucosal Epithelium Using Single-Cell Transcriptomics
12. Chiemela Ohanele PhD Student Jennifer Kwong Lab Emory University School of Medicine	The Mitochondrial Citrate Carrier, SLC25A1, is a Dosage-Dependent Regulator of Metabolic Reprogramming and Morphogenesis in the Developing Heart
14. Douglas Saforo, MD, PhD Pediatric Resident Emory University School of Medicine	Strategic Targeting of Bcl2-family Protein Interactions in High-risk Neuroblastoma
16. Liberty Strange, MD, MPH Clinical Fellow Emory University School of Medicine	Hyperglycemia Severity and Patient-Reported Outcomes during Induction for Acute Lymphoblastic Lymphoma
18. Adrianna Westbrook, MPH Staff Scientist Chris A. Rees Lab Emory University School of Medicine	Prediction Modeling in Clinical Medicine: A Real-World Application to Identify Neonates at Risk for Post-Discharge Mortality
20. Lauren Zhou, MSME PhD Student Woon-Hong Yeo Lab Georgia Institute of Technology	All-in-One, Wireless, Nanomembrane Wearable Device for Continuous Health Monitoring of Neonates in Ethiopia

RAPID-FIRE PRESENTATIONS

SESSION 2 – 1:45– 2:25

Presenter	Title
1. Emmanuel Adediran PhD Student in Pharmaceutical Sciences Martin J. D'Souza Lab Mercer University	Non-invasive Nanovaccine for Influenza Administered Using Fast-Acting Buccal Film Induces a Robust Immune Response in a Murine Model
3. Katelyn Chiang, MPH PhD Student Jean Welsh Lab Nutrition and Health Sciences Rollins School of Public Health Emory University School of Medicine	Obesity Prevalence Trends in a Metro-Atlanta Pediatric Primary Care Practice: An Analysis of Well-Child Visit EHR Data – 2016-2023
5. Viswanath Gorti PhD Student Francisco E. Robles Lab Wallace H. Coulter Department of Biomedical Engineering at Emory University and Georgia Tech	Rapid, Point-of-Care Assessment of Bone Marrow Aspirate Adequacy via Deep Ultraviolet Microscopy
7. Kaitlyn Love Staff Scientist Jessica Raper Lab Emory University School of Medicine	Postnatal Zika Virus Infection Alters Temperament and Social Attention in Infant Rhesus Macaques
9. Jan Mooney, PhD Post-Doctoral Fellow Emory University School of Medicine	Dear Diary, Today Feels Different: Exploring Intra-individual Dynamics in Pain and Relevant Correlates for Youth with Chronic Sickle Cell Disease Pain
11. Teresa Oh, MD Clinical Fellow Emory University School of Medicine	Detection of Minimally Invasive Biomarkers for Pediatric Eosinophilic Esophagitis
13. Hazel Ozuna, PhD Post-Doctoral Fellow Ben Kopp Lab Emory University School of Medicine	Proteomics Profiling of Inflammatory Responses to Elexacaftor/Tezacaftor/Ivacaftor in Cystic Fibrosis
15. Viviane Schuch, PhD Post-Doctoral Fellow Erica L. Johnson Lab Morehouse School of Medicine	Innate Immunity in Placental Hofbauer Cells to HCMV and HIV Across Gestation and a Potential Role in Protection
17. Afra Toma, MS PhD Student Steven Goudy Lab Wallace H. Coulter Department of Biomedical Engineering at Emory University and Georgia Tech	Harnessing Bilayer Biomaterial Delivery of FTY720-Nanofibers to Enhance Oral Wound Healing
19. Jordan Zgodny Research Specialist Vivien Sheehan Lab Emory University School of Medicine	Evaluation of the Impact of a Naturally Occurring Beta Hemoglobin Variant, Hb G-Makassar, on Mature Red Blood Cell Function and Pathology in a Sickle Cell Disease Mouse Model

PEDIATRIC RESEARCH ALLIANCE CENTERS

Click **here** to learn more about the Pediatric Research Centers

Aflac Cancer and Blood Disorders Center
Director: Douglas K. Graham, MD, PhD

As one of the leading pediatric oncology, hematology, and blood and marrow transplant programs in the country, the Aflac Cancer and Blood Disorders Center of Children's Healthcare of Atlanta and Emory University is committed to developing new techniques, treatments, and cures to advance research and medicine in pediatric hematology/oncology. Through collaborative relationships with Winship Canter Institute of Emory University, Georgia Institute of Technology, and the Centers for Disease Control and Prevention, our more than 100 physicians and researchers study the following fields: Blood and Marrow Transplant (BMT), brain tumors, cancer survivorship, cell and gene therapy, hemostasis and thrombosis, leukemia and lymphoma, psychology, sickle cell disease, solid tumor, and transfusion medicine.

Center for Childhood Infections and Vaccines (CCIV)
Director: Mehul Suthar, PhD

Atlanta is a leading global center of infectious diseases research, rooted in research strengths at Emory University and the Centers for Disease Control and Prevention (CDC). Investigators from several additional institutions add to strengths in this area, including Georgia Tech, Morehouse School of Medicine, The University of Georgia, and the Medical College of Georgia. Children's Healthcare of Atlanta builds on these strengths through the Center for Childhood Infections and Vaccines (CCIV), working with partner institutions, to address major childhood infectious diseases through innovative research into microbial pathogenesis, immune responses in children, and the development of new vaccines and therapeutics. CCIV has five integrative focus areas designed to build new collaborations that lead to sustainable research programs, new grant opportunities, and important scientific discoveries. These focus areas include basic immunology and assay development, HIV research, respiratory and emerging pathogens, antimicrobial resistance and stewardship, and clinical trials.

PEDIATRIC RESEARCH ALLIANCE CENTERS

Center for Clinical and Translational Research (CCTR)
Directors: Claudia R. Morris, MD, FAAP and Miriam Vos, MD, MSPH

The Center for Clinical and Translational Research (CCTR) is the virtual home for pediatric clinical and translational research. The Center supports innovative clinical research studies and the translation of basic science discoveries into improved child health. The Center integrates closely with the Georgia Clinical and Translational Science Alliance (Georgia CTSA), an NIH/NCRR-sponsored component of the CTSA network. The Center offers many services related to conducting clinical research, including protocol scientific consultation, assistance with research/data safety monitoring plans, FDA regulatory consultation, clinical research resources (i.e., research education), research administration operations, and assistance with clinical and translational research growth.

Center for Cystic Fibrosis and Airways Disease Research (CF-AIR)
Directors: Nael McCarty, PhD and Benjamin T. Kopp, MD, MPH

The Center for Cystic Fibrosis and Airways Disease Research (CF-AIR), a component of Emory + Children's CF Center of Excellence (CF@LANTA), is dedicated to establishing a comprehensive program that enhances quality of life and longevity for individuals affected by CF and other airway diseases. Our aim is to be recognized as the top CF program, excelling in research, clinical care, and education. CF-AIR's research covers pulmonary and non-pulmonary aspects of CF, including CF-related bone disease (CFBD), liver disease (CFLD), diabetes (CFRD), mental health, and gastrointestinal issues. Additionally, we investigate asthma, COPD, and non-CF bronchiectasis. CF-AIR embraces interdisciplinary approaches and methodologies to achieve precision medicine and long-term disease management for individuals living with CF and other airway diseases.

Center for Gastroenterology, Endocrinology, & Nutrition Innovation (GENI)
Interim Director: Paul Dawson, PhD, FAASLD

The Center for Gastroenterology, Endocrinology, & Nutrition Innovation (GENI) aims to address the causes and consequences of the growing epidemic of childhood obesity through research into the underlying genetic, environmental, nutritional, and lifestyle factors. A primary focus is on understanding how overweight beginning in childhood leads to the early development of cardiovascular disease, steatotic liver disease, and diabetes. GENI's overarching goal is to identify those overweight children at greatest risk for poor health outcomes, develop new approaches for prevention and treatment of obesity-associated metabolic disorders/diseases, and change the life trajectories of these children toward a healthier future.

PEDIATRIC RESEARCH ALLIANCE CENTERS

Center for Immunity and Applied Genomics (CIAG)
Directors: Subra Kugathasan, MD and Greg Gibson, PhD

The Children's Center for Immunity and Applied Genomics (CIAG) is a multi-faceted center that focuses on both rare and complex disorders and works closely with physicians and researchers from Children's Healthcare of Atlanta, Emory University, and the Georgia Institute of Technology. In parallel with advances in genomics and other omics, which drives the increased application of precision medicine, CIAG is working to create personalized management plans to effectively manage, prevent complications, improve outcomes, and enhance the quality of life in both monogenetic and polygenetic forms of diseases, while developing precision therapeutics through pharmacogenomics and tailoring drug therapies to each patient's genetic and other omics makeup.

Center for ViroScience and Cure (CVC)
Directors: Baek Kim, PhD and Stefan Sarafianos, PhD

The mission of the Center for ViroScience and Cure (CVC) is to develop therapeutic and curative strategies that improve the lives of many who are battling acute, chronic, and difficult-to-treat virus infections and related complications. Our researchers have been highly successful in developing small molecules, from discovery to clinical use, for treating devastating human viral infections. These human viral infections include HIV/AIDS, HCV, HBV, SARS-CoV-2, Monkeypox, Ebola, Zika, Influenza, Norovirus, and others.

Children's Center for Neurosciences Research (CCNR)
Director: Timothy Gershon, MD, PhD; **Associate Director:** Stacy Heilman, PhD

The Children's Center for Neurosciences Research (CCNR) aims to promote translational pediatric neuroscience research. We seek to build multidisciplinary research teams that can bring insight from developmental neuroscience to the benefit of children with neurologic disorders. Areas of interest include epilepsy, sickle-cell anemia-associated stroke, neonatal brain injury, brain tumors, traumatic brain injury, developmental delays, and neuromuscular disorders. CCNR also provides education, seed funding, opportunities for collaboration, and resources and support.

PEDIATRIC RESEARCH ALLIANCE CENTERS

Children's Heart Research and Outcomes Center (HeRO)
Director: Mike Davis, PhD; **Associate Director:** Holly Bauser-Heaton, MD, PhD

The Heart Research and Outcomes Center (HeRO) seeks to reduce the morbidity of pediatric heart disease by leading the transformation of focused cardiac research into innovative therapies for young patients. Major areas of research include regenerative and nanomedicine technologies, cardiac development, cardiac outcomes, cardiac devices, and neurodevelopmental studies. HeRO's various research programs blend fundamental basic science with translational and clinical medicine to improve the quality of life of children with congenital heart disease.

Clinical Outcomes Research and Public Health (CORPH)
Interim Director: Shasha Bai, PhD

The Center for Outcomes Research and Public Health (CORPH) is a research center within the Department of Pediatrics at Emory University and Children's Healthcare of Atlanta focused on clinical outcomes and public health that promotes the development and oversight of high-quality epidemiologic and clinical research. Outcomes research seeks to link the health care that people receive with their experienced outcomes, with the hope of developing better ways to monitor and improve the quality of care. With strong ties to the Rollins School of Public Health at Emory University and to the Centers for Disease Control and Prevention, CORPH also identifies established investigators to mentor young investigators interested in pursuing careers in clinical research.

Marcus Autism Center
Director: Ami Klin, PhD

As one of the largest autism centers in the U.S., Marcus Autism Center offers families access to the latest research, comprehensive testing, and science-based treatments. We conduct research into why and how autism develops by studying the different trajectory for each child, and we establish evidence for best clinical practices. Areas of research focus include advancing autism treatment and care, clinical trials, early brain development, education science, neuroimaging, social neuroscience, and spoken communication. Our work translates research findings from the lab directly to the patient.

PEDIATRIC RESEARCH ALLIANCE CENTERS

Marcus Center for Pediatric Advanced Cellular Therapy (MPACT)
Director: Edwin M. Horwitz, MD, PhD

The Marcus Center for Pediatric Advanced Cellular Therapy (MPACT) provides the leadership and expertise necessary to facilitate the successful translation of the use of cellular therapies into treatments and cures for childhood diseases. The Center will provide an academic home for the entire spectrum of investigators working in cell therapy. MPACT will develop and maintain a broad portfolio of investigator-sponsored Investigational New Drug Applications (INDs). The overall goal of this center is to streamline the translation of scientific discoveries into early clinical trials.

Pediatric Technology Center (PTC)
Directors: Stanislav Emelianov, PhD and Wilbur Lam, MD, PhD
The Children's Healthcare of Atlanta Pediatric Technology Center at Georgia Tech (PTC) is a unique partnership that merges the expertise of clinical professionals from Children's Healthcare of Atlanta and the scientists and engineers of Georgia Tech. The Center is dedicated to addressing challenges in pediatric healthcare through the development of advanced technological solutions through interdisciplinary collaboration aiming to achieve breakthrough discoveries and expedite their translation from research to clinical application. By bringing new clinical processes and devices to market, the Center will improve the accessibility, efficiency, and quality of children's healthcare delivery in hospitals and communities that need it most.

PEDIATRIC RESEARCH ALLIANCE CORES

Click **here** to learn more about the Pediatric Research Cores
Visit the core posters during Poster Sessions

Animal Physiology Core
Scientific Director: David Archer, PhD; darcher@emory.edu
Technical Director: Rebeccah Wood, MA; rhunte5@emory.edu
Location: Emory University

The Animal Physiology Core provides pediatric researchers with services and equipment to develop and characterize animal models relevant to investigating pediatric diseases. We perform acute and survival surgery for small animals such as rats and mice. Surgical services include (but are not limited to) pulmonary and aortic banding, myocardial infarction, hindlimb ischemia, and ultrasound-guided injection for targeted drug delivery or cell therapy. Our VisualSonics Vevo 3100 High-Frequency Ultrasound system provides high-resolution small animal ultrasound examinations for noninvasive measurement of in vivo structure and function. Comprehensive cardiac exams, characterization of liver and kidney blood flow, measures of arterial stiffness, and imaging of tumor growth are some examples of available services. The directors also work with investigators to develop new surgical and imaging techniques to meet their needs.

Cardiovascular Imaging Research Core (CIRC)
Medical Director: Ritu Sachdeva, MD; sachdevar@kidsheart.com
Contact: Tara Edwards, MBA; tara.edwards@choa.org
Location: Children's Healthcare of Atlanta

Cardiovascular Imaging Research Core (CIRC) provides non-invasive cardiovascular imaging support for investigators involved in clinical research involving infants, children and adolescents. The CIRC has dedicated space, equipment, and experienced staff to provide high quality cardiovascular imaging services as well as post-processing of previously acquired images using specialized software. These services include performance of a routine complete or limited congenital or non-congenital two-dimensional echocardiography, color and spectral Doppler imaging, advanced echocardiographic imaging including three-dimensional echocardiography, tissue Doppler imaging, strain and strain rate imaging, stress echocardiography and cardiac magnetic resonance imaging. CIRC has also launched a program for assessment of vascular health in pediatric patients that includes non-invasive assessment of endothelial function using brachial artery flow-mediated dilation, measurement of arterial stiffness using applanation tonometry and assessment of structural arterial changes using carotid imaging.

PEDIATRIC RESEARCH ALLIANCE CORES

Clinical and Translational Discovery Core
Scientific Director: Christopher Porter, MD; chris.porter@emory.edu
Technical Director: Mimi Le, PhD; uqle@emory.edu
Location: Emory University

The Clinical and Translational Discovery Core offers support to investigators conducting basic science, epidemiologic, translational, and clinical research. The CTDC provides clinical sample processing and storage services for their subsequent use in hypothesis-driven clinical research, access to a variety of human biological specimens from both healthy control participants and patients with a variety of diagnoses, and support and advice on the conduct of clinical trials from initial study design and planning through the implementation and interpretation of molecular assays of drug targets and genomic correlates of disease. Our mission is to support and compliment the research efforts of qualified investigators by providing laboratory research services and access to biological samples that represent a variety of diagnoses and healthy volunteers.

Cystic Fibrosis Discovery Core
Director: Arlene Stecenko, MD; astecen@emory.edu
Co-Director: Lokesh Guglani, MD; lokesh.guglani@emory.edu
Contact: Chris Driggers; wdrigge@emory.edu
Location: Emory University

The CF Discovery Core accelerates CF research by providing researchers access to patient clinical samples through the CF Biospecimen Repository (CF-BR), along with valuable clinical data. The Core ensures scientific rigor and high-quality research through a dedicated Research Oversight Committee consisting of biostatisticians, clinicians, and researchers.

By studying CF disease pathogenesis and addressing pulmonary and non-pulmonary conditions such as CF-related bone disease (CFBD), liver disease (CFLD), diabetes (CFRD), mental health concerns, and GI issues, the Core aims to enhance CF care, treatment, and co-morbidity prevention. This necessitates interdisciplinary approaches to precision medicine and long-term disease management. Ultimately, the Core strives to translate scientific discoveries into tangible benefits for people with CF.

PEDIATRIC RESEARCH ALLIANCE CORES

Laboratory and Pathology Clinical Research Core
Director: Elizabeth Weinzierl, MD, PhD; elizabeth.weinzierl2@choa.org
Contacts: Cali Hulsey and Cheryl Stone, RN, MDIV, CCRP; labresearchcoordinator@choa.org
Location: Children's Healthcare of Atlanta

The Children's Healthcare of Atlanta Laboratory and Pathology Clinical Research Core provides clinical laboratory testing, specimen processing, research histology, phlebotomy and de-identified tumor bank specimens to investigators conducting research at CHOA (Egleston, Scottish Rite and the Center for Advanced Pediatrics) and affiliated organizations. The lab currently provides services for over 100 actively enrolling studies. It has a tiered pricing schedule, which is based on individual study sponsors and the time required for processing and shipping. The processing staff are all IATA and CITI trained to ensure research samples are processed accurately and shipped to laboratories around the world following federal regulations.

Laboratory for the Advancement of Diagnostics for a Just Society (The ADJUST Lab)
Director: Beverly B. Rogers, MD; beverly.rogers@choa.org
Contact: E. Kendall Williams, PhD; evelyn.williams@choa.org
Location: Children’s Healthcare of Atlanta

The Children's ADJUST lab is a Clinical Laboratory Improvement Amendments (CLIA) certified, College of American Pathologists (CAP) accredited lab that is validating, implementing, and helping to develop new diagnostic technologies to be used in locations from the clinical laboratory to the home. The focus is on testing that is accessible, reliable, and affordable for members of all communities and economic backgrounds. The lab sits within the clinical lab of Scottish Rite Hospital and is thus optimally situated to help identify and fill gaps in current diagnostic testing in pediatrics. Currently, the lab is partnering with industry for regulatory submissions such as 510k clearances, assists with analytical and clinical validation of clinical diagnostic tests, and is performing research and development for tests in the research arena.

PEDIATRIC RESEARCH ALLIANCE CORES

Pediatric Biomarkers Core
Scientific Director: Lou Ann Brown, PhD; lbrow03@emory.edu
Technical Director: Frank Harris; fharris@emory.edu
Location: Emory University

The Pediatric Biomarkers Core provides the equipment and technical expertise to assay samples using methods that combine the features of gas or liquid chromatography and mass spectrometry. These core services are applicable to a wide variety of sample types and will allow small-molecule metabolite profile identification. The Core has a Thermo Scientific Vanquish UHPLC/TSQ Quantis triple quadrupole mass spectrometer, a Thermo ISQ 7000 gas chromatograph/single quad mass spectrometer and three Waters High Performance Liquid Chromatographs with fluorescence, UV and electrochemical detectors.

The Biomarkers Core currently performs analysis of biomarkers of oxidative stress including reduced and oxidized glutathione, cysteine, cystine, amino acids, polyunsaturated fatty acids, isoprostanes, hydroxynonenal and malondialdehyde. This core also analyzes Fatty Acid Ethyl Esters, Phosphatidylethanols and Ethyl Glucuronide/Ethyl Sulfate from biological samples such as plasma, meconium, hair, placenta and bronchoalveolar lavage as markers of alcohol use and exposure. The core is located in the Emory-Children's Center.

Pediatric Biostatistics Core
Director: Scott Gillespie, MS, MSPH; scott.gillespie@emory.edu
Location: Emory University

The Pediatric Biostatistics Core was established in 2009 with a mission to support pediatric researchers at Emory University and Children's Healthcare of Atlanta, as well as child health researchers at several other Atlanta area institutions including Georgia Institute of Technology and Morehouse School of Medicine. The high-rigor statistical expertise provided by the core bolsters the quality of pediatric research to promote impactful and reproducible research findings across all child health disciplines. The Core provides in-house assistance and collaboration in study design, grant applications, protocol development, data analysis, publication preparation, and statistical education. In addition, the core also provides access to expertise using qualitative research methods including aid in the design, collection, and analysis of data collected through qualitative methodologies and approaches such as focus groups, interviews, and observations.

The Biostatistics Core is one of the most productive pediatric biostatistics units in the country, managing 400-500 active projects at any given time and collaborating on up to 100 grant applications and co-authoring 100-150 scientific articles every year.

PEDIATRIC RESEARCH ALLIANCE CORES

Pediatric Heart Diseases Data Registry Core
Scientific Director: Lazaros Kochilas, MD; lazaros.kochilas@emory.edu
Contact: Yanxu Yang, DrPH; yanxu.yang@emory.edu
Location: Emory University

The Pediatric Heart Diseases Data Registry Core (PHDDR) provides access to the rich collection of data from the Pediatric Cardiac Care Consortium (PCCC). The PCCC includes outcome events from surgical, catheter-based, and electrophysiologic interventions for multiple pediatric heart diseases. Between 1982 and 2011, over 300,000 event outcomes from over 140,000 patients have been collected. This core provides consultation assistance and can run queries and compile data for research investigators wishing to perform outcome studies related to pediatric heart diseases. Forms for requests of research projects can be found at www.pedsresearch.org/research/cores/phddcore and submitted for consideration to the staff of PHDDR.

Pediatric Research Development Core
Core Director: Julie Hawk, PhD; julie.lollar.hawk@emory.edu
Location: Emory Univesity

The Pediatric Research Development Core (formerly GEMS core) offers a full range of support services for grants, manuscripts, and other research products. The PRDC includes three broad categories of service: 1. General Resources and Services—ranging from boilerplate materials to manuscript and grant consultations and/or copyediting, these services are what GEMS core already offered; 2. Education and Training—providing both standard and custom curriculum for a range of research-related activities, these services currently focus tightly on grantsmanship and mentorship training; and 3. Proposal Development Service—a tiered suite of offerings to develop large research proposals, this service can provide support ranging from basic resources to full project management for the proposal development process, depending on the scope of the project and Investigator needs. More detailed information and forms for requesting service can be found here: https://www.pedsresearch.org/research/cores/prdc/overview/

PEDIATRIC RESEARCH ALLIANCE CORES

Pediatrics and Winship Advanced Flow Cytometry Core
Scientific Director: David Archer, PhD; darcher@emory.edu
Technical Director: Aaron Rae; ajrae@emory.edu
Location: Emory University

The Emory Pediatric and Winship Flow Cytometry Core is recognized by the International Society for Advancement of Cytometry (ISAC) for its commitment to best practices in flow cytometry. This recognition highlights the Core's dedication to establishing rigorous standards for Shared Resource Laboratories (SRLs), significantly enhancing data reproducibility and reliability. By setting a high benchmark, the Core serves as a model for other laboratories, nationally and internationally.

The Core offers comprehensive cytometry services, including cell analysis and sorting, along with expert consultation for experimental design and planning. The facility boasts access to several analytical flow cytometers (eight) and high-speed cell sorters (two). It also provides training and technical expertise to enhance the quality and scope of research.

For any questions regarding cytometry services, please contact Aaron Rae. Additionally, the Flow Cytometry Core offers immunological-based assay services. For inquiries related to these services, please reach out to the Core Director, David Archer.

OTHER CORES AND FACILITIES

Center for Systems Imaging Core
Director: John Oshinski, PhD; jnoshin@emory.edu
Location: Emory University

The Center for Systems Imaging Core (CSIC), one of the Emory Integrated Core Facilities (EICF), provides state-of-the art research and pre-clinical human and animal imaging to the Emory community. The CSIC supports the Center for Systems Imaging (CSI), which is the cross-disciplinary scientific, administrative, and educational home for imaging science at Emory University. The goals of this center are to: (1) support the advancement of scientific research focused on the development of imaging biomarkers, (2) promote the development and application of biomedical imaging technology particularly magnetic resonance imaging, (3) provide core services for human and animal imaging studies, and (4) to build cross-cutting educational and training programs.

The major imaging equipment housed at CSIC includes: a State licensed radiochemistry lab, a 18 MeV GE PETrace cyclotron, three 3T MRI (Siemens Prisma) scanners and one 7T MRI (Siemens Terra) scanner, a GE3T PET/MRI scanner, a Siemens Biograph PET/CT system, a XCT 2000 (qCT) scanner, an Inveon micro PET-CT system, and two Bruker small animal MRI scanners (9.4T and 11.7T).

Emory + Children's Health Informatics Core
Director: Evan Orenstein, MD; evan.orenstein@choa.org
Co-Director: Naveen Muthu, MD; naveen.muthu@choa.org
Location: Emory University

The Emory + Children's Health Informatics Core (HIC) provides state-of-the-art informatics expertise to quality improvement advocates and investigators aiming to leverage electronic health record (EHR) data and related technologies for research, multicenter collaboration, and interventions to promote health in children. It aims to accelerate data-driven insights and technologies that improve outcomes for kids, families, and clinicians. The HIC sits under CORPH with leadership in the Emory + Children's Pediatric Institute and engineering and research staff spanning Emory and Children's.

The HIC is divided into three units:

1. ***The Data Delivery Unit*** (DDU) aims to reduce the time from question to insight for clinical researchers and quality improvement advocates at Emory + Children's and their partners. It focuses on extracting data from the EHR for research-specific and multicenter quality collaborative requests, including data available in existing self-service tools, extracts from standardized databases for multicenter collaboration (e.g. Observational Medical Outcomes Partnership, OMOP), and/or custom requests. The DDU is led by a physician informaticist with expertise in clinical workflows, EHR data models, and extraction techniques. The DDU also

includes data analysts with experience in Structured Query Language, EHR data models, and familiarity with OMOP and other tools.

2. ***The Innovation Unit*** (IU) aims to collaborate with researchers and innovators to produce technology-enabled care that demonstrably improves outcomes for kids, families, and clinicians. It focuses on translating novel ideas into pilot technologies that can be tested iteratively, de-risked, and scaled up if successful. The IU is led by a physician informaticist with expertise in usability, clinical decision support, study design and improvement methodologies, data extraction, and multicenter collaboration.
3. ***The Collaboration Unit*** (CU) is responsible for the technical infrastructure to accelerate activities of both the DDU and the IU. These include developing and maintaining databases for multicenter collaboration (e.g. OMOP), storage and accessibility of high frequency data (e.g. waveforms) for predictive analytics, database connections and linkages for analytics and innovation purposes, and charting a roadmap to reduce barriers for ongoing innovative informatics research.

Emory Integrated Core Facilities
Director: Adam Marcus, PhD; aimarcu@emory.edu
Location: Emory University

The Emory Integrated Core Facilities (EICF, www.cores.emory.edu) include 16 core facilities and the Division of Animal Resources that provide Emory investigators access to the latest cutting-edge platforms. These platforms support animal, big data, multi-omics, and imaging research tools used in a wide variety of research applications.

Emory Integrated Genomics Core
Director: Lyra Griffiths, PhD; lmbooke@emory.edu
Location: Emory University

The Emory Integrated Genomics Core (EIGC), one of the Emory Integrated Core Facilities (EICF), is supported by the Winship Cancer Institute, the Georgia Clinical & Translational Science Alliance, and the Emory University School of Medicine. We help investigators use the latest genomics technologies in their research.

OTHER CORES AND FACILITIES

Emory Integrated Lipidomics and Metabolomics Core
Director: Eric Ortlund, PhD; eortlund@emory.edu
Contact: Kristal Maner-Smith, PhD; kmaners@emory.edu
Location: Emory University

The Emory Integrated Lipidomics and Metabolomics Core (EILMC) facility provides quantitative lipidomics and small metabolites analyses on samples from a wide variety of biological matrices, e.g. blood, serum, plasma, solid tissues, cell extracts, etc., to support both clinical and basic research efforts on campus. These analyses will provide insight on signaling molecules whose abundance can be monitored as biomarkers to predict and follow progression of a wide range of diseases, such as metabolic disorders (e.g., obesity, Type II diabetes, and NAFLD), neurodegenerative diseases (e.g., Alzheimer's Disease and Parkinson's Disease), and cancer (e.g., prostate cancer and breast cancer).

General Equipment Core
Core Director: Kira Moresco, MS; kira.moresco@emory.edu
Location: Emory University

The General Equipment Core and Specimen Processing is located within Emory-Children's Center (ECC) and the Health Science Research Building (HSRB). It provides access to shared equipment to all Emory and Children's affiliated investigators. Shared equipment includes ultracentrifuges, RT-PCR, gel documentation systems, TopCount system, developer, and specimen processing resources.

Integrated Cellular Imaging Core
Scientific Director: Adam Marcus, PhD; aimarcu@emory.edu
Core Director: Laura Fox-Goharioon; lfoxgoh@emory.edu
Location: Emory Univesity

The Integrated Cellular Imaging Core (ICI), one of the Emory Integrated Core Facilities (EICF), is housed in five main locations within the central research and clinical area of Emory's campus the ICI hosts 21 microscopes and 5 workstations in approx. 3400 sq ft of scope room, wet space, and bench space. Each location has available wet space for basic preparations, in addition to being located within close proximity to multiple lab spaces, allowing for easy access to researchers own preparation areas. We house 21 different microscopes ranging from basic widefield setups to the more advanced and cutting edge. These include confocal, spinning disk, multiphoton, super-resolution (SIM and STED), and light sheet (including a 3i lattice light sheet and Miltenyi Blaze LFOV), with 13 systems (including at least from each modality) equipped for live cell conditions.

OTHER CORES AND FACILITIES

MSM/RCMI Research Core Facilities
Technical Director: Vincent C. Bond; vbond@msm.edu
Contact: Pamela Alexander; palexander@msm.edu
Location: Morehouse School of Medicine

Major support for the biomedical research infrastructure at Morehouse School of Medicine (MSM) is received through the Research Centers in Minority Institutions (RCMI) Program, sponsored by the National Institute on Minority Health and Health Disparities (NIMHD) of the National Institutes of Health (NIH), Grant number U54MD007602. With RCMI funding, state-of-the-art biomedical research technology cores, shared-use facilities, and other resources at MSM are available to our scientific investigators. RCMI support has fostered the development of areas of research focus at MSM (e.g., Cardiovascular Disease, HIV/AIDS, Neuroscience, Reproductive Biology, and Molecular Immunology). Morehouse School of Medicine's record of research development, and its research enterprise, is in large part due to the support received from the RCMI Program. Currently, there are five "umbrella" cores encompassing multiple labs that focus on similar technologies: Protein Profiling, Biomedical Technology Service Lab (BTSL), Biological Manipulation, Cells and Tissues Imaging and Gene Profiling.

Pediatric Research Unit
Director: Stephanie Meisner, RN, BSN, CCRP; stephanie.meisner@choa.org
Manager: Cheryl Stone, RN, MDiv, CCRP; cheryl.stone@choa.org
Team Lead: Michelle Popler, RN, BSN, CCRP; michelle.popler@choa.org
Location: Children's Healthcare of Atlanta

The Pediatric Research Unit (PRU) was created to facilitate Children's Healthcare of Atlanta's vision for clinical excellence and to support the mission to make kids better today and healthier tomorrow. Inpatient and outpatient units offer core support facilities and resources including nursing, pharmacy, laboratory, and bio nutrition. The PRU supports studies of children with asthma and allergy, cardiac disease, hypertension, Crohn's disease, types 1 and 2 diabetes mellitus, kidney and hepatic disease, sickle cell, and cystic fibrosis among others. Research studies follow exacting standards for delivering the interventions and collecting the requisite data.

The PRU is located on the 5th floor of the Center for Advanced Pediatrics. The research-focused 4,327 square feet of space with six dedicated exam rooms, an observational rooms, a triage room and consult room, and dedicated workspaces for coordinators and PIs. Investigational Drug Services is located within the PRU as well as a new Emory research lab. To learn more about how the PRU can support your research, please call the PRU at 404-785-0400, or email Michelle Popler, RN, BSN, CCRP, Clinical Research Team Lead, at Michelle.Popler@choa.org.

OTHER CORES AND FACILITIES

Petit Institute Core Facilities
Director: Steve Woodard; steve.woodard@ibb.gatech.edu
Location: Georgia Institute of Technology

The Petit Institute's Core Facilities serve as a shared resource for the bioengneering and bioscience community. Consultation, training and technical support are available for a variety of research projects. Users have access to over 100 pieces of instrumentation and a host of specialized services.

Systems Mass Spectrometry Core
Technical Director: David Smalley; dsmalley@gatech.edu
Location: Georgia Institute of Technology

The System Mass Spectrometry (SyMS) Core provides state-of-the art instrumentation, resources, and technical support in both proteomics and metabolomics to Georgia Tech and the surrounding research community. Standard proteomics services include protein identification of simple and complex mixtures, relative protein quantification, and protein characterization. Standard metabolomics services include both targeted assays for various analyte classes as well as untargeted assays to evaluate metabolome alterations in biofluids and tissues-generating new hypotheses. More specialized services, such as global phosphoproteome analysis (among others), are available to examine cellular pathway activation. Customized research needs will also be met through the incorporation of new technologies.

ACKNOWLEDGEMENTS

Thank you to the conference speakers for graciously sharing their expertise.

Thank you to **Kelley Shaffer** and the **Georgia Tech Hotel and Conference Center** for all their assistance.

Thank you to the planning committee for their efforts in making this conference a success.

Lynn Gardner, MD, MBA, FAAP
Vivien Sheehan, MD, PhD
W. Hong Yeo, PhD
Clinton Joiner, MD, PhD
Stacy Heilman, PhD
Carla Armour
Maryam Ehteshami, PhD
Shantisa Fulgham
Mary Anne Geryak, MS
Gillian Glauber
Debra Hamilton, MA, PsyS
Julie Hawk, PhD
Kristen Herzegh, MPH
Sarah Marie Huban, MA, CIP, CHRC
Kymry Jones, PhD
Mimi Le, PhD
Kevin Loop-Tapp
Clovis Sarmiento, MD
Megan Vallowe, PhD
Tracy Willoughby, MPH

Thank you to our generous sponsors for their support.

DIAMOND

Children's Healthcare of Atlanta

SILVER

EMORY UNIVERSITY
Department of Pediatrics

BRONZE

MOREHOUSE SCHOOL OF MEDICINE
Georgia CTSA
Georgia Clinical & Translational Science Alliance
Georgia Institute of Technology