Emory+Children's Pediatric Research Center Snapshot March 2016

Research Resources:

The resources to the right are available to all investigators affiliated with Children's Healthcare of Atlanta (CHOA), including medical staff, Emory Department of Pediatrics (DOP) faculty and staff, and those outside of the DOP and CHOA who are members of our research centers. We encourage involvement of all those interested in research throughout our system, and provide this as a guide to resources along with our research website <u>www.pedsresearch.org</u> . Our goals are to build infrastructure and programs that serve a broad community of scientists and clinicians engaged in pediatric research, and provide training in grant writing and grant opportunities that enhance our extramural funding for all child health investigators affiliated with Children's Healthcare of Atlanta, For suggestions and comments on any of the initiatives and resources, please contact Paul Spearman, MD (paul.spearman@emory.edu).

Grant and Manuscript Support

- Stacy Heilman, PhD Grants Advocate 404-727-4819 stacy.heilman@emory.edu
- Assistance with finding grant opportunities and connecting to collaborators
- Core laboratory assistance, supervision

Grants & Manuscript Editing

- Prioritized for extramural funding opportunities, program projects
- Experienced at program project management, grant and scientific paper editing
- Request form on pedsresearch.org; send to Stacy Heilman

Clinical studies/coordinators

- CHOA Clinical Research Administration Kris Rogers, RN, CRA, Director
 - Kris Rogers, RN, CRA, Directo 404-785-1215
 - Kristine.rogers@choa.org
- Manager, Egleston campus: Allison Wellons 404-785-6459 Allison.wellons@choa.org
- ➤ Manager, Hughes Spalding/ Scottish Rite campuses: Beena Desai 404-785-2269 beena.desai@choa.org
- Nurse Manager, Pediatric Research Unit (PRC/Egleston): Stephanie Meisner, RN Stephanie.Meisner@choa.org 404-785-0400-main number

Emory Clinical Research Services

Amanda Cook, Director
404-727-5234 amcook@emory.edu

Scientific Facilities Manager

Kira Moresco, MS <u>kira.moresco@emory.edu</u> 404-727-6515

Equipment Core: Biosafety cabinet, incubators, clinical centrifuge, real-time PCR machine, standard PCR machine, multilabel plate reader, gel documentation system on order Services: This core provides common equipment for investigator's use, including access to benchtop space and hood space, centrifuges for clinical specimen processing

Biostatistics Core

Research Resources

- Courtney McCracken, PhD
 - Traci Leong, PhD
 - Scott Gillespie, MS
 - Mike Kelleman, MSPH
 - Curtis Travers, MPH
 - Elizabeth Wang

Procedure: Request form located at: http://www.pedsresearch.org/cores/detail/biostats

Priorities: analysis for grant applications and Publications

Pediatric Research Unit

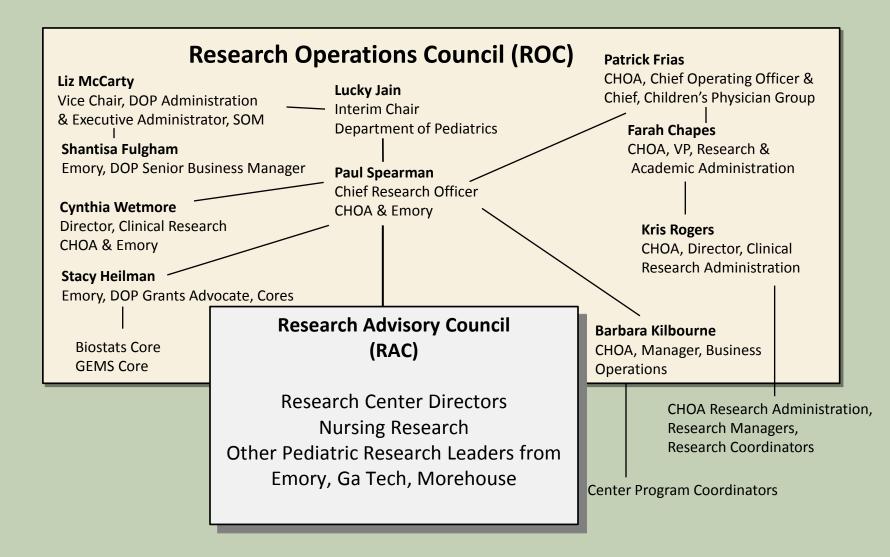
(PRC/Egleston) Services— A four-bed outpatient research unit/ A four-bed inpatient research unit/ A core research lab/A research pharmacy/ Bionutrition services/Nursing Services including, but limited to: Medication administration including investigational drugs; I.V. access and port access; I.V. infusions; Routine and complex vital sign monitoring; Phlebotomy; Timed specimen collections such as PK trials and oral glucose tolerance tests; Telemetry monitoring; For more information, please visit:

please visit: http://www.pedsresearch.org/clinicalresearch/pediatric-research-center/

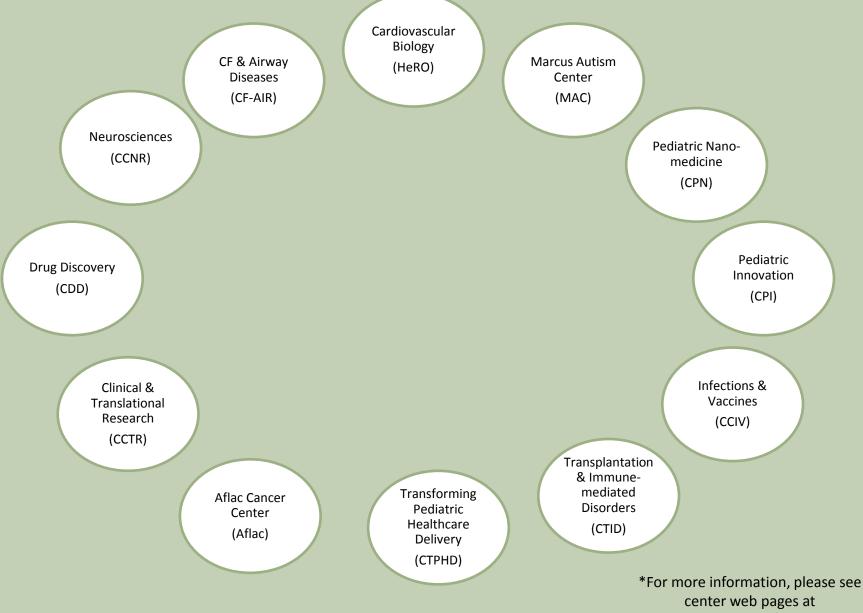
Laboratory Specimen Processing: Clinical Laboratory at Egleston and Scottish Rite

- ➤ Heather MacDonald, Manager Advanced Diagnostics Laboratory 404-785-5766
 - Heather.macdonald@choa.org
- Clinical trials specimen processing, shipping, limited storage
- ACTSI processing lab
- Laboratory inventory management system (LIMS) available

Research Leadership:



Emory+Children's Pediatric Research Centers*



Research Snapshot March 2016

pedsresearch.org

Emory+Children's Pediatric Research Center Contacts

Center Directors:

Aflac Cancer and Blood Disorders Center

Center Director: Doug Graham, MD, PhD

douglas.graham@choa.org
Program Coordinator: Faith Barron
faith.barron@emory.edu

Children's Heart Research and Outcomes Center

Center Director: Mike Davis, PhD michael.davis@bme.gatech.edu Program Coordinator: Kristen Herzegh, BA, MPH kcoshau@emory.edu

Center for Clinical and Translational Research

Center Director: Cynthia Wetmore, MD, PHD cynthia.wetmore@emory.edu Program Coordinator: Kristen Herzegh, BA, MPH kcoshau@emory.edu

Center for Cystic Fibrosis & Airways Disease Research

Center Director: Nael McCarty, PhD namccar@emory.edu

Program Coordinator: Karen Kennedy, PhD kmurra5@emory.edu

Center for Drug Discovery
Center Director: Baek Kim, PhD

Baek.kim@emory.edu
Program Coordinator: Karen Kennedy, PhD
kmurra5@emory.edu

Center for Childhood Infections and Vaccines

Center Director: Marty Moore, PhD

Martin.moore@emory.edu
Program Coordinator: Karen Kennedy, PhD

Children's Center for Neurosciences Research

Center Director: Ton deGrauw, MD, PhD ton.degrauw@choa.org

Research Director: Alex Kuan, MD, PhD

<u>alex.kuan@emory.edu</u> Program Coordinator: Jennifer Villaseñor

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kmurra5@emory.edu

Center for Pediatric Innovation Co-Center Directors: Bob Guldberg, PhD and Kevin Maher, MD

<u>robert.guldberg@me.gatech.edu</u> and <u>maherk@kidsheart.com</u>

Program Coordinator: Hazel Stevens hazel.stevens@me.gatech.edu

Center for Pediatric Nanomedicine Center Director: MG Finn, PhD

mgfinn@gatech.edu

Co-Director: Tom Barker, PhD
thomas.barker@bme.gatech.edu
Program Coordinator: Erin Kirshtein
Erin.kirshtein@bme.gatech.edu

Center for Transplantation & Immunemediated Disorders

Center Director: Subra Kugathasan, MD

skugath@emory.edu

Program Coordinator: Jennifer Villaseñor

jkenny@emory.edu

Center for Transforming Pediatric Healthcare Delivery

Center Director: Beth Mynatt, PhD

mynatt@cc.gatech.edu Program Coordinator: TBN

Marcus Autism Center Center Director: Ami Klin, PhD Director of Research: Warren Jones, PhD

ami.klin@emory.edu or ami.klin@choa.org and warren.r.jones@emory.edu

Associate Director of Research, Chris Gunter, PhD

<u>Chris.gunter@emory.edu</u> Program Coordinator: Christina Wessels

Christina.wessels@choa.org

Research Center Administration:

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Executive Medical Director, Faculty Practices of the Children's Physician Group Ijain@emory.edu

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Chief Operating Officer & Chief, Children's Physician Group, Children's Healthcare of Atlanta pat.frias@choa.org

Paul Spearman, MD

Nahmias-Schinazi Professor & Chief, Pediatric Infectious Diseases, Chief Research Officer, Children's Healthcare of Atlanta, Vice Chair for Research, Dept of Pediatrics, Emory University paul.spearman@emory.edu

Cynthia Wetmore, MD, PhD

Director, Center for Clinical & Translational Research and Director, Clinical Research for Children's & Emory Dept of Pediatrics, Emory University Cynthia.wetmore@emory.edu

Farah Chapes

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Liz McCarty

Vice Chair, DOP Administration & Executive Administrator, SOM.mmccar2@emory.edu

Shantisa Fulgham

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Director of Programs & Grants Advocate, Department of Pediatrics, Emory University & Children's Healthcare of Atlanta stacy.heilman@emory.edu

Barbara W. Kilbourne, RN, MPH

Manager, Business Operations, Research Strategy Leadership, Children's Healthcare of Atlanta barbara.kilbourne@choa.org

Emory+Children's Pediatric Research Center

Locations and Contacts:

Emory Campus/Egleston

Emory-Children's Center (E-CC)

2015 Uppergate Drive Atlanta, GA 30322



Health Sciences Research Building (HSRB)

1760 Haygood Drive, NE Atlanta, GA 30322



Egleston hospital

1405 Clifton Road Atlanta, GA 30322



Chief Research Officer Paul Spearman, MD

Paul.spearman@emory.edu

Manager, Business Operations: Barbara Kilbourne, RN, MPH

barbara.kilbourne@choa.org

Manager, Egleston campus: Allison Wellons allison.wellons@choa.org

Centers:

Aflac Cancer and Blood Disorders Center

Program Coordinator: Faith Barron faith.barron@emorv.edu

Children's Heart Research and Outcomes Center

Program Coordinator: Kristen Herzegh, BA, MPH kcoshau@emory.edu

Children's Center for Clinical and Translational Research

Program Coordinator: Kristen Herzegh, BA, MPH kcoshau@emory.edu

Center for Cystic Fibrosis & Airways Disease Research

Program Coordinator: Karen Kennedy, PhD kmurra5@emory.edu

Center for Drug Discovery *Program Coordinator: Karen Kennedy, PhD kmurra5@emory.edu*

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Children's Center for Neurosciences Research Program Coordinator: *Jennifer Villaseñor jkenny@emory.edu*

Center for Transplantation & Immune-mediated Disorders Program

Coordinator: Jennifer Villaseñor <u>jkenny@emory.edu</u>

Marcus Autism Center

1920 Briarcliff Road, NE Atlanta, GA 30329

Associate Director of

Research, Chris Gunter, PhD

Chris.gunter@emory.edu

Program Coordinator:

Christina Wessels

Christina.wessels@choa.org



Georgia Institute of Technology

Main Contacts:

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Chief Engineer, Pediatric Technologies: Leanne West

<u>Leanne.West@gtri.gatech.edu</u>

75 5th Street Atlanta, GA 30308

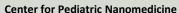


Center for Pediatric Innovation

Parker H. Petit Institute for Bioengineering & Bioscience 315 Ferst Drive, NW

Atlanta, GA 30332

Program Coordinator: Hazel Stevens <u>hazel.stevens@me.gatech.edu</u>



Department of Biomedical Engineering

313 Ferst Drive

Atlanta, GA 30332

Program Coordinator: Erin Kirshtein <u>Erin.kirshtein@bme.gatech.edu</u>

Center for Transforming Pediatric Healthcare Delivery

College of Computing 801 Atlantic Drive Atlanta, GA 30332

Center Director: Beth Mynatt, PhD mynatt@cc.gatech.edu



Scottish Rite Hospital*

1001 Johnson Ferry Road NE Atlanta, GA 30342-1605

Director, Center for Clinical and Translational
Research: Cynthia Wetmore, MD, PHD

cynthia.wetmore@emory.edu

Program Coordinator: Kristen Herzegh, BA,

MPH <u>kcoshau@emory.edu</u>

Manager, SR Campus: Beena Desai

Beena.desai@choa.org

*Research Office located in the Medical Library on the Ground Floor

Hughes Spalding Hospital

35 Jesse Hill Jr. Drive SE Atlanta, GA 30303-3032 Research Coordinator, Saadia Khizer Saadia.khizer@choa.org



Morehouse School of Medicine

PI: Beatrice Gee, MD, AB, FAAP bgee@msm.edu PI: Lily Immergluck, MD, FAAP Limmergluck@msm.edu



Research-sponsored events/meetings:

(This is an overview, for specific dates/events, go to: http://www.pedsresearch.org/calendar)

MONDAYS	TUESDAYS	WEDNESDAYS	THURSDAYS	FRIDAYS	VARIOUS DAYS
Research Operations Council (ROC) meetings: occurs weekly at HSRB, E360. Designed for central team to discuss detailed operations and issues.		Research Brainstorming Sessions: Help as needed to allow development and exploration of special research topics. For suggested topic nominations, contact (Stacy.heilman@emory .edu)		PeRCS: 10 AM coffee social every 1 st and 3 rd Friday, usually held 3 rd floor break area, E-CC	Research Advisory Council (RAC) meetings: twice monthly; restricted to RAC membership, contact Paul Spearman for inquiries or suggestions paul.spearman@emory.edu
K club: Monthly discussions/lectures for K award training, other grants training/education. Typically 2 nd Monday, September to May, Contact Stacy Heilman (Stacy.heilman@emory.edu) for more information. Sponsored by Departments of Pediatrics and Medicine and ACTSI.		Research Grand Rounds: 3 rd Wednesday of month, Egleston, 7:30 AM		Research Seminars: Fridays (Egleston Classrooms). Contact Barbara Kilbourne for suggestions or needs (barbara.kilbourne@choa.org)	Invited speakers through seminar series sponsored by centers; contact Center Directors or Barbara Kilbourne at barbara.kilbourne@choa.org if interested in upcoming events. Center Directors are listed on pedsresearch.org website.

Specialized Research Equipment/Service Cores:

CORE	SCIENTIFIC DIRECTOR	TECHNICAL DIRECTOR/ CONTACT	EQUIPMENT	LOCATION	SERVICES
Animal Physiology Core	Mary Wagner, PhD mary.wagner@emory.edu 404-727-1336	Rong Jiang, MD rjiang2@emory.edu	 Small animal ventilator Cautery Temperature monitoring Anesthesia system Dissecting microscope Visualsonics Vevo 2100 High Frequency Ultrasound* 	Emory-Children's Center, 2 nd Floor Lab	This core is a centralized resource specializing in survival surgery for rats and mice in addition to assistance with other USDA regulated animals such as rabbits, guinea pigs and piglets. The core director assists all investigators with development of IACUC protocols. Surgical services currently offered by the Core include pulmonary banding in rat and neonatal rabbit, aortic banding, myocardial infarction 5/6th nephrectomy for chronic kidney disease, liver-ischemia reperfusion and ultrasound guided injection ideally suited for targeted drug or cell therapy delivery. The Core also has available for use a Visualsonics Vevo 2100 High Frequency Ultrasound system that allows high resolution small animal ultrasound examinations for noninvasive measurement of in vivo structure and function. The Core Technical Director has been extensively trained in ultrasound techniques with many years' experience thereby increasing reliability and reproducibility of imaging data. Studies can either be conducted in an assisted fashion or investigators can reserve the equipment and utilize their own laboratory personnel.
Biomarkers Core	Lou Ann Brown, PhD lou.ann.brown@emory.edu 404-727-5739	Frank Harris fharris@emory.edu	Agilent gas chromatography/mass spectrometer and Waters high performance HPLC with fluorescence detector	Emory-Children's Center, 3 rd Floor Lab	This cores analyzes markers of oxidative stress and markers of alcohol exposure. Speak to Scientific Director about other chromatography/mass spec assays available.
Cardiovascular Imaging Research Core (CIRC)	Ritu Sachdeva, MD sachdevar@kidsheart.com 404-785-CIRC	Heather Freidman Heather.friedman@choa. org	-Echocardiograms - Flow Doppler -3-D Imaging -Upright Bicycle -VO2 Analysis -Electrocardiogram -Cardiac MRI	Outpatient Cardiac Services, 2 nd Floor, Tower 1	This core provides non-invasive cardiac support for investigators involved in clinical research involving infants, children and adolescents. The CIRC has dedicated space, equipment and staff to provide you with quality cardiovascular imaging data that is collected in a meticulous, systematic, detail-orientated manner. Because of our unique set-up, we are able to utilize state-of-the-art imaging modalities not typically seen in the clinical setting.
Flow Cytometry/Cell Sorting	David Archer darcher@emory.edu	Technical Director for Core: Aaron Rae aaron.j.rae@emory.edu Immunology services are overseen by Bridget Neary bridget.e.neary@emory.edu	 BD FACS Canto II Flow Cytometer - Lab E-362, HSRB BD LSRII Flow Cytometer - Lab E-362, HSRB BD LSRII Flow Cytometer - Lab E-362, HSRB BD FACS Aria II Cell Sorter - Lab E-362A, HSRB Imagestream X Mark II - Lab E-362, HSRB Miltenyi AutoMACS Pro - Whitehead, RM 655 Luminex 100 Analyzer - Lab E-362, HSRB CTL-ImmunoSpot-S6 Micro Analyzer (ELISPOT Reader) - E-480, HSRB 	Health Sciences Research Building, E362	This core offers access to several state of the art analytical flow cytometers and Luminex as well as high-speed cell sorting. We also offer training as well as expert help to enable our users to improve the quality and scope of their research. The facility provides flow cytometric analyzers and Luminex for the following applications: Immunophenotyping Cell Cycle Ploidy Mitochondrial Potential Apoptosis PhosFlow Live/Dead Cell Proliferation Oxidative Burst Cytokine leveins in serum and plasma Gene and protein expression in cells and body fluids

Specialized Research Equipment/Service Cores (continued)

CORE	SCIENTIFIC DIRECTOR	TECHNICAL DIRECTOR/ CONTACT	EQUIPMENT	LOCATION	SERVICES
Resources Biorepository	Radiologists at Children's are board certified with additional training in pediatric imaging and are available for consultation upon request. This operation also includes physicists with imaging expertise and other staff experts. Cynthia Wetmore, MD, PhD Cynthia.wetmore@em ory.edu	bradley.hanberry@emory	Access to clinical CT (4), PET (1), Bone Densitometry (2), Fluoroscopy (8), Nuclear Medicine (4), Ultrasound (9) and X-ray. Access to 6 clinical MRI scanners including a 1.0T intraoperative, 1.5T and 3T systems. Access to 2 fMRI systems. Sedation Services Access to radiology investigators specializing in radiology, neuroradiology and interventional radiology. Access to MRI physicists (3). Access to research professionals including administrators and research coordinators. Administrative services including scheduling, archival of images Freezers (-80, LN2)	Health Sciences Research Building, E264	We provide a cross-disciplinary scientific, administrative, and educational home for imaging science through the Emory Center for Systems Imaging (CSI) and the Pediatric Imaging Research Core (PIRC) at Children's Healthcare of Atlanta. Inpatient Imaging Resources Outpatient Imaging Resources Outpatient Imaging Resources Collection Processing Storage in a variety of storage media and freezers, including liquid nitrogen and -80 degree freezers. Monitoring
					systems ensure 24/7 specimen integrity. Distribution - Specimens are tracked electronically via the Nautilus LIMS System. Samples Available for Withdrawal PBMCs, plasma, whole blood, DNA, and urine from pediatric patients with immune-mediated disorders, solid organ transplant recipients and/or patients with end-stage organ disease who are awaiting organ transplant Blood and urine from living kidney donors and healthy controls with renal diagnoses of rejection, stable function or viremia Clinical data also can be made available upon request.

Partnership Cores

CORE	SCIENTIFIC DIRECTORS	EQUIPMENT	LOCATION	SERVICES			
Integrated Cell Imaging Core	Adam Marcus, PhD Director, ICI aimarcu@emory.edu Alexa Mattheyses, PhD Associate Director, ICI mattheyses@emory.edu Neil Anthony, PhD neil.anthony@emory.edu 404-969-CORE	The rates for the microscopes included in this effort can be found at: http://ici.emory.edu/document/ICI %20Pediatrics%20Rates.pdf. Pediatric researchers will benefit from a 40% subsidy when using any of the ICI equipment and technologies. ICI also provides expert consultation, training, and assistance on all technologies. More information on the microscopes and services available, locations, and how to become a user is available at ici.emory.edu	A partnership facilitated by the Emory School of Medicine and includes the Emory+Children's Pediatric Research Center Cellular Imaging Core along with other cellular imaging sites on campus including Winship Cancer Institute, Emory NINDS Neuroscience Core Facilities (ENNCF), and the Department of Physiology	This core provides training and access to advanced cellular imaging systems, including confocal and TIRF microscopy. For more information: http://www.pedsresearch.org/cores/detail/cell-imaging			
Genetics/ Genomics Core Resources	The Emory Integrated Genomics Core (EIGC): Michael Zwick, PhD mzwick@emory.edu	technologies and methods of analysis microarray services, targeted enrichm	in their research. We offer n ent, single nucleotide polym ur custom Galaxy server and	ring Emory researchers the ability to use the latest ext-generation sequencing, high density orphism (SNP) genotyping, and cutting-edge Emory University's high performance computing ory Integrated Genomics Core.			
	Emory Genetics Laboratory (EGL): Madhuri Hegde, PhD, FACMG mhegde@emory.edu and Derek Stevens derek.stevens@emory.edu	Emory Genetics Laboratory (EGL) is a "one-stop shop" for genetic testing. Its molecular genetics, biochemical genetics, and cytogenetics laboratories are fully integrated and offer one of the most comprehensive test menus available – more than 900 genetic tests are available for clinicians and researchers. As part of Emory University School of Medicine, EGL remains on the forefront of the latest technologies, including exome sequencing, next generation sequencing, whole genomic and targeted microarrays, and more. ABMG-accredited laboratory directors and NSGC-certified laboratory genetic counselors are available to all ordering clinicians and researchers. For more information, please visit Emory Genetics Laboratory.					

Funding Opportunities:

Funding Opportunity	Funding Limit	Funding Term	Deadline	Eligibility	Post Award Expectations	Additional Information
Friends	\$25,000	12-18 months	Once annually	 Children's professional staff who do not also have a compensated faculty appointment Must be for clinical or outcomes research taking place in Children's facilities 	 Must provide annual and final reports. Must be willing to present findings to Friends groups, Children's leadership, etc. 	http://www.ped sresearch.org/re search- tools/research- funding/friends/
Research Center Pilot Grants (including Emory & GA Tech based centers)	\$50,000 (some GA Tech are \$60K)	12 months	Usually mid -winter; Emory- based are due roughly every other year and GA Tech- based offered every year	 Must include a member of the center and/or member of Children's medical staff GA Tech-based centers (CPN, CPI and IPaT/CTPHD) must also include member of GA Tech faculty 	 Must provide annual report specifying related publications, grant applications submitted and extramural funding received. Must apply for extramural funding within one year of project conclusion date. 	http://www.ped sresearch.org/re search- tools/research- funding/pilots/

Funding Opportunities (continued):

							Information
Dudley Moore Nursing and Allied Health Research Fund	\$15,000	6-18 months	Usually 1st Friday in May and 1 st Friday in October	and all who prone of locatio 2. Exclude regular appoin are em 3. Project impact patient given twill pro	dren's nursing ied health staff rovide services at Children's ins are eligible. es those with faculty itments or who aployed by Emory its must have an it care, priority is o projects that povide evidence to expractice.	Must be willing to present findings by request.	Fund restricted by donor to support nursing and allied health research at Children's
Quick Wins va	varies	12-24 months	ongoing	be sub compri from e Childre Tech. 2. The proaddres provide an unn clinical identifit techno	t proposals must mitted by teams ised of individuals ach organization, en's and Georgia oposals must as a project that es an answer to net business or need as ied by a clinician, plogist, or en's leader.	The project must be capable of delivering a workable solution (at minimum a validated "prototype") into the hands of a clinician or team within 18 months from the receipt of funds and project start.	https://pediatrico nnect.gtri.gatech.e du/grants

Additional Resources:

Research listserv:

Contact <u>barbara.kilbourne@choa.org</u> to be added to this listserv used to disseminate all pediatric research related announcements including seminars, funding opportunities, such as the BiRD (Bringing in Research Dollars), and the Weekly PREP (Pediatric Research Events and Programs).

Website:

www.pedsresearch.org

This is the central resource for research seminar info, contacts, cores, calendars, and forms.

Emory Library Resources

- http://www.healthlibrary.emory.edu/
- Ask a librarian: http://health.library.emory.edu/about/conta ct/ask.php

Scottish Rite and Egleston Library Resources

- Emily Lawson
 Clinical Information Librarian, Inman Medical Library at Children's at Egleston

 404-785-1481
- <u>Kate Daniels</u>
 Clinical Information Librarian at Scottish Rite
 404-785-2157
- If you have access to <u>Careforce</u> use the following link: http://careforceconnection/Departments/HumanResources/Learning%20Services/LibrarServices/Pages/Home.
 aspx
- If you do not have access to Careforce -- use the following link: http://www.choa.org/Health-
 Professionals/Physician-Resources/Medical-libraries.

NAME	РНОТО	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Bernardo A. Mainou, PhD		Center for Childhood Infections and Vaccines (CCIV)		September 2015	Pediatric Research Division of Pediatric Infectious Diseases Vanderbilt University School of Medicine	Dr. Mainou's research is focused on virus and host interactions, having developed expertise with enveloped DNA viruses as well as non-enveloped RNA viruses. As obligate intracellular pathogens, viruses require host cells to replicate, which has provided a strong platform to develop a series of assays to study cellular and viral processes. Dr. Mainou's research is centered on using knowledge from virus and cellular interactions to drive the development of viral therapeutics.
Sookyong Koh, MD, PhD				September 2015	& Robert H. Lurie Children's Hospital of Chicago	Dr. Koh is a pediatric neurologist and epileptologist. Her research interest is in inflammation of the central nervous system in relation to epilepsy, which she pursues currently in laboratory based animal models. In addition, Dr. Koh is interested in the clinical science of early-life onset seizure disorders and new onset seizures in general

NAME	РНОТО	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Doug Graham, MD, PhD		Aflac Cancer and Blood Disorders Center (Aflac)	Professor/ Center Director	August 2015	Children's Hospital Colorado, Center for Cancer and Blood Disorders, University of Colorado Cancer Center University of Colorado Anschutz Medical Campus	The Graham lab focuses much of its research on the role of Mer and Axl receptor tyrosine kinases(RTKs) in development and progression of human cancer. Mer is overexpressed in multiple human cancers and is transforming in vitro. With a particular focus on leukemia, lymphoma, and non-small cell lung cancer, the Graham lab has elucidated pro-survival pathways which are activated as a result of abnormal Mer and Axl activation. Specifically, the abnormal expression of Mer and/ or Axl leads to downstream activation of AKT and ERK 1/2 and mTOR, allowing cancer cells to survive even in the presence of apoptotic stimuli. In solid tumors, the Mer and Axl RTKs are important in cancer cell invasion. Using shRNA knockdown of Mer, a prolongation of survival has been found in xenograft studies. Recently, novel biologic inhibitors of Mer and Axl have been developed in the Graham lab and are being tested in preclinical in vitro and in vivo studies.
Eric J. Sorscher, MD		Fibrosis and	Professor/GRA Eminent Scholar	July 2015	Department of Medicine Professor, Department of Cellular, Developmental and Integrative Biology Professor, Department of Human Genetics University of Alabama at Birmingham School of Medicine	Investigates the structure and function of the gene product responsible for cystic fibrosis (i.e., the cystic fibrosis transmembrane conductance regulator, CFTR), and also evaluates new approaches to therapy, including the activation of alternate chloride secretory pathways in cystic fibrosis epithelia, molecular correction of mutant CFTR, and gene transfer-related aspects of cystic fibrosis using both viral and non-viral vectors. Involves the characterization of a novel mechanism for tumor sensitization using the E. coli PNP gene. In this approach, tumors are rendered hundreds or thousands of times more sensitive to conventional chemotherapy by expression of a prokaryotic enzyme that cleaves nontoxic nucleoside prodrugs to a very toxic form. The research involves analysis of the crystal structure of E. coli PNP, and structure-based drug design of novel compounds that would be effectively cleaved in vitro and in vivo. Gene transfer vectors that might be important in the treatment of human cancers are also developed and characterized.

NAME	РНОТО	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Dolores Hambardzumyan, PhD			Assistant Professor	June 2015	Department of Neurosciences, Cleveland Clinic Cleveland, Ohio	Her research interests are focused on adult and pediatric gliomas, specifically looking at the role of macrophages (the most abundant immune infiltrates in gliomas) and reactive astrocytes. She studies these stromal non-neoplastic cells in gliomagenesis and how they modify glioma response to therapy. Her research is funded by a U01 grant from NIH/NCI (PI, 2012-2017). She also has a project investigating anti-VEGF therapy resistance in gliomas, which is funded as a subcontract from a U01 (until 8/30/2015) held by Dr. Eric Holland at Fred Hutchinson Cancer Center. She is also Co-I of an R01 (2013-2018) held by Dr. Jeongwu Lee at Case Western to investigate polycomb and cellular hierarchy in brain cancer.
Lazaros Kochilas, MD, MSCR	66	Children's Heart Research and Outcomes Center (HeRO)	Associate Professor	May 2015	School of Medicine	Nearly 1 in every 120 children born has congenital heart disease (CHD). Congenital heart defects are the most common birth defect and are the number one cause of death from birth defects during the first year of life. Understanding the long term outcome for congenital heart disease is critically important. National Heart Blood Institute (NHLBI) has recently convened a panel of experts to address the issue of late outcomes for congenital heart disease NHLBI institute director Mike Lauer has expressed concern that not enough science has been focused toward late outcomes in emerging adults with congenital heart disease. Dr. Kochilas' expertise and interest in the field of late outcomes will put our center in a unique position to lead this effort to better characterize the late outcomes of those with congenital heart disease; and, improve their quality of life.

NAME	РНОТО	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Steven L. Goudy, MD		Children's Heart Research and Outcomes Center (HeRO)	Associate Professor		Center, Vanderbilt University	Both a surgeon and a basic scientist. He has an active basic science laboratory studying palatal development and the pathogenesis of cleft palate. His K08 was entitled "The Role of IRF6 during craniofacial development", and ended 7/31/2013. His R01 application submitted in 2013 examines the role of Jagged1 signaling in osteoblast differentiation and maxillary bone formation, using relevant mouse models that recreate mid-facial defects in humans. The reviewers noted that the mouse model matches well human disorders of maxillary hypoplasia, and that the investigator is well positioned to study this problem. The primary concerns were with the proposed mechanism through which Jagged1 signals and some technical approaches with the microCT techniques. These have been well addressed in the revised application. Two new manuscripts have been accepted that support his application, and it appears poised for a better reception