

Emory+Children's Pediatric Research Center

Update May 2012

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 www.pedsresearch.org. 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).

Research Resources

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/Paper Writer

➤ **Becky Kinkead, PhD**

- 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.

Biostatistics Core

➤ **Traci Leong, PhD, Statistician and Courtney McCracken, MS, PhD, (ABD) Data analyst/database assistance**

Procedure: Request form on pedsresearch.org; send to Stacy Heilman

Priorities: analysis for grant submission, analysis for publication, analysis for other purposes

Clinical studies/ coordinators

➤ **Kris Rogers, Director, Clinical Research:** (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 (Egleston):** Nancy Ferzola nancy.ferzola@choa.org (404-785-0400-main number)

➤ **Medical Director, Pediatric Research Unit (Egleston):** **Howard Katzenstein** howard.katzenstein@choa.org

Services: *The Research Department manages clinical coordinators and research nurses centrally, and provides training in research procedures and compliance. As needs grow or new grants are obtained, new personnel are hired who report to Kris Rogers and to the natural supervisor (grant PI, service line chief, division director).*

Common Equipment/ Specimen Processing Core

2nd floor ECC 260 lab:
Technical Director:
 ➤ **Katie Casper**
kcasper@emory.edu

Equipment: Biosafety cabinet, incubators, clinical centrifuge, real-time PCR machine, standard PCR machine, multilabel plate reader, gel documentation system on order

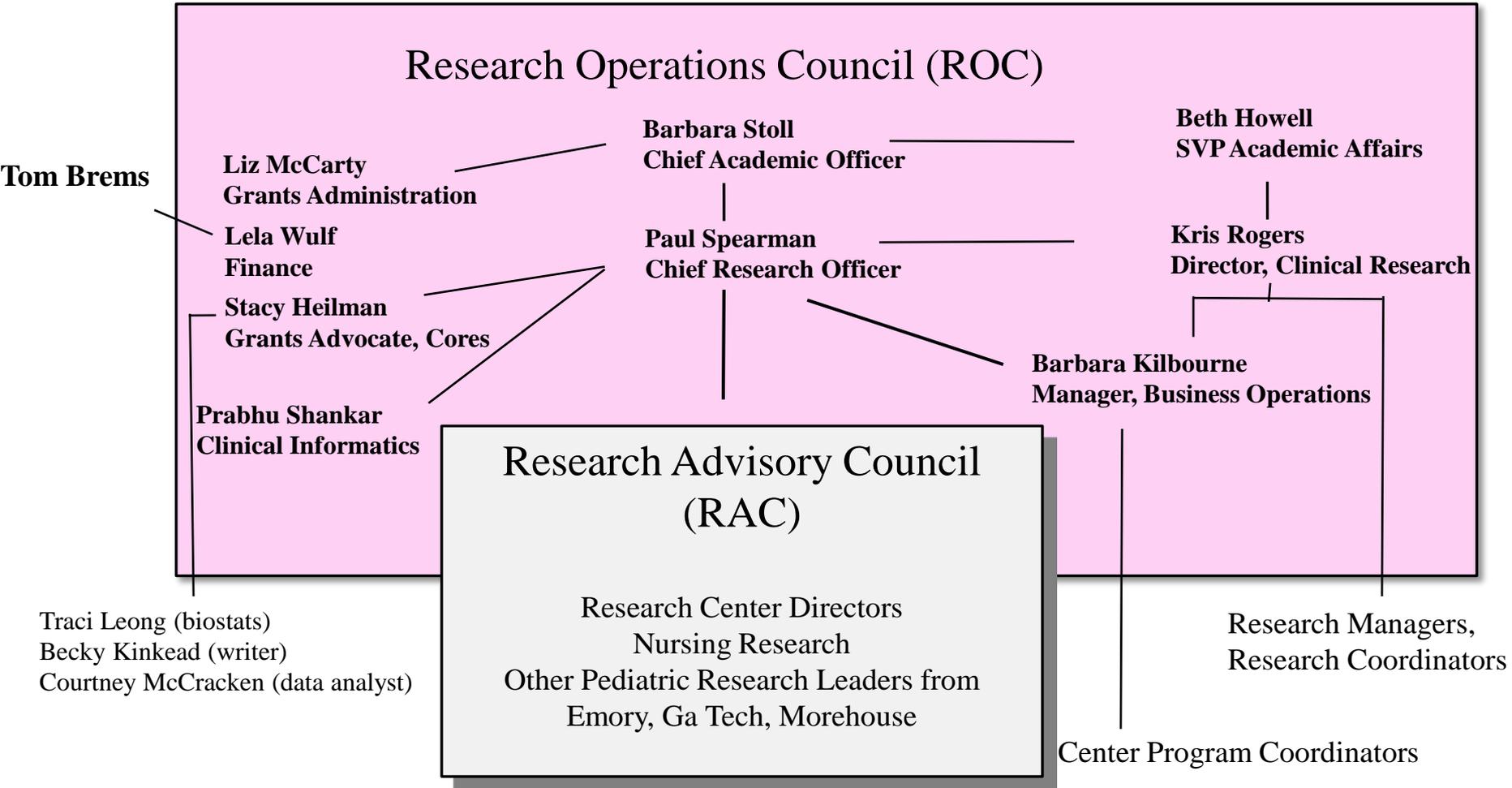
Services: this core provides common equipment for investigator's use, including access to benchtop space and hood space, centrifuges for clinical specimen processing

Laboratory Specimen Processing: Egleston

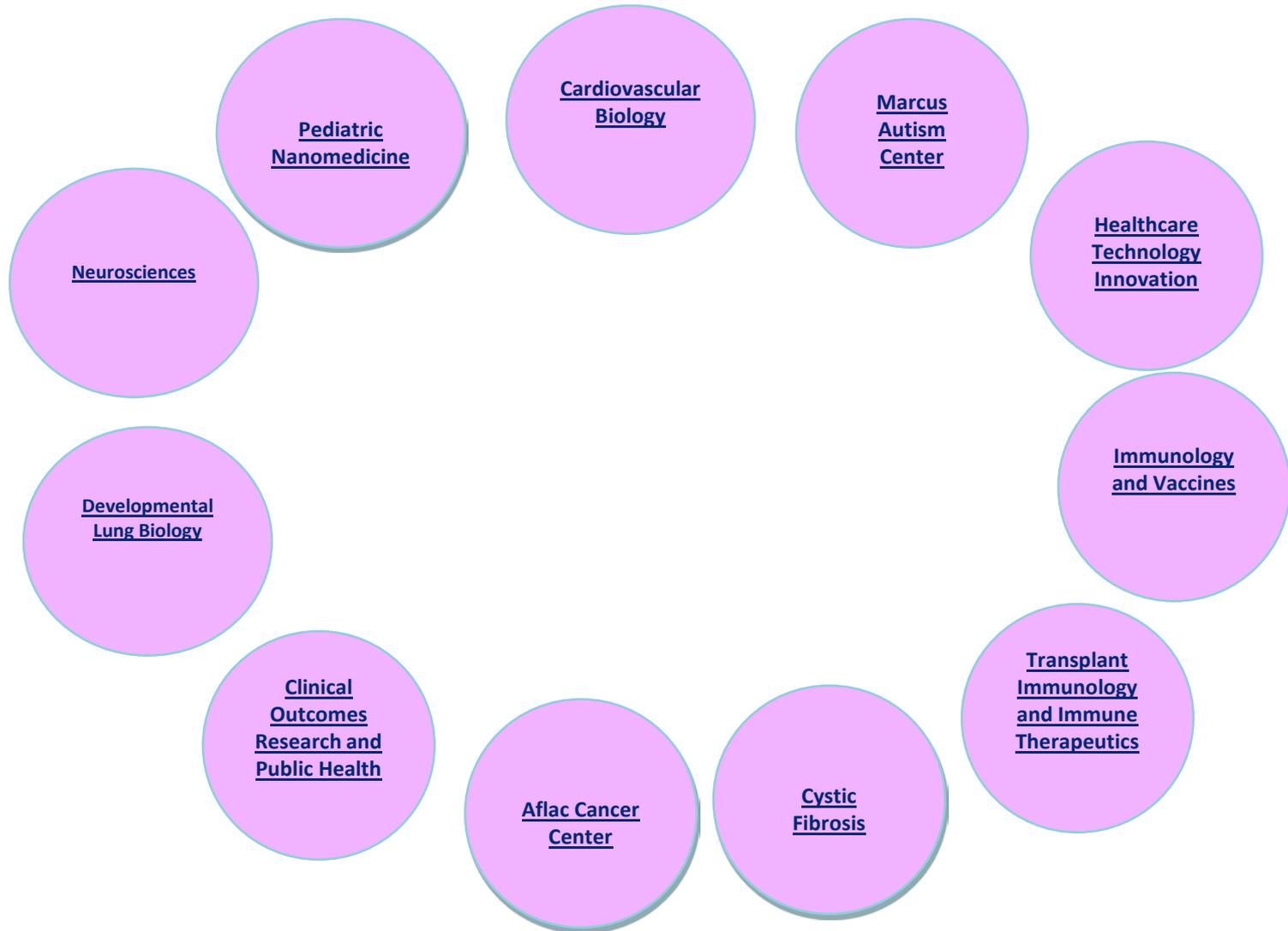
Manager: Diana Worthington-White (404-785-1721, diana.worthington-white@choa.org)

- Clinical trials specimen processing, shipping, limited storage
- ACTSI processing lab
- Laboratory inventory management system (LIMS) available

Research Leadership:



Emory+Children's Pediatric Research Centers*



*For more information, please see center WebPages

New Centers in Development for 2012/2013:

Drug Discovery

Ray Schinazi, PhD, Director
Vision forthcoming

Clinical/Translational Research Center

(New leader to be recruited)

- Organize pediatric clinical research units, ACTSI relationship, research nurse/coordinator pool, and support for multicenter trials networks
- NIH and other extramural funding emphasized, as for all sponsored activities
- **Mission:** This Center will engage those clinical investigators who perform interventional clinical research, including trials of drugs, devices, and vaccines. The Clinical/Translational Research Center will be the research “home” for clinical investigators throughout the system who are not primarily epidemiologists/outcomes researchers. We envision the leader of this center leading and organizing further the central clinical research resources, including the distribution of research coordinators, managers, and data analysts. Clinical informatics will be a key part of this Center, shared with the Outcomes/Wellness Center.

Emory+Children's Pediatric Research Center Contacts

Center Directors:

Aflac Cancer Center and Blood Disorders Service

Center Director: Bill Woods, MD

william.woods@choa.org

Center for Cardiovascular Biology

Center Director: Mary Wagner, PhD

mbwagne@emory.edu

Program Coordinator: Shantisa

Fulgham shantisa.fulgham@choa.org

Center for Clinical and Translational Research

Center Director: TBD

Program Coordinator: Jennifer Kenny

jennifer.kenny@choa.org

Center for Cystic Fibrosis Research

Center Director: Nael McCarty, PhD

namccar@emory.edu

Program Coordinator: Megha Madan

megha.madan@choa.org

Center for Developmental Lung Biology

Center Director: Lou Ann Brown, PhD

lbrow03@emory.edu

Program Coordinator: Megha Madan

megha.madan@choa.org

Center for Drug Discovery

Center Director: Raymond Schinazi, PhD, DSc

raymond.schinazi@emory.edu

Center for Immunology and Vaccines

Center Directors: Paul Spearman, MD and Bali Pulendran, PhD

paul.spearman@emory.edu and

bpulend@emory.edu

Program Coordinator: Shantisa

Fulgham shantisa.fulgham@choa.org

Center for Neurosciences Research

Center Director: Ton deGrauw, MD, PhD

Program Coordinator: Jennifer Kenny

jennifer.kenny@choa.org

Center for Pediatric Healthcare Technology Innovation

Center Director: Barbara Boyan, PhD

barbara.boyan@bme.gatech.edu

Program Coordinator: Maribel Baker

maribel.baker@bme.gatech.edu

Center for Pediatric Nanomedicine

Center Director: Gang Bao, PhD

gang.bao@bme.gatech.edu

Senior Manager: Amy Tang

amy.tang@bme.gatech.edu

Program Coordinator: Erin Kirshtein

Erin.kirshtein@bme.gatech.edu

Children's Transplant Immunology and Immune Therapeutics Center

Center Directors: Leslie Kean, MD, PhD and Allan Kirk, MD, PhD

leslie.kean@choa.org and

adkirk@emory.edu

Program Coordinator: Jennifer Kenny

jennifer.kenny@choa.org

Clinical Outcomes

Research and Public Health

Center Director: TBN

Program Coordinator: Shantisa

Fulgham

shantisa.fulgham@choa.org

Marcus Autism Center

Center Director: Ami Klin, PhD

Director of Research: Warren Jones, PhD

ami.klin@emory.edu or

ami.klin@choa.org or

warren.r.jones@choa.org

Research Center Administration:

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George W. Brumley, Jr., Professor and Chair
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President and CEO, Emory-Children's Center
SVP and Chief Academic Officer, Children's
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Paul Spearman, MD

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Director of Programs & Grants Advocate
Department of Pediatrics, Emory University &
Children's Healthcare of Atlanta

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Barbara W. Kilbourne, RN, MPH

Manager, Business Operations
Research Strategy Leadership
Children's Healthcare of Atlanta

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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
<p>Research Operations Council (ROC) meetings: occurs weekly at the Marcus Autism Center. Designed for central team to discuss detailed operations and issues.</p>				<p>PeRCS: 10 AM coffee social every Friday, usually held 3rd floor break area, E-CC</p>	
<p>K club: Monthly discussions/lectures for K award training, other grants training/education. Typically 2nd Monday, Contact Stacy Heilman (Stacy.heilman@emory.edu) for more information.</p>		<p>Research Brainstorming Sessions: Typically, 2nd Wed. To allow development and exploration of special research topics. For suggested topic nominations, contact (Stacy.heilman@emory.edu)</p>		<p>Research Seminars: Fridays (Egleston Classrooms). Contact Barbara Kilbourne for suggestions or needs (barbara.kilbourne@choa.org) Including:</p> <ul style="list-style-type: none"> ✓GRIP: (Genetics Research in Pediatrics): seminar series, planned monthly, typically the 2nd Friday, Egleston classrooms. Contact David Okou david.okou@emory.edu for more information. ✓CORPH (Clinical Outcomes Research and Public Health): interest group has monthly meetings scheduled for the 3rd Friday of each month. Contact Shantisa Fulgham shantisa.fulgham@choa.org for more information. 	<p>Research Advisory Council (RAC) meetings: once monthly; restricted to RAC membership, contact Paul Spearman for inquiries or suggestions paul.spearman@emory.edu</p>
		<p>Research Grand Rounds: 3rd Wednesday of month, Egleston, 7:30 AM</p>			<p>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.</p>

Specialized Research Equipment/Service Cores:

CORE	SCIENTIFIC DIRECTOR	TECHNICAL DIRECTOR/CONTACT	EQUIPMENT	LOCATION	SERVICES
<u>Animal Physiology Core</u>	Mary Wagner mary.wagner@emory.edu 404-727-1336	Rong Jiang rjiang2@emory.edu	Small animal surgical equipment	Emory-Children's Center, 3 rd Floor Lab	This core assists with and provides the surgical expertise and equipment for small animal survival surgery, including IACUC protocol assistance. Currently, the core offers pulmonary banding, aortic banding, coronary ligation and intramyocardial injections for mice, rats and rabbits and is available for development of other surgical procedures.
<u>Biomarkers Core</u>	Lou Ann Brown lou.ann.brown@emory.edu 404-727-5739	Mojgan Zavareh mojgan.zavareh@emory.edu	Agilent gas chromatography/mass spectrometer and Waters high performance HPLC with fluorescence detector	Emory-Children's Center, 3 rd Floor Lab	This core analyzes markers of oxidative stress and markers of alcohol exposure. Speak to Scientific Director about other chromatography/mass spec assays available.
<u>Cardiovascular Imaging Research Core (CIRC)</u>	Will Border, MBChB, MPH borderw@kidsheart.com 404-785-6255	Carey K. Lamphier, RN, BSN, CCRC Carey.lamphier@choa.org	-Echocardiograms - Flow Doppler -3-D Imaging -Upright Bicycle -VO2 Analysis -Electrocardiogram -Cardiac MRI Nursing Services	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.
<u>Cell Imaging</u>	Lou Ann Brown lou.ann.brown@emory.edu 404-727-5739	Nimita Fifadara, PhD nfifada@emory.edu	Olympus laser scanning confocal, TIRF microscopy	Emory-Children's Center, 3 rd Floor Lab	This core provides training and access to advanced cellular imaging systems, including confocal and TIRF microscopy.

Specialized Research Equipment/Service Cores (continued)

CORE	SCIENTIFIC DIRECTOR	TECHNICAL DIRECTOR/C ONTACT	EQUIPMENT	LOCATION	SERVICES
Flow Cytometry/ Cell Sorting	David Archer darcher@emory.edu	Aaron Rae aaron.j.rae@emory.edu	FACSCanto, LSRII, FACSAria, AutoMACS	Emory-Children's Center, Room 560	This core offers access to several state of the art analytical flow cytometers 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.
Immunology Core	Larry Anderson larry.anderson@emory.edu 404-712-6604	Katie Casper kcasper@emory.edu	Specimen processing (hood, centrifuges, Coulter counter), Zeiss ELISPOT reader, ELISAs, assay design for intracellular cytokine staining (ICS), luminex 200 assays for protein quantitation, real-time PCR	Emory-Children's Center, Room 510	This core provides equipment and technical expertise for the performance of immunologic assays and diagnostic assays for infectious pathogens. Our mission is to enhance the ability of investigators at Children's and affiliated institutions to perform research in the areas of immunology, vaccine testing, and infectious diseases.
Radiology Core	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 .	Melinda Dobbs, RN, BSN, CCRC melinda.dobbs@choa.org	<ul style="list-style-type: none"> • 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 		The is an interdisciplinary research core that recognizes the importance of medical imaging in the diagnosis and treatment of diseases in children and young adults. PIRC provides investigators with modern imaging technology and collaborating imaging researchers to achieve research goals. Our team consults with investigators to enhance their research through access to state-of-the-art technology and enables the conduct of standard imaging associated with large clinical trials. Services include MRI, CT, PET, Bone Densitometry, Fluoroscopy, Nuclear Medicine, Ultrasound and X-ray.

CORE in Development	CURRENT FACILITATOR	EQUIPMENT/LOCATION	DESCRIPTION
Specimen Repository (which will enhance the Specimen Processing Core)	Task force headed by Allison Wellons Allison.wellons@choa.org Goal: initial investment 2011	LIMS, freezers (-80, LN2) Sync with freezer space in new building; temporary space until then being identified	The specimen repository will offer organized storage of blood and body fluids and nucleic acids in 2012. Tissue repository services are under further discussion. Specimen processing can be coordinated to link with the specimen repository. Bar-coded standard vial storage and a dedicated LIMS will offer automated tracking and organized retrieval of specimens.

Funding Opportunities:

Funding Opportunity	Funding Limit	Funding Term	Eligibility	Post Award Expectations	Additional Information
Friends	\$50,000	12-18 months	<ol style="list-style-type: none"> Children's professional staff Must be for clinical research taking place in Children's facilities 	<ol style="list-style-type: none"> Must provide annual and final reports Must be willing to present findings to Friends groups, Children's leadership, etc 	<ol style="list-style-type: none"> Fund was originally created for non-Faculty who were not eligible for EECRC funding Fund does not provide for investigator salary support
EECRC (Emory-Egleston Children's Research Center, Inc.)	\$50,000	12 months	<ol style="list-style-type: none"> Regular faculty in clinical departments at Emory. Applicants outside of DoP must have clinical privileges at Children's. Must not have an active R01 or P01. Must provide agency and proposed date they will submit for extramural funding 	Must submit a grant to an extramural agency	\$25,000 of total award may be directed to investigator salary
H S I	\$50,000	1 year	Must include at least one Ga Tech collaborator from GTRI, College of Engineering or Computing and at least one collaborator from Children's.	Written quarterly reports	Commitment to this opportunity is made on a year to year basis depending on budget. Priority funding areas are agreed to on a yearly basis
Center Pilot Grants	Varies by Center	1 year	Varies by Center	Annual report	
Dudley Moore Nursing and Allied Health Research Fund	\$15,000	6-18 months	<ol style="list-style-type: none"> All Children's nursing and allied health staff who provide services at one of Children's locations are eligible. Excludes those with regular faculty appointments or who are employed by Emory Projects must have an impact on enhanced patient care, priority is given to projects that will provide evidence to change practice. 	Must be willing to present findings by request.	Fund restricted by donor to support nursing and allied health research at Children's

Additional Resources/Updates:

Research listserv:

Contact barbara.kilbourne@choa.org to be added to this listserv used to disseminate all pediatric research related announcements including seminars, funding opportunities, such as BiRD (Bringing in the 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, forms

New Health Sciences Research Building:

Started construction: June 2011

Finish date: April 2013

190,000 ft²; 115,000 for pediatric research

Dry and wet lab research

Programming in progress; space for new recruits

Go to: <http://www.pedsresearch.org/about-us> for more info

Research Recruitment Update:

NAME	PHOTO	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Iñaki Sanz, MD		Children's Transplant Immunology and Immune Therapeutics Center	Professor	March 2012	University of Rochester Medical Center	Research interests are focused on understanding the phenotypic and functional diversity of human B cells. In addition, specially interested in the regulation of human autoreactive B cells and the subversion of tolerance in autoimmunity. Studies employ a combination of multiparameter flow cytometry and in vitro studies (including antibody and cytokine production, proliferation assays and transcriptional profiling) to understand the function of finely discriminated B cell subsets and their homeostasis in healthy subjects and in a number of autoimmune diseases including SLE, RA, Sjögren's syndrome and more recently type 1 diabetes.
Chunhui Xu, PhD		Center for Cardiovascular Biology	Acting Associate Director	January 2012	Geron Corporation	1) Establishment of induced pluripotent stem cells for cell therapy and disease modeling, taking advantage of the large pediatric cardiac population at CHO, 2) Stem cell therapy by achieving stable generation of cardiomyocytes from human pluripotent stem cells, which would include comparing iPSCs to hESCs as well as characterization, limiting tumorigenicity, developing therapies for heart failure treatment and using tissue engineering approaches for cardiac reconstruction and 3) Cardioprotection and activation of endogenous stem cells which would use stem cells to discover therapies that prevent cardiac cell death or conditions that activate stem cells and thus could be therapeutically used for recruitment and migration of endogenous stem cells.

Research Recruitment Update (continued):

NAME	PHOTO	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
My Helms, PhD		Center for Developmental Lung Biology	Assistant Professor	January 2012	Department of Physiology, Emory University	Our studies suggest that O ₂ ⁻ anions may have a permissive effect on Na reabsorption, and that model type 1 cells may produce more O ₂ ⁻ anions than type 2 cells. In light of new evidence that shows that normal cells can regulate their redox state through Rac1 control of NADPH oxidase, we investigate the effect of redox signaling on lung epithelial sodium channels in order to gain a better understanding of how the alveoli maintains appropriate fluid levels. Using novel model systems developed in our laboratory, electrophysiological measurements, as well as standard biochemical assays; we can uniquely study all the cells that make up the alveoli. Therefore, we will be able to make novel comparisons between redox signaling and ENaC function in both alveolar type 1 and type 2 cells.
Assem G. Ziady, PhD		Center for Cystic Fibrosis Research	Assistant Professor	October 2011	Case Western Reserve University	Inflammation in cystic fibrosis is excessive, and typically leads to lung damage and eventual lung failure. A number of studies have found that CF cells, especially airway epithelia produce elevated levels of proteins such as cytokines, transcription factors, kinases, and phosphatases implicated in their exaggerated response to inflammatory stimulus. Anti-inflammatory therapy with agents such as ibuprofen has been shown to be beneficial, slowing lung deterioration in patients. However, the origin of drug mechanisms involved in limiting this inflammatory response as well as the interplay between defects in cystic fibrosis transmembrane regulator (CFTR) and the inflammatory cascades are not well understood.

Research Recruitment Update (continued):

NAME	PHOTO	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Rabin Tirouvanziam, PhD		Center for Cystic Fibrosis Research	Assistant Professor, Dept. of Pediatrics, Emory	September 2011	Stanford University	My research is focused on the basic study of CF exacerbations (acute flares of disease) and to basic studies of other human pathologies, including chronic obstructive pulmonary disease (COPD) and asthma.
Ton deGrauw, MD, PhD		Neurosciences Research Center	Director, Neurosciences	August 2011	Director, Neurology and Training Program in Child Neurology, Children's Hospital Medical Center of Cincinnati	The area of neurodevelopmental deficits as well as neurodegenerative and neurometabolic disorders. His metabolic interest is specifically focused on disorders of energy metabolism. Dr. deGrauw is also interested in the neurological aspects of language development.
Saul Karpen, MD, PhD		Member of Children's Transplant Immunology and Immune Therapeutics Center	Professor	August 2011	Director, Texas Children's Liver Center; Medical Director, Texas Children's Liver Transplantation Program; and Chief of Service, Texas Children's Biliary Atresia Clinic	Biliary Atresia; Liver Diseases in Infants and Children; New treatments of Liver Disease; Viral Hepatitis; and Clinical and Basic Research in Liver Disease; NIH-Funded Research on Biliary Atresia