

Emory+Children's Pediatric Research Center

Update November 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 & 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.

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

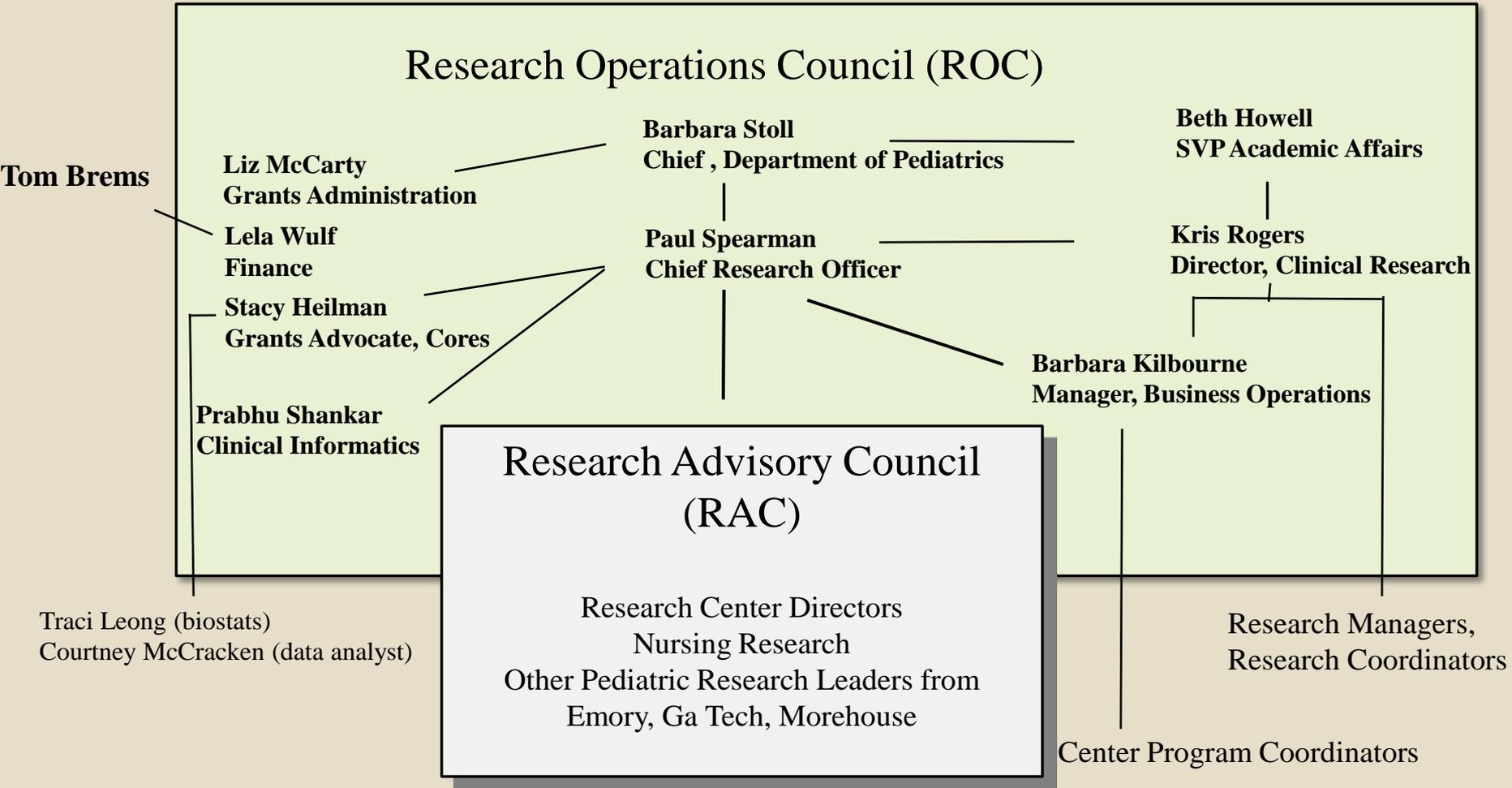
Services: this core provides common equipment for investigator's use, including access to benchtop space and hood space, centrifuges for clinical specimen processing

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

The focus of the Center is on the discovery of new drugs for infectious diseases afflicting children, inflammatory conditions of childhood, and childhood cancers and blood disorders. The Vision for the Center is being drafted at present, along with more detailed plans for developing a world-class drug discovery endeavor.

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 and Blood Disorders Center

Center Director: Bill Woods, MD

william.woods@choa.org

Program Coordinator: Linda Campbell
linda.campbell@emory.edu

Center for Cardiovascular Biology

Center Director: Mary Wagner, PhD

mbwagne@emory.edu

Program Coordinator: Shantisa Fulgham
shantisa.fulgham@choa.org

Children's Center for Clinical and Translational Research

Center Director: TBN

Program Coordinator: Michele Klopper
Michele.Klopper@choa.org

Center for Cystic Fibrosis Research

Center Director: Nael McCarty, PhD

namccar@emory.edu

Program Coordinator: Michele Klopper
Michele.Klopper@choa.org

Center for Developmental Lung Biology

Center Director: Lou Ann Brown, PhD

lbrow03@emory.edu

Program Coordinator: Jennifer Kenny
jkenny@emory.edu

Center for Drug Discovery

Center Director: Raymond Schinazi, PhD, DSc

raymond.schinazi@emory.edu

Program Coordinator: Shantisa Fulgham
shantisa.fulgham@choa.org

Center for Immunology and Vaccines

Center Directors: Paul Spearman, MD

paul.spearman@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: Ann Mertens, PhD

Ann.mertens@choa.org or
amerten@emory.edu

Program Coordinator: Michele Klopper
Michele.Klopper@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
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Research Center Administration:

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Paul Spearman, MD

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Children's Healthcare of Atlanta
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Barbara W. Kilbourne, RN, MPH

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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>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>PeRCS: 10 AM coffee social every 1st and 3rd Friday, usually held 3rd floor break area, E-CC</p>	<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>K club: Monthly discussions/lectures for K award training, other grants training/education. Typically 2nd Monday, September to May, Contact Stacy Heilman (Stacy.heilman@emory.edu) for more information. <i>Sponsored by Departments of Pediatrics and Medicine and ACTSI.</i></p>		<p>Research Grand Rounds: 3rd Wednesday of month, Egleston, 7:30 AM</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"> ✓ Neurosciences seminar series, 2nd Friday of each month, Egleston classrooms. Contact Jennifer Kenny jkenny@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>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, PhD mary.wagner@emory.edu 404-727-1336	Rong Jiang, MD 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, PhD 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>	Ritu Sachdeva, MD sachdevar@kidshcart.com 404-785-CIRC	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.

Specialized Research Equipment/Service Cores (continued)

CORE	SCIENTIFIC DIRECTOR	TECHNICAL DIRECTOR/ CONTACT	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	EQUIPMENT/LOCATION	DESCRIPTION
Specimen Repository (which will enhance the Specimen Processing Core)	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.

Partnership Core

CORE	SCIENTIFIC DIRECTORS	CONTACT	EQUIPMENT	LOCATION	SERVICES
<u>Integrated Cell Imaging Core</u>	Adam Marcus, PhD Director, ICI aimarcu@emory.edu Alexa Mattheyses, PhD Associate Director, ICI mattheyses@emory.edu	For pediatrics Nimita Fifadara, PhD nfifada@emory.edu	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

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
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
Kavita Patel, MD		Aflac Cancer and Blood Disorders Center	Assistant Professor, Director of Thrombosis Program	October 2012	Texas Children's Hospital Baylor College of Medicine Houston, TX	Focuses on molecular mediators of thrombosis in sepsis. Her work utilizes intravital microscopy to monitor real time in vivo thrombus formation in murine models of sepsis. Her previous work has shown a role for von Willebrand Factor in mediating enhanced microvascular thrombosis in endotoxemia. Dr. Patel is currently working on the role of endothelial versus platelet stores of von Willebrand factor in the development of microthrombi in endotoxemia. She is also developing an experimental protocol to evaluate molecular mediators of thrombus formation in Staphylococcus aureus sepsis. A translational research project is being developed to understand the mechanisms involved in the formation of deep venous thrombosis (DVT) in patients with Staphylococcal osteomyelitis.
Chia-Yi (Alex) Kuan, MD, PhD		Center for Neurosciences Research	Associate Professor	September 2012	Cincinnati Children's Hospital Medical Center	Three major forms of perinatal brain injury in animal models, and believe that our research in RhoA will suggest new insights into the link between dysregulated neurogenesis and embryonic tumorigenesis. But most importantly, I understand the need to work closely with clinical colleagues in order to move my research into the bedside. Thus, my objective is to search for a supportive environment for my career goal to combine disease-oriented and mechanism-directed research in developmental neuroscience.
Claudia Morris, MD		Center for Developmental Lung Biology	Associate Professor	September 2012	Attending Physician, Department of Emergency Medicine Clinical Research Scientist Director of Pediatric Emergency Medicine Fellowship Research Children's Hospital and Research Center at Oakland, Oakland, CA	Glutamine Therapy for Hemolysis-Associated Pulmonary Hypertension: This study is a phase II trial of L-glutamine in sickle cell disease and thalassemia patients. In particular the impact of this glutamine supplementation on arginine bioavailability, biomarkers of oxidative stress and hemolysis-associated pulmonary hypertension will be investigated. Pharmacokinetic studies will also be performed to determine the metabolic fate of glutamine supplementation in both plasma and within the sickle and thalassemia erythrocyte. AsthmaNet Clinical Center: The major goals are to serve as a clinical center participating in the conduct of NHLBI-supported multi-center clinical trials of asthma therapies in children and adults with asthma, and to conduct smaller, focused studies of mechanisms of action of asthma therapies, of novel treatments for severe asthma, and of concepts of asthma pathophysiology that could lead to the development of new asthma treatments.

Research Recruitment Update (continued):

NAME	PHOTO	CENTER	TITLE	START DATE	RECRUITED FROM	RESEARCH INTERESTS
Jens Wrammert, PhD		Children's Center for Immunology and Vaccines	Assistant Professor	August 2012	Assistant Professor, Research track Department of Microbiology and Immunology Emory University School of Medicine Atlanta, Georgia	An emerging leader in the analysis of human B cell responses following infection or vaccination. While in the Ahmed laboratory, he pioneered the use of plasmablast quantitation and sorting for the measurement of plasmablast responses and for the production of monoclonal antibodies representing early B cell responses. He has applied this to cloning of H1N1 influenza monoclonals and more recently to dengue virus monoclonals. He is now developing plasmablast technology for primate models of SIV/HIV pathogenesis.
Evan Anderson, MD		Center for Immunology and Vaccines	Assistant Professor	August 2012	Feinberg School of Medicine, Northwestern University, Departments of Medicine and Pediatrics	Research contributions focus on rotavirus infection of adults, an understudied area that appears to have considerable significance, and on vaccines and vaccine clinical trials. He has obtained industry funding for vaccine trials from Medimmune, Merck, and other industry sponsors.
Clint Joiner, MD, PhD		Aflac Cancer and Blood Disorders Center	Director of Hematology	August 2012	Director, Division of Hematology, Professor, University of Cincinnati Children's, Department of Pediatrics	Sickle cell disease and other hemoglobinopathies; red blood cell physiology; cation transport and volume regulation; hematological problems of the newborn

Research Recruitment Update (continued):

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 CHOA, 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.