# Children's Foundation Research Institute

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# Meet our new team members

The CFRI has recruited a new set of

faces. They include: Dave Bridges, PhD, a member of the new UTHSC-Le Bonheur Pediatric Obesity program. Bridges



studies the molecular, cellular and physiological changes associated with obesity and is particularly interested in the role of the central nutrient responsive protein kinase mTORC1, how it is altered in weight gain and how its activation affects obesity-related comorbidities. He completed doctoral training in biochemistry at the University of Calgary, followed by a fellowship at the University of Michigan.

Stephania Cormier, PhD, associate professor in the UTHSC departments of Pediatrics, Division of Infectious Disease, and



Daniel Fundo, business manager. Fundo spent the past two years as finance



director for ULPS. Prior to that, he held a variety of roles at Baptist, and, most recently, St. Jude. He holds an MBA from Vanderbilt University and a BS in Healthcare Management from Baptist

College of Health Sciences.

Tamekia L. Jones, PhD, assistant professor in the Department of Pediatrics and



Department of Preventive Medicine. Prior to joining UTHSC, Jones earned her PhD in Biostatistics from the University of Alabama at Birmingham and served as a senior statistician for frontline Acute Lymphoblastic Leukemia clinical trials in the Children's Oncology Group at the University of Florida. Her research interests include clinical trials, survival analysis, robust statistics, obesity, cardiovascular disease and health disparities. Jones will work as a biostatistician and assist investigators with study design, sample size and power calculations and statistical analyses.

Naga Nagisetty, MS, biomedical informatics research specialist of the Biomedical Informatics Core at the CFRI. He



works to develop and maintain clinical research information systems, software applications and databases. He also assists with analysis of external data definitions, documentation and mapping processes, along with assisting in data security requirements.

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### MEET OUR NEW TEAM MEMBERS CONTINUED

Terrie Swearingen, executive assistant to Scientific Director Dennis Black, MD, and Administrative Director Sheon Lynch. Swearingen has 17 years of administrative experience at Le Bonheur and Methodist Healthcare and has



worked in various departments, including Pharmacy, Laboratory, Administration and Engineering/Facilities. She is also a notary public for the hospital.

Grady Wade, PhD, clinical research informaticist of the Biomedical Informatics Core. Wade facilitates extraction of data from existing data sources for research and is an expert on data definitions and appropriate usage, especially as they pertain to the hospital's electronic



Weiqiang Zhang, PhD, instructor in the UTHSC departments of Physiology and Pediatrics and researcher for the UTHSC Cystic Fibrosis Center and CFRI. Zhang's research focuses on understanding and finding better treatments for cystic fibrosis. Zhang

medical record system.

graduated from the University of Wales, Swansea and worked as a postdoctoral research fellow in the laboratory of Dr. A. P. Naren in the UTHSC Dept of Physiology.

### **Research contracts change**

Beginning Oct. 1, the Le Bonheur Foundation will serve as the contracting institution for all industry-sponsored research studies. The billing responsibility for industrysponsored studies will move to CFRI Business Manager Daniel Fundo. The Methodist Foundation previously filled this role.

The CFRI is also moving studies under the Methodist Healthcare IRB to the University of Tennessee IRB. **Contact CFRI Administrative Director** Sheon Lynch at 287-3208 with questions.

# Schwingshackl earns NIH K12, American Lung Association Grant

Critical Care Specialist Andreas Schwingshackl, PhD, MD, will use two grants to study the field of Acute Lung Injury (ALI) and Acute Respiratory Distress Syndrome (ARDS). His recent National Institutes of Health's K12 Career Development Award and American Lung Association Biomedical Grant will help him continue his research focus on the role of stretch-activated ion channels in the development of ALI and ARDS, inflammatory mediator secretion, loss of epithelial barrier function and propagation of lung inflammation. His team recently discovered that the 2-pore domain potassium channel TREK-1 plays a crucial role in the development of hyperoxia- and mechanical stretch-induced lung injury and functions as a key regulator in inflammatory cytokine secretion from alveolar epithelial cells. The grants will allow Schwingshackl to further study the signaling mechanisms responsible for the alterations in cytokine secretion and in alveolar barrier function observed in TREK-1deficient epithelial cells and in a mouse model of ALI/ARDS.



### Research Day: Nov. 20

Dunbar Ivy, MD, section head of Cardiology and director of the Pediatric Pulmonary Hypertension Program at the University of Colorado, will serve as the keynote speaker at the 6th annual Pediatric Research Day on Nov. 20. Ivy has helped



run more than 20 research trials and is an investigator in the National Institutes of Healthsponsored Specialized Centers of Clinically Oriented Research grant. His areas of interest include treatment of pulmonary hypertension and proteomics of pulmonary vascular disease.

### **CFRI launches new data systems**

The CFRI has launched three new data systems to help researchers. The Pediatric Clinical Research Unit (PCRU) is now using IntelliTRIAL to manage research workload with tasks like tracking study activities, visit scheduling and management, adverse events/deviations and compliance documentations. While its focus is now on industry-sponsored studies, the leaders plan to add PI-initiated studies. The Pediatric Research Database (PRD) is a deindentified clinical research database that will help researchers query large patient populations to identify small subsets. The database should help researchers build hypotheses from raw data. Finally, the Research Electronic Data Capture (REDCap) is a web-based application that allows user to enter data and is flexible enough to be used in various research areas. REDCap will help in data collection for individual studies and provide automated export procedures for data downloads in various statistical packages.



Summer interns join CFRI.

### Le Bonheur Grants awarded

Investigators were recently awarded junior faculty and regular grants. All grants were scored by two non-conflicted reviewers. Congratulations to:

### **Junior Faculty Grants**

- Amali Samarasinghe, PhD "Resistin-like Molecules in Asthma and Influenza Co-Morbidity." \$30,000 plus \$5,000 (Bea Gerber Award for best-scored grant).
- Bindiya Bagga, MD "Investigating the Mucosal Immune Response in Human RSV Infection." \$30,000, second year.
- Emma Tillman, PharmD "Fish Oil in Parenteral Nutrition-associated Liver Disease." \$30,000, second year.

### **Regular Grants**

- Narendra Dereddy, MD "Platelet-derived Growth Factor Receptor Expression in Pulmonary Hypertension Associated with BPD." \$5,000
- Oscar Herrera, PharmD "Citrulline and Calprotectine as Biomarkers in Patients with Bowel Loss. \$5,000, second year.



Stephania Cormier, PhD recently joined the CFRI. Dr. Cormier relocated from the Louisiana State University Health Sciences Center in New Orleans along with six members of her laboratory. The National Institutes of Health-funded laboratory focuses on understanding the role of early environmental exposures (e.g. pollution, respiratory viruses, and the combination of these) in the development and exacerbation of asthma.

# **CFRI Publications April-June 2013**

- 1. Anand KJ, Clark AE, Willson DF, Berger J, Meert KL, Zimmerman JJ, Harrison R, Carcillo JA, Newth CJ, Bisping S, Holubkov R, Dean JM, Nicholson CE. Opioid analgesia in mechanically ventilated children: results from the multicenter Measuring Opioid Tolerance Induced by Fentanyl study. *Pediatr Crit Care Med.* 2013;14:27-36
- Boop FA. Editorial: Bifocal germ cell tumors. *J Neurosurg Pediatr.* 2013;11:105-106
- 3. Caron E, Morgan R, Wheless JW. An unusual cause of flaccid paralysis and coma: Baclofen overdose. J Child Neurol. 2013
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samples by sequenceindependent amplification. Nucleic Acids Res. 2013;41:e13

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- 14. Park D, Brown ML, Densen P, Myers LK, Lew DB. A 9-yearold boy with chronic urticaria and progressive spondyloarthritis. *Allergy Asthma Proc.* 2013;34:103-107
- Sawyer JR. Atypical presentation of an osteoid osteoma in a child revisited. *Am J Orthop (Belle Mead NJ).* 2013;42:19
- Schwingshackl A, Teng B, Ghosh M, Lim KG, Tigyi G, Narayanan D, Jaggar JH, Waters CM. Regulation of interleukin-6 secretion by the two-poredomain potassium channel Trek-1 in alveolar epithelial cells. *Am J Physiol Lung Cell Mol Physiol*. 2013;304:L276-286
- 17. Shore RM, Chesney RW. Rickets: part I. *Pediatr Radiol.* 2013;43:140-151
- 18. Shore RM, Chesney RW. Rickets: Part II. *Pediatr Radiol.* 2013;43:152-172
- Tillman EM. Review and clinical update on parenteral nutrition-associated liver disease. *Nutr Clin Pract.* 2013;28:30-39