Towbin: Cardiology chief

Cardiologist Jeffrey A. Towbin, MD, is the new executive co-director of Le Bonheur’s Heart Institute. He and his research team have been leaders in gene discovery and mechanism of cardiomyopathies, arrhythmias, sudden cardiac death, vascular disorders and congenital heart disease, as well as viral causes of myocarditis, cardiomyopathies, transplant rejection and transplant coronary disease. Dr. Towbin pioneered the concept of pathway-focused candidate gene analysis using his “final common pathway hypothesis” and has defined disease mechanisms and targeted therapies using animal models. He has trained more than 50 post-doctoral and 20 pre-doctoral students and has been a principal mentor for multiple K-grant-funded trainees. He also has been a member of multiple T32 Training Grants. Towbin will serve as chief of Pediatric Cardiology and vice chair of Strategic Advancement and will hold the St. Jude Chair of Pediatric Cardiology at Le Bonheur.

New faces join CFRI

Maggie Bissler, clinical research assistant in the PCRU, received her master’s degree in ethnemusicology (the anthropology of music) from The Ohio State University, where she worked as a teaching associate and research associate. Her research examines the intersections of sound, space and sovereignty. Bissler brings ethnographic methods to clinical research from her studies with Canadian Aboriginal community radio producers and Creole dance troupes in Nicaragua’s Caribbean coast. She studies documentary arts at Duke University and holds bachelor’s degrees (music, classical civilization, and anthropology) from the University of Cincinnati.

Ghazala Mazhar, MD, has joined the PCRU as a clinical research coordinator. Mazhar previously worked as a study coordinator for the UTHSC Division of Endocrinology, Diabetes and Metabolism and the Hamilton Eye Institute. Originally from Pakistan, she is a physician in psychiatry and family medicine. In 2001, she joined the UTHSC Department of Pharmacology as a postdoctoral research fellow. She has also passed USMLE Steps 1, 2 and 3. “I became interested in clinical research because I liked working with human beings,” she said. “I had no research experience when I came here. I have learned a lot from UT, and I’m very grateful for that.” She has begun working with principal investigators on our faculty for several drug studies already, including trials of new treatments in cardiology and infectious diseases.

Nora Urraca, MD, PhD, is a new clinical research coordinator who could help with Genetics & Genomics studies in the near future. Before joining the CFRI she was a postdoctoral fellow at UTHSC where she was performing translational genetics studies of autism spectrum disorders, mainly in 15q duplication syndrome. She was trained as a clinical geneticist and earned her master’s degree and PhD at Universidad Nacional Autonoma de Mexico in Mexico City. She has previous experience in pediatric and psychiatric genetics research.
Research Day 2014

More than 90 poster presentations on basic science, clinical and translational research were presented at the seventh annual Pediatric Research Day in November. The 2014 James Hunt Distinguished Visiting Professorship Lecturer, Dr. Carlton Bates from the Children's Hospital of Pittsburgh, also presented his current research on the genetics of kidney disease in children. His talk was followed by faculty presentations from Drs. John Bissler, David Hains, Russell Chesney, Robert Wyatt and Adebowale Adebiyi.

Congratulations to the winners of the outstanding poster awards, selected by a panel of 25 judges from among many very good presentations:

General poster competition winners
- Cecil Scaglioni-Weinlich: Activity of oral AL-8176 in a respiratory syncytial virus challenge study
- Viraj Ichhaporia: Characterizing the myopathy in a mouse model of Marinesco-Sjögren syndrome
- Sridhar Jaligama: Exposure to combustion derived particulate matter suppresses pulmonary host defense
- Amali Samarasinghe: Resistin-like molecules reduce influenza morbidity in mice
- Carol O’Hear: Anti-CD33 chimeric antigen receptor therapy for acute myeloid leukemia
- Tae Won Yoon: Contribution of protein kinase D1 and a pharmacological protein kinase D inhibitor G06976 on development and progression of experimental arthritis

Medical student winners
- Heather A. Cole: Prevalence of hypertension in pediatric tibia vara and slipped capital femoral epiphysis
- Katherine M. DiGiovanni: Permissive role of nitric oxide in cerebral vasodilation to H2S in newborn pigs
- Aaron J. Shaw: Age-dependent differences in naïve CD4 T cell polarization

UTHSC submits grant to create CTSI

Clinical and translational research is a critical bridge from basic laboratory-based and clinical patient-centered research into clinical and community practice. The creation by NIH of the Clinical and Translational Science Award (CTSA) program in 2006 was intended to spur translation across this gap by creating “integrated intellectual and physical resources” in the form of a consortium of individual CTSA sites conducting original clinical and translational research. There are currently 60 such centers around the country. A new call for grant applications to establish additional centers was issued in September 2014. UTHSC has submitted an application based on the CFRI model in pediatrics at Le Bonheur to establish a university-wide Clinical and Translational Science Institute (CTSI), named the Institute for Research, Innovation, Synergy and Health Equity (iRISE) with Dr. Jonathan McCullers, chair of the UTHSC Department of Pediatrics and Le Bonheur Physician-in-Chief, as program director and Dr. Dennis Black, scientific director of the CFRI, as operations manager. This institute will focus on supporting and facilitating translational research on health care inequities and health problems that impact the pediatric and adult populations we serve, including asthma, obesity, type 2 diabetes, cancer, developmental disabilities and others.

The $20 million grant, along with additional funding from UTHSC, will fund iRISE to serve as a catalyst for high quality clinical and translational research at Le Bonheur and across the UTHSC campus. This project will leverage the current child health-based CFRI structure to expand and interweave clinical and translational research resources within the broader UTHSC in a novel institute for research and innovation. As part of the CTSA national consortium, iRISE will also be integrated with broader national programs and with local community efforts. The outcome of the application will be known this spring.

BMIC to present two papers

The Biomedical Informatics Core recently had two peer-reviewed papers accepted for presentation. They include “An Online Platform for Focal Structure Analysis – Analyzing smaller and more pertinent groups using a web tool,” which will be presented in March at the Association for the Advancement of Artificial Intelligence Spring Symposium on Socio-Technical Behavior Mining: From Data to Decision. Also accepted was “Predicting risk of ICU transfer, intubation, or death for pediatric asthma, RSV, pneumonia patients by mining data in electronic medical records using machine-learning techniques,” at the American Medical Informatics Joint Summits on Translational Science.

CFRI researchers are studying the formation and regulation of a protein complex at the cell surface that inhibits CF transmembrane conductance regulator (CFTR). Weiqiang Zhang, PhD, and his team will use a $1.8 million grant from the National Heart, Lung and Blood Institute to study the protein complex.

CFRI Biomedical Informatics Core Technical Director Tee Viangteeravat, PhD, has been selected to move forward on the Blavatnik Awards for Young Scientists, sponsored by the New York Academy of Sciences and the Blavatnik Family Foundation, providing a $250,000 grant award.


60. Spentzas T. Mortality in pediatric patients receiving centrifugal-pump extracorporeal membrane oxygenation: time, hemolysis, or both. Crit Care Med. 2014;42:e679


70. Whitehead MT, Raju A, Choudhri AF. Normal centraline myelination of the callosal splenium reflects the development of the cortical origin and size of its commissural fibers. Neuoradiology. 2014;56:333-338