Children's Foundation Research Institute

Research Matters

Spring 2018

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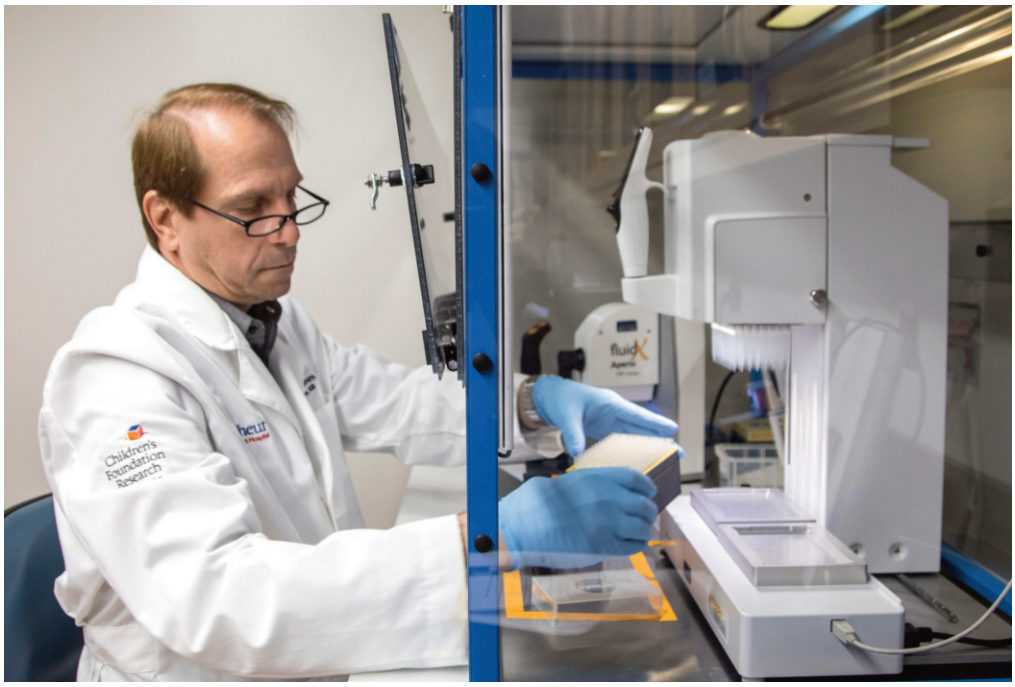
THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

Le Bonheur Children's Hospital

Repository enters third year, opens to investigators



The Biorepository and Integrative Genomics Initiative (BIG), UTHSC's spearhead into Precision Medicine, is entering its third full year, having thus far signed up more than 7,200 participants and archived over 4,000 genomic DNA samples. BIG's expanded access to Le Bonheur Children's Hospital inpatient and outpatient center populations has raised average enrollment to 500 new participants per month, which should accelerate the numbers of samples suitable for investigating a wider array of conditions and phenotypes.

Although de-identified, each BIG sample is matched to its donor's de-identified health and demographic information in Le Bonheur's Pediatric Research Database (PRD), which was created and is maintained by the CFRI Biomedical Informatics Core (BMIC). PRD contains diagnostic, pharmacologic, and other clinical information from over 800,000 encounters dating back to January 1, 2009 for more than 300,000 Le Bonheur patients, and provides the means to rapidly identify research cohorts based on specific health metrics. Additional information on PRD can be found at Le Bonheur's Biomedical Informatics and Biostatistics FAQ webpage. Please call BMIC at 901-287-5044 or email rruchi@uthsc.edu with any questions about PRD access, training, and use.

BIG has now developed an application, review, and distribution process for UTHSC faculty who want DNA samples for genomic/genome-wide analysis. There are four steps to identify appropriate BIG samples for a proposed study:

1. Principal Investigators first log into the PRD, identify a study cohort, and navigate to PRD Home > DNA Request to see a cumulative total of DNA samples available for that study cohort.

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Repository enters third year, opens to investigators *(continued from page 1)*

2. A DNA Request Form in PRD is then submitted in order to obtain a list of those DNA samples.
3. BIG will contact the Principal Investigator by email to ensure the search parameters used in PRD are precise and accurate for the intended study, and will additionally use Cerner PowerInsight to search Le Bonheur's Cerner EMR to ensure the cohort is fully up-to-date.
4. BIG will return a list of corresponding clinically valid samples with quality control metrics to the Principal Investigator.

This BIG List can be used as is, or edited by the Principal Investigator to remove undesired samples, to create a final list which is then uploaded into a formal request application to BIG. A link to the BIG Materials Distribution Request Application can be found on the BIG webpage.

Additional information on the process, requirements, and review criteria for BIG sample requests is provided on the BIG Sample Request FAQ webpage.

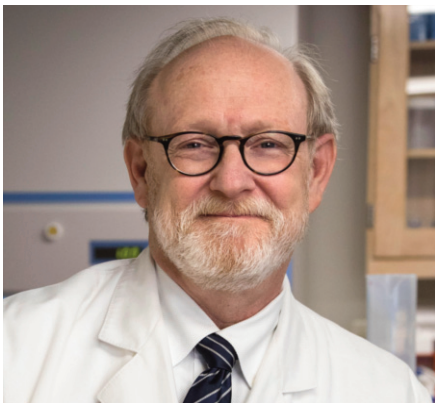
Useful links:

BIG webpage: http://www.lebonheur.org/research-and-education/research/biorepository-and-integrative-genomics-initiative/

BIG Sample Request FAQ: http://www.lebonheur.org/research-and-education/research/biorepository-and-integrative-genomics-initiative/BIGSample%20RequestFAQ%20pageNEW.pdf

Biomedical Informatics and Biostatistics FAQ: http://www.lebonheur.org/research-and-education/research/biomedical-informatics-and-biostatistics/faqs/

Towbin named 'Distinguished Scientist' by American Heart Association



Jeffrey A. Towbin, MD

The American Heart Association (AHA) honored **Jeffrey A. Towbin, MD,** as a 2017 Distinguished Scientist. The award was presented during the Opening Session of the 2017 AHA Scientific Sessions in Anaheim, Calif., and recognizes Towbin's significant, original and sustained contributions that have advanced AHA's mission of improving cardiovascular health.

Towbin is co-director of the Heart Institute at Le Bonheur Children's Hospital, chief of cardiology at St Jude Children's Research Hospital and professor and chief of pediatric cardiology at the University of Tennessee Health Science Center. He studies cardiomyopathies and heart failure, cardiac transplantation and cardiovascular genetics, and has co-authored more than 500 publications in high-impact journals.

CFOM donates $1 million, names Chair of Excellence

The Children's Foundation of Memphis recently celebrated its 100th anniversary and announced a $1 million donation to endow a chair of excellence at Le Bonheur Children's Hospital. **John DeVincenzo, MD,** is the first holder of the Children's Foundation of Memphis Chair of Excellence. DeVincenzo's investigative focus is respiratory syncytial virus (RSV), and his lab is at the leading edge of research in this area.

Since 1993, the Foundation has provided significant support for the Children's Foundation Research Institute at Le Bonheur Children's Hospital as part of their mission to serve the health and well-being of children in the Memphis area.

Amber Smith joins Le Bonheur, focuses on coinfections


Amber Smith, PhD.

Amber Smith, PhD, uses her unique skill set of theoretical and practical laboratory skills to develop mathematical models aimed describing and predicted experimental and clinical observations. She is a quantitative biologist, with training in the fields of microbiology and immunology as well as applied mathematics. Smith, who recently joined the CFRI from St .Jude Children's Research Hospital, is an assistant professor in the Department of Pediatrics and the Institute for the Study of Host-Pathogen Systems at UTHSC.

Smith's research focuses on exploring the complex interaction of pathogens and the immunological host response during coinfection with viruses and bacteria. Of particular interest to her work are coinfections with influenza A virus and Streptococcus pneumoniae bacteria. While both of these pathogens can cause serious infections in hosts as single infectious agents, simultaneous infection with both increases the severity of disease, and is responsible for many deaths, including those during the 2009 H1N1 pandemic. Understanding these complex interactions has important implications for human health.

Research Day hosted on March 28

Le Bonheur hosted its 10th annual Pediatric Research Day on March 28, 2018. This event brings together clinicians and researchers to facilitate discussions on the latest research findings, medical advances and scientific innovations. Investigators will share work being carried out in the areas of basic, translational and clinical research, patient care and community education programs. Gregory Holmes, MD, Chair of Neurological Sciences at the University of Vermont, served as the James C. Hunt Keynote Speaker.

CFRI welcomes Lynn Kizer


Lynn Kizer, BSN, RN

Lynn Richter Kizer, BSN, RN, joins CFRI as a research coordinator in the Department of Radiology. Her nursing career has focused on pediatrics and has included working in clinical settings at Le Bonheur and St. Jude.

Additionally, she spent three years teaching science classes at the junior high and high school level. Kizer has 10 years of research experience and has participated in research at both St. Jude and UTHSC.

Bran to manage Research Regulatory and Compliance


Derita Bran, RN, CCRC

Derita Bran, RN, CCRC, has been promoted to manager of Research Regulatory and Compliance. In her new role, she will oversee all regulatory and compliance issues for clinical trials conducted at Le Bonheur.

"Derita has over 20 years of experience in research, and I am confident she would do great in her new position," said Sheon Lynch, CFRI executive director.

Since joining CFRI in 2016, she has been instrumental in providing auditing and monitoring efforts for investigator-initiated research conducted at Le Bonheur to ensure compliance with federal and institutional regulations and guidance.

Reminder: Register at ClinicalTrials.gov

Prior to enrolling your first study participant, please ensure that you have registered your clinical trial on the ClinicalTrials.gov website. Trials must be included in a public registry in order to publish research results as required by the International Committee of Medical Journal Editors (ICMJE). This is also an FDA requirement for some trials.

CFRI Publications September-December 2017

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