



Children's Foundation
Research Institute

Research Matters

Winter 2016

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CFRI adds Bran, Doville and Hobson



Derita Bran

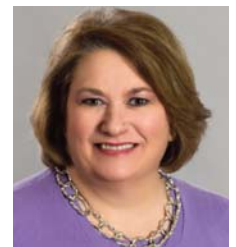


Thomas Hobson

The Children's Foundation Research Institute welcomes **Derita Bran, Amy Doville** and **Thomas Hobson**.

Derita Bran RN, CCRC has been a Certified Clinical Research professional through the Association of Clinical Research Professionals (ACRP) for over 20 years. She has more than 30 years experience as a nurse with more than 20 years in the research field. She will coordinate and provide auditing and monitoring efforts for research conducted at Le Bonheur to ensure compliance with Federal and institutional regulations and guidance.

Amy Doville is a Certified Clinical Research professional through the Society of Clinical Research Associates. She has more than 25 years of experience in research from St. Jude Children's Research Hospital, research industries and from Baptist Memorial Healthcare Corp. as the executive director of Baptist Cancer Center. Her pediatric research includes clinical research education, central protocol and data monitoring office, bone marrow transplantation and cellular therapy department operations.



Amy Doville

Thomas Hobson has been with Le Bonheur Children's Hospital for nearly 15 years, having most recently served as the director of Child Life Services. His background training is as a music therapist, holding master's degrees in both music therapy and healthcare administration. While working with process improvement, budgeting, and other such tasks, Thomas fell in love with the business side of healthcare and is now working with the CFRI as the business manager. When he's not working with finances, Thomas can be found in his home workshop woodworking.

CFRI members Spearman, Smith promoted

Children's Foundation Research Institute members **Venessa Spearman** and **Chris Smith** both received promotions.

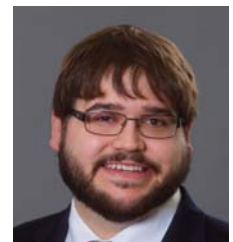


Venessa Spearman

Spearman, MPA, has been promoted to the director of Grant Administration and Contract Development. She has been instrumental in improving contract development process for clinical trials in the Children's Foundation Research Institute and beyond, said **Sheon Lynch**, Executive Director of the Children's Foundation Research Institute.

Smith has been named the director of Finance and Research Lab Operations in the Children's Foundation Research Institute. Smith began working at Le Bonheur in 2009 in the molecular diagnostic lab. He later received his Executive MBA from the University of Memphis and became the

Research Lab manager. Smith **now focuses on the finances for sponsored research trials and he also still oversees labs.**



Chris Smith

Pediatric Research Database copyright issued

The Certification of Registration for the copyright on the Pediatric Research Database (PRD) was officially issued by United States Register of Copyrights on March 8, 2016 with the Registration Number "TXu 2-006-857."

This was the first joint intellectual property (IP) between University of Tennessee Research Foundation and Le Bonheur Children's Hospital. PRD is a de-identified research database designed to make secondary use of a clinically rich data source, the Electronic Medical Records.

PRD currently contains 674,713 patient encounters for 247,370 distinct patient records from Le Bonheur Children's Hospital. It is actively used by more than 144 researchers from LBCH and UTHSC. This presents us with a test case for de-identified cohort searching and acquisition of limited datasets for analysis.



Save the date: Pediatric Research Day is March 29

Pediatric Research Day will be held March 29. This event, which is hosted by the Children's Foundation Research Institute, Le Bonheur Children's Hospital and UTHSC Department of Pediatrics, will highlight work being carried out in the areas of basic, translational and clinical research, patient care and community education programs.

Michael Zasloff, MD, PhD, Professor of Surgery and Pediatrics, Scientific Director, MedStar-Georgetown Transplant Institute, Georgetown University, will serve as the Keynote Speaker. Additional invited speakers include **Sandra Arnold, MD**; **Stephanie Cormier, PhD**; **John DeVincenzo, MD**; **Samir Shah, MD, MBA**; and **Richard Webby, PhD**; who will present their current research, with a focus on infection.

Online registration and abstract submission for Pediatric Research Day will run until Feb. 3. Further information, including for online registration and abstract submission and Research Excellence Award details, will be available on the Pediatric Research Day webpage at lebonheur.org/researchday.



Cannabidiol begins to control childhood seizures

Neurologists at Le Bonheur Children's Hospital are leading a new pediatric clinical trial of cannabidiol (CBD), a compound extract from a cannabis plant, which they hope will help minimize the frequency and length of seizures for children with epilepsy.

The trial, which is currently in its third phase, studies the potential benefits of CBD for children with epilepsy. Le Bonheur is the only children's hospital in Tennessee to provide such care.

Researchers have found some children who have been using CBD have had fewer seizures and that those seizures are shorter in duration, said **James Wheless, MD**, co-director of Le Bonheur's Neuroscience Institute. "In our CBD trials, some of the children have had a sustained reduction in seizure number, with one child doing well enough to lower the other seizure medication," Wheless said.

The Neuroscience Institute's lead Clinical Research Coordinator **Tracee Ridley-Pryor, MSN, RN, CCRC**, and her team have closely monitored the new drug's effects on children. "We have seen a significant change in the number of seizures the patients report experiencing," Ridley-Pryor said. "Not only have the seizures decreased in frequency, they have also been shorter in duration. Our families are quite happy about this and so are we."



Researchers study how combustion-derived pollution can change metabolism, epigenetic makeup in the womb

Gestational exposure to combustion-derived particulate matter can lower energy expenditure at least in part through alterations to mitochondrial metabolism, according to a new study from researchers at Le Bonheur Children's and the University of Tennessee Health Science Center.

The study, co-authored by **Stephania Cormier, PhD**, director of the Pediatric Asthma Research Program and Plough Foundation Chair of Excellence in Pediatrics at Le Bonheur and UTHSC, and published in the American Journal of Physiology, Endocrinology and Metabolism, found that pregnant mice exposed to particulate

pollution had larger pups – who stayed large throughout life – than pups born to mothers who weren't exposed to pollutants.

The increased body size observed in mice exposed to the combustion-derived particulate matter was associated with reduced food intake, reduced physical activity and lower energy expenditure. The reduced energy expenditure in pups indirectly exposed to the pollutants was associated with reductions in skeletal muscle, mitochondrial DNA copy number, lower mRNA levels of electron transport genes, and reduced citrate synthase (a marker of cellular oxidative capacity) activity.

Researchers also believe exposure increased oxidized stress and eventually changes the mitochondrial metabolism in the skeletal muscle of the pup. Cormier now wants to determine if exposure has transgenerational effects – and whether mitochondrial changes in the body can change genetic makeup and affect children for generations to come. Her goal is to learn more about how obesity and airway dysfunction correlate and eventually develop therapeutics to treat the condition.

Study finds abusive head trauma rates on the rise

Le Bonheur Children's Hospital neurosurgeon **Paul Klimo, MD**, led a study on abusive head trauma (AHT), which was published in the Journal of Neurosurgery: Pediatrics. The study was conducted from 2009-2014, and all patients were admitted to Le Bonheur. The study objective was to identify patient demographics and determine the incidence and extent of the injuries, seasonal trends, required neurosurgical procedures and costs of hospitalization.

Of the 213 AHT cases identified, approximately 55 percent involved children 6 months or younger — 61 percent were males, 47 percent were African Americans (39 percent were white and 14 percent were identified as other races), and 82 percent were publicly insured.

Injuries were graded on a severity scale: Grade I injuries were defined as skull fracture only (26 percent), Grade II were intracranial hemorrhage or edema not requiring surgical intervention (48 percent) and Grade III were intracranial hemorrhage requiring intervention (23 percent) or death due to brain injury (3 percent).

AHT incidence appears to be increasing dramatically, from 19.6 cases per 100,000 children younger than the age of 5 in 2009 to 47.4 cases per



100,000 in 2014. Monthly peaks were in January, July and October.

"This is a sobering study," Klimo said. "This is a serious public health issue that deserves greater attention within local communities, state-wide and nationally."

Reminder to CFRI researchers

When publishing manuscripts, please ensure you include **Children's Foundation Research Institute at Le Bonheur Children's Hospital** in both your affiliation and acknowledgments.

Including CFRI in your affiliation has the benefit of helping to raise the profile of our Institute and Hospital both nationally and internationally. It also assists us in keeping accurate publication records and helps us to promote your work.



CFRI Publications August-November 2016

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CFRC—Children's Foundation Research
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FOB—Faculty Office Building



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