Research Matters

Winter 2014

Children's Foundation Research Institute

Bridges lab: Obesity

Dave Bridges, PhD, and his team of researchers are studying the physiology of obesity, particularly how nutrient storage can contribute to obesity. Using mice and fruit fly models, his lab studies the mechanisms that cause obesity and pathway interventions that can alleviate obesity and associated diseases.

Bridges has a joint appointment with the Department of Pediatrics and Physiology. He arrived in May from the University of Michigan, where he studied insulin function. He said he was attracted to Memphis because of the opportunity to build an obesity research center and because of the focus the community has on childhood obesity. He will work closely with Joan Han, MD, the newly named director of the Health Lifestyles Clinic and Metabolic Research Center. Han studies the genetic determinants of obesity.

Nephrology adds new faces

John Bissler, MD, was recently named the new chief of Pediatric Nephrology at Le Bonheur Children’s. He comes to Memphis from Cincinnati Children’s Hospital and will also serve as a professor at the University of Tennessee Health Science Center (UTHSC). His research interests include proliferative renal diseases, polycystic kidney disease, tuberous sclerosis complex, Von Hippel-Lindau disease, Birt Hogg-Dube syndrome and renal cancers. Bissler replaces Robert Wyatt, MD, who retired as chief after 29 years in the division.

Nephrologist David Hains, MD, comes to Le Bonheur from Nationwide Children’s Hospital. His NIH-funded research interests focus on DNA copy number variations in genes important to our immune system. Specifically, using genetic signatures of pediatric patients with vesicoureteral reflux enrolled in the RIVUR study, Hains will begin determining why some patients develop recurrent urinary tract infections and subsequent renal scarring while the vast majority have no problems. Hains will also serve as the Pediatric Nephrology Fellowship Training Program director and as an associate professor at UTHSC.

Spearman, Horobetz join CFRI

Venessa C. Spearman – Grant/Contracts Coordinator, Children’s Foundation Research Institute

Spearman comes to the CFRI from Memphis City Schools where she was director of professional development and staff in-service. She previously served as administrator of the University of Memphis School of Urban Affairs and Public Policy and has also worked as an independent consultant securing funding from the U.S. Department of Housing and Urban Development, U.S. Department of Education, Tennessee Department of Education, the City of Memphis and philanthropic organizations. Spearman has a Bachelor of Business Administration and a Master of Public Administration from the University of Memphis.

Catherine Horobetz – Neuroscience Institute Clinical Research Coordinator

Horobetz has spent most of her career in the field of diabetes research, working with both adults and children. She has Bachelor of Science degree from UTHSC in nursing with more than 10 years of experience in clinical research. Horobetz previously worked at the University of Tennessee and in private practice coordinating NIH-funded studies and pharmaceutical trials. A certified diabetes educator, Horobetz worked in private practice teaching individual and group education classes. She has also worked in disease management and as a clinical specialist in pump therapy for an insulin pump company.
Nearly 250 people attended Le Bonheur’s sixth annual Pediatric Research Day, held Nov. 20, 2013. Winners among the 135 poster presentations, selected by a panel of 15 judges, were:

**Research Day winners**

**General competition winners**

- **Greg I. Lee**
  Effects of environmentally persistent free radicals on severity of neonatal influenza infection

- **Dahui You**
  Limited pDC and type I IFN responses permit Th2-biased responses in mice initially infected as neonates

- **Bindiya Bagga**
  Investigating mucosal and humoral immune correlates of respiratory syncytial virus protection in infants: An interim analysis

- **Mark Weems**
  Management of urinary tract infections in young infants less than forty-nine weeks postmenstrual age

- **Carol O’Hear**
  Anti-CD33 chimeric antigen receptor therapy for acute myeloid leukemia

- **Errin Marie Newman**
  Update on the CHAMP program: The successes and challenges of building a successful community-based program for high-risk asthma patients in Memphis

**Medical student winners**

- **MacLean House**
  Surgical Apgar score is associated with cardiac troponin leak and myocardial infarction after non-cardiac surgery

- **Elizabeth Ockerman**
  Terminating type 1 diabetes with enhanced CD8 regulatory T cells

- **Kristie Chang**
  Permissive contributions of prostacyclin and NO to cerebral vasodilation to H2S in newborn pigs

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### CFRI Publications July-Dec 2013