

Researchers Winter 2014

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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.



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 Medical Center 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 NIHfunded 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.

Assisi Foundation gives to research



The Assisi Foundation of Memphis, Inc. has committed a generous amount in support for the Children's Foundation Research Institute (CFRI) at Le Bonheur. The gift will help the institute expand its infrastructure, including staff, equipment and technology. The Assisi Foundation of Memphis, Inc. works to serve non-profit organizations in Memphis and the Mid-South.

"Our goal is to become a nationally recognized pediatric research center, contributing to the prevention and treatment of pediatric diseases like asthma and childhood obesity," said Sheon Lynch, administrative director of the CFRI. "We want to continue to build our capacity, and the gift from The Assisi Foundation will help us do that."

Research Day winners

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:

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

MacLean House

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

General competition winners

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

Medical student winners

Elizabeth Ockerman

Terminating type 1 diabetes with enhanced CD8 regulatory T cells

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

Kristie Chang

Permissive contributions of prostacyclin and NO to cerebral vasodilation to H2S in newborn pigs

CFRI Publications July-Dec 2013

- 1. Astur N, Klimo P, Jr., Sawyer JR, Kelly DM, Muhlbauer MS, Warner WC, Jr. Traumatic atlanto-occipital dislocation in children: evaluation, treatment, and outcomes. J Bone Joint Surg Am. 2013;95:e1941-1948
- 2. Birg L, Narayana S, Rezaie R, Papanicolaou A. Technical tips: MEG and EEG with sedation. Neurodiagn J. 2013;53:229-240
- 3. Boop FA. Editorial: Bifocal germ cell tumors. J Neurosurg Pediatr. 2013;11:105-106
- 4. Cannon TA, Neto NA, Kelly DM, Warner WC, Jr., Sawyer JR. Characterization of radiation exposure in early-onset scoliosis patients treated with the vertical expandable prosthetic titanium rib (VEPTR). J Pediatr Orthop. 2013 Oct 29 [Epub ahead of print]
- 5. Choudhri AF, Narayana S, Rezaie R, Whitehead MT, McAfee SS, Wheless JW, Boop FA, Papanicolaou AC. Same day tri-modality functional brain mapping prior to resection of a lesion involving eloquent cortex: technical feasibility. Neuroradiol J. 2013;26:548-554
- 6. Corkins MR, Guenter P, Dimaria-Ghalili RA, Jensen GL, Malone A, Miller S, Patel V, Plogsted S, Resnick HE. Malnutrition diagnoses in hospitalized patients: United States, 2010. JPEN J Parenter Enteral Nutr. 2013 Nov 18 [Epub ahead of print]
- 7. Hastings MC, Moldoveanu Z, Suzuki H, Berthoux F, Julian BA, Sanders JT, Renfrow MB, Novak J, Wyatt RJ. Biomarkers in IgA nephropathy: relationship to pathogenetic hits. Expert Opin Med Diagn. 2013;7:615-627
- 8. Kelly DM, Heyworth BE, Kruse RW, Edmonds EW, Vanderhave KL, Podeszwa DA, Talwalkar VR, Warner WC, Jr., Gordon JE. Current state of pediatric orthopaedic disaster response. J Pediatr Orthop. 2013 Oct 29 [Epub ahead of print]
- 9. Klimo P, Jr., Jha T, Choudhri AF, Joyner R, Michael LM, 2nd. Fibromyxoma of the lateral skull base in a child: case report. J Neurol Surg Rep. 2013;74:105-110
- 10. Murphy RF, Beaty JH, Kelly DM, Sawyer JR, Warner WC, Jr. Implant failure in slipped capital femoral epiphysis. A report of two cases. JBJS Case Connector. 2013;3:e138-e143
- 11. Saravia J, You D, Thevenot P, Lee GI, Shrestha B, Lomnicki S, Cormier SA. Early-life exposure to combustion-derived particulate matter causes pulmonary immunosuppression. Mucosal Immunol. 2013
- 12. Szlam S, Meredith M. Shake, rattle, and roll: an update on pediatric seizures. Pediatr Emerg Care. 2013;29:1287-1294
- 13. Wheless JW, Klimo P, Jr. Subependymal giant cell astrocytomas in patients with tuberous sclerosis complex: Considerations for surgical or pharmacotherapeutic intervention. J Child Neurol. 2013 Oct 7 [Epub ahead of print]