

# **Bryce A. Heese, M.D., M.A.**

## **Contact Information**

Work: 816-234-3290  
Fax: 816-346-1378  
Web: <http://www.childrensmercy.org/content/view.aspx?id=155>

## **Current Position (05/04/2009 - Present)**

Clinical Biochemical Geneticist  
Assistant Professor, Department of Pediatrics  
University of Missouri-Kansas City School of Medicine  
Children's Mercy Hospital, Kansas City, MO

## **Previous Position (07/01/2006 – 04/17/2009)**

Assistant Professor of Pediatrics  
Division of Genetics and Metabolism  
University of Florida, Gainesville, FL

## **Board Certifications**

2006-2013 Am. Board of Medical Genetics – Clinical Biochemical Genetics  
2003-2010 American Board of Pediatrics  
1997-2002 USMLE, Step 1,2,3

## **Medical Licensure**

2009-2010 State of Missouri  
2009-2010 Kansas State Board of Healing Arts  
2006-2011 State of Florida  
2003-2006 Minnesota Board of Medical Practice  
2000-2003 State of Nebraska DHHS, Temp Education Permit

## **Hospital Staff Affiliations:**

### **Current (2009-)**

- Children's Mercy Hospital and Clinics, Kansas City, MO

### **Previous (2006-2009)**

- Shands Hospital at University of Florida, Gainesville, FL
- Shands Hospital at Alachua General Hospital, Gainesville, FL
- Sacred Heart Hospital, Pensacola, FL (consulting privileges)

## **Education**

- 2003-2006 Clinical Residency in Medical Genetics, Mayo Clinic, Rochester, MN (non consecutive years: 2003-2004 & 2005-2006)
- 2004-2005 Clinical Fellowship in Biochemical Genetics, Mayo Clinic, Rochester, MN
- 2000-2003 Clinical Residency in Pediatrics, Creighton Univ/Univ of Nebr, Omaha, NE
- 1996-2000 Medical Education, University of Nebraska School of Medicine, Omaha, NE  
Degree: M.D.
- 1994-1995 Graduate school, Boston University School of Medicine, Boston, MA,  
Degree: M.A.
- 1990-1994 Undergraduate education, Nebraska Wesleyan University, Lincoln, NE;  
Biology Major, Mathematics Minor – Degree: B.S.

## **Vocation & Training (other)**

- 1995-1996 Saint Mary's Hospital Burn Unit, Lincoln, NE, Clinical and Hospital Technician
- 1995 Northeastern University, Boston, MA, Basic EMT Training,
- 1994-1995 Department of Child Psychiatry, Boston City Hospital, Boston, MA,  
Clinical Assistant under Jonathan Bass M.D.
- 1993 Department of Endocrinology, University of Texas Medical Branch,  
Galveston, TX, Undergraduate Summer Laboratory Research Program,  
Studied vitamin A effects on IGF-1 and spermatogenesis in rat models,  
non-degree

## **Educational Activities**

### **Master's Thesis, Boston University School of Medicine**

The measure of Aggression, Violence and Rage in Children (MAVRIC) in boys ages 6 to 12 years: a comparison with the Achenbach Child Behavior Checklist, Boston University. July 1996.

### **Teaching Activities**

Residency - Creighton University/University of Nebraska, Omaha, NE

- Various presentations for Patient Management Conferences, Subspecialty Case Conferences and Pediatric Resident Lectures

Residency/Fellowship - Mayo Clinic, Rochester, MN

- Genomics in Clinical Practice (CME) counseling issues for cystic fibrosis, group facilitator, Mayo Clinic, Oct 6, 2003 and Oct 11, 2004
- Mayo Medical School Genetics course, teaching assist and group facilitator for 1<sup>st</sup> yr medical students; Fall 2003 & Fall 2004
- Various presentations for Biochemical Genetics Case Conferences, Cytogenetics Case Conference, and Seminars in Medical Genetics

University of Florida, Gainesville, FL

- Pediatric Science Day, moderator for platform talks on gene therapy, Gainesville, FL, Mar 22, 2007.
- University of Florida, pediatric residency subspecialty conferences and board review lectures, various presentations
- Genetics and Metabolism Grand Rounds, various presentation
- University of Florida, Pediatric Board Prep Review July 11, 2008

### **Administrative Activities**

- Newborn Dried Blood Spot Workgroup for the Department of Health and Human Services Secretary's Advisory Committee on Heritable Disorders in Newborns and Children with Public Health Informatics Institute. (2008)
- Florida state newborn screening inborn errors of metabolism workgroup; weekly video teleconference; facilitator, (2007-2009).
- University of Florida Clinical Genetics Residency Program, (2008)

- Southeastern Regional Genetics Group, Region 3 collaborative and long-term follow-up project of HRSA grant, workgroup; member (May 2007).
- Medical director for the Department of Health Children's Medical Services newborn screening (2006-2009).

## **Professional Memberships and Societies (present & past)**

- Society of Inherited Metabolic Diseases, 2008
- American Society of Human Genetics, 2008
- American College of Medical Genetics, 2004

## **Research Activities**

- Principal investigator at University of Florida for industry sponsored early access program for the drug, Kuvan, a possible treatment for patients with phenylketonuria.
- Collaboration in a multi-center phase 3 clinical trial: Coenzyme Q<sub>10</sub> therapy in mitochondrial diseases. Principal investigator: Peter W. Stacpoole, PhD, MD, Director of General Clinical Research and Training, University of Florida.
- The effects of fibric acids on fibroblasts with various fatty acid oxidation defects, and its use as a possible adjunct to current therapy in individuals with fatty acid oxidation disorders. Mentor: Dietrich Matern M.D., Biochemical Genetics Lab, Mayo Clinic.

## **Presentations**

- *Genomics in medicine: Neurogenomics*. Oral Presentation: Upper Mississippi Basin Chapter of the American Association of Neuroscience Nurses, Rochester, MN, Sep 16, 2004.
- *Clinical Genetics for the Pediatrician and Biochemical Genetics for the Pediatrician* (presenter), MedStudy 2006 Intensive Board Review of Pediatrics, Snowmass Village, CO, September 13, 2006.
- *Newborn Screening in the State of Florida*, University of Florida Pediatric Grand Rounds, Gainesville, FL, June 15, 2007.
- *Newborn screening in Florida: are we there yet?*, Tallahassee Pediatric Foundation Tallahassee, FL, Sept. 17, 2007.
- *Perspectives in Newborn Screening for Inborn Errors of Metabolism*, Pediatric Rounds, Children's Mercy Hospital, December 23, 2008
- *Lysosomal Storage Diseases*, Children's Medical Services Education, Gainesville, FL, February 13, 2009.

- *Common Genetic Disorders in the Neonate*, Baby Steps Conference, Pensacola, FL March 12, 2009.  
*Metabolic Disorders in the Neonate: Beyond Newborn Screening*, Baby Steps Conference, Pensacola, FL March 12, 2009.

## Abstracts

1. J Ireland, B Heese, AW Strauss, V Michels, D Whiteman, SH Hahn, P Rinaldo, D Matern. Severe lactic acidosis in the absence of dicarboxylic aciduria in a newborn with mitochondrial trifunctional protein deficiency. Society for the Study of Inborn Errors of Metabolism 41<sup>st</sup> Ann Symposium, Amsterdam, Netherlands, Sep 7-10, 2004.
2. B Heese, J Winters, S Minnich, K Mensink, V Marley, JF O'Brien, D Matern, E Highsmith, S. Hahn. An improved algorithm for the evaluation of galactosemia positive from newborn screening. , *Mol Gen Met*, 2005; 84(3): 203-4.
3. Oglesbee D, Heese B, Kramer K, Hartman S, Huey J, Matern D, Whiteman D, Renaud D, Rinaldo D, Robinson B, Cameron J, Hahn S. Improving the diagnosis of mitochondrial respiratory chain defects via skin fibroblast analysis. *Mol Gen Met*, 2005; 84(3): 203-4.
4. Heese B, Anderson B, Matern D, The effect of bezafibrate on the metabolism of palmitate in fibroblast cultures deficient of various fatty acid oxidation enzymes. Oral presentation: 6<sup>th</sup> Fatty Acid Oxidation Congress, Egmond aan Zee, Netherlands, Jun 2005
5. Heese BA, Anderson B, Hahn S, Tortorelli S, Rinaldo P, Matern D, The effect of Bezafibrate on the metabolism of palmitate in fibroblast cultures of patients with VLCAD deficiency, presented at: Society for the Study of Inborn Errors of Metabolism 42<sup>nd</sup> Annual Symposium, Paris, France, Sept 6-9, 2005.
6. Noe K, Heese B, Babovic-Vuksanovic D, Lindor N, Khan S, Renaud D, Vanishing white matter disease with neutropenia: a case report with serial MRI and EEG correlation, *Neuropediatrics*, 10<sup>th</sup> International Child Neurology Conference, 2006, 37 (S1)
7. Oglesbee B, Heese B, Tortorelli S, Hahn S, Rinaldo P, Matern D, Follow-up algorithm for C4-acylcarnitine elevations detected by newborn screening. *APHL: Newborn Screening and Genetic Testing Symposium*, Portland, Oregon, 2006 October 24 – 27.
8. Dagli AI, Edwards PK, Stalker HJ, Maisenbacher MK, Wallace MR, Burch MN, Tiranti V, Gavrilov D, Rinaldo P, Martin LS, Heese B. Ethylmalonic encephalopathy with a novel ETHE1 mutation diagnosed on newborn screening. *Mol Gen Met*, Mar 2008.

9. Heese B, Dagli A, Driscoll DJ, Zori R, Edwards P, Kerr DS, Stacpoole PW, A Novel and Extreme Case of a Female Patient with Undetectable Pyruvate Dehydrogenase Complex Activity: Early Responsiveness to Diet and Drug Treatment. United Mitochondrial Disease Foundation, Annual Meeting Indianapolis, IN 2008.

## **Published Works**

1. Halligan C, Heese BA, Mellor G, Michels, VV, Reed A. A boy with fever and whorl keratopathy. *J Rheumatol* 2006; 33(6): 1210-1211.
2. Mensink KA, Ketterling RP, Flynn HC, Knudson RA, Lindor NM, Heese BA, Spinner RJ, Babolovic-Vuksanovic. Connective tissue dysplasia in five new patients with NF1 microdeletions: further expansion of phenotype and review of the literature. *J Med Genet.* 2006; 43(2).
3. Schimmenti L, Crombez E, Schwahn B, Heese B, Wood T, Schroer R, Bentler K, Cederbaum S, Sarafoglou K, McCann M, Rinaldo P, Matern D, Amat di San Filippo C, Pasquali M, Berry S, Longo N. Expanded newborn screening identifies maternal primary carnitine deficiency. *Molecular Genetics and Metabolism* 2007; 90 (4): 441-445.
4. Dagli AI, Zori R, Heese B. Testing strategy for inborn errors of metabolism in the neonate. *NeoReviews*, 2008; 9(7) e291-e298.
5. Heese B, Zori R. Medical genetics and inherited metabolic disorders. *Critical Care* 4<sup>th</sup> edition. Editors Civetta JM, Taylor RW, Kirby RR. 2008, Lippincott-Ravin, Philadelphia.
6. Heese B. Current strategies in the management of lysosomal storage diseases. *Seminars in Pediatric Neurology*, 2008; 15(3):119-126.
7. Mineri R, Rimoldi M, Burlina A, Koskull S, Perletti C, Heese B, vonDobeln U, Mereghetti P, Di Meo I, Invernizzi F, Zeviani M, Uziel G, Tiranti V. Identification of new mutations in the ETHE1 gene in a cohort of 14 patients presenting with Ethylmalonic Encephalopathy. *Journal of Medical Genetics*, 2008; 45:473-478.
8. Burton B, Kurczynski T, Hainline B, Andersson H, Heese B, Hillman R, Gambello M, Northrup H, Dorenbaum A, Pallansch P, Kakkis E, Turbeville S, Nicely H, The Sapopterin expanded access program (SEAP): safety tolerability, and retention during Sapopterin therapy in patients with phenylketonuria (in preparation – Clinical Therapeutics).