

Mark A Clements, MD PhD CPI FAAP

*Medical Director, Pediatric Clinical Research Unit
Director, Pediatric Endocrine/Diabetes Clinical Research
Associate Professor, Pediatrics
University of Missouri-Kansas City
Department of Pediatrics
Division of Endocrinology and Diabetes
Children's Mercy Hospital
2401 Gillham Road
Kansas City, MO 64108
(816) 983-6982
maclements@cmh.edu*

POSITIONS

*University of Missouri-Kansas City, Kansas City, MO, July 2008-present
Assistant Professor, Pediatrics- Endocrinology, July 2008-2015
Associate Professor, Pediatrics – Endocrinology, September 2015-present*

*Children's Mercy Hospital, Kansas City, MO, July 2008-present
Staff Physician, Pediatric Endocrinology, July 2008-present*

LEADERSHIP

*Director, Pediatric Endocrine/Diabetes Clinical Research, Children's Mercy Hospital, July 2011-present
Medical Director, Pediatric Clinical Research Unit, Children's Mercy Hospital, October 2012-present
Pediatric Vice-Chair, Protocols and Manuscripts, T1D Exchange, January 2016-present*

EDUCATION AND TRAINING

*Children's Mercy Hospital, Kansas City, MO
CQPI (continuous quality and process improvement) course
February-April, 2017 (scheduled)*

*Institute for Healthcare Improvement (IHI)
Leading Quality Improvement
June-September, 2016*

*Children's Mercy Hospital, Kansas City, MO
Genomic Medicine Master Class
September 8-12, 2014
5-day intensive course teaching analysis of genomic sequence for diagnosis of human disease

*Food and Drug Administration, Bethesda, MD
Clinical Investigator Training
November, 2012
2-day intensive course on federal regulations & skills to conduct clinical trials

Children's Mercy Hospital, Kansas City, MO
Certified Physician Investigator (CPI) training
June-September; 2011

*4-month intensive course on federal regulations & skills to conduct clinical trials

FOCIS- Federation of Clinical Immunology Societies

Advanced course in basic and clinical immunology
Scottsdale, Arizona

February, 2008 and February, 2009 (attended two 4-day intensive courses)

University of Missouri-Kansas City School of Medicine,

Children's Mercy Hospital, Kansas City, MO, 7/2003-6/2008

Pediatric Residency 7/2003-6/2006

Pediatric Endocrinology Fellowship (Fast-track) 7/2006-6/2008

Washington University School of Medicine, St Louis, MO, 7/1993-5/2003

Medical Scientist Training Program (M.D., Ph.D.), Division of Biology and Biomedical Sciences

Ph.D. in Neuroscience, 2003; Area of Specialization: Developmental Neuroscience

M.D., 2003

Butler University, Indianapolis, IN, 6/1993

B.S. in Biological Sciences, *magna cum laude*

B.S. in Chemistry, *magna cum laude*

Minor concentration: creative writing.

Northeastern University, Somerset, MA, 1990

The School for Field Studies

Field study of harbor seal behavior and ecosystem disequilibrium in Prince William Sound, Alaska.

AWARDS AND HONORS

2015 Teacher of the year, Acellus

2014 Golden Apple mentor award, Children's Mercy (June)

2013 Outstanding Teaching Section Award

Award granted to the entire section; I delivered a number of the lectures to residents from 7/1/2012 to 6/30/2013 which were contributory.

2012 Top Doc, 435 magazine

2010 Cure Award, American Diabetes Association Kansas City Chapter

2008 Children's Mercy Hospital Physician Scientist Award

2007 Katherine B Richards (KBR) Grant recipient, Children's Mercy Hospital

1993 Appointed to the Medical Scientist Training Program, Washington University.

1993 Graduated magna cum laude, Butler University

1990-1993 Recipient of Merit Scholarship, Department of Biology

1989-1993 Recipient of Merit Scholarship, University College

1991 and 1992 Appointment to Butler Summer Institute

Required competitive grant application to the Holcomb Research Institute of Butler University

PROFESSIONAL SOCIETIES

2003-present	American Academy of Pediatrics
2007-2012	Lawson Wilkins / Pediatric Endocrine Society
2008-present	The Endocrine Society
2007-2008	American Association for the Advancement of Science
2009-present	American Diabetes Association
2011-present	American College of Research Professionals
2012-present	International Society for Pediatric and Adolescent Diabetes
2014-present	Midwest Society for Pediatric Research
2015-present	Society for Pediatric Research

LICENSURE AND CERTIFICATION

2003-present	Missouri licensure
2006-present	Kansas licensure
2006-2016	Board Certified, Pediatrics
2009-present	Board Certified, Pediatric Endocrinology
2012-present	Certified Physician Investigator Association of Clinical Research Professionals (ACRP)

RESEARCH INTERESTS

- Leveraging big data in type 1 diabetes mellitus research
- Discovering/defining predictors risk for acute and chronic complications in type 1 diabetes mellitus
- Impact of glycemic variability on chronic complications in type 1 diabetes mellitus
- Impact of genetic factors on susceptibility to chronic complications in type 1 diabetes mellitus
- Autoimmune mechanisms of type 1 diabetes mellitus
- Developing novel behavioral and technology-based interventions for type 1 diabetes mellitus
- Clinical trials of novel pharmacologic, biologic, and device therapies in type 1 and type 2 diabetes

FUNDING AND GRANTS

ACTIVE

1U01DK106984-01 (Moore, WV, Clements, MA) 07/01/2015 – 04/30/2019 1.2 calendar
NIH \$282,829

Type 1 Diabetes TrialNet Clinical Center (U01)

Major Goals: Creation of a regional clinical trial sub-network for the TrialNet consortium. Will leverage a comprehensive business model for clinical trial management, real-time informatics, and quality improvement methodologies to increase the effectiveness and efficiency of recruitment and retention in TrialNet studies.

Role: PI (multi-PI award)

<NONE> (Beck, Roy) 01/01/2016-4/01/2017 1.2 calendar
Helmsley Charitable Trust \$21,470

T1D Exchange Pediatric Vice Chair

Major Goals: To assist the T1D Exchange network and its investigators in the development of new health outcomes and interventional research protocols. To facilitate manuscript working groups and actively develop manuscripts for publication. To participate in the Operations Committee and Steering Committee for the network. 1 year term renewable up to 3 years.

Role: Vice Chair (Service Agreement)

1R01DK100779-01A1 (Patton, Susana R) 08/01/2014 - 07/31/2019 0.96 calendar
NIH \$375,323

Longitudinal Test of Adherence & Control in Kids New to T1 Diabetes & 5-9 Years Old
Major Goals: Longitudinal study of 120 children, 5-9 years old and newly diagnosed with type 1 diabetes plus qualitative study recruiting 25 families of youth 5-9 years old and newly diagnosed with type 1 diabetes.

Role: Co-Investigator

1R21HD081502-01A1 (Patton, Susana Ruth) 04/01/2015 – 03/31/2017 1.2 calendar
NIH \$238,153

Reducing hypoglycemia fear in parents of young kids with video-based telemedicine
Major Goals: To evaluate a new group-based telemedicine intervention (RED CHiP: Reducing Emotional Distress for Childhood Hypoglycemia in Parents), which was designed to reduce parental FH and improve glycemic levels and variability in young children with T1DM.

Role: Co-Investigator

DP3 (Patton, Susana Ruth) 12/01/2015 - 11/30/2019 1.0 calendar
NIH \$1,019,273

An interactive mHealth app for better glycemic control in families of young kids with T1D
Major goals: To build, refine, and pilot feasibility test a tailored diabetes education program for parents of young children. The tailored education program, called DIPPer Academy (Diabetes Information for Parents of Preschoolers) will use an online video-based and interactive micro-lecture format to deliver type 1 diabetes education and behavioral parent training to families of young children.

Role: Co-investigator

UG1 (McCulloh, Russell) 09/26/2016 – 09/25/2020 0.6 calendar
NIH \$308,173

SPeCTRE: The Sunflower Pediatric Clinical Trials Extension

Major goals: To improve the opportunity for children in rural and underserved areas of Kansas and neighboring states to participate in clinical trials. SPeCTRE will conduct outreach, education, and engagement activities that will extend clinical trials participation opportunities to children in rural and underserved areas of Kansas and eventually neighboring states, which will help to support the development of better care options for children.

Role: Co-investigator

<NONE> (Ball, Dana) 8/1/2016 – 7/31/2017 0.5 calendar
Helmsley Charitable Trust \$20,000 (core site)
\$20,000 (data extraction)

T1D Exchange Quality Improvement Collaborative

Major goals: Overall, the goal is to develop a multi-center quality improvement collaborative to improve type 1 diabetes care. My role is twofold: 1) to lead Children's Mercy as one of 11 sites in the initial phase of development; and 2) to co-develop the EHR data extraction and data transmission model along with one other site in the collaborative (the Barbara Davis Center).

Role: Site PI

INACTIVE

<None> (Clements, Mark A) 07/01/2013-06/30/2014 1.2 calendar
KC Digital Sandbox \$23,800

Impact of real-time data sharing from a home glucometer to the diabetes care team on patient satisfaction, adherence, and glycemic control

Major Goals: Observational prospective study of 10 adolescents with type 1 diabetes. Develop pilot data to assess the impact of real-time data-streaming of blood glucose data to a health care provider portal, with automated alerts designed to identify clinically actionable patterns in blood glucose data. The goal is to improve communication frequency and quality between patient and providers, ultimately leading to improved glycemic control.

Physician Scientist Award (Clements, Mark A) 10/1/2008-9/31/2012 2.4 calendar
Children's Mercy Hospital \$225,000

Project 1: Measuring the impact of novel aspects of glycemic control on the rate of development of microvascular complications in pediatric patients with type 1 diabetes. Major Goals: To develop a health outcomes database containing highly granular information on 5000+ pediatric patients with type 1 diabetes seen over a 24 year period at the investigator site. To develop a database of information from home devices (glucometer, insulin pump) to allow high-resolution phenotyping of patients' glycemia and adherence patterns. To develop predictive models for future glycemic control and diabetes complications. The studies apply multivariable analyses, latent class analysis, and survival analysis to identify risk factors for future deterioration in glycemic control, as well as future risk for diabetic complications.

Project 2: Developing a model of glycemic variability in the diabetic rat
Major Goals: To create a chronic animal model of glycemic variability by applying continuous glucose monitoring via glucose biosensors, plus continuous subcutaneous insulin infusion via an implantable pump (osmotic or micro-programmable), plus timed intermittent oral glucose delivery. Study assesses the impact of glycemic variability on vascular oxidative stress over 4-8 weeks, and lays the groundwork for chronic experiments to assess the impact of glycemic variability on the rate of development of vascular complications over 16-26 weeks in the diabetic rat.

Role: PI

5UL1TR000001-03 (Raman, Sripriya) 03/01/2013-02/28/2014 0.6 calendar
Frontiers Pilot and Collaborative Studies Funding Program \$30,000

Role of HbA1c Variability in Risk Prediction Models for Diabetes Mellitus (DM)
Nephropathy in Children with Type I Diabetes

Major Goals: To measure the relative contribution of longitudinal variation in HbA1c on rate of development of microalbuminuria in pediatric type 1 diabetes. The study leverages multivariable analyses, novel risk predictors, and survival analyses/Cox Proportional Hazards modeling, as well as the extensive type 1 diabetes health outcomes database developed by the study team.

Role: Mentor

<NONE> (Clements, Mark A) PI 09/1/2010-8/31/2011 2.4 calendar
Kansas City Area Life Sciences Institute \$50,000

Collaborators: J Steve Leeder, Christian Schoeneich
Vascular Oxidative Stress in Type 1 Diabetes

Major Goals: To measure the impact of short-term glycemic variability, long-term glycemic variability (HbA1c variation), and genomic variation in key oxidative stress pathway genes on vascular oxidative stress measured by a novel fluorogenic assay for oxidatively modified proteins. The study leverages an assay developed by Dr Schoeneich along with genotyping of subjects for known disease-associated alleles in key oxidative stress pathway genes and high-resolution characterization of glycemia to allow multivariable analysis of risk factors for vascular oxidative stress in diabetes.

Role: PI

PUBLICATIONS AND PRESENTATIONS

Pending

Clements M, Staggs V. A mobile app for synchronizing glucometer data: impact on adherence and glycemic control among youths with type 1 diabetes in routine care. Accepted (12/21/2016), Journal of Diabetes Science and Technology.

Noser, AE, Huffhines, L, **Clements, MA**, Patton, SR. Self-efficacy outstrips the positive impact of self-efficacy on youth adherence and glycemic control in type 1 diabetes. Revised and Resubmitted to Pediatric Diabetes

Van Allen, J, Noser, AE, Littlefield, AK, Seegan, PL, **Clements, MA**, Patton, SR. A confirmatory factor analysis of the self-efficacy for diabetes scale in a sample of youth with type 1 diabetes. Submitted to Diabetes Research and Clinical Practice

Published

Stahl CH, Lind M, Svensson AM, Kosiborod M, Gudbjörnsdottir S, Pivodic A, **Clements M**, Rosengren A. Long-term excess risk of stroke in people with Type 2 **diabetes** in Sweden according to blood pressure level: a population-based case-control study. Diabet Med. 2016 Nov 25. doi: 10.1111/dme.13292. [Epub ahead of print] PMID: 27885698

Noser AE, Huffhines L, **Clements MA**, Patton SR. Diabetes conflict outstrips the positive impact of self-efficacy on youth adherence and glycemic control in type 1 diabetes. Pediatr Diabetes. 2016 Nov 17. doi: 10.1111/pedi.12471. [Epub ahead of print] PMID: 27859979

Tsai SL, **Clements MA**, Apodaca TR.

Reflections on Incorporating a Behavioral Intervention into a Busy Pediatric Subspecialty Clinic. J Pediatr Health Care. 2016 Sep 27. pii: S0891-5245(16)30222-X. doi: 10.1016/j.pedhc.2016.08.011. [Epub ahead of print] PMID: 27692505.

Noser AE, Patton SR, Van Allen J, Nelson MB, **Clements MA**. Evaluating Parents' Self-Efficacy for Diabetes Management in Pediatric Type 1 Diabetes. J Pediatr Psychol. 2016 Aug 22. pii: jsw072. [Epub ahead of print] PMID: 27550634

Maliszewski G, Patton SR, Midyett LK, **Clements MA**. The Interactive Effect of Diabetes Family Conflict and Depression on Insulin Bolusing Behaviors for Youth. *J Diabetes Sci Technol*. 2016 Aug 18. pii: 1932296816664363. [Epub ahead of print] PMID: 27543271

Patton SR, Driscoll KA, **Clements MA**. Adherence to Insulin Pump Behaviors in Young Children With Type 1 Diabetes Mellitus: Opportunities for Intervention. *J Diabetes Sci Technol*. 2016 Jul 6. pii: 1932296816658901. [Epub ahead of print] PMID: 27390223

Clements MA, DeLurgio SA, Williams DD, Habib S, Halpin K, Patton SR. Association of HbA1c to BOLUS Scores Among Youths with Type 1 Diabetes. *Diabetes Technol Ther*. 2016 Jun;18(6):351-9. doi: 10.1089/dia.2015.0352. PMID:27258122

Patton SR, **Clements MA**. Psychological Reactions Associated With Continuous Glucose Monitoring in Youth. *J Diabetes Sci Technol*. 2016 May 3;10(3):656-61. doi:10.1177/1932296816638109. Print 2016 May. PMID:26969141

Ferguson AM, Michael J, DeLurgio S, **Clements MA**. The use of point-of-care ketone meters to diagnose and monitor diabetic ketoacidosis in pediatric patients. *Clinical Lab International*. 2016 April / May on-line, pgs. 23-24.

McDonough RJ, **Clements MA**, DeLurgio SA, Patton SR. Sleep duration and its impact on adherence in adolescents with type 1 diabetes mellitus. *Pediatr Diabetes*. 2016 Mar 30. doi: 10.1111/pedi.12381. [Epub ahead of print] PMID: 27028035

Patton SR, **Clements MA**. Psychological Reactions Associated With Continuous Glucose Monitoring in Youth. *J Diabetes Sci Technol*. 2016 Mar 10. pii: 1932296816638109. [Epub ahead of print] PMID: 26969141

Van Allen J, Steele RG, Nelson MB, Peugh J, Egan A, **Clements M**, Patton SR. A Longitudinal Examination of Hope and Optimism and Their Role in Type 1 Diabetes in Youths. *J Pediatr Psychol*. 2015 Nov 30. pii: jsv113. PMID: 26628250

Rosengren A, Vestberg D, Svensson AM, Kosiborod M, **Clements M**, Rawshani A, Pivodic A, Gudbjörnsdottir S, Lind M. Long-term excess risk of heart failure in people with type 1 diabetes: a prospective case-control study. *Lancet Diabetes Endocrinol*. 2015 Nov;3(11):876-85. doi: 10.1016/S2213-8587(15)00292-2. Epub 2015 Sep 18. PMID: 26388415

Patton SR, DeLurgio SA, **Clements MA**. Evaluation of the Average Daily Risk Range as a Measure of Glycemic Variability in Youths with Type 1 Diabetes. *Diabetes Technol Ther*. 2015 Nov;17(11):795-800. doi: 10.1089/dia.2015.0061. PMID: 26535929

Corathers SD, Schoettker P, **Clements MA**, List BA, Mullen D, Ohmer A, Shah A, Lee J. Health-System-Based Interventions to Improve Care in Pediatric and Adolescent Type 1 Diabetes. *Curr Diab Rep*. 2015 Nov;15(11):91. doi: 10.1007/s11892-015-0664-8. PMID: 26374568

Tancredi M, Rosengren A, Svensson AM, Kosiborod M, Pivodic A, Gudbjörnsdóttir S, Wedel H, **Clements M**, Dahlqvist S, Lind M. Excess Mortality among Persons with Type 2 Diabetes. *N Engl J Med*. 2015 Oct 29;373(18):1720-32. doi:10.1056/NEJMoa1504347. PMID: 26510021

Raman S, Dai H, DeLurgio SA, Williams DD, Lind M, Patton SR, Spertus JA, Kosiborod M, **Clements MA**. High hemoglobin A1c variability is associated with early risk of microalbuminuria in children with T1D. *Pediatr Diabetes*. 2015 Sep 17. doi: 10.1111/peidi.12300. PMID: 26377593

Li X, Kover KL, Heruth DP, Watkins DJ, Moore WV, Jackson K, Zang M, **Clements MA**, Yan Y. New Insight Into Metformin Action: Regulation of ChREBP and FOXO1 Activities in Endothelial Cells. *Mol Endocrinol*. 2015 Aug;29(8):1184-94. doi: 10.1210/ME.2015-1090. Epub 2015 Jul 6. PMID: 26147751

Patton SR, **Clements MA**, George K, Goggin K. "I Don't Want Them to Feel Different": A Mixed Methods Study of Parents' Beliefs and Dietary Management Strategies for Their Young Children with Type 1 Diabetes Mellitus. *J Acad Nutr Diet*. 2015 Aug 8. pii: S2212-2672(15)01111-9. doi: 10.1016/j.jand.2015.06.377. PMID: 26260671

Patton SR, Goggin K, **Clements MA**. The Cost of a Healthier Diet for Young Children With Type 1 Diabetes Mellitus. *J Nutr Educ Behav*. 2015 Jul-Aug;47(4):361-6.e1. doi: 10.1016/j.jneb.2015.03.006. PMID: 26164132

Clements MA, Foster NC, Maahs DM, Schatz DA, Olson BA, Tsalikian E, Lee JM, Burt-Solorzano CM, Tamborlane WV, Chen V, Miller KM, Beck RW; T1D Exchange Clinic Network. Hemoglobin A1c (HbA1c) changes over time among adolescent and young adult participants in the T1D exchange clinic registry. *Pediatr Diabetes*. 2015 Jul 8. doi: 10.1111/peidi.12295. PMID: 26153338

Kover K, Yan Y, Tong P, Watkins W, Li X, Tasch J, Hager M, **Clements M**, Moore W. Osteocalcin protects pancreatic beta cell function and survival under high glucose conditions. *Biochem Biophys Res Commun*. 2015 Jun 19; 462(1):21-6. doi: 10.1016/j.bbrc.2015.04.095. Epub 2015 Apr 27. PMID: 25930995

Willig LK, Petrikin JE, Smith LD, Saunders CJ, Thiffault I, Miller NA, Soden SE, Cakici JA, Herd SM, Twist G, Noll A, Creed M, Alaba PM, Carpenter SL, **Clements MA**, Fischer RT, Hays JA, Kilbride H, McDonough RJ, Rosterman JL, Tsai SL, Zellmer L, Farrow EG, Kingsmore SF. Whole-genome sequencing for identification of Mendelian disorders in critically ill infants: a retrospective analysis of diagnostic and clinical findings. *Lancet Respir Med*. 2015 May; 3(5):377-87. doi: 10.1016/S2213-2600(15)00139-3. Epub 2015 Apr 27. PMID:25937001

Clements MA, Matuleviciene V, Attvall S, Ekelund M, Pivodic A, Dalquist S, Fahlen M, Haraldsson B, Lind M. Predicting the effectiveness of insulin pump therapy on glycemic control in clinical practice: A retrospective study of patients with type 1 diabetes from 10 outpatient diabetic clinics in Sweden over 5 years. *Diabetes Technol Ther*. 2015 Jan; 17(1):21-8. PMID: 25470010

Lind M, Svensson AM, Kosiborod M, Gudbjornsdottir S, Pivodic A, Wedel H, Dahlqvist S, **Clements M**, Rosengren A. Glycemic control and excess mortality in type 1 diabetes. *N Engl J. Med.* 2014 Nov 20;371(21):1972-82. PMID: 25409370

Clements M, Lind M, Raman S, Patton S, Lipska K, Fridlington A, Tang F, Jones P, Spertus J, Kosiborod M. Age at diagnosis predicts deterioration in glycaemic control among children and adolescents with type 1 diabetes. *BMJ Open Diabetes Res Care.* 2014 Oct 7;2(1). PMID: 25452876

Patton SR, Odar C, Midyett LK, **Clements MA**. Pilot Study Results for a Novel Behavior Plus Nutrition Intervention for Caregivers of Young Children With Type 1 Diabetes. *J Nutr Educ Behav.* 2014 Sep-Oct;46(5):429-33. doi: 10.1016/j.jneb.2013.11.007. Epub 2014 Jan 14. PMID:24438850

Patton SR, Delurgio SA, Fridlington A, Cohoon C, Turpin AL, **Clements MA**. Frequency of Mealtime Insulin Bolus Predicts Glycated Hemoglobin in Youths with Type 1 Diabetes. *Diabetes Technol Ther.* 2014 Aug;16(8):519-23. doi: 10.1089/dia.2013.0356. Epub 2014 Apr 28. PMID: 24773597

Patton SR, **Clements MA**. Average daily risk range as a measure for clinical research and routine care. *J Diabetes Sci Technol.* 2013 Sep 1;7(5):1370-5. PMID: 24124966

Yan Y, Li X, Kover K, **Clements MA**, Ye P; CREB participates in the IGF-I-stimulation cyclin D1 transcription. *Dev Neurobiol*, 2013 Aug;73(8):559-70. PMID 23447091

Carlsson BM, Attvall S, **Clements M**, Gumpeny SR, Pivodic A, Sternemalm L, Lind M. Insulin pump-long-term effects on glycemic control: an observational study at 10 diabetes clinics in Sweden. *Diabetes Technol Ther.* 2013 Apr;15(4):302-7. doi: 10.1089/dia.2012.0286. Epub 2013 Mar 28. PMID: 23537418

Kover K, Tong PY, Watkins D, **Clements M**, Stehno-Bittel L, Novikova L, Bittel D, Kibiryeveva N, Stuhlsatz J, Yan Y, Ye SQ, Moore WV. Expression and regulation of namp1 in human islets. *PLoS One.* 2013;8(3):e58767. doi: 10.1371/journal.pone.0058767. Epub 2013 Mar 11. PMID: 23536823

Patton S, **Clements M**, Delurgio S, Fridlington A, Cohoon C. Frequency of Mealtime Insulin Bolus as a Proxy Measure of Adherence for Youth with Type 1 Diabetes Mellitus. Submitted, *Diabetes Technology and Therapeutics.* 2013 Feb; 15(2):124-8. PMID: 23317372

Patton SR and **Clements MA**. Continuous glucose monitoring versus self-monitoring of blood glucose in children with type 1 diabetes-The pros and cons. *US Endocrinology* 2012; 8(1):27-9. PMID: 24312136

Goldman J, Becker M, Jones B, **Clements M**, and Leeder JS. Development of biomarkers to optimize pediatric patient management: what makes children different? *Biomarkers Med* 2011; 5(6) 781-794. PMCID: PMC3321646

Kover K, Tong PY, Pacicca D, **Clements M**, Bodker AM, Eidson C, Sheldon M, Southard A, Zaidi A, and Moore WV. Bone marrow cavity: A supportive environment for islet engraftment. *Islets* 2011 May/June; 3(3), 93-101. PMID: 21512317

Kover K, Tong PY, Pacicca D, **Clements M**, Bodker AM, Eidson C, Sheldon M, Southard A, Zaidi A, and Moore WV. Bone marrow cavity: A supportive environment for islet engraftment. *Islets* 2011 May/June; 3(3), 93-101. PMID: 21512317

Clements M, Duncan D, Milbrandt J. *Drosophila* NAB (dNAB) is an orphan transcriptional co-repressor required for correct CNS and eye development. *Dev Dyn*. 2003 Jan; 226(1):67-81. PMID: 12508226

Karn RC, **Clements MA**. A comparison of the structures of the alpha:beta and alpha:gamma dimers of mouse salivary androgen-binding protein (ABP) and their differential steroid binding. *Biochem Genet*. 1999 Jun; 37(5-6):187-99. PMID: 10544804

Sadovsky Y, Crawford PA, Woodson KG, Polish JA, **Clements MA**, Tourtellotte LM, Simburger K, Milbrandt J. Mice deficient in the orphan receptor steroidogenic factor 1 lack adrenal glands and gonads but express P450 side-chain-cleavage enzyme in the placenta and have normal embryonic serum levels of corticosteroids. *Proc Natl Acad Sci U S A*. 1995 Nov 21; 92(24):10939-43. PMID: 7479914

Presentations:

Clements M, Hermann JM, Charalampopoulos D, Svensson J, Hanas R, Maahs DM, Akesson K, Warner J, Holl RW, Birkebaek, N, Drivvoll A, Miller K, Svensson A, Stephenson T, Hofer S, Fredheim S, Janne S, Kummernes S, Foster N, Hanberger L, Amin R, Rami-Merhar B, Johansen A, Dahl-Jorgensen K, Skriverhaug T. International benchmarking of HbA1c in pediatric type 1 diabetes (T1D): comparison of target achievement by country and center. Submitted (pending review), American Diabetes Association 77th Scientific Sessions, San Diego, CA June 9-13, 2017.

Lyons SK, Boyle CT, DeSalvo DJ, Rickels MR, Miller KM, Foster NC, **Clements MA**, for the T1D Exchange Clinic Network. Dyslipidemia and statin use in adolescents and young adults in the T1D Exchange Clinic Registry. Submitted (pending review), American Diabetes Association 77th Scientific Sessions, San Diego, CA June 9-13, 2017.

Davis AK, Evans-Molina C, Connor CG, Hao W, Nadeau KJ, **Clements MA**, Sherr JL, Hannon T, Pratley RE, Miller KM, Greenbaum CJ, Rickels MR for the T1D Exchange Beta-Cell Function Study Group. More than just measurable peptides: describing the physiologic importance of residual C-peptide through β -cell responsiveness in type 1 diabetes. Submitted (pending review), American Diabetes Association 77th Scientific Sessions, San Diego, CA June 9-13, 2017.

Paprocki E, Patton S, Staggs V, and **Clements M**. Insulin pump adherence behaviors do not correlate with glycemic variability. Submitted (pending review), American Diabetes Association 77th Scientific Sessions, San Diego, CA June 9-13, 2017.

Patton S, Noser A, Raymond J, Majidi S, **Clements M**. Family conflict predicts HbA1c across six months in 5-9 year-olds who are new to type 1 diabetes. Submitted (pending review), American Diabetes Association 77th Scientific Sessions, San Diego, CA June 9-13, 2017.

Huerta-Saenz L, Delurgio S, Knecht N, Williams D, Patton S, **Clements M**. Dietary quality, nutrition, and healthy eating knowledge measured by the Youth Adolescent Questionnaire and the revised NutriCarb Quiz in youth with type 1 diabetes. Poster, Midwest Society for Pediatric Research Annual Meeting, Chicago, IL September 22-23, 2016.

Padman R, Chouldechova A, Diwakar IB, **Clements MA**. Predictive analytics for diabetic keto-acidosis (DKA) using features extracted from asynchronous multivariate data streams. Oral Presentation, iHealth 2017 Clinical Informatics Conference, Philadelphia, PA, May 2017.

Charalampopoulos D, Hermann JM, Svensson J, Skriverhaug T, Maahs DM, Akesson K, Warner J, Holl RW, Birkebaek N, Drivvoll AK, Miller K, Svensson A, Stephenson T, Hofer S, Fredheim S, Kummernes S, Foster N, Hanberger L, Amin R, Rami-Merhar B, Johansen A, Dahl-Jorgensen K, **Clements M**, Hanas R. International HbA_{1c} benchmarking in type 1 diabetes: Do we need to report between-clinic variation in addition to national average values? Poster, 42nd Annual Conference of the International Society of Pediatrics and Adolescent Diabetes, Valencia, Spain, October 26-29, 2016.

Noser, AE, Huffhines, L, **Clements, MA**, Patton, SR. Self-efficacy moderates the family conflict-SMBG adherence relation in youths with type 1 diabetes. Poster, American Diabetes Association 76th Scientific Sessions, New Orleans, LA, June 10-14, 2016.

Shea, J, Raymond, JK, Noser, AE, **Clements, MA**, Patton, SR (2016, June). Increase in fear of hypoglycemia post-diagnosis in young children with type 1 diabetes. Poster, American Diabetes Association 76th Scientific Sessions, New Orleans, LA June 10-14, 2016.

Huffhines L, Noser A, **Clements MA**, Egan A, Patton, SR. Moderating effects of family conflict and self-efficacy on glycemic control in youths with type 1 diabetes. Poster, Society of Pediatric Psychology Annual Conference, April 2016, Atlanta, GA.

Maliszewski G, **Clements MA**, Egan A, Patton SR. The Influence of Diabetes Family Conflict and Depression on Insulin Bolusing Behaviors for Youths. Poster, Society of Pediatric Psychology Annual Conference, April 2016, Atlanta, GA.

Patton, SR, Noser, AE, **Clements, MA**, & Van Allen, J (2016, April). An examination of the factor structure of the maternal self-efficacy for diabetes scale in parents of youth with type 1 diabetes. Poster, Society of Pediatric Psychology Annual Conference, Atlanta, GA, April 14-16, 2016.

Li X, Kover KL, Heruth DP, Watkins DJ, Moore WV, Zhang C, Zang M, **Clements MA**, Yan Y. Thioredoxin-interacting protein stimulated by high glucose induces endothelial cell apoptosis. Poster, Pediatric Academic Society, April 2016, Baltimore, MD.

****Received Poster Award.**

Tsai S, Patton S, DeLurgio S, Apodaca S, **Clements M**. A New Pediatric Diabetes Knowledge Test: Instrument Development and Factor Analysis. Oral presentation, 41st Annual Conference of the International Society of Pediatrics and Adolescent Diabetes, Brisbane, Australia, October 7-10, 2015.

McDonough, RJ, **Clements, MA**, DeLurgio, SA, Patton, SR. Sleep duration and its impact on adherence in adolescents with type 1 diabetes mellitus. Poster, 41st Annual Conference of the International Society of Pediatrics and Adolescent Diabetes, Brisbane, Australia, October 7-10, 2015.

Clements, MA, Staggs, V, Paprocki, E, Habib, S, Leisner, K, Barnes, M, Patton, SR (2015). Glycemic variability: A peril of modern insulin therapy among youths with type 1 diabetes? Oral presentation, 41st Annual Conference of the International Society for Pediatric and Adolescent Diabetes, Brisbane, Australia, October 7-10, 2015

Patton, SR, Driscoll, KA, Barnes, M, **Clements MA**. Adherence to insulin pump behaviors among young children with type 1 diabetes (T1D): Opportunities for intervention. Poster, 41st Annual Conference of the International Society of Pediatrics and Adolescent Diabetes, Brisbane, Australia, October 7-10, 2015.

Tsai S, **Clements MA**, DeLurgio S, Apodaca TR. Motivational Interviewing in Adolescents with Type 1 Diabetes: A Randomized Control Trial. Poster, American Diabetes Association 75th Scientific Sessions, June 2015 Boston, MA

Markey, S, Williams, K, **Clements, MA**, & Patton, SR. (2014). A comparison of ADRR scores in very young, school-age, and adolescent children with type 1 diabetes mellitus. Poster, 40th Annual Conference of the International Society of Pediatric and Adolescent Diabetes, Toronto, Canada, September 3-6, 2014.

Patton, SR, Markey, SJ, DeLurgio, SA, & **Clements, MA** (2014). Average daily risk range (ADRR) predicts future glycemic excursions among youths with type 1 diabetes (T1DM). Poster, 40th Annual Conference of the International Society of Pediatric and Adolescent Diabetes, Toronto, Canada, September 3-6, 2014.

Huerta-Saenz S, DeLurgio S, Knecht S, Vergara-Bagby S, Patton SR, **Clements MA**. Healthy Eating, Nutrition Knowledge, and Glycemic Control in Youth with Type 1 Diabetes Mellitus. Abstract, American Diabetes Association 74th Scientific Sessions, June 2014 San Francisco, CA.

Huerta-Saenz L, DeLurgio S, Knecht N, Vergara-Bagby S, Patton S, **Clements M**. Glycemic variability and nutrition knowledge measured by the NutriCarb Quiz (NCQ) in youth with type 1 diabetes. Poster, Endocrine Society 96th Annual Meeting and Expo, Chicago, IL June 21-24, 2014. ****Received Helmsley charitable Trust Abstract Award.**

Patton SR, DeLurgio, SA, Fridlington, A, Turpin, A, **Clements MA**. Comparing two methods for calculating an adherence score using insulin pump records in youths with type 1 diabetes: Mealtime insulin boluses versus total daily boluses. Poster, Society of Pediatric Psychology Annual Conference, Philadelphia, PA, March 27-29, 2014.

Van Allen, J, Steele, RG, **Clements, MA**, Egan, AM, Nelson, MB, Patton, SR (2014). Child hope relates to better adherence and glycemic control in youths with type 1 diabetes: Outcomes of a 6-month prospective study. Poster, Society of Pediatric Psychology Annual Conference, Philadelphia, PA, March 27-29, 2014.

Patton SR, Egan A, Nelson MB, Kreul C, Midyett LK, **Clements MA**. Examining Concurrent Validity of the Mealtime BOLUS Score with Common Psychosocial Correlates of Adherence in Youth. Poster, American Diabetes Association 73rd Scientific Sessions, June 2013 Chicago, IL

Haefner P, Holliday-White K, **Clements M**. Comparison of Continuous Glucose Monitoring Systems in Type1 Rat Model. Poster, American Diabetes Association 73rd Scientific Sessions, June 2013 Chicago, IL

Delurgio, SA, Raman PS, Williams DD, **Clements MA**. Microvascular Disease in Type 1 Diabetes (T1D): The Predictive Power of A1c Variability (A1cV). Poster, American Diabetes Association 72nd Scientific Sessions, June 2012 Philadelphia, PA

Clements M, Lind M, Raman S, Patton SR, Lipska KJ, Fridlington A, Tang F, Jones PG, Spertus JA, Kosiborod M. Older Diagnostic Age and Black Race Predict Glycemic Deterioration Among Children and Adolescents with Type 1 Diabetes (T1DM). Poster, American Diabetes Association 72nd Scientific Sessions, June 2012 Philadelphia, PA

Clements M, Southard A, Yao J, Smith K, Cohenour J, Moore W. Glycemic variability and chronic complications of type 1 diabetes: an essential animal model. Poster, American Diabetes Association 70th Scientific Sessions. June 2010 Orlando, FL

Flint J, **Clements MA**, Jacobson JD. Laboratory abnormalities consistent with 11- β hydroxylase deficiency in adrenal hypoplasia congenita (AHC). Poster, The Endocrine Society 91st Annual Meeting. June 10-13, 2009 Washington D.C.

Clements M, Chan S, Baalman K and Jacobson J. Sex Differences in Stimulatory G Protein Activity in Response to the Classic G Protein Coupled Hormones GnRH and CRH. Poster, Pediatric Academic Societies Annual Meeting. May 3-6, 2008 Honolulu, Hawaii.

CLINICAL TRIAL EXPERIENCE

Summary

Principal Investigator (Site)

2 national consortium-based registries (T1D Exchange, Pediatric Diabetes Consortium)

1 phase IV device study (type 1 diabetes)

2 phase I or II oral/injected anti-diabetic agent studies (type 2 diabetes)

1 phase III insulin study (type 1 diabetes)

2 behavioral intervention trials (type 1 diabetes)

1 phase II/III cellular therapeutic study (type 1 diabetes)

2 phase III oral/injected anti-diabetic agent study (type 2 diabetes)

1 phase III oral anti-diabetic agent study (type 1 diabetes)

Co-Investigator

4 phase I or II oral/injected anti-diabetic agent studies (type 2 diabetes)
6 phase II immune modulator studies (preventing/altering course of type 1 diabetes)
2 phase III growth hormone studies (pediatric)
1 behavioral intervention trial (type 1 diabetes)
2 national consortium registry/screening programs (Trialnet Pathway to Prevention, STOPP-T2D)
3 phase III oral/injected anti-diabetic agent studies (type 2 diabetes)
2 industry sponsored registries (growth hormone)

Detail

Principal Investigator (Site)

The Pediatric Diabetes Consortium: Type 2 Diabetes In Youth Registry

T1D Exchange Type 1 Diabetes Network

A trial to Evaluate the Safety and Efficacy of CLBS03 in Adolescents with Recent Onset Type 1 Diabetes Mellitus (T1DM) (T-REX)

Protocol H9X-MC-GBGC, A Randomized, Double-Blind Study with an Open-Label Extension Comparing the Effect of Once-Weekly Dulaglutide with Placebo in Pediatric Patients with Type 2 Diabetes Mellitus (AWARD-PEDS)

H8O-MC- GWBQ: Safety and Efficacy of Exenatide as Monotherapy and Adjunctive Therapy to Oral Antidiabetic Agents in Adolescents with Type 2 Diabetes

A Trial Investigating the Efficacy and Safety of Insulin Degludec/Insulin Aspart Once Daily Plus Insulin Aspart for the Remaining Meals Versus Insulin Detemir Once or Twice Daily Plus Meal Time Insulin Aspart in Children and Adolescents With Type 1 Diabetes Mellitus

DIA1055 Study- Canagliflozin an SGLT2 inhibitor in T2DM: Open-Label, Multicenter, Multiple Oral Dose Study to Evaluate the Pharmacokinetics, Pharmacodynamics and Safety of Canagliflozin in Older Children and Adolescents ≥ 10 to < 18 years of age with Type 2 Diabetes Mellitus and Currently on a Stable Dose of Metformin

A Randomized Trial of Metformin as Adjunct Therapy for Overweight Adolescents with Type 1 Diabetes (served initially as PI, then mentored junior faculty as PI)

Post Approval Study of the TS (Threshold Suspend) Feature with a Sensor-Augmented Pump System; CEP266/Z25/B

Protocol MB102091 A Randomized, Multi-Center, Parallel Group, Single-Dose, Pharmacokinetics and Pharmacodynamics Study of Dapagliflozin in Children and Adolescents Aged 10 to 17 Years with Type 2 Diabetes Mellitus

An Interactive mHealth App for Better Glycemic Control in Families of Young Kids with T1D (DIPPer Academy).

Reducing Hypoglycemia Fear in Parents of Young Kids with Video-Based Telemedicine (REDCHip).

Co-Investigator

TODAY Study Group Genetics Protocol (STOPP-T2D)

HGH-2149 The ANSWER Program® American Norditropin® Studies: Web Enabled Research. An Observational Study (Registry) Assessing Treatment Outcomes and Safety for Children and Adults Who Are Prescribed Norditropin (Human Growth Hormone)

B9R-GW-GDFC GeNeSIS – The Genetics and Neuroendocrinology of Short Stature International Study

B9R-US-GDGH. Effect of Early Growth Hormone Treatment on Long-term Growth and Skeletal Maturaion in Girls with Turner Syndrome

A Phase 3 double-blind, placebo-controlled, randomized, multi-center study to assess the safety and efficacy of exenatide once weekly in adolescents with T2D

A Phase III, Multicenter, Double-Blind, Randomized, Placebo and Metformin-Controlled Clinical Trial to Evaluate the Safety and Efficacy of Sitagliptin in Pediatric Patients with Type 2 Diabetes Mellitus with Inadequate Glycemic Control (MK0431-083)

Single Dose Pharmacokinetic Study of CYCLOSET 0.8 mg Tablets Following Administration of a Weight-Adjusted Dose in Male and Female Children and Adolescent Type 2 Diabetes Mellitus Subjects

Efficacy and Safety of Liraglutide in Combination With Metformin Compared to Metformin Alone, in Children and Adolescents With Type 2 Diabetes (Ellipse™)

CTLA-4 Ig (Abatacept) for Prevention of Abnormal Glucose Tolerance and Diabetes in Relatives at Risk for T1DM (TrialNet TN-18)

Motivational Interviewing in Adolescents with Type 1 Diabetes: A Randomized Control Trial

An Open-Label, Long-Term Extension Study of the Safety and Efficacy of a Long-Acting Human Growth Hormone (VRS-317) in Children with Growth Hormone Deficiency

ITN028AI ATG - START Effect of Anti-Thymocyte Globulin on Preserving Beta-Cell Function in New Onset Type 1 Diabetes Mellitus Recipients

TrialNet Oral Insulin for Prevention of Diabetes in Relatives at Risk for Type 1 Diabetes Mellitus (TrialNet TN-07)

T1DAL Inducing Remission in New Onset T1DM with Alefacept (Amevive) ITN 045AI

Effect of Intravenous Alpha-1 Antitrypsin on Preserving Beta-cell Function in New-onset Type 1 Diabetes Mellitus Protocol ITN041AI

Anti-CD3 MAB (Teplizumab) for Prevention of Diabetes in Relatives at Risk for Type 1 Diabetes Mellitus (TrialNet TN10)

A Study to Assess the Pharmacokinetics and Ability for Pediatric Patients with Type 2 Diabetes to Swallow MK-0431A XR Tablets (Janumet)

Colesevelam Oral Suspension as Monotherapy or Add-on to Metformin Therapy in Pediatric Subjects with Type 2 Diabetes Mellitus (Welchol)

Evaluation of the Pharmacokinetics of Saxagliptin, 5-Hydroxy Saxagliptin, and Metformin in Children and Adolescents Aged 10 to 17 Years with Type 2 Diabetes Mellitus Following Oral Administration of Saxagliptin and Metformin XR Fixed Dose Combination Table and Co-Administration of Saxagliptin and Glucophage (Metformin) IR Tablets

GRADUATE/UNDERGRADUATE RESEARCH EXPERIENCE

Doctoral Research: Division of Biology and Biomedical Sciences, Washington University in St Louis School of Medicine, 1997-2003

“Determining the Structure and Function of the *Drosophila* NAB (dNAB) co-repressor protein in *Drosophila melanogaster*”

Advisor: Jeffrey D. Milbrandt, MD, PhD.

This study involved isolation and characterization of the *Drosophila melanogaster dnab* gene, demonstration of the activity of the dNAB protein as a transcriptional co-repressor and characterization of the expression pattern in CNS neuroblasts and other developing tissues. We also initiated a search for interacting proteins/genes in *Drosophila*. We functionally deleted the *dnab* gene from *Drosophila* and described the CNS phenotype of deletion mutants.

Support: Medical Scientist Training Program (NIH, other): 10 year tuition support with stipend and fringe benefits

Role: doctoral trainee

Undergraduate Honors Research: Department of Biological Sciences and School of Pharmacy, Butler University, 1990-1993 (research advisers: Dr. Robert Karn, Ph.D. (Biological Sciences) and Dr Leroy Salerni, Pharm.D. (School of Pharmacy))

“Comparison of the structures of the alpha:beta and alpha:gamma dimers of mouse salivary androgen-binding protein (ABP) and their differential steroid binding.” Advisor: Robert Karn, Ph.D. Support: Butler Summer Research Institute Grant.

- Investigation of the mRNA and protein structure of mouse ABP in multiple subspecies of mouse

“Synthesis and characterization of bis-thiohydantoin as anti-seizure agents.” Advisor: Leroy Salerni, Pharm.D. Support: Butler Summer Research Institute Grant.

- Organochemical synthesis of bis-thiohydantoin structures containing hydrocarbon bridges of variable length
- Testing of synthesized compounds for anti-seizure activity in chemically induced rat model of tonic-clonic seizures

TEACHING EXPERIENCE

Associate Professor, Pediatrics: University of Missouri, Kansas City, School of Medicine, 2015-present.

- Formal lectures to pediatric residents and medical students on pediatric endocrinology and diabetes, including board review lectures
- Formal board review/didactic lectures to section of endocrinology
- Point-of-care teaching with 10-15 minute topical lectures after daily patient rounds

Assistant Professor, Pediatrics: University of Missouri, Kansas City, School of Medicine, 2008-2015.

- Formal lectures to pediatric residents and medical students on pediatric endocrinology and diabetes, including board review lectures
- Formal board review/didactic lectures to section of endocrinology
- Point-of-care teaching with 10-15 minute topical lectures after daily patient rounds
- Medical student teaching
 - Research Elective Rotation Courses:
 - Sana Habib, July 2014
 - Seung Ha Nam, June 2010
 - Soniya Mehra, September 2009
 - Toby Matthew, August 2009
 - Research Mentor
 - Kelsee Leisner, pediatrics resident, Children's Mercy 2013-2014
 - Emily Paprocki, pediatrics resident, Children's Mercy 2015
- Graduate student teaching
 - Mentor, Stephanie Markey, Candidate MS in Bioinformatics, UMKC
 - Successfully defended thesis 7/16/2014
 - Thesis Committee, Megan Dunn, MD PhD Candidate, KUMC
 - Successfully defended thesis 2015
 - Mentor, Kavitha Dileepan, MPH, KUMC
 - Successfully defended Capstone 6/11/13
- Endocrine Fellow Research Mentorship
 - Sripriya Raman, primary mentor
 - Kavitha Dileepan, primary mentor
 - Sonal Chandratre, scholarship oversight committee
 - Katie Jackson, primary mentor
 - Katie Barger, scholarship oversight committee chair
 - Naziya Tahseen, scholarship oversight committee chair
 - Patria Alba, scholarship oversight committee
 - Ryan McDonough, primary mentor
 - Hiba Ahmed-Fadoul, primary mentor

- Summer Scholar program mentor
 - Paris Clark 2014
 - Kaitlin July 2012
 - Kristy Koncak 2011
 - Megan Burri 2010
 - Kellyn Smith 2009
 - Justin Cohenour 2009
 - Ariel Bodker 2009
 - Audrey Southard 2008
 - Suzanne Fox 2008
 - Kelli Baalman 2007

Instructor: University of Missouri, Kansas City, School of Medicine, 2006-2008.

- Formal lectures to pediatric residents and medical students on pediatric endocrinology and diabetes, including board review lectures
- Formal board review/didactic lectures to section of endocrinology
- Point-of-care teaching with 10-15 minute topical lectures after daily patient rounds

Clinical Teaching Lectures

2017

- Multiple Daily Injection (MDI) Basics, 03/29/17; Fourth Annual Endocrine Fellows Series: Type 1 Diabetes Care and Management Program Conference, Orlando, FL (invited)

2016

- Diabetes in children, Physician Assistant Program, 10/04/16; UMKC

2015

- Diabetes in children, Physician Assistant Program, 9/29/15; UMKC

2014

- Diabetes in children, Physician Assistant Program, 10/15/14; UMKC

2013

- Evaluation and management of diabetes and DKA, PL1, 11/8/13; CMH
- Ethics of streaming home device data in diabetes, Ethics brown bag presenter, 10/22/13; CMH
- Insulin Bolus Score to measure adherence in diabetes, MAHI Outcomes Conference, 6/12/13; Mid-America Heart Institute, St Luke's Hospital
- Measurement of Hemoglobin A1c, CMH Lab update, 4/5/13; CMH
- Glycemic variability in the diabetic rat, Data Sciences International, 2/18-20/13; Minneapolis, MN
- Case Conference: Hypoglycemia in type 1 diabetes, 2/15/2013; CMH

2012

- Diabetes, PL1 lecture, 11/2/12; CMH
- Endocrine/Nutrition Research Update and Resource Meeting, 10/9/12; CMH
- CPG Development and Evidence Based Management of Diabetic Ketoacidosis 6H nurses DKA education, 9/18/2012; CMH
- Diabetes, resident lecture, 9/5/2012; CMH
- CPG Development and Evidence Based Management of Diabetic Ketoacidosis, ED Educational sessions, 9/5/2012; CMH
- Endocrine emergencies, South ED Endocrine update, 9/4/2012; CMH
- Ride'n the Roller Coaster without a Seatbelt (Glycemic variability), Spring Seminar 2012, Department of Pharmaceutical Chemistry, University of Kansas, 4/10/2012; CMH
- CPG Development and Evidence Based Management of Diabetic Ketoacidosis, House staff meeting, 1/4/2012; CMH
- Endocrinology Journal Club, 9/7/2012; CMH

2011

- Diabetes Research Update, Children's Mercy Resource Development, 11/14/2011; CMH
- Evaluation and management of DKA PL2, 11/4/2011; CMH
- Type 1 diabetes update in children, Pediatric Grand Grounds, Stormont Vail Hospital, 7/20/2011; CMH
- Obesity and Insulin resistance in children, Pediatric Grand Grounds, Stormont Vail Hospital, 7/20/2011; CMH
- Immunologic Endocrine Disorders; Pediatric Allergy & Immunology Fellowship Program, 4/11/2011; CMH
- "A1c Variability", Type 1 Diabetes Exchange Investigator Meeting, 3/4/2011; Jaeb Center for Health Research, Tampa Florida
- Evaluation and management of DKA PL2, 1/14/2011; CMH

2010

- Exam and Evaluation of diabetes and DKA, GME Medical Student Didactics, 6/10/2010; CMH
- Methods & Biological Principles of Molecular Biology Endocrine Didactics, 5/28/2010; CMH
- Ride'n the roller coaster without a seatbelt (Glycemic Variability) Academic Scholarship Conference, 4/10/2009; CMH

2009

- Molecular biology, pharmacology, statistics; Endocrine Didactics, 7/17/2009; CMH
- Application of Continuous Glucose Monitoring to Rodent Models of Diabetes, 5/9/2009; University of Kansas Medical Center, Diabetes Research Institute Working Group

- Exam and Evaluation of diabetes and DKA, PL1, 4/3/2009; CMH
- Short stature, PL1, 4/3/2009; CMH
- Immunology in Pediatrics, pediatric residents, 2/11/2009; CMH

2008

- Glycemic Variability and Diabetes related complications, Great Plains symposium, 10/17/2008; CMH/WWI Memorial
- Ride'n the roller coaster without a seatbelt (Glycemic Variability) Wayne State, 10/9/2008; Detroit, Michigan
- Diabetes mellitus/DKA, pediatric residents, 9/17/2008; CMH

Grand rounds/invited speaker series:

2016

- "Listening" to the stories that Big Data Tell: Using Type 1 Diabetes Data Past and Present, 12/01/16, Texas Children's Hospital, Baylor College of Medicine, Houston, TX

2014

- Insulin resistance and type 2 diabetes in Children: too much of a good thing, 09/17/14, Kansas Medical Education Foundation, Topeka, KS

2013

- Glycemic variability in the diabetic rat, Data Sciences International, 2/18-20/13; Minneapolis, MN

2012

- Glycemic variability and diabetes-related complications, Spring Seminar 2012, Department of Pharmaceutical Chemistry, University of Kansas 4/10/2012; CMH

2011

- Obesity and Insulin resistance in children, Pediatric Grand Grounds, Stormont Vail Hospital, 7/20/2011; CMH
- Type 1 diabetes update in children, Pediatric Grand Grounds, Stormont Vail Hospital, 7/20/2011; CMH

2009

- Ride'n the roller coaster without a seatbelt (Glycemic Variability) Academic Scholarship Conference, 4/10/2009; CMH

2008

- Glycemic Variability and Diabetes related complications, Great Plains symposium, 10/17/2008; CMH/WWI Memorial
- Ride'n the roller coaster without a seatbelt (Glycemic Variability) Wayne State, 10/9/2008; Detroit, Michigan

UNIVERSITY/HOSPITAL SERVICES

Search Committee, Children's Mercy Genome Center Director 07/2015-07/2016

Clinical Practice Guideline Working group for diabetic ketoacidosis (2011-present): Participated in interdisciplinary development of evidence-based practice guidelines for the management of diabetic ketoacidosis at Children's Mercy Hospitals & Clinics. The guideline covers management on inpatient units, in the emergency department and in the pediatric intensive care unit.

Scientific Misconduct Inquiry committee (fall 2013)

Department of Pediatrics research strategic planning (spring/summer 2013)

Special Emphasis Panel to review proposals for Fall 2012 internal grant competitions (12/7/2012); Katherine B. Richardson (KBR), Cross Foundation and Marion Merrell Dow grants

Special Emphasis Panel to review proposals for Spring 2012 internal grant competitions (6/8/2012); Katherine B. Richardson (KBR), Cross Foundation and Marion Merrell Dow grants

Special Emphasis Panel to review proposals for Spring 2011 internal grant competition (5/16/2011); Katherine B. Richardson grant

Fellow Interview Committee, Pediatric Endocrinology program (2011-2012)

Search Committee, Pediatric Obesity/Nutrition Research Director 06/01/10-09/23/10

Special Emphasis Panel to review proposals for Spring 2009 internal grant competitions 6/9/2009; Smith and Henson grants

Resident Representative, Cerner Executive Committee (2005-2006): Participated in committee-based planning of hospital transition to Cerner electronic medical record system.

Resident Representative, Nurse-Resident Council (2005-2006): Participated in dialogue related to nursing/resident relations and in planning related to cooperative patient care on the inpatient services at CMH.

Physician Liaison, Information Technologies (2003-2008): Developed simple, networked, multi-user patient handoff solution for pediatric residents at CMH. Participated in MyPatients/Outpatients software development and deployment of handheld computers and Tablet PCs in clinical setting at CMH.

COMMUNITY SERVICE

Board of Directors, Postpartum & Pregnancy Resource Center of Kansas
(PPRC). Member, 2009-2015

Board of Directors, Kids with Courage. Member, 2010-2015

Board of Directors, JDRF Kansas City Chapter. Member, 2011-present

Speaker, "Babysitter class", Kids with Courage, 2013

Speaker, "Regional School Nurse Training", 2012 and 2014

PROFESSIONAL SERVICE

US News & World Report Best Children's Hospitals' Work Group for Pediatric
Endocrinology, 2014-present

REFERENCES

Wayne V Moore, MD, PhD
Pediatric Endocrinologist
Former Division Chair, Endocrinology & Diabetes
Co-PI, TrialNet Clinical Center
Department of Pediatrics
Children's Mercy Kansas City
2401 Gillham Road
Kansas City, MO 64108
816-234-1660

Max Feldt, DO
Pediatric Endocrinologist
Medical Director of Ambulatory and Outreach Services, Pediatric Endocrinology
Department of Pediatrics
Children's Mercy Kansas City
2401 Gillham Road
Kansas City, MO 64108
816-234-1660

Joe Cernich, MD
Pediatric Endocrinologist
Interim Division Chair, Endocrinology & Diabetes
Department of Pediatrics
Children's Mercy Kansas City
2401 Gillham Road
Kansas City, MO 64108
816-234-1660

Ryan McDonough, DO
Pediatric Endocrinologist
Former (mentored) fellow
Endocrinology & Diabetes
Department of Pediatrics
Children's Mercy Kansas City
2401 Gillham Road
Kansas City, MO 64108
816-234-1660