

# Harold Hamm Diabetes Center Quarterly Newsletter



**Jed Friedman, Ph.D.**  
Director, Harold Hamm Diabetes Center  
Chickasaw Nation Endowed Chair

## CONTENTS

- 01** Director's Corner

---

- 02** Research Spotlight:  
Award to Advance  
Indigenous Maternal Health

---

- 03** Research Spotlight:  
Grant to Develop New  
Treatment Modalities for  
Diabetes

---

- 04** Clinic Updates

---

- 05** Capital Campaign

---

- 07** Camp Blue Hawk  
Diabetes Care Summit

---

- 08** Events

---

- 09** New Grants & Publications

---

- 10** New Presentations

---

- 11** New HHCD Staff


### Director's Corner

Welcome to the October 2022 newsletter. Just before we went to press, we announced the launch of our bold new fundraising campaign, Lead On. Based on the University of Oklahoma Health Sciences Center (OUHSC) strategic plan, we are all very excited about beginning this new chapter and encompassing the next five years of Harold Hamm Diabetes Center (HHDC). Read more about it in our official press release and stay tuned for more news about fundraising activities in 2022-2023.

In this issue, we highlight new federal grant winner Emily Jones, Ph.D., Associate Professor, Ph.D. Program Director at the College of Nursing on her PCORI engagement award focused on Indigenous maternal health equity agenda. Her work will guide collection of data in the Southern Plains, identify drivers of maternal mortality and morbidity, elucidate root causes and ultimately advance the safety and vitality of Indigenous mothers in the region. We also congratulate Weidong Wang, Ph.D., Associate Professor of Endocrinology for his new NIH grant: Developing proinsulin misfolding inhibitors for beta cell protection and diabetes treatment, which will focus on potentially modifiable proinsulin misfolding inhibitors, as a significant first step towards the development of a new class of medication to treat diabetes. Lastly, we welcome Cassie Mitchell, Ph.D., RDN, who just joined HHDC as a Senior Staff Research Scientist, and give a shout out to new HHDC staff member, Lark Zink, J.D., Senior Project Coordinator.

### Important Dates

#### HHDC Research Symposium - Friday, November 1

Information will be sent out soon and posted online. 


#### Metabolic Research Conference - Next presentation is Monday, November 7

For more information and a schedule of upcoming lectures, visit the website. 

### Other Important Information

#### Capital Campaign

More information on the Capital Campaign can be found online. 

**Reminder for HHDC Members!** Please help us update your profile on the HHDC website. Click on the icon to enter your information. 

Remember to contact us with news about publications, awards, presentations and other related information if you are currently or formerly funded by HHDC.

We would love to help communicate your research stories via articles and social media. Please send updates to **Lark Zink** at [Lark-Zink@ouhsc.edu](mailto:Lark-Zink@ouhsc.edu).

All the Best,

Jacob E. Jed Friedman, Ph.D.

Director, OU Health Harold Hamm Diabetes Center



**Emily Jones, Ph.D., RCN-OB,  
FAHA, FPCNA**

Associate Professor  
Ph.D. Program Director  
Fran and Earl Ziegler College of Nursing  
University of Oklahoma  
Health Sciences Center

## HHDC Researcher Dr. Emily Jones to lead Engagement Award to Advance Indigenous Maternal Health

The OU Health Sciences Center has been approved for a funding award through the Eugene Washington PCORI Engagement Awards program, an initiative of the Patient-Centered Outcomes Research Institute (PCORI). The funds will support a project to advance Indigenous maternal health in the Southern Plains.

*“Indigenous mothers are dying at rates two to three times higher than non-Hispanic white mothers in the United States, yet research examining regional nuances and addressing root causes is scarce.”*

Emily Jones, Ph.D., an associate professor in the Fran and Earl Ziegler College of Nursing, will lead the engagement project for the OU Health Sciences Center, working in collaboration with Indigenous women, healthcare providers, and tribal, academic, health system and Indian Health Service/policy partners. The project team will also work closely with OU Health Harold Hamm Diabetes Center.

*“To develop solutions, they will develop a culturally safe and regionally and situationally specific Patient-Centered Outcomes Research (PCOR)/Comparative Effectiveness Research (CER) Agenda.”*

It will guide collection of data in the Southern Plains, identify drivers of maternal mortality and morbidity, elucidate root causes and ultimately advance the safety and vitality of Indigenous mothers in the region. The Southern Plains (Oklahoma, Kansas and Texas) is home to 44 federally recognized tribes and represents the largest population using the Indian Health Service. Most births to Indigenous mothers occur in tribal or IHS hospitals.

This project is part of a portfolio of projects that PCORI has funded to help develop a community of patients and other stakeholders equipped to participate as partners in patient-centered CER and disseminate PCORI-funded study results. Through the Engagement Awards Program, PCORI is creating an expansive network of individuals, communities and organizations interested in and able to participate in, share and use patient-centered CER.

The OU Health Sciences Center’s project and the other projects approved for funding by the PCORI Engagement Award Program were selected through a highly competitive review process in which applications were assessed for their ability to meet PCORI’s engagement goals and objectives, as well as program criteria. For more information about PCORI’s funding to support engagement efforts, visit <http://www.pcori.org/content/eugene-washington-pcori-engagement-awards/>.

PCORI is an independent, nonprofit organization authorized by Congress in 2010 to fund comparative effectiveness research that will provide patients, their caregivers, and clinicians with the evidence needed to make better-informed health and healthcare decisions. PCORI is committed to seeking input from a broad range of stakeholders to guide its work.



**Weidong Wang, Ph.D.**  
Associate Professor  
William K. Warren,  
Sr. Chair in Diabetes Studies

## Research Spotlight:

### Study Unlocks New Therapeutic Direction for the Treatment and Prevention of Diabetes

Diabetes affects 37.3 million adults and children in the United States and is the seventh leading cause of death. A 2017 study conducted by the American Diabetes Association estimated the direct cost of diabetes at \$237 billion and revealed average medical expenses are 2.3 times higher for people with diabetes. For the patient, high treatment cost poses an added burden.

Against this harsh reality, a new approach for treatment is being explored locally by Weidong Wang, Ph.D., Associate Professor of Medicine at the University of Oklahoma College of Medicine, William K. Warren, Senior Chair in Diabetes Studies, and Member of the Harold Hamm Diabetes Center. The researchers have been awarded a five-year, \$1.9 million dollar grant by the National Institutes of Health (NIH) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). Wang's promising research is yielding new insights into the mechanisms that cause and worsen diabetes.

Previous research has established that pancreatic  $\beta$ -cells play a pivotal role in the development and progression of diabetes. It is in the  $\beta$ -cells that proinsulin, which is later synthesized into insulin, is produced. All forms of diabetes (Type 1, 2, or monogenic) are characterized by progressive dysfunction and death of pancreatic  $\beta$ -cells. Even in the case of Type 2 diabetes, which typically develops in insulin-resistant and obese patients,  $\beta$ -cell function is reduced by 50-80% at the time of diagnosis.

*“Proinsulin misfolding is now regarded as a primary initiating factor of ER stress and  $\beta$ -cell dysfunction.”*

As Dr. Wang explains, proinsulin is folded in the Endoplasmic Reticulum (ER) and is moved to the Golgi for processing into mature insulin. It is also an early event in  $\beta$ -cell dysfunction, ER stress and the onset and progression of diabetes. Significant to Dr. Wang's new area of study, these signs of dysfunction are observable in patients up to 10 years prior to diagnosis.

Currently, anti-diabetic drugs do not directly suppress proinsulin misfolding to improve the survival of pancreatic  $\beta$ -cells. Preliminary studies by Wang and his team identified a small molecule that protects  $\beta$ -cells from ER stress-induced death. Wang's team has further observed the small molecule to eliminate the accumulation of misfolded proinsulin and increase mature insulin production in pancreatic  $\beta$ -cells. In animal studies, the small molecule has also been found to significantly improve hyperglycemia (abnormally high levels of glucose in the blood).

This promising research shows that counteracting proinsulin misfolding may provide the means to prevent or reverse diabetes. Focused on testing first-in-class proinsulin misfolding inhibitors, their research represents a significant first step towards the development of a new class of medication to treat diabetes.



**David Sparling, M.D., Ph.D.**  
Assistant Professor  
Associate Section Chief of  
Pediatric Endocrinology  
CHF Paul and Ann Milburn Chair in  
Pediatric Diabetes

## Clinic Updates

### Pediatric Diabetes & Endocrinology Clinic

The pediatrics clinic continues to be quite busy! With ever expanding technologies for kids with Type 1 diabetes and medications newly available to children with Type 2 diabetes, our clinicians, education team and clinic team are always learning “what’s next.” The new school year also always brings new challenges, with kids newly diagnosed or kids in new schools, working to develop and utilize our Diabetes Medical Management Plans. We’re lucky to have such great partnerships with schools to keep our kids safe and healthy every day—we want them focusing on learning, not on diabetes! We’re also excited to be a part of the new OU Health Oklahoma Children’s Hospital Norman Specialty Clinic. We’ve got two providers seeing patients there, with two clinics a month. We hope to expand this in the future, as our team grows! Lastly, we have a new clinic manager, Stace Devous, in OKC. If you see her, say hello and welcome her to the family!

---



**Mary Zoe Baker, M.D.**  
David Ross Boyd  
Professor of Medicine  
Department of Internal Medicine

## Clinic Updates

### Adult Diabetes & Endocrinology Clinic

It is officially Fall, and the adult clinic is keeping busy. We are on track with, and looking forward to the Endocrinology Fellows Clinic relocating from the Presbyterian Professional Office Building to the Adult Diabetes and Endocrinology Clinic at HHDC.

**Director’s Note:** *We want to congratulate Mary Zoe Baker, M.D., on her election to Masters of the American College of Physicians (ACP). This is one of the highest honors bestowed by the ACP, and we recognize and commend her accomplishment.*

# \$2 Billion Capital Campaign

## LEAD ON

*Joseph Harroz, Jr.,  
University President,  
announcing the Lead On  
fundraising campaign*

## OU Launches Historic \$2 Billion 'Lead On' Fundraising Campaign

The University of Oklahoma today announced the public phase of the largest philanthropic campaign in the history of Oklahoma higher education, enabling the university to fully deliver on its promise of changing lives and launching a new era of excellence at OU.

With a historic goal of raising \$2 billion, "Lead On: The University of Oklahoma's Campaign for the Future" supports OU's core traditions of providing an unparalleled, affordable education; generating real-world impact through pathbreaking research and innovation; delivering world-class health care across the state; and creating a welcoming place for learning and belonging.

All three of OU's campuses are positioned to benefit from the campaign, which will provide wide-reaching support for students, faculty and programs across the university.

"We see this as an extraordinary opportunity to shape our future into what we've always dreamed of, but never before been equipped to do until now," said OU President Joseph Harroz Jr. "Our goal is incredibly ambitious, but we know that through the unwavering loyalty of our OU Family, we will seize this moment to build upon our storied legacy. Together, we will achieve nothing short of transformational."

The seven-year "Lead On" campaign has been gaining momentum since its quiet launch, which began July 1, 2020. Since then, \$600 million has been raised toward the \$2 billion goal. The campaign will conclude June 30, 2027.

In alignment with the university's "Lead On, University" Strategic Plan, the campaign prioritizes increasing access through enhanced student support and programming, fostering faculty growth, creating research opportunities and encouraging a welcoming campus culture. Central to the campaign's overall goal is a \$500 million commitment to scholarship and student support and a \$300 million commitment to support the strategic recruitment and retention of talented faculty.

"The 'Lead On Campaign for the Future' is ambitious, far-reaching and unprecedented in OU's history," said OU Board of Regents Chair Frank Keating. "But, as with every effort taken at the University of Oklahoma, the campaign has at its core the goal of changing the lives for the better of our most important family members – our students. On their behalf, we dream no small dreams."

“Lead On” is the university’s first comprehensive campaign in more than 20 years and comes on the heels of back-to-back record fundraising years for OU.

With the transition of the university’s advancement operation to the OU Foundation in March 2021, the restructured fundraising organization saw quick and early success, raising a record \$237.9 million during the first year. Fiscal year 2022 proved even more successful, with \$317.4 million raised from over 80,377 gifts – 54 of which totaled \$1 million or more.

“As the recipient of a life-changing scholarship, I know firsthand how this campaign will create countless opportunities for students,” said Clay Dobbins, AIA, NCARB, a 2019 graduate of the Christopher C. Gibbs College of Architecture at OU.

“Receiving scholarship support allowed me to intern with an architecture firm in Oklahoma City, leading to a full-time position and launching my career. Donor support meant being able to achieve my dream of designing the future of Oklahoma.”

“Academic excellence requires strong student support programs,” said Zack Lissau, president of the OU Student Government Association. “Without scholarships, my peers and I wouldn’t be able to pursue our dreams and many of these opportunities are made possible by OU’s donor community. Donor support creates countless opportunities for students with high aspirations. It is an investment that will benefit current and future students hoping to change the world without worrying about affordability or burdensome debt.”

Spearheading the charge to move the “Lead On” campaign forward are the Campaign Champions, a network of volunteer alumni and friends with deep admiration for the university and its purpose. Serving as campaign co-chairs are longtime OU supporters Jonny and Brenda Jones.

“‘Lead On’ is a call to action for the entire OU community,” said Jonny and Brenda Jones. “As donors ourselves, we have seen firsthand the impact that giving has on the enthusiasm of students, faculty, staff and alumni at OU. Giving to this campaign will help open doors to countless opportunities for those who wish to pursue their dreams and make a difference in the world.”

**Below is a complete listing of the Campaign Champions:**

- Jonny and Brenda Jones (Austin, Texas)
- Phil and Nancy Estes (Carson City, Nevada)
- Christy Everest (Nichols Hills, Oklahoma)
- Harold Hamm and Jane Hamm Lerum (Oklahoma City, Oklahoma)
- Bill and Sherri Lance (Sulphur, Oklahoma), representing the Chickasaw Nation
- Ken Levit (Tulsa, Oklahoma), representing the George Kaiser Family Foundation
- David Love (Oklahoma City, Oklahoma)
- Jenny Love Meyer (Nichols Hills, Oklahoma)
- David and Kim Rainbolt (Oklahoma City, Oklahoma)
- Dr. Jerry Ransom (Greenville, Texas)
- Jeff and Marisa Records (Oklahoma City, Oklahoma), representing MidFirst Bank
- Regent Robert J. Ross (Oklahoma City, Oklahoma), representing Inasmuch Foundation
- Bart Shelley (Nichols Hills, Oklahoma), representing Tim Headington
- Randall and Lenise Stephenson (Dallas, Texas)
- Steve Stephenson (Big Sky, Montana), representing the Charlie and Peggy Stephenson Family
- Ken and Laura Waits (Tyler, Texas), representing the Mewbourne Family

For more information about how to support the “Lead On” campaign, visit [www.oufoundation.org](http://www.oufoundation.org).



Camp Blue Hawk 2022

## Camp Blue Hawk

Camp Blue Hawk: Summer Camp 2022 was a huge success! We were ecstatic to have our first full in-person summer camp session since the beginning of the COVID-19 pandemic and we welcomed 90 children and teens with Type 1 diabetes to camp. The theme for camp this year was “Game Night”. In addition to the usual summer camp activities (rock wall climbing, hiking, lake swimming, canoeing, to name a few!), campers also got to create their own board games, many of which were diabetes themed. We watched the classic board game movie, “JUMANJI”, and we had an epic game night with all the board games we know and love. We also reached a huge milestone this year by having staff members who were once Camp Blue Hawk campers for the first time! Summer Camp was great, and we are looking forward to summer 2023!

## Diabetes Care Summit

The Harold Hamm Diabetes Care Summit, Oklahoma’s premier annual Continuing Medical Education (CME) conference for diabetes, was held on August 26th this year. 2022 was our first year back in person since 2019 and we welcomed over 90 participants, 11 speakers, and 10 exhibitors.

The Summit conference provides annual CME for physicians, educators, nurses and pharmacists.. This year’s agenda featured three keynote speakers: Dr. Marisa Hilliard from Baylor University, Dr. Dessi Zaharieva from Stanford University and Dr. Christie Schumacher from Northwestern University. In addition, several breakout sessions were held on the topics of Diabetes & Pregnancy, Pharmacology Update, Updates on Cardiovascular Outcomes Trials and Practice Management.

The Summit 2023 date will be finalized soon. Stay tuned for more details in the coming months.



Stephanie Pierce, M.D., M.S.; Jeanie Tryggestad, M.D. (pictured left to right)  
Breakout session speakers, discussing Diabetes & Pregnancy



Dessi Zaharieva, Ph.D., CDCES  
From her keynote speech  
on strategies to encourage  
physical activity in individuals  
with Type 1 diabetes



Emma Punni, M.D.  
Breakout session speaker, discussing  
Pharmacology Update with Minu  
George, M.D. (not pictured)

# Save The Date!

19th Annual HHDC Research Symposium to be held on  
Friday, November 11



The 2022 Harold Hamm Diabetes Center Research Symposium will be held at the Samis Education Center, on Friday, November 11, 2022. The Symposium will consist of selected presentations and symposia talks, and will feature:



## Featured Keynote Speaker

*Pancreatic Islets in human diabetes: from development to genetics to genomics to function*

### Alvin C. Powers, M.D.

Joe C. Davis Chair in Biomedical Science  
Professor of Medicine, Molecular Physiology and Biophysics  
Director, Vanderbilt Diabetes Center  
Chief, Division of Diabetes, Endocrinology and Metabolism  
Vanderbilt University Medical Center



## Featured Guest Speaker

*Lipid-centric view of diabetic retinopathy*


### Julia Busik, Ph.D.

Professor, Department of Physiology  
College of Natural Science  
Michigan State University

## Agenda Highlights

7:30 a.m.	Check-in & Continental Breakfast
8:30 a.m. – 12:15 p.m. & 2:30 – 4:30 p.m.	Oral Presentations & Discussions
12:15 – 2:00 p.m.	Lunch (Provided)
12:30 – 2:15 p.m.	Concurrent Short Talks (Judged)
4:40 – 6:00 p.m.	Awards Presentation & Reception (On Site)

## Metabolic Research Conference

The Metabolic Research Conference is a series of lectures in the style of Grand Rounds. Guests include distinguished visiting and internal speakers, who will share their research on various subjects relating to diabetes. Talks are held twice monthly during the academic year, in person and virtually. For more information, visit the website. 

## November is Diabetes Awareness Month

November is diabetes awareness month, and Oklahoma is lighting up in honor of diabetes awareness. Keep an eye out for the Scissortail Bridge in Oklahoma City, and The Gathering Place Boathouse in Tulsa, which will be lit blue November 13-15. Check back in January for photos!



## New Grants to HHDC Members:

### PHF BRIDGE GRANT (10/2022 – 10/2023)

**PI: Shaoning Jiang**

Department: Pediatrics

Funding Organization: Presbyterian Health Foundation

Grant Type: Bridge

Title of Grant: *Role of miR-130b/301b in regulating brown and beige adipogenesis and energy Metabolism*

Dates: 10/03/2022 – 10/02/2023

Amount Awarded: \$100,000

**PI: Karen Jonscher**

Department: Biochemistry and Molecular Biology

Funding Organization: Presbyterian Health Foundation

Grant Type: Bridge

Title of Grant: *Impact of pyrroloquinoline quinone (PQQ) on preventing fetal and postnatal developmental programming of NAFLD in the olive baboon, Papio Anubis*

Dates: 10/03/2022 – 10/02/2023

Amount Awarded: \$100,000

### EMILY JONES PCORI GRANT

**PI: Emily Jones, PhD, RNC-OB, FAAN, FAHA, FPCNA**

Department: Nursing

Funding Organization: Patient-Centered Outcomes Research Institute

Award Type: Eugene Washington Engagement Award

Title of Award: *Building Capacity to Advance Indigenous Maternal Health Equity in the Southern Plains*

Dates: 07/01/22 – 06/30/24

Amount Awarded: \$249,899

**PI: Weidong Wang**

Department: Internal Medicine

Funding Organization: NIH/NIDDK (National Institutes of Health/National Institute of Diabetes and Digestive and Kidney Diseases)

Grant type: R01

Title of Grant: *Developing proinsulin misfolding inhibitors for beta cell protection and diabetes treatment*

Dates: 7/15/2022 – 6/30/2027

Amount Awarded: \$1,932,260

---

## New Publications

Jackson, TN; Grinberg, G; **Khorgami, Z**; Shiraga, S; Yenumula, P. Medicaid Expansion: the impact of health policy on bariatric surgery. *Surg Obes Relat Dis*. 2022 Sep 6; S1550-7289(22)00645-1. [Epub ahead of print] [PMID: 36195522](#).

Xiaoxiao Jiang, Sam Fulte, Fengyan Deng, Shiyuan Chen, Yan Xie, Xiaojuan Chao, Xi C He, Yuxia Zhang, **Tiangang Li**, Feng Li, Colin McCain, E Matthew Morris, John Thyfault, Wanqing Liu, Linheng Li, Nicholas O Davidson, Wen-Xing Ding, Hong-Min Ni (2022). Lack of VMP1 Impairs Hepatic Lipoprotein Secretion and Promotes Nonalcoholic Steatohepatitis. *Journal of Hepatology*. [PMID: 35452693](#).

Levitsky LL, Drews KL, Haymond M, Glubitosi-Klug RA, Levitt Katz LE, Mititelu M, Tamborlane W, **Tryggestad JB**, Weinstock RS. The obesity paradox: Retinopathy, obesity, and circulating risk markers in youth with type 2 diabetes in the TODAY Study. *J Diabetes Complications*. 2022 Jul 19;36(11):108259. doi: 10.1016/j.jdiacomp.2022.108259. [Epub ahead of print] [PMID: 36150365](#).

Luo W, Kim Y, Jensen ME, Herlea-Pana O, Wang W, Rudolph MC, Friedman JE, Chernausk SD, **Jiang S**. miR-130b/301b is a Negative Regulator of Beige Adipogenesis and Energy Metabolism in vitro and in vivo. *Diabetes*. 2022 Aug 24;db220205. doi: 10.2337/db22-0205. [Epub ahead of print] [PMID: 36001751](#).

Xiaowen Ma, Allen Chen, Luma Melo, Ana Clemente-Sanchez, Xiaojuan Chao, Ali Reza Ahmadi, Brandon Peiffer, Zhaoli Sun, Hiromi Sesaki, **Tiangang Li**, Xiaokun Wang, Wanqing Liu, Ramon Bataller, Hong-Min Ni, Wen-Xing Ding (2022). Loss of hepatic DRP1 exacerbates alcoholic hepatitis by inducing megamitochondria and mitochondrial maladaptation. *Hepatology*. [PMID: 35698731](#).

Magge SN, Wolf RM, Pyle L, Brown EA, Benavides VC, Bianco ME, Chao LC, Cymbaluk A, Balikcioglu PG, Halpin K, Hsia DS, Huerta-Saenz L, Kim JJ, Kumar S, Levitt Katz LE, Marks BE, Neyman A, O'Sullivan KL, Pillai SS, Shah AS, Shoemaker AH, Siddiqui JAW, Srinivasan S, Thomas IH, **Tryggestad JB**, Yousif MF, Kelsey MM. The coronavirus disease 2019 pandemic is associated with a substantial rise in frequency and severity of presentation of youth-onset type 2 diabetes. *J Pediatr.* 2022 Aug 17;. doi: 10.1016/j.jpeds.2022.08.010. [Epub ahead of print] [PMID: 35985535](#); PubMed Central PMCID: PMC9383958.

David Matye, Sumedha Gunewardena, Jianglei Chen, Huaiwen Wang, Yifeng Wang, Mohammad Nazmul Hasan, Lijie Gu, Yung Dai Clayton, Yanhong Du, Cheng Chen, Jacob E Friedman, Shelly C Lu, Wen-Xing Ding, **Tiangang Li** (2022). TFEB regulates sulfur amino acid and coenzyme A metabolism to support hepatic metabolic adaptation and redox homeostasis. *Nature Communications*, 13(1), 5696. [PMID: 36171419](#).

**Pierce SL**, Peck JD, Zornes C, Standerfer E, Edwards RK. Antibiotic Prophylaxis to Prevent Obesity-Related Induction Complications in Nulliparae at Term: a pilot randomized controlled trial. *Am J Obstet Gynecol MFM.* 2022 Sep;4(5). [PMID 35728781](#).

**Short KR**. Unexpected postprandial energy expenditure and fuel oxidation responses to meals with different macronutrient compositions. *J Nutr*, 152: 2003-2004, 2022. [PMID: 35849709](#).

Harrison D Stierwalt, E Matthew Morris, Adrianna Maurer, Udayan Apte, Kathryn Phillips, **Tiangang Li**, Grace M E Meers, Lauren G Koch, Steven L Britton, Greg Graf, R Scott Rector, Kelly Mercer, Kartik Shankar, John P Thyfault (2022). Rats with high aerobic capacity display enhanced transcriptional adaptability and upregulation of bile acid metabolism in response to an acute high-fat diet. *Physiological Reports*, 10(15), e15405. [PMID: 35923133](#).

**Wetherill MS**, Bakhsh C, Caywood L, et al. Unpacking determinants and consequences of food insecurity for insulin resistance among people living with HIV: Conceptual framework and protocol for the NOURISH-OK study. *Frontiers in Clinical Diabetes and Healthcare.* 2022;3:1-16. [PMID: 36225538](#).

William A. Ogilvie, Zakiya Shakir, Lacie D. Whinery, Justin S. Puthoff, Geoffrey S. Chow, Robert B. Lim, **Zhamak Khorgami**, Effect of Obesity on Outcomes after Breast Reconstruction Surgery, An Analysis of National Surgical Quality Improvement Program, *Journal of Plastic, Reconstructive & Aesthetic Surgery* (2022). [PMID: 36280442](#).

Young, B.E.; Kyere-Davies, G.; Farriester, J.W.; Varshney, R.; MacLean, P.S.; Krebs, N.F.; **Rudolph, M.C.** Infant Red Blood Cell Arachidonic to Docosahexaenoic Acid Ratio Inversely Associates with Fat-Free Mass Independent of Breastfeeding Exclusivity. *Nutrients* 2022, 14, 4238. [PMID: 36296922](#).

---

## New Presentations

Whitney J. Kerr, Jennifer D. Peck, Carin Huset, Katy Duncan, **Stephanie Pierce**, David A. Fields and Ellen W. Demerath. Changes in Poly- and perfluoroalkyl substances (PFAS) breastmilk concentrations between siblings in the first 3-months of lactation. Pitch presentation at the United States Developmental Origins of Health and Disease Society Annual Meeting. October 10-11, 2022. Minneapolis, MN.

**Short KR**, Palle SK, Tryggestad JB, Sciarrillo CM, Emerson SR. Increased Cardiovascular Disease Risk in Adolescents with Nonalcoholic Fatty Liver Disease. American College of Sports Medicine's Integrated Physiology of Exercise Conference. Baltimore, MD. Sep 21-24, 2022.

**Tryggestad, Jeanie B.** ADCES National meeting August 13th – Complication in Youth Onset Type 2 Diabetes: Outcomes from TODAY. Presented virtually.

## New HHDC Lab Staff:



**Cassie Mitchell, Ph.D., RDN** | Senior Staff Research Scientist

**1. Tell us about your background. Where did you earn your training?**

I received my B.S. in Health and Exercise Science and my M.S. in Nutritional Sciences from the University of Oklahoma and OUHSC, respectively. I obtained my Ph.D. at Virginia Tech in Clinical Physiology and Metabolism, prior to moving to Phoenix, Arizona where I earned my Registered Dietitian Nutritionist credential and completed a 3-year postdoctoral research fellowship at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

**2. Why did you pursue research?**

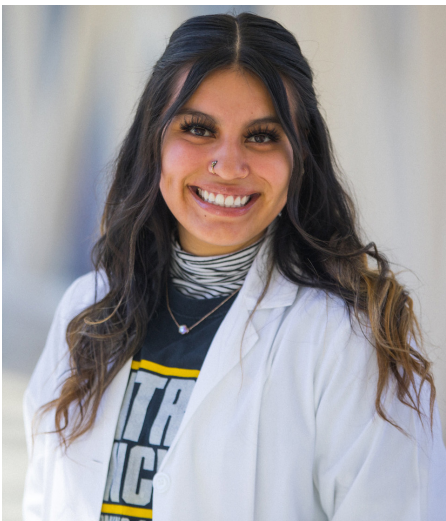
After obtaining my M.S., I realized how many lingering questions there were about the ways in which nutrition and exercise contribute unique independent and interrelated roles in health. Research is a profession where there are always more questions than answers. It is a dynamic field that needs diverse and innovative teams to problem-solve for answers. I pursued research because I enjoy the opportunities to continuously learn, problem-solve and bring nutrition and metabolism-related questions to the table.

**3. What drew you to diabetes research specifically?**

While earning my RDN, I had the opportunity to provide inpatient and outpatient clinical care at Phoenix Indian Medical Center. The vast majority of my patients had Type 2 diabetes and were admitted with severe complications. I saw first-hand how integral nutrition was to diabetes management, but also realized how many recommendations we provide to patients without fully knowing the “why” behind them. To me, research is the path to uncovering the “why” to help people lead fuller, healthier lives.

**4. What is your hope for the future of diabetes research?**

As a member of the Citizen Potawatomi Nation and as an Indigenous clinical researcher, my hope is that the scientific community continue to better understand the epigenetic risks of diabetes, including the nutritional epidemiology. Ultimately, I hope for this knowledge to reduce the burden and incidence of Type 2 diabetes in future generations, particularly within Indigenous nations. In humble and earnest pursuit of that end, I will be working with Dr. Friedman and Dr. Fields on a K99 application, titled: “Impact of Maternal Obesity, Diet Quality, and Energy Expenditure on Maternal and Infant Outcomes.”



**Alexandrea Martinez**

Department of Physiology  
Research Technician  
Rudolph Lab

## New Administrative Staff:



**Lark Zink, J.D.**

**Senior Project Coordinator**

**1. Tell us about your background and what brought you to HHDC.**

I got my Bachelor's degree from the University of California at Berkeley and a J.D. from the University of Oklahoma. I practiced law for nine years in Oklahoma State and Administrative Courts. Before law school, I worked for two years at OU Health Physicians. When I had the opportunity to return to the University of Oklahoma Health Sciences Center campus and work for OU Health Harold Hamm Diabetes Center, it felt like coming home.

**2. What drew you to working at HHDC?**

The mission and work of the Harold Hamm Diabetes Center speak for themselves and are a tremendous draw. I've traveled internationally under the auspices of the United Nations and seen first-hand the impact of diet on indigenous communities where illegal gold mining makes it more common for homes to have Pepsi than clean water.

OU Health Harold Hamm Diabetes Center couples comprehensive and cutting-edge work across the full spectrum of diabetes care and prevention, with both robust clinical practice and pioneering research and insight into avenues towards a cure. I'm proud to contribute to this mission and ethos of cure and care.

**3. Tell us about upcoming events and programming at HHDC.**

We kicked off our Metabolic Research Conference series this month, with Dr. Alyssa Hasty's presentation on October 3rd. The conference showcases developments at the forefront of clinical research, with lectures from visiting speakers and in-house faculty and researchers and continues through the month of May.

We are also gearing up for our Research Symposium, to be held on Friday, November 11, 2022, at the Samis Education Center. This year will be our first in-person Symposium since COVID. The Symposium is an opportunity for researchers to show their work with abstracts and short oral presentations that will be judged by our distinguished faculty and research panel. Our featured keynote speaker is Alvin Powers, M.D., and our featured guest speaker is Julia Busik, Ph.D.

**4. What are you hoping to accomplish in your new role?**

I have the privilege to work in support and furtherance of the mission of OU Health Harold Hamm Diabetes Center, by planning the events that showcase and drive our progress towards a cure.