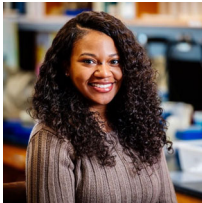


APRIL 2023

ANNOUNCING THE 2023 DRC PILOT & FEASIBILITY AWARDEES

Help us in congratulating the 3 awardees of our annual Pilot & Feasibility program. We had an incredibly competitive application cycle and are thrilled by the continued interest in our award every year. Thank you to all who applied!

Maigen Bethea, PhD "The Role of Gastrointestinal GLP-1R Neurons in Mediating the Glucose-Lowering and Weight Loss Effects of Oral Exendin-4"



Current studies demonstrate a strong correlation between obesity and Type 2 Diabetes (T2D). Therefore, therapeutics that are able to reduce weight loss and lower glucose are cornerstone to T2D treatments. To date, the only drugs on the market that are able to claim this success are glucagon like peptide 1 receptor agonists (GLP-1RAs). However, many of these drugs require injections, thus negatively impacting patient compliance. Oral GLP-1RAs have the capacity to increase patient adherence and make T2D therapies affordable. It is important to note that systemic versus oral administration of GLP-1RAs target different GLP-1R populations. Therefore, it is critical that the GLP-1R populations that mediate the glucose lowering and weight loss effects of orally administered GLP-1RAs are assessed. In this proposal, I will eliminate the neuronal GLP-1R populations within the intestine to determine if they are necessary for the enhanced glucose tolerance and weight loss effects of orally administered GLP-1RAs. Data leveraged from this study will enhance our knowledge of GLP-1 biology and lead to the development of more efficacious drugs.

Holly O'Donnell, PhD "Understanding the Child Experience in the Autoimmunity Screening for Kids (ASK) Study"



Screening for pre-symptomatic type 1 diabetes (T1D) by measuring islet autoantibodies (IA) has historically targeted first-degree relatives of individuals with T1D, but is now rapidly increasing in the general population. Children diagnosed through these studies may experience both immediate and long-term health benefits including lower A1C and impressively low rates of DKA at diagnosis. As screening for IA in the general population expands, there is a critical need to understand factors associated with active participation in screening and monitoring programs as continued engagement with the monitoring protocol is essential for preventing adverse outcomes and offering novel drug interventions to eligible individuals with presymptomatic T1D. Several studies have documented the psychological experience of caregivers whose children are participating in screening and monitoring programs. However, there is an extreme paucity of literature examining the psychological experience of the children themselves. This project will (1) identify caregiver and child demographic, clinical and psychological characteristics associated with optimal participant engagement in IA screening programs and (2) document the experience of children ≥ 10 years of age with confirmed IA+ test results who agree to be monitored. Results will inform future behavioral interventions to increase retention in IA screening and monitoring programs.

Alicia White, PhD "Investigating Fetal Pancreatic β -cell NF κ B Signaling as a Novel Pathway Linking Early Metabolic Dysfunction to Type 2 Diabetes Later in Life"



Intrauterine growth restriction (IUGR) increases perinatal morbidity and mortality and results in long-term metabolic consequences, including premature β -cell failure and type 2 diabetes. IUGR fetuses have β -cells that fail to sense intrauterine nutrients properly thereby leading to impaired oxidative metabolism, reduced insulin secretion, and decreased β -cell mass. Oxidative metabolism increases cytoplasmic calcium leading to insulin secretion, suggesting impaired calcium handling within the IUGR β -cell. NF κ B is a calcium-sensitive transcription factor that promotes β -cell mass by regulating β -cell replication and apoptosis and is activated in adult β -cells during nutrient stimulation and insulin secretion. Therefore, we propose that evaluating fetal β -cell-specific NF κ B activation will uncover a novel mechanism linking intrauterine β -cell failure, lower β -cell mass, and the later development of type 2 diabetes. This will be tested with in vivo and in vitro nutrient and calcium stimulation in chronically catheterized late gestation normally grown fetal sheep for eventual comparison to fetal sheep subjected to experimental IUGR with similar characteristics and complications to human IUGR pregnancies.



DIABETES DAY 2023

We would like to sincerely thank everyone who attended diabetes day for helping us make it event an overwhelming success. The diabetes symposium brings researchers across campus together for a day of presentations by faculty and trainees and an engaging poster session. The day also features the John Hutton Memorial keynote lecture given by a distinguished member of the diabetes community. The 2023 John Hutton Memorial Lecture was given by Dr. Mark Atkinson from the University of Florida.



DIABETES DAY ABSTRACT AND POSTER SESSION WINNERS!

We would be remiss to not give a shout out to our abstract & poster session winners.

Our abstract winners were:

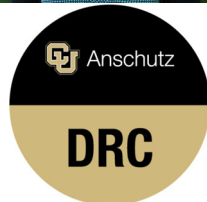
- Mark Ciccaglione (PhD student) "Submicron Ultrasound Contrast Agents as Therapeutic Delivery Vehicles in Type 1 Diabetes"
- Karli Swenson (Research assistant) "Fetal cannabidiol (CBD) exposure induces glucose intolerance and insulin resistance in a sex- and dose-dependent manner"
- Maya Hunter (Research assistant) "Deletion of Ptpn2 in B cells contributes to loss of B cell tolerance"
- Yongkyung Kim, PhD (Post-Doctoral Fellow) "PTPN2 regulates mitochondrial function in the context of type 1 diabetes-like stress conditions"

Our poster session winners were:

- Anne Gresch, PhD (Postdoctoral Fellow) "Characterization of wave and network properties of the membrane potential of cells within the intact islet recorded using microelectrode arrays"
- Tyler Cook, PhD (Postdoctoral Fellow) "Mechanisms associated with postbariatric hypoglycemia"
- Maigen Bethea, PhD (Research Instructor) "Regulation of Food Intake via Gastrointestinal Stretch"



2022 PILOT & FEASIBILITY AWARDEE: LESSONS & TRIUMPHS EMILY BATES, PHD



How did the P&F award help your research?

The P & F award from the Diabetes Research Center (DRC) allowed us to generate data that shows that intrauterine exposure to cannabidiol (CBD) predisposes mice to glucose intolerance and insulin resistance, hallmarks of diabetes. This is really important because survey data suggests that over 20% of pregnant people consume CBD in some form during pregnancy and diabetes is on the rise in the United States. We have benefitted from the expertise and technical help from Without the DRC, we would not have had the funds to make this discovery.

Do you believe this award helped develop you professionally? If so, how?

This award has absolutely helped me develop professionally. I am new to diabetes research, so I needed to learn from experts in the field. The Diabetes Research Center has provided me with a forum to discuss data, grant applications, and interpretations of our results in the context of the broader field. This network of diabetes experts has been very valuable to my perspective on our research.

What were the major lessons you learned in the last year?

I have learned that the DRC is a wonderful and collaborative community of Diabetes researchers and that sex differences in mechanisms and phenotypes are prevalent in diabetes.

DIABETES RESEARCH CENTER EVENTS

Newsletter Update: I wanted to give you all an update that there will be no DRC Newsletter in May, June or July 2023 as I will be on maternity leave!

I look forward to reconnecting with you all later in the summer.

**Thank you all for your continuous support of the DRC,
Lisbel Woods
DRC Program Manager**



RESEARCH IN PROGRESS SEMINAR SERIES SPRING 2023

Mondays at 12:00pm- BDC Main Conference Room 2104

Monday, January 16, 2023	MLK DAY
Monday, January 23, 2023	Emily Bates, PhD
Monday, January 30, 2023	Christopher Schaaf
Monday, February 6, 2023	Maria Hansen
Monday, February 13, 2023	Jefferson Knight, PhD
Monday, February 20, 2023	Presidents Day
Monday, February 27, 2023	nPOD Conference
Monday, March 6, 2023	Kathleen Woulfe, PhD
Monday, March 13, 2023	Week of Diabetes Day – NO RIP
Monday, March 20, 2023	Jaakko Tuomilehto, MD, PhD (External Guest, Co-Sponsor with NORC)
Monday, March 27, 2023	CANCELLED
Monday, April 3, 2023	Melike Sirlanci, PhD
Monday, April 10, 2023	CANCELLED
Monday, April 17, 2023	CANCELLED
Monday, April 24, 2023	Catherine Nicholas
Monday, May 1, 2023	Kelly Vazquez, PhD
Monday, May 8, 2023	Nikki Farnsworth, PhD

Questions? Contact Lisbel Woods at Lisbel.Woods@CUAnschutz.edu

SPRING 2023 BDC & DRC DIABETES SPEAKER SERIES

Seminars will take place in person on Fridays at 12pm MT
All seminars will have a link provided for registration.

Questions? Contact:
Christy Vasey, christy.vasey@cuanschutz.edu , 303-724-9787

Friday, February 3, 2023	Sarah Lessard, MSc, PhD Assistant Professor	Joslin Diabetes Harvard Medical School
Friday, March 3, 2023	Hubert M. Tse, PhD Professor and Chair	Department of Microbiology, Molecular Genetics, & Immunology University of Kansas Medical Center
Friday, March 17, 2023	BDC Diabetes Day Symposium Keynote Speaker: Mark Atkinson, PhD Professor	Director, UF Diabetes Institute Departments of Pathology and Pediatrics University of Florida
Friday, March 31, 2023	Megan Levings, PhD Professor	Department of Surgery Lead, Childhood Diseases BC Children's Hospital Research Institute
Friday, April 14, 2023	Samuel Klein, MD Professor	Chief, Division of Geriatrics and Nutritional Science Washington School of Medicine in St. Louis
Friday, April 21, 2023	Todd Brusko, PhD Professor	Department of Pathology, Immunology and Laboratory Medicine University of Florida
Friday, May 12, 2023	Denise Feig, MD MSc, FRCPC Professor	Obstetrics & Gynecology, and Health Policy, Management & Evaluation Head, Diabetes & Endocrinology in Pregnancy Program Mt Sinai Hospital, Toronto, Canada

OPPORTUNITIES FOR FUNDING



DiabetesPro

The American Diabetes Association® (ADA) is pleased to announce the opening of a new nomination window for the Pathway to Stop Diabetes® research grants in 2023. **Submission deadline is August 1.**

This call for nominations will prioritize translational applications that move knowledge and discovery gained from basic research to its eventual translation into patient and population benefit. The ideal applicant will propose innovative research that will be an important step towards our goal of improving the lives of people at risk of diabetes or living with the disease—and the pathway to this impact is clear. Our vision is to create a pathway to launch the next generation of trailblazers in diabetes research.

Click [here](#) to learn more



JDRF Australia and The Leona M. and Harry B. Helmsley Charitable Trust

Two new RFPs, offering access to early-childhood clinical data and samples from the Global Platform for the Prevention of Autoimmune Diabetes (GPPAD) and the Environmental Determinants of Islet Autoimmunity (ENDIA) study groups have been launched by long-term partners of the Helmsley Type 1 Diabetes Program. These precious resources are offered in conjunction with funding for pancreatic, immune, or metabolic research that may improve the understanding of T1D pathogenesis. More information can be found at the links below.

Letters of intent due April 7th for both RFPs.

More information can be found [here](#)

[Click Here to see all current JDRF RFAs](#)



[Click Here to see all current NIH NIDDK RFAs](#)



NIH K-12 Building Interdisciplinary Research Careers in Women's Health (BIRCWH) at UC Denver

I. General Information

- MD or PhD Scholars will be considered who are pursuing a research career in one of these areas of women's health
 - Pregnancy, lactation and developmental programming of health and disease
 - Immunology/Precision Medicine/Biomedical Informatics
 - Adult Health: obesity, menopause, aging, diabetes and CVD

Clinical Scholars must hold the MD or DO, have completed their clinical training, and demonstrate a commitment to pursuing a successful career involving research in women's health/sex differences.

- Candidates must be U.S. citizens, nationals or permanent resident aliens
- Applicants who are eligible to become faculty and junior faculty who have just initiated an academic career are eligible to apply. All applicants must be tenure eligible

A two-year award designed to support junior faculty who are interested in a career in women's health research will be available. Salary and some program support will be provided to the successful applicant for two years with the possibility of renewal for a 3rd year. Interested applicants are encouraged to apply following the attached instructions. **The application is due at 5:00 PM on April 17, 2023.** No exceptions will be made as to this due date and time.

Click [here](#) for all details of the award and application process.

NIH T32: Research Training Program in Metabolism, Obesity and Type 2 Diabetes for PhDs, MDs or DOs

The Division of Endocrinology, Metabolism and Diabetes in the Department of Medicine at the University of Colorado Anschutz Medical Campus is now accepting applications to provide salary support for post-doctoral research training in metabolism, obesity and type 2 diabetes. Individuals with PhD, MD, or DO degrees are welcome to apply. During the period of support trainees will have the opportunity to work in mentor-based research with one of the many investigators that do studies using model systems that extend from genetic studies in flies, mechanistic studies in animals and humans to interventional studies in people with diabetes or obesity and epidemiological studies in populations across the lifespan. Trainees will have the opportunity to take part in a range of seminars, workshops and specialized training opportunities. A central resource for trainees is the NIH funded Colorado Nutrition Obesity Research Center which supports a number of core labs and has a pilot project program that supports the work of junior investigators.

Details on the application process are included [here](#).

Applications will be reviewed by the Recruitment Committee and awardees notified in mid-May. Applicants must be US citizens or have a green card.

The Training Program in Metabolism, Obesity and Type 2 Diabetes is committed to recruiting and retaining an outstanding and diverse trainee population including trainees from underrepresented racial and ethnic groups and trainees with disabilities. Applicants from these groups are strongly encouraged to apply.

The deadline for application submission is Monday, April 24th, 2023.

Submit your completed application to Daniel.Bessesen@cuanschutz.edu.



The Colorado Nutrition and Obesity Research Center (NORC) is requesting applications for pilot and feasibility projects to support new investigators with projects relevant to nutrition or obesity who have no

independent NIH (or comparable) funding. The goal of the program is to help junior investigators perform studies that will help them build their independent research program and support their efforts to acquire a career development award (K01, K08, K23, VA CDA2 or similar award) or their first independent R01 award.

The program supports a broad range of research on nutrition and obesity, which includes, but is not limited to, the following areas:

- Early life influences affecting long term health
- Women's health and sex differences research
- Exercise, physical (in)activity, or energy expenditure
- Metabolic regulation, dysfunction, and related co-morbidities (diabetes, cancer, CVD)
- Interventions for better health

Proposals related to the science of behavior change, personalized nutrition/medicine, and disease-specific treatments are also encouraged. Fellows and junior faculty members who are from underrepresented minority populations or from disadvantaged backgrounds are strongly encouraged to apply. Projects that have a research focus on underrepresented minority populations or individuals from disadvantaged backgrounds are also encouraged.

To obtain application instructions and document templates, please contact: Caro Henauw at caro.henauw@cuanschutz.edu

SUBMISSION DEADLINE: COB May 22, 2023

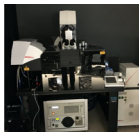
AWARD START DATE: August 1, 2023

Click [here](#) to see full RFA

[Click here to see current CU INTERNAL Limited Submission Funding Opportunities](#)

Have you considered using a DRC core service?

The DRC contains four biomedical cores that provide services and resources to DRC investigators. These cores are designed to facilitate and broaden CU Denver DRC research by expanding access to shared equipment, enhancing availability and training for emerging technologies, and allowing scientists to have greater access to clinical tissue and data.



Cell and Tissue Analysis

Access to state-of-the-art multi-color confocal microscopy, flow cytometry analysis and cell sorting services, and expert assistance for mass cytometry and ion-beam imaging technologies.

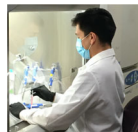
[Learn More about Cell & Tissue Analysis](#)



Clinical Resources

Access to an integrated, campus-wide, research registry enabling informatics-based clinical studies.

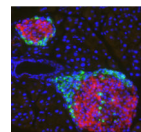
[Learn More about our Clinical Resources](#)



Disease Modeling

Access and training in stem cell technologies for in vitro human disease modeling of diabetes & molecular core services.

[Learn More about Disease Modeling](#)



Tissue Procurement & Processing

Access to islet isolation and transplantation services along with access to commonly used cell lines and diabetes-related histology techniques.

[Learn More about Tissue Procurement & Processing](#)

Want us to feature you or a colleague on an upcoming DRC newsletter? Have an important research update?

[Click Here to Submit a Story to the DRC Monthly Newsletter](#)



[Click Here to Follow us on Twitter](#)

Please remember to acknowledge support from the University of Colorado Diabetes Research Center and our associated cores by referencing NIDDK grant #P30-DK116073 in your presentations and publications.

[Click here to visit the DRC Website](#)

[Click Here to Subscribe to this Newsletter](#)

Contact Lisbel.Woods@CUAnschutz.edu with any questions or feedback about this newsletter

This email was sent to: lisbel.woods@cuanschutz.edu

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