Robert Slover passed away on Friday, August 5, 2022, bringing to a close 73 years of service as a husband, father, grandfather, physician, veteran, scholar, and ecclesiastical leader.

Dr. Slover joined the faculty of BDC in 2002 and became the Director of Pediatric Diabetes Division in 2011. His research work focused in the area of insulin pump and sensor use, the use of sensor-augmented pump therapy, and the development of closed loop (artificial pancreas) systems. He was the PI of several studies at the BDC including the pivotal ASPIRE study, and the pre-pivotal and pivotal trials of hybrid closed loop systems in children from as young as age 6. This work progressed through intensive hospital trials, and closely monitored “off-site” studies, to home use with extended periods of direct observation in group settings. Numerous publications attest to the success of this new technology. Dr. Slover used his special expertise of diabetes technology use in children to assist in the development of appropriate diabetes modules to educate parents and families in the newest diabetes technology. He was an expert in the collection, review, analysis, and interpretation of continuous glucose monitor data including measurements of variability, analysis of glycemic variability, percent time spent in various glucose ranges, and other glycemic data outcomes. As the PI of many studies, he authored over 250 peer-reviewed publications.

Dr. Slover made a lasting impact on the Diabetes community as a whole and we will always remember him.

2020 DRC PILOT & FEASIBILITY AWARDEE DR. SRIDHARAN RAGHAVAN - LESSONS & TRIUMPHS

How did the P&F award help your research?

The P&F award allowed us to create a new, validated database for analyses of patterns of care and outcomes in a real-world population of individuals with prediabetes and diabetes. Such independent datasets are essential for real-world evidence generation, and the P&F award allowed us to do this work in a rigorous way. Creating phenotyping algorithms from electronic health record data can be challenging and the award allowed us to work with EHR phenotyping experts on campus to develop and validate a database that we think will be a valuable resource to me and others in the DRC.

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

Absolutely. I had never participated first-hand in developing and validating phenotype algorithms
Can you tell us about yourself (personal, educational, leadership, research history)?

I was born and raised in western Romania. I trained in medicine at the University of Medicine and Pharmacy in Timisoara, Romania (1990), completed a residency in internal medicine, diabetes and metabolic diseases (1994), and a PhD in clinical sciences (1997). Having served several years as junior faculty in Internal Medicine and Diabetes in Timisoara, Romania, I undertook an NIH Fellowship in diabetes epidemiology with the NIDDK Epidemiology and Field Studies Branch in Phoenix, AZ (1997-1999). It was there that I was one of the first to call attention to the rapidly increasing prevalence of type 2 diabetes in American Indian youth, which we later confirmed in all US populations. I then accepted an appointment as Assistant Professor in the Department of Preventive Medicine, in the CU School of Medicine (SOM) in 2001. I was promoted to Associate Professor with tenure in the SOM in 2008, the same year that the new Colorado School of Public Health (ColoradoSPH) transferred the prior Department, now the Department of Epidemiology. I was promoted to full professor in 2011, served as Associate Dean for Faculty Affairs in the ColoradoSPH for 4 years (2012-2016), and became endowed professor (2013), Center Director (2015) and Distinguished University Professor (2021).

What are the primary goals, mission and vision of the LEAD Center?

In 2015 the Life Course Epidemiology of Adiposity & Diabetes (LEAD) Center was established as a partnership between the ColoradoSPH, Department of Pediatrics, Children’s Hospital, and the Chancellor’s office and I became the first director. The Center’s mission is to conduct the highest quality research in order to better understand the environmental, genetic and developmental determinants of obesity, diabetes, and related conditions throughout the life course, by bringing together multidisciplinary teams to effectively study the complex processes, and educate the next generation of researchers and practitioners who can translate the findings into preventive action. The vision of the LEAD Center is to foster a future where healthy pregnancies, infants, youth and adults result from knowledge of the optimum environment for growth and development. LEAD became a Chancellor’s approved campus-wide Center in 2016. To date, the LEAD Center has 28 active grants led by 14 PIs, and over 60 members comprising faculty, staff and trainees. While the center is administratively housed within the ColoradoSPH, the large number of our core and affiliated investigators are in the SOM, especially Department of Pediatrics, in both clinical and basic sciences divisions.

What is the most important thing the LEAD center is working on right now, and how are you making it happen?

Our most important focus areas right now are:

- Quantifying the burden (prevalence, incidence, trends) and understanding the clinical course (processes of care, quality of life, morbidity and mortality) of young adult-onset type 2 diabetes in Colorado and the US, through multicenter studies like SEARCH and DCAYA, including a focus of COVID19 pandemic effects of diabetes risk and evolution;
- Studying the developmental origins of major pediatric outcomes (including obesity, youth-onset diabetes, and type 2 diabetes, asthma, food allergies, neurodevelopmental impairment, and behavioral health), through studies like Healthy Start (phases 1-4), EPIC-2 (phases 1-3) and our participation in the ECHO (Environmental Influences and Child Health) Consortium;
- Studying the long-term effects of prediabetes and type 2 diabetes on diabetes-related outcomes, quality of life and Alzheimer Disease and Related Dementias (ADRD), through our participation in the Diabetes Prevention Program Outcomes Studies (DPPOS phases 1-3) and now the DPPOS-ADRD);
- Conducting and translating clinical trials into community prevention for youth (Trials Turning Point, in American Indian Youths; The Bennett Project, in rural Colorados), pregnant women (via our participation in the newly funded ERICH study) and adults (through our newly funded NextGen pre-conceptional RCT);
- Understanding and addressing disparities in obesity and diabetes in diverse and underserved groups- all our studies focus on this.
Most of our research is federally funded (NIDDK, NHLBI, NICHD, ADA, CDC). We have a talented, multidisciplinary team of core investigators, and many collaborators on campus, at other institutions in Colorado, nationally and internationally, who are leveraging our human cohorts, data and sample repositories, and our wonderful and innovative ideas.

How has the LEAD center evolved since it was first created?

While obesity, diabetes and their immediate consequences were, and continue to be, important areas of research focus, over the last 7 years the center’s research has expanded substantially to include, among others, cardiometabolic health, neurodevelopment and brain development, lung development, food allergies, asthma, and other respiratory outcomes, behavioral and mental health, and healthy aging. In addition, while the initial focus was primarily on understanding the biological underpinnings of obesity and diabetes from a developmental perspective, including focused mechanistic studies and integration with population “omics” data, more recent efforts have added comprehensive assessments of above the skin” environmental exposures, such as air pollution, chemicals, built environment and social determinants. We conduct observational studies, randomized clinical trials, surveillance work, implementation science, ‘omics studies and basic science projects, nested within our human cohorts.

Who should DRC members reach out to if they are interested in hearing more or collaborating?

They can reach out to: Wei Peng, PhD, LEAD Associate Director for Research Training, who can advise about ongoing studies and potential collaborations; Anna Bellatorre, LEAD Assistant Director for Data Operations, who can advise about policies and procedures related to data and sample access; Drs Katherine Sauder, PhD, LEAD Deputy Director, or myself, for general questions or specific ideas. Please stop and visit us in the new Anschutz Health and Sciences Building, 1st floor.

Is there anything else that the DRC community should know about LEAD?

LEAD serves as data and biosample repository for the large, multi-center SEARCH study. These resources are available to all investigators who are interested in developing manuscripts, pilot grants, training grants, research grants, and even program projects that may continue the life of the SEARCH study beyond its first 20 years of initial NIDDK/CDC funding.

CONGRATULATIONS MARIA HANSEN, RECIPIENT OF DIABETES RESEARCH CONNECTION GRANT

Project Summary: The use of human pluripotent stem cells (hPSCs) for the generation of b-like cells (bSCs) holds great promise for transplantation therapies for type 1 diabetes. However, while bSCs are believed to present as a homogeneous population, our single cell RNAseq data suggests distinct bSC populations that separate mature bSCs from immature bSCs. Interestingly, Uncoupling Protein 2 (UCP2) expression is highly increased in data sets comparing mature to immature bSC cell populations at the transcript level. Immunofluorescence analysis shows UCP2 protein only in immature, but not in mature bSCs nor cadaveric human b-cells. Previously UCP2 has been described as a gatekeeper of the metabolic switch from glycolysis to oxidative phosphorylation (OXPHOS), also a key event in the functional maturation of b-cells. In order to investigate the role of UCP2 in human beta-cell development and function, we have generated homo- and heterozygous UCP2 knockout iPSC lines using CRISPR/Cas9. Utilizing RT-qPCR, flow cytometry and IF, we will characterize the UCP2 KO iPSCs at multiple stages throughout the beta-cell differentiation. Preliminary data shows increased calcium activity at both low and high glucose in the UCP2 KO bSCs. Strikingly, this is consistent with the phenotype seen in patients with mutations in the UCP2 gene who develop congenital hyperinsulinism. We will evaluate the functionality of the UCP2 KO bSCs by performing dynamic glucose stimulated insulin secretion (dGSIS) assays, live-cell calcium imaging, as well as mitochondrial DNA copy number and insulin content analysis. We will examine the effects on metabolism using Seahorses analysis.

CONGRATULATIONS, ALI SHILLEH! RECIPIENT OF THE HIRN 2022 TRAINEE SCHOLARSHIP
HIRN 2022 Trainee Scholarship Recipients

Gregory Grider, PhD
University of Pennsylvania Postdoctoral Researcher
CDEP (PI: Brem)

Athifah Ismail, PhD
Univ. Florida Postdoctoral Research Fellow
CDEP/CICR (PI: Virella/Gurso)

Oluwaseyi Adekunle, PhD
Indiana University Postdoctoral Research Fellow
CDEP (PI: Memmi)

Ali Huda
Univ. Colorado Anschutz Med Campus Graduate Student
CICR (PI: Kasamatsu)

RUN FOR THE RING - ANNUAL BDC 5K AN OVERWHELMING SUCCESS

The morning of Saturday, August 13, was full of fun family time, teamwork and above all, a passion to find a cure for diabetes.

Thank you to everyone who attended and participated, and a very special shout out to the Research team who has kept up with winning the “Largest Team” award!

Click Here to Access All Event Photos

ANNOUNCING THE FALL 2022 RIP SERIES- WE HOPE TO SEE YOU THERE ON MONDAYS!
# Research in Progress Series

**FALL 2022**

**Mondays at 12:00pm**

**BDC Main Conference Room 2104**

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>Monday, September 12, 2022</td>
<td>Prashanth Francis, MD PhD</td>
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<tr>
<td>Monday, September 19, 2022</td>
<td>Dylan Sarbaugh</td>
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<td>Monday, September 26, 2022</td>
<td>Mia Smith, PhD</td>
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<td>Monday, October 3, 2022</td>
<td>James Scott-Browne, PhD</td>
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<td>Monday, October 10, 2022</td>
<td>Yan Li, PhD (Guest Speaker)</td>
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<td>Monday, October 17, 2022</td>
<td>Sridevi Iyer, PhD</td>
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<td>Monday, October 24, 2022</td>
<td>Jordan Jacobelli, PhD</td>
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<td>Monday, October 31, 2022</td>
<td>Laurel Messer, PhD</td>
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<td>Monday, November 7, 2022</td>
<td>Katja Tommerdahl, MD</td>
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<td>Monday, November 14, 2022</td>
<td>Roberto Castro-Gutierrez</td>
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<td>Monday, November 21, 2022</td>
<td>Thanksgiving Break</td>
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<td>Monday, November 28, 2022</td>
<td>City of Hope Diabetes Research Symposium</td>
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<td>Monday, December 5, 2022</td>
<td>Rachel Friedman, PhD</td>
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<td>Monday, December 12, 2022</td>
<td>Yong Kim, PhD</td>
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<td>Monday, December 19, 2022</td>
<td>Holiday Break</td>
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<tr>
<td>Monday, December 26, 2022</td>
<td>Holiday Break</td>
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# DRC SPEAKER SERIES ANNOUNCED FOR 2022-2023 ACADEMIC YEAR, PLEASE JOIN US!

All seminars will take place in the Shore Family Auditorium unless otherwise noted in green.

**2022-2023 DRC Diabetes Speaker Series**

**Barbara Davis Center for Diabetes Series Roster**

Seminars will take place in person on Fridays at 12pm MT.

All seminars will have a link provided for registration.

For administrative assistance: Christy Vassey, christy.vassey@ucdenver.edu, 303-743-7977

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>Friday, September 2, 2022</td>
<td>Bethany Cunningham, DVM, PhD, Associate Professor</td>
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<td>Friday, September 9, 2022</td>
<td>Dickson, MD Professor</td>
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<td>Friday, October 7, 2022</td>
<td>Sarah L. Harris, MD PhD, Assistant Professor</td>
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<td>Friday, October 28, 2022</td>
<td>Rachel Bannan, PhD Assistant Professor</td>
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<tr>
<td>Friday, November 4, 2022</td>
<td>Matthew L. Bissett, MD PhD, Associate Professor</td>
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<td>Friday, November 18, 2022</td>
<td>TRD</td>
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<td>Friday, January 5, 2023</td>
<td>Leonardo M. R. Ferrero, PhD, Assistant Professor</td>
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<tr>
<td>Friday, January 29, 2023</td>
<td>Rebecca L. Hunt, PhD Research Professor</td>
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<td>Friday, February 3, 2023</td>
<td>TRD</td>
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<td>Friday, March 3, 2023</td>
<td>Todd Bruck, PhD, Professor</td>
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<td>Friday, March 17, 2023</td>
<td>Hudson M. T. Tou, PhD, Professor</td>
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<td>Friday, March 24, 2023</td>
<td>BDC Diabetes Day Symposium Keynote Speaker: Mark Akathor, PhD, Professor</td>
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<td>Friday, April 1, 2023</td>
<td>Megan L. Watkins, PhD, Professor</td>
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<td>Friday, April 14, 2023</td>
<td>Sarah Ek, MD, Professor</td>
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<tr>
<td>Friday, April 28, 2023</td>
<td>Dennis Roig, MD, MSIC, FRCPC, Professor</td>
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[https://view.communications.cu.edu/?qs=bf0e03daadbad99be26538f9586cc2b19cde5c0171c77ea9d90c8435b62d0c3e5c3a73611ed730bdfc4aa64...](https://view.communications.cu.edu/?qs=bf0e03daadbad99be26538f9586cc2b19cde5c0171c77ea9d90c8435b62d0c3e5c3a73611ed730bdfc4aa64...)
**JOB POSTINGS**

**UC San Diego School of Medicine**

**Assistant Professor - Chancellor's Joint Initiative: Pharmacology/Chemistry & Biochemistry**

The focus of this search is in the broad areas of Metabolism, Mitochondria, and Human Diseases. Successful candidates will be expected to have a strong record of research accomplishments and funding and an innovative plan for their future research.

Click [here](https://view.communications.cu.edu/?qs=bff0e03daaadb9d9be26538f586cc25b19cde5c0171c77ea990c8435b62d0c3e5c3a7361f6d730bdfc4aa64) to see the full job description & posting.

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**NIH National Institute of Diabetes and Digestive and Kidney Diseases**

The NIDDK currently has two open positions for Program Directors in the Division of Diabetes, Endocrinology and Metabolic Diseases (DDEMID) at NIDDK. One is for Diabetes Clinical and Translational Research and the other for Diabetes Clinical Research.

Click [here](https://view.communications.cu.edu/?qs=bff0e03daaadb9d9be26538f586cc25b19cde5c0171c77ea990c8435b62d0c3e5c3a7361f6d730bdfc4aa64) to read more about the Program Director for Diabetes Clinical & Translational research.

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**OPPORTUNITIES FOR FUNDING**

**CAIANDTR Pilot & Feasibility Program** provides support for early-stage investigators (ESIs) committed to conducting translational research related to diabetes in American Indian and Alaska Native (AI/AN) populations.

Investigators may be affiliated with any institution that can receive NIH funds. During this 18-month research and training program, funded investigators will complete and publish a secondary analysis project (Months 1-12) and develop a grant application seeking larger-scale funding for their research efforts (Months 13-18).

**Application & Review Timeline**

- **Call for Applications Opens:** July 5, 2022
- **Interest Form Due:** September 19, 2022
- **Complete Application Due:** October 3, 2022
- **Response from Reviewers:** October 24, 2022
- **Written Response to Review:** November 7, 2022
- **Notification of Award:** November 14, 2022
- **Project Period:** December 1, 2022 – May 31, 2024

Detailed information about this opportunity is available on the [CAIANDTR website](https://view.communications.cu.edu/?qs=bff0e03daaadb9d9be26538f586cc25b19cde5c0171c77ea990c8435b62d0c3e5c3a7361f6d730bdfc4aa64) and in the [Request for Applications](https://view.communications.cu.edu/?qs=bff0e03daaadb9d9be26538f586cc25b19cde5c0171c77ea990c8435b62d0c3e5c3a7361f6d730bdfc4aa64).

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**Stakeholder Engagement Innovation Center for Advancing Health Equity in Type 2 Diabetes Research (SEIC-T2D)**

**NIH National Institute of Diabetes and Digestive and Kidney Diseases**

This award aims to provide highly specialized research resources to accelerate use of appropriate methods and meaningful and equitable engagement of individuals from and communities of diverse backgrounds and sectors in developing the research priorities and
activities that involve them, particularly NIH-designated health disparity populations, underserved communities, and those with the highest proportion of diabetes-related morbidity and mortality.

Letter of Intent due September 26, 2022

The SEIC-T2D will provide highly specialized research resources to support field and clinical investigators by fully embedding communities, patients, and other stakeholders into the full spectrum of research activities through expert consultations and education in principles and methods of community-engaged research. The SEIC-T2D will also establish a network consisting of multidisciplinary research investigators, including those from underrepresented groups, with expertise in diabetes research and community-engaged methods, community elders with lived experiences, and representatives of various health and other organizations deemed essential for addressing disparities and advancing health equity in T2D prevention and treatment.

If there are any questions, please contact

Dr. Beena Aikkar (beena.aikkar@extra.niddk.nih.gov) or
Dr. Shavon Arts Dickerson (shavon.artsdickerson@niddk.nih.gov).

Notice Number: RFA-DK-22-001
Release Date: June 10, 2022
Application Due Date: October 26, 2022
Expiration Date: October 27, 2022

Click here to access the full RFA

Mass Spectrometric Assays for the Reliable and Reproducible Detection of Proteins/Peptides of Importance in Type 1 Diabetes (T1D) Research (U01 Clinical Trial Not Allowed)

This Funding Opportunity Announcement (FOA) encourages applications from institutions/organizations proposing the development and/or validation of targeted mass spectrometric assays (e.g. Multiple Reaction Monitoring) for proteins and peptides of primary interest to the type 1 diabetes research community (e.g. glucagon and other pro-glucagon derived peptides, C-peptide, insulin, pro-insulin, Glycosylated CDSB, Islet Amyloid Polypeptide (IAPP), Chromogranin A (CgA), and chromogranin B (CgB)). The proposed assays should be highly reproducible, easily transferable to other laboratories, and validated in human plasma or serum. This might also require the development of appropriate community standards, and reference materials when not already available.

Letter of Intent due September 26, 2022

Notice Number: RFA-DK-21-031
Release Date: July 14, 2022
Application Due Date: October 25, 2022
Expiration Date: October 27, 2022

Click here to access the full RFA

Human Islet Research Network - Consortium on Targeting and Regeneration (HIRN-CTAR) (U01 Clinical Trial Not Allowed)

This Funding Opportunity Announcement (FOA) invites applications for the Consortium on Targeting and Regeneration (CTAR) that supports the development of innovative strategies to increase or protect functional human beta cell mass in patients with Type-1 Diabetes (T1D) through controlled manipulation of beta cell replication or islet cell plasticity, reprogramming of non-beta cells into beta-like cells, or shielding of residual beta cell mass from the autoimmune environment. CTAR is part of the Human Islet Research Network (HIRN).

Letter of Intent due September 26, 2022

Notice Number: RFA-DK-22-009
Release Date: July 13, 2022
Application Due Date: October 26, 2022
Expiration Date: October 27, 2022

Click here to access the full RFA

Understanding the Pathophysiology and Clinical Course of New-Onset Diabetes Following COVID-19 (U01 Clinical Trial Not Allowed) (RFA-DK-22-016)

This Funding Opportunity Announcement invites multiple Program Director/Principal Investigator (multi-PD/PI) applications to conduct a study to establish a longitudinal cohort of individuals who developed diabetes following SARS-CoV-2 infection to understand the pathophysiology and clinical course post-COVID-19 diabetes. The cohort must include children and adults and reflect the geography and demographics of COVID-19 in the U.S. There must be an appropriate
comparator population recruited and followed. The goals are to determine the contribution of: 1) specific pathophysiologic pathways; 2) overall health impact of the pandemic; 3) COVID-19 severity, and 4) COVID-19 treatment upon excess new onset diabetes from SARS-CoV-2 infection and response to diabetes therapy.

Letter of Intent due November 20, 2022

Notice Number: RFA-DK-22-016
Release Date: July 13, 2022
Application Due Date: December 20, 2022
Expiration Date: December 21, 2022

Click here to access the full RFA

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.

Clinical Resources
Access to an integrated, comprehensive, research facility enabling integrative clinical studies.

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

Tissue Procurement & Processing
Access to tissue cryopreservation and transplantation services along with access to commonly used cell lines and diabetes-related pathology techniques.

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 8P30-DK116073 in your presentations and publications.

Click here to visit the DRC Website
Click Here to Subscribe to this Newsletter

Please contact Lisa.Wood@CUAnschutz.edu with any questions or feedback about this newsletter

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This email was sent by the University of Colorado