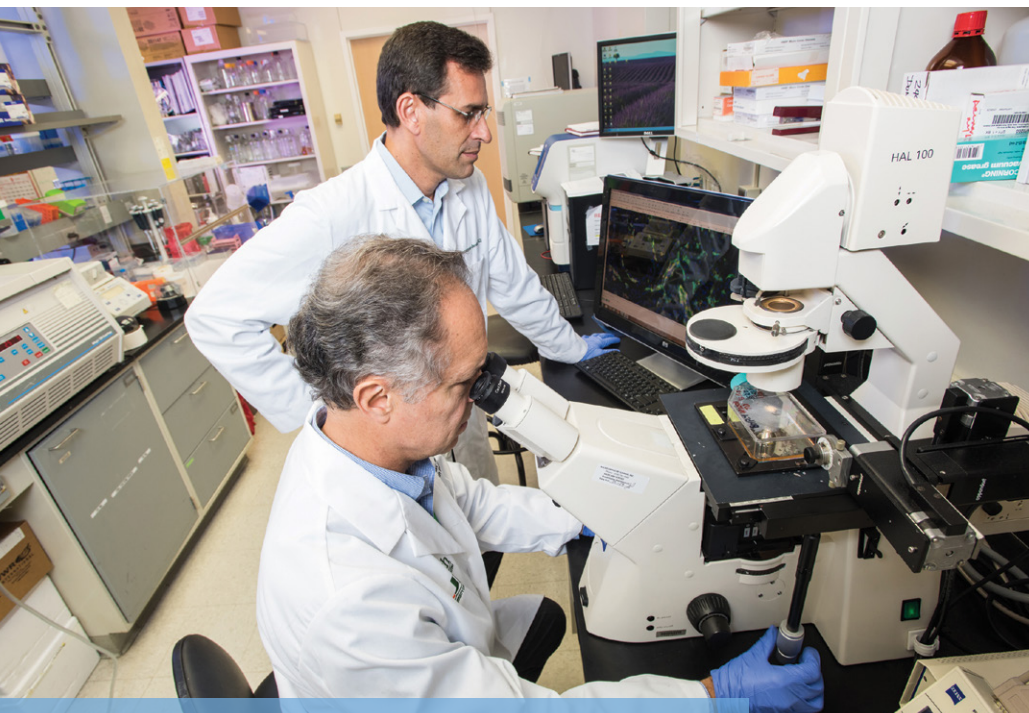


# DRI Focus

Diabetes Research Institute Foundation  
Fall 2020



## Breakthrough technology provides a window into the pancreas' ability to regenerate

DRI scientists have developed a method allowing for the long-term culture of "pancreatic slices" to study the regeneration of the human pancreas in real time. The results, published in June in *Nature Communications*, demonstrate for the first time that extended cultures of near-intact

human pancreatic tissue retain the ability of the live organ to replenish insulin-producing beta cells. These findings could lead to a faster and more certain path to clinical trials for type 1 and type 2 diabetes.

Pancreatic slices are very thin live sections of the organ that preserve the cellular architecture and cell-to-cell interactions of the native organ. Due to their fragility, the slices usually disintegrate in culture very quickly. This makes it difficult to study the regeneration of insulin-producing beta cells. However, DRI scientists used a device that enhances the oxygenation of the tissue, leading to their extended survival and biological function.

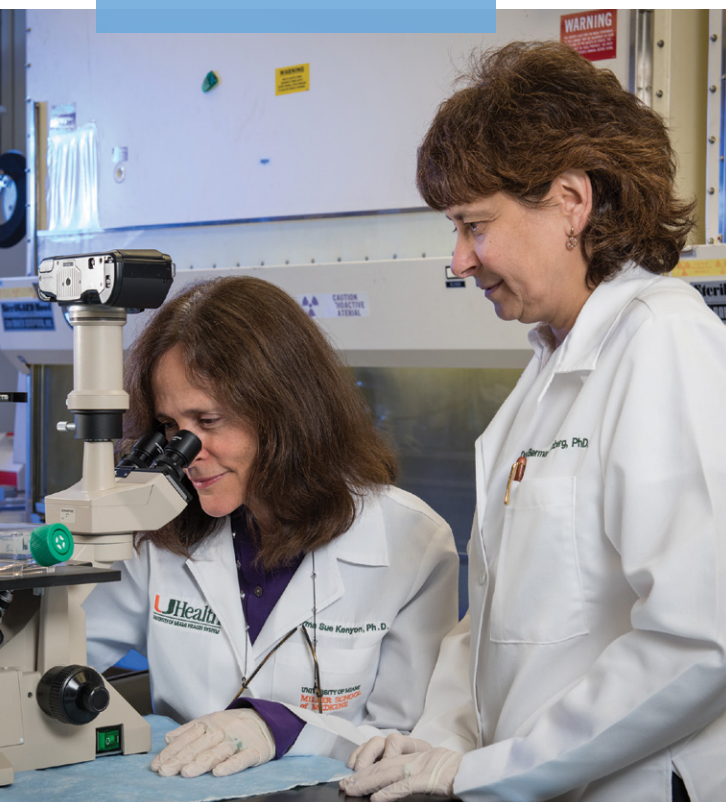
"The ability to keep human pancreatic slices alive for nearly two weeks is a technical breakthrough that allows us to witness the regeneration of beta cells in a human model that strongly resembles the real pancreas," said DRI's Dr. **Juan Dominguez-Bendala** (pictured standing), principal investigator of this work, along with Dr. **Ricardo Pastori** (pictured at the microscope). "We now have a window into the native human organ that simply wasn't possible prior to this study." Read the complete article at: [DiabetesResearch.org](https://DiabetesResearch.org).

## NABTU Pledges to Raise \$6 Million for the DRI

North America's Building Trades Unions (NABTU), our longstanding partner and largest contributor, made another extraordinary commitment. They announced at their recent convention that they would raise \$6 million for our cure-focused research over the next five years! Since our relationship began in 1984, NABTU and its members have donated nearly \$60 million to support our work.

All of us at the Diabetes Research Institute and Foundation would like to thank each affiliate and every member of the NABTU family for working on the front lines and doing whatever it takes during the pandemic to help the DRI and communities across North America. To learn more, follow the hashtag [#buildingtradeswhateverittakes](https://twitter.com/buildingtradeswhateverittakes).

"The disease doesn't stop, so we're not stopping either."



## Working Toward Tolerance

WITH NORMA KENYON, PHD, SCIENTIST AND DIABETES MOM

Kicking off the fall season, at a virtual Meet a Scientist event, guests had the opportunity to learn more about the ongoing research at the Diabetes Research Institute from Dr. **Norma Kenyon**, Deputy Director and the Martin Kleiman professor of Surgery, Microbiology and Immunology, and Biomedical Engineering at the University of Miami (pictured at the microscope with Dr. **Dora Berman-Weinberg**). She and her team are investigating various agents and cell-based therapies that may help islet cells survive and function without the need for harsh immune-suppressing drugs. The team has shown strong evidence that an immunotherapy agent, anti-CD40L, can create a more tolerant environment for the transplanted islets by interfering with the pathway that triggers the immune system's attack. Dr. Kenyon has already seen promising results in preclinical models and is moving toward patient trials.

In addition, Dr. Kenyon is studying how co-transplanting mesenchymal stem cells (MSCs) could improve islet function. With promising data on both strategies, they are adding an innovative third component, preimplantation factor (PIF), a naturally occurring peptide important in pregnancy that could further induce the immune system to tolerate transplanted islets.

To keep abreast of Dr. Kenyon's progress and other research news, sign up to Be a DRI Insider at: [DiabetesResearch.org](https://DiabetesResearch.org).

## Re-Engineering Encapsulation

WITH CHRIS FRAKER, PHD, RESEARCHER AND T1D PATIENT

This summer, the Diabetes Research Institute Foundation hosted a special, virtual experience with Dr. **Chris Fraker**, a researcher with the DRI for over 20 years and a patient with type 1 diabetes for more than 30 years. A small group of supporters got the opportunity to interact with Dr. Fraker and hear more about current progress in our search for the cure.

Dr. Fraker's current research focuses on optimizing islet and stem cell encapsulation to restore normal glucose levels without the need for immunosuppression. Additionally, he continues to work on improving oxygenation to encapsulated cells and applying his technologies to the growth and maintenance of mesenchymal stem cells (MSCs), islets and immune cells.

While encapsulation is not a novel area of research, understanding it is something that Dr. Fraker believes is critical to the success of

ongoing clinical trials. The goal is to conceal transplanted insulin-producing cells in a way that the body would not reject them, which could eliminate the need for harsh anti-rejection drugs. Dr. Fraker expressed his excitement about getting started on testing models of the device.

"During this time, I am in the lab. I've been working," said Dr. Fraker about his continuing research throughout the pandemic. "The disease doesn't stop, so we're not stopping either," he said and thanked all virtual participants for making it possible for the DRI to continue its critical research toward a cure.



## WAYS TO GIVE



### Online Auction for Diabetes Research

Join us on November 1 to kick off Diabetes Awareness Month by bidding on our Online Auction for Diabetes Research! It's taking place all month long to benefit our groundbreaking research toward a cure for diabetes. Register today at <https://drifauction.givesmart.com> so you can be ready to bid on a variety of stellar items, one-of-a-kind virtual experiences, luxury getaways and more!

**Here's a sneak peek at some of our favorite items up for bid at the auction:**

- Kobe Bryant 5-Time NBA Champion Rings Shadowbox
- Country Music Superstar-Signed Guitar including signatures from Tim McGraw and Miranda Lambert!
- Custom art piece by Koops, a 15-year old emerging artist and creative entrepreneur from Miami Beach

Young entrepreneur **Lauren Buchwald**, 14, is serving as a sponsor of the event with her company Splattered Essentials. Diagnosed with type 1 diabetes at 3 years old, Lauren and her family have been active supporters of our mission for over a decade, and she was thrilled to get involved with the online auction. Check out her line of comfy, customized tie-dye clothing for kids and adults on Instagram @splattered.essentials. Additional sponsors include: TotalDiabetesSupply.com and Miracle Noodle.

### FACEBOOK FUNDRAISER



### Raise Funds via Social Media

With the world social distancing, now more than ever it's easier to raise funds using social media. **The ever-popular Facebook Fundraiser platform helps you ask friends and family to support the DRI during birthdays and celebratory events – or even November's Diabetes Awareness Month or December's Giving Tuesday.** Instagrammers are raising funds, too. Just tap the donation sticker after you've added an image or a video to your story. And the best part? Nonprofits receive 100% of the proceeds without any transaction fees.



### Diabetes Awareness Month Text 2 Give Fundraiser

This year, we invite you to support the DRI during Diabetes Awareness Month by texting to give. You can now help fund scientific advancements at the Diabetes Research Institute anytime, anywhere, in only a few seconds! Simply text DiabetesAwareness to **855-735-2437**. Any amount is appreciated!

**All funds raised will go toward DRI research to find a cure for diabetes.**



### Join TEAM DRI

We have exciting news! **We have just launched a new initiative that allows you to be part of the team that helps scientists at the Diabetes Research Institute get closer to a cure.** Whether you join as an individual or a group, Team DRI unites people of all ages from all over the world who are creating their own fundraisers to keep our critical research moving forward during these challenging times.

Maximize your impact by using your passions and hobbies to organize do-it-yourself fundraising projects, like a bike-a-thon, a virtual cooking class, or a video game live stream with friends. The possibilities are endless!

You can also participate in our local upcoming endurance events to raise much-needed funds for the DRI. Visit us at [JustGiving.com/campaign/TeamDRI](https://JustGiving.com/campaign/TeamDRI) for more information.

To learn more visit: [DiabetesResearch.org/Ways-to-Give](https://DiabetesResearch.org/Ways-to-Give)



*address service requested*

## CALENDAR

For more info visit: [DiabetesResearch.org/Events](https://DiabetesResearch.org/Events)

2020

NOVEMBER 1 - 30

**Online Auction for  
Diabetes Research**  
VIRTUAL

DECEMBER 9

**Empire Ball**  
VIRTUAL

December 11 - 13

**Garden of Life Palm  
Beaches Marathon**  
TEAM DRI / VIRTUAL

December TBD

**C3 - Collaborate,  
Celebrate, Cure**  
VIRTUAL

2021

FEBRUARY 22

**A Gift of Love... A Gift  
of a Hope Luncheon**  
PENDING

APRIL 25

**Out of the Kitchen  
Hits the Road**  
NATIONAL

MAY 6

**DREAMS in the City**  
NEW YORK

The Diabetes Research Institute and Foundation were created for one reason – to cure diabetes – which is and will continue to be the singular focus until that goal is reached. For more information, please visit [DiabetesResearch.org](https://DiabetesResearch.org), or contact us at 800-321-3437 or [info@drif.org](mailto:info@drif.org).



Make a  
huge impact  
by becoming  
a **monthly**  
donor!

**VISIT** [DiabetesResearch.org/monthlygiving](https://DiabetesResearch.org/monthlygiving)