Diabetes Research Connection

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ANNUAL REPORT

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OUR MISSION

Donor-Driven, Peer-Reviewed, Innovative Diabetes Research

Our mission is to connect donors with early-career scientists enabling them to perform peer-reviewed, novel research designed to prevent and cure Type 1 Diabetes, minimize its complications and improve the quality of life for those living with the disease.

T1D By The Numbers

worldwide. T1D is one of the fastest growing, noncommunicable, chronic health conditions on the planet and its numbers are expected to nearly double by 2040.

Why DRC Funds the Full Picture - Prevention, Treatment, **Complications, and a Cure:**

Improving T1D treatment access could prevent 1.35M premature deaths by 2040. **Early Diagnosis** Saves Lives

Timely T1D diagnosis could prevent 393,000 deaths by 2040.

Access to **Essential Care** Matters

Source: T1Dindex.org



There are over 9.4 million people living with T1D

Technology Is More Than a Luxury

Access to CGMs and pumps could help 741K more people thrive with T1D by 2040.

Full-spectrum research can not only extend lifebut restore its quality-for those with T1D.

A Cure Changes Everything

2024 BOARD OF DIRECTORS

lar friends

Type 1 diabetes (T1D) isn't just a cause I support it's personal. My amazing son, Taylor lives with T1D, and every day, I see the resilience, determination, and strength it takes to manage this disease. That's why I'm committed to fighting for a future where he-and millions like him-no longer have to.

This year, we've seen incredible momentum in T1D research. Bold new ideas are pushing boundaries, uncovering ways to slow or even stop the immune attack on insulin-producing cells. Scientists are making breakthroughs in beta cell regeneration and innovative therapies that could revolutionize how we treat, prevent, and ultimately cure this disease. It's an exciting time-but we can't afford to slow down now.



Eric Zwisler Board President & Chair





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Heather Prado, Esg.

"We are committed to ensuring that DRC becomes one of the most significant forces funding innovative diabetes research that will rid the planet of this disease and its complications."

Despite this progress, the landscape for funding medical research is more uncertain than ever. Traditional funding sources often overlook early-career scientists-the very researchers who bring the fresh perspectives and groundbreaking ideas that lead to real change. That's where you and Diabetes Research Connection (DRC) come in.

At DRC, we're laser-focused on identifying and funding the most promising new researchers in T1D. We believe that today's bold ideas become tomorrow's gamechanging discoveries—but only if they get the support they need now. And thanks to you, we're making that happen.

Every dollar you give fuels innovation. Every grant we award brings us closer to a cure. And every step forward is because of people like you who refuse to accept the status quo. On behalf of the entire board of directors, we thank you for your continued support.

With gratitude and determination,

Eric Zwisler Board President Diabetes Research Connection



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- David Winkler

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Our Unique Scientific Review Process

At Diabetes Research Connection (DRC), we fund groundbreaking T1D research with the potential to change lives. Every project undergoes a rigorous review by our volunteer Scientific Review Committee—leading experts from across the country—who help us identify the most innovative, feasible, and impactful studies advancing T1D research.



Supporting bright young investigators at this critical early career stage when they are contemplating a commitment to a career in Type 1 Diabetes research makes a real difference.

- Mark Huising, PhD, UC Davis

It's deeply rewarding to help identify promising, rigorous projects, knowing that supporting these novel ideas nurtures both early career scientists and their breakthrough concepts that will ultimately transform T1D treatment and prevention.

Sangeeta Dhawan, PhD, City of Hope



I joined the DRC Scientific Review Committee to help ensure that early-career scientists receive the encouragement and resources they need to launch impactful careers in T1D research.



Specialty Review: Experts from the SRC assess each proposal for innovation, feasibility, and impact.



Committee Approval: Projects meeting our rigorous standards and receiving the highest recommendations from the SRC move forward for funding.



Fast Turnaround: The review protection the support they need quickly.



- Raghu Mirmira, MD, PhD, University of Chicago

Every grant application undergoes a multi-step evaluation:

Fast Turnaround: The review process takes as little as 4 months, getting researchers

Growing up with T1D

Behind every research proposal is a deeper purpose: real people living with T1D. T1D is a heavy burden, especially for young people growing up while managing a lifelong condition. That's why we fund research not only for a cure, but also for better treatments, prevention, and solutions to long-term complications. Every funded project moves us closer to a future where T1D is no longer a daily burden.





Ethan, Diagnosed at age 10

Diagnosed with T1D at age 10, Ethan remembers trying to hide his condition from classmates to avoid unwanted attention. Over the years, advancements like insulin pumps and continuous glucose monitors became major milestones in making his life easier.

Growing Up Ethan

"My life has gotten tremendously better because of the research and innovation funded by projects like DRC."

Today, Ethan is a graduate of USD, runs several businesses, and even completed the Napa Valley Marathon-proof that with continued research and innovation, T1D doesn't have to limit what's possible.

Growing Up Addie

Diagnosed at just 1 year old, Addie has lived her entire life navigating the demands of type 1 diabetes. Just a few years later, her brother, Nolan, was diagnosed at age 2. Now a student at San Diego State University, she's experienced firsthand how far diabetes technology has come-and how much it still impacts daily life.

Continuous glucose monitors and insulin pumps have improved peace of mind for Addie and her family, especially after years of difficult injections in early childhood.

"I'm completely wireless now so I don't take any more injections. Now I just have two pieces of equipment that run through my phone."

But challenges remain. Continuous glucose monitors can give inaccurate readings, disrupt sleep, and still need to be managed in inconvenient moments.

For Addie and her brother, progress in technology has made life more manageablebut the goal is a future where T1D no longer exists. (7)



Growing Up Lauren

Diagnosed with T1D at age 5, Lauren guickly learned what it meant to be her own "walking pharmacy," carrying extra supplies to stay safe. Four years later, her sister Kyra was diagnosed too, highlighting the strong genetic risk within families.

"It's vital for organizations like DRC to invest in both advancing current treatments and pursuing a cure, because for millions of people, these efforts directly shape not just quality of life, but survival itself."

Now a graduate of Stanford University, and headed to Stanford Law, Lauren has seen how far treatments have come-from long needles and vials to advanced technologies that help lighten the daily burden. "Countless times, my continuous glucose monitor has woken me up during a severe low at night-something I might not have caught on my own. It gives me a sense of safety and peace I didn't have before." Lauren emphasizes that her hope is that T1D research will one day allow her to live without these devices.



"Innovation buys us time, but a cure will grant us our freedom."

"I am alive because of the visionaries who dared to invest in bold ideas, and I hope that future generations can say they are free because we invested in finding a cure."



Lauren, Diagnosed at age 5

Growing Up Brooklynn

Diagnosed with type 1 diabetes at age 3, Brooklynn recalls carrying a purse full of supplies by second grade. At 17, a CGM gave her newfound freedom to travel and experience the best control she'd ever had.

Now a graduate of Texas Christian University, Brooklynn advocates for research that could lead to a cure. "Technology has transformed survival into management," she says. "But I still navigate constant decisions, alerts, and the unpredictability of both my body and devices and managing T1D remains mentally and physically exhausting." Brooklynn's story underscores why advancing both treatment and cure-focused research is critical.

> Scan the QR code to hear directly from young people living with T1D.



Revolutionizing Diabetes Care Through Immune System Training

In 2024, we were thrilled to share groundbreaking results from a research project led by Dr. Leonardo Ferreira at the Medical University of South Carolina, supported by our essential seed funding. This initiative represents a significant leap forward in the treatment of Type 1 Diabetes.

Innovative Treatment Strategies

Islet cell transplantation has long been plagued by the ongoing challenge of requiring lifelong immunosuppression to keep the body from rejecting the foreign beta cells. Dr. Ferreira's team, in collaboration with the University of Florida, has pioneered a novel approach to address these challenges.

Ferreira describes the immune system as an army. Human regulatory T cells (Tregs) are the "generals," and the other immune cells are the "soldiers." The Tregs guide the other immune cells by suppressing them when they become over-activated, as in autoimmunity, and by letting them fully function when there is a threat, such as infections or cancer.

Ferreira and his team have developed engineered Tregs equipped with a chimeric antigen receptor (CAR) and engineered stem cell-derived beta cells that the CAR-Tregs can recognize. This innovative method trains the patient's immune system to accept transplanted cells as its own, which lab trials have shown to potentially eliminate the need for lifelong immunosuppressants.



Promising Outcomes and Future Prospects

Lab trials have yielded encouraging results: the transplanted beta cells remain safe and functional in their new environment. Dr. Ferreira is optimistic about using these engineered Tregs as "living drugs" and sees potential for this approach to extend beyond T1D to other autoimmune diseases and certain cancers.

The Importance of **Supporting Early-Career Researchers**

Our commitment to nurturing the next generation of scientific talent remains steadfast. Dr. Ferreira's work exemplifies the type of cutting-edge research we aim to support, bringing us closer to breakthroughs that could profoundly change the lives of those with T1D and beyond.

We are excited about the future possibilities and remain grateful for the generous support that makes this work possible. Together, we are making strides towards a future where diabetes and other autoimmune diseases can be managed more effectively and ultimately, cured.





Project Spotlights

More researchers than ever are eager to tackle the challenges of Type 1 Diabetes (T1D), reflecting the growing momentum in early-stage T1D research and the vital role DRC plays in advancing innovative ideas.

We're proud to showcase the newest projects we are supporting, each offering fresh hope for better treatments, prevention strategies, and ultimately, a cure.



Dr. Leeana Peters University of Florida

Investigating the Role of BACH2 in **Immune System Diversity and T1D Risk**

Breaking new ground in genetic immunology, Dr. Peters is studying how a specific genetic variant-BACH2 rs72928038-may reduce immune system diversity and promote harmful immune memory in individuals with T1D. By better understanding this risk locus, Peters aims to uncover how genetic factors shape autoimmune behavior, paving the way for more personalized prevention and treatment strategies.

Combined Inhibition of RANKL/RANK and DYRK1A Pathways for T1D Therapy

Reimagining what's possible in T1D care, Dr. Kondegowda is exploring a new combination therapy targeting two pathways that harm pancreatic beta cells in Type 1 Diabetes. By combining two molecules—one already in clinical trials for T1D and one for safety-Dr. Kondegowda's research aims to enhance beta cell regeneration, survival, and function. Early results suggest this dual approach could more effectively reverse T1D in pre-clinical models, with strong potential for rapid clinical translation.



Dr. Nagesha Guthalu Kondegowda

Arthur Riggs Diabetes and Metabolism Research Institute, City of Hope

aE-catenin-Gatekeeper of Endocrine **Cell Proliferation and B-Cell** Regeneration

Bringing bold ideas to life, Mark Andrade is investigating how manipulating a protein called aE-catenin could unlock the ability of pancreatic a-cells to convert into insulin-producing β-like cells. By promoting this natural regeneration process, his research aims to develop new strategies for restoring insulin production in people with T1D, offering hope for improved therapies and potential future cures.



Lindsay Bass Vanderbilt University

Direct Reprogramming of Pancreatic Ductal Cells Using AI-Designed Mini-Proteins

Fueling innovation for better treatments, Dr. Levi's project explores a novel approach to treating T1D by reprogramming pancreatic ductal cells-cells that remain intact after the immune attack-into insulin-producing cells. Using AIdesigned mini-proteins called EpiBinders, Levi aims to activate key genes that trigger this transformation. Success could lead to new regenerative therapies that restore natural insulin production and reduce the need for lifelong insulin injections.



Mark Andrade University of Washington

Identifying an Autoreactive B Cell Signature in At-Risk T1D Individuals

Pushing the boundaries of early detection, Lindsay Bass seeks to uncover a unique B cell "signature" in individuals at high risk for Type 1 Diabetes. By identifying specific immune cells involved in the early stages of the disease, she hopes to predict-and ultimately prevent-the onset of T1D before symptoms begin.



Dr. Shiri Levy University of Washington School of Medicine



2024 Financial Snapshot



DRC By the Numbers

T1D research projects funded by DRC to date

\$3.9M+

75

Total amount DRC has granted to early-career scientists

\$56M+

Subsequent funding driven by DRC seed investments, providing a 14.5x ROI

DRC-funded scientists who established or lead their own T1D research labs

Looking Ahead

Entering 2025, DRC is building upon the momentum of T1D breakthroughs in 2024 by boldly committing to increase our funding by 72%. In early 2025, we have already seen a surge in funding requests - the highest in DRC history, showing that more early-career scientists than ever trust DRC to champion bold, promising ideas in Type 1 Diabetes research.

In 2025, DRC is poised to be the leading organization in the US providing seed-funding to promising early-career scientists in the T1D research field. This leadership is crucial: with the uncertainty of federal funding and fierce competition for traditional grants, many talented researchers struggle to launch and sustain their work. DRC fills this critical gap-keeping the next generation of discoveries alive.



More researchers than ever are ready to push boundaries.

This progress is only possible because of visionary supporters like you. Your partnership ensures that groundbreaking Early-Career ideas don't stall for lack of funding-and that Researchers hope for a cure moves closer every day. Innovation With your continued support, we will: Feasability Fund more innovative early-stage Donors & research with the power to transform T1D Supporters care and prevention. Attract and support more top early-career Impact scientists when they need it most. Hope Cure Fill the national funding gap that threatens promising research.









Drive progress toward better treatmentsand a cure.

Together, we're shaping the future of T1D research.



More donors than ever are making it possible.

Dance for Diabetes

We'd also like to extend a special thank you to our event sponsors and underwriters for their vital contributions in making this event possible.

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Mark Your Calendars!





FOOD • COCKTAILS • LIVE MUSIC • DANCING • AUCTION + MORE! Cocktail Casual Attire



Thanks to the incredible generosity of our supporters, the 2024 Dance for Diabetes raised over \$450,000! These donations directly fund groundbreaking research to fuel innovation and bring us closer to a cure for Type 1 diabetes (T1D). This funding supported two new cycles of research projects, accelerating progress in understanding and curing this complex disease.

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5690 Cancha de Golf Rancho Santa Fe. CA 92091 Scan QR code for tickets

Leaders in Giving

We remain extremely grateful to these extraordinary research champions whose cumulative gifts over the past 12 years have made a tremendous impact in DRC's mission.

2024 Major Gifts

Thank you to these major contributors whose inspirational gifts of \$10,000 and above in 2024 had power to effect change. They set the pace, providing vital funding to propel new research that significantly impacts our shared vision of a world without T1D.

\$100.000+ **David & Sherry Winkler**

\$50.000+ Ivan Gayler

\$25.000+

Eric & Tori Zwisler Jose Fernandez & Deidre Buddin Gary & Jerri-Ann Jacobs

\$10.000+

Jill Helou Amy & Micah Adams Steve & Teresa Korniczky Taylor Zwisler Lucy McDonald-Stewart Lorne & Meagan Stoops Joe & Diane Goodman Kevin & Sherry Ahern Steve & Cherryl Simms

gifts in 2024 are helping us pave the way to a future without T1D.*

\$5,000+

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\$1,000+

* Every effort was made to review this list for completion and accuracy. If there are any errors or omissions, please contact us at Giving@DiabetesResearchConnection.org so that we may immediately correct them.

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Leaving a Legacy

What is Legacy Giving?

Legacy giving, also known as planned giving, allows you to make a powerful, lasting contribution to DRC's mission—often through a gift in your will, trust, or beneficiary designation.

Simple Ways to Leave a Legacy

Include DRC in your will or living trust.

Name DRC as a beneficiary of your retirement plan, life insurance policy, or investment account.

Make a gift of stock or appreciated assets.

Set up a charitable trust to support DRC and your loved ones.

Ready to create your legacy?

Contact us at **giving@diabetesresearchconnection.org** to learn more about how your gift can change the future.

Honoring Felice Levine

We remember and honor Felice Levine, a devoted DRC Board Member whose life was defined by her unwavering commitment to advancing T1D research. Diagnosed with T1D as a child, Felice brought profound personal dedication and vision to our mission. Her leadership, generosity, and tireless advocacy strengthened DRC and inspired so many.

Though we lost Felice too soon to complications of this disease, her impact lives on—not only through the lives she touched during her lifetime, but through the gift she planned for DRC. Felice's legacy gift will ensure that promising research continues to move forward in her honor, bringing us closer every day to a cure.

By including DRC in your own estate plans, you too can create a lasting legacy of hope, progress, and possibility for generations to come.

Giving to DRC—A Wise Investment

At DRC, we invest in bold ideas and bright minds. By supporting early-career scientists, we help launch the next generation of discoveries in Type 1 Diabetes. Each project is rigorously reviewed by top T1D experts and funded quickly—often within 3 to 6 months—to accelerate breakthroughs.

With rapid turnaround and full transparency, you can direct 100% of your donation to a specific project—and now give via crypto, stock gifts, or employer matching. Together, we're not just funding research— accelerating a cure and improving lives for those living with T1D.

It's time for a cure. DRC is committed to making that happen.

Give to DRC today. DiabetesResearchConnection.org

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We're proud to share that Diabetes Research Connection has earned a Four-Star Rating from <u>Charity Navigator</u>, the highest possible score from the nation's largest independent charity evaluator. In addition, for the sixth consecutive year, we've received <u>Candid's</u> Platinum Seal of Transparency (formerly GuideStar), underscoring our commitment to accountability, effectiveness, and donor trust. In 2024, DRC became a BBB Accredited Charity, meeting the <u>Better Business Bureau's</u> 20 rigorous standards for nonprofit accountability. These recognitions affirm that your support is in good hands—fueling impactful, transparent progress in Type 1 Diabetes research.

DRC Gets Top Ratings Celebrating Transparency Excellence!

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