Welcome to the FY2014 JDRF Annual Report. Inside you’ll find exclusive videos, photos and other interactive infographics that tell the story of our progress toward a world without T1D. When you come across one of the icons below, click it to explore enhanced content.
# Table of Contents

Message from Our CEO and Chairman of the Board .............................................4

Join Us ........................................................................................................................5

Artificial Pancreas: Moving into a New Frontier .................................................6-7

Encapsulation: Novel Approaches with a Unified Goal .....................................8-9

Smart Insulin: Investing in Smarter Ideas .......................................................10-11

Prevention: Teaming Up to End the Cycle .........................................................12-13

Creating a World Without T1D ..................................................................14

2014 Consolidated Financials ..........................................................................15

Thank You to Our Supporters ........................................................................16-19
Message From...
Our CEO and Chairman of the Board

Dear JDRF Community:

Our FY2014 Annual Report tells the story of an organization moving toward our vision of creating a world without type 1 diabetes (T1D). We, along with you, our volunteers, supporters and industry partners have reached a pivotal moment in T1D research. At the end of each day, and with every dollar raised, we know that, we are moving closer to our shared goal.

For the past 44 years, JDRF has been a T1D research catalyst for scientific advancements that have made a real impact on the lives of people living with T1D. Because of JDRF, we are now able to detect antibodies in at-risk individuals long before they are diagnosed. We are able to identify genetics that create predisposition to the disease.

Although these advances have been monumental, T1D doesn’t rest, and neither will we. As the only global organization with a strategic plan to end T1D, we understand the integral role we play in leading, supporting and energizing the community until together we successfully turn Type One into Type None.

There’s a gap between what we raise and the financial resources we need to create transformative therapies that will eventually cure people with T1D, so we must continue to inform more people about T1D and garner their support. As Greg LeMond, the great three-time Tour de France winner once said, “It never gets easier, you just go faster.” We are all on this journey together, and We thank you for your continued support and ask you to join us as we move forward, faster.

Best,

Derek K. Rapp
JDRF, President & Chief Executive Officer

John Brady
JDRF, Chairman of the International Board of Directors
Join Us

When it comes to developing improved treatments and a cure for T1D, JDRF knows that the progress we have made is dependent upon the tireless help of supporters like you. JDRF is pursuing a diversified, dynamic research agenda aimed at moving us toward a world where lives are restored and people are T1D-free. JDRF is the only global organization with a strategic plan to end T1D. Our plan maps out a clear path of life-changing therapies that lessen the impact of the disease and keep people healthy until we find a cure. This report focuses on four of our key research therapy areas that experienced significant advances this year.

Artificial Pancreas
Encapsulation
Smart Insulin
Prevention

Glucose Control
Complications
Restoration

Click or tap on the icons on this page to learn more about each of the JDRF research therapy areas at JDRF.org
Over the past year, we have seen inspiring, tangible advances in artificial pancreas (AP) systems. In September 2013, the U.S. Food and Drug Administration (FDA) approved Medtronic’s MiniMed 530G with Enlite system. Medtronic has received continuing support from JDRF and The Leona M. and Harry B. Helmsley Charitable Trust Initiative to advance continuous glucose monitoring and increase accuracy and reliability in the next generation of AP systems.

In May 2014, a JDRF-funded study at the University of Cambridge was published and showed that unsupervised use of an overnight treat-to-range device led to improved blood-glucose control through the night—and even through the next day. The number of nights participants experienced hypoglycemia decreased by nearly 50 percent. In addition to improved blood-glucose control, trial participants and their parents reported improvements in quality of life when using the AP treat to-range device, which were outlined in a companion study. Among the benefits noted were greater peace of mind and better sleep without having to frequently monitor their blood-glucose, and more confidence in their diabetes control. The researchers concluded that unsupervised home use of the AP treat to-range device in adolescents with T1D is both safe and effective.

Longer and more comprehensive studies could help pave the way toward bringing the first automated AP systems to market for use overnight, when variables such as eating and exercise pose less of a challenge. The use of an AP system during sleep is important, because hypoglycemia occurs overnight frequently in people with T1D. The AP systems being developed prevent hypoglycemia by utilizing a “smart” computer program that links an insulin pump to a continuous glucose monitor to dispense insulin based on real-time changes in blood-sugar levels. Eventually, we envision a fully automated, multi-hormonal, dual-chamber artificial pancreas device that more closely mimics the body’s process for controlling blood-sugar levels.
The amazing thing, when you talk to people who have taken part in AP trials, is their incredible emotional experiences. Beyond the blood sugar control, that’s hopeful for me.

Dr. Aaron Kowalski  
Chief Mission Officer & Vice President, Research, JDRF

JDRF staff and volunteers understand the importance of clinical trials in the research development pipeline. Read more about AP clinical trials on Typeonenation.org.

WATCH THIS
See how an AP system study impacted the life of one family in the United Kingdom.  
https://vimeo.com/120606255

Why this Matters:
Medtronic has developed a predictive low glucose suspend (pLGS) system called the 640G, which is expected to be available in Europe in the next year. One of our organizational goals is to continue our work with the FDA to expedite the approval of all AP devices, including making the 640G available in the U.S. soon. The exceptional advances that have occurred in the AP field would not have been possible without JDRF’s leadership and your support. We will continue to push for an AP system with accurate and reliable sensors, novel insulin delivery options and faster acting insulin.
Novel Approaches with a Unified Goal

JDRF-funded researchers in Canada were the first to show that it is possible to end an individual’s dependence on injected insulin and achieve normal blood-glucose control by transplanting pancreatic islet cells into an individual living with T1D. Despite this advancement, widespread use of islet transplantation is not possible because of two major obstacles: a lack of available islets for transplantation, and the need for transplant recipients to take immunosuppressive drugs to prevent the immune system from attacking the transplanted cells.

With encapsulation therapies, replacement islets or precursor cells have the ability to mature into islets in a protective barrier before being implanted in the body. These will sense a person’s blood-glucose levels and produce insulin and other required hormones as needed. The protective barrier would shield them from the destructive immune-system responses associated with T1D, and the implanted cells would be effective for months—possibly years—at a time before replacement would be needed.

In our efforts to reach the ultimate goal of a world without T1D, JDRF has been partnering with companies like ViaCyte to advance the development of products like ViaCyte’s VC-01™ encapsulated cell therapy product candidate. While in preclinical trials, proved capable of controlling blood-glucose levels in diabetic mice. The company uses various lab techniques to grow and coax human embryonic stem cells (hESC) into precursor islet cells. The precursor cells are placed into ViaCyte’s encapsulation device—called Encaptra®—to create an implantable
cell-replacement product. In studies, VC-01 cells that were implanted in animal models developed into fully functioning islets that secreted insulin and other blood-glucose controlling hormones. The novel device allows oxygen and other nutrients to feed the developing islets while protecting them from an immune system attack.

As a result of ViaCyte’s promising work, JDRF announced funding of up to $7 million to help ensure a rapid transition of the project into the clinical phase of development. This commitment builds on JDRF’s previous support of ViaCyte’s preclinical development program focused on collecting the necessary animal safety and efficacy data to support introduction into clinical testing.

Why this Matters:

We know that it is possible to end an individual’s dependence on injected insulin and achieve normal blood-glucose control by transplanting pancreatic islet cells into people living with T1D. Islet cell transplantation has demonstrated the life-changing impact of cell-replacement therapy. Studies have shown that islet cell transplant recipients can achieve normalized blood-glucose control without the hourly ordeal of testing, carbohydrate counting, insulin-dosage calculation and insulin infusion for up to five years. An encapsulated beta cell replacement therapy has the potential to virtually eliminate the relentless daily burden for those living with T1D.
Investing in Smarter Ideas

Smart insulin is a single dose of insulin, either a shot or a pill, which supplies the body’s needs. The process involves the bound insulin circulating in the body until blood-glucose levels start to rise; as glucose rises, the binding element releases the insulin. In short, smart insulin automatically activates or deactivates in response to glucose in the blood, or “turns on” or “turns off” when needed, allowing people to take only one shot or dose per day. JDRF knows that a team comprised of advocates, researchers, regulators and the private sector will be required to accelerate delivery of a smart insulin product that will ensure tight blood-glucose control.

In 2013, a North Carolina State University study, supported by JDRF and The Leona M. and Harry B. Helmsley Charitable Trust, developed glucose-responsive insulin (GRI) that could lead to stronger blood-glucose control. The study specifically tested a nanoparticle-based GRI that is injected into the body and releases insulin in response to blood glucose fluctuation. One injection of this nanoparticle-based insulin was effective in keeping blood-glucose under control for up to 10 days in mice.

In May, drugmaker Merck & Co., Inc. announced that its novel smart insulin drug candidate (acquired in 2010 from SmartCells, a diabetes drug development company that received early support from JDRF) reached a development milestone. New data supports advancing the smart insulin project into clinical trials that have been approved by the FDA.

JDRF is supporting multiple smart insulin researchers and projects simultaneously. Thanks to the support of our generous donors, JDRF provides financial lifelines of support and key technical guidance that enables researchers to validate this innovative technology and keep the research moving.
Why this Matters:

JDRF is the only organization in the public or private sector that allocates resources across the entire scientific spectrum, from discovery in the laboratory to delivery of new technology and treatments for people with T1D. We call this “working the pipeline.” JDRF drives progress through this pipeline by injecting funds at critical points; advocating before Congress and federal agencies to ensure access and affordability; building collaborative networks of scientists and academicians across multiple disciplines; and engaging industry to accelerate product development.

Working the Pipeline

The Merck & Co., Inc. project is the most groundbreaking smart insulin product in development, and it was made possible by early funding that JDRF provided more than a decade ago. While other research-funding institutions were skeptical, JDRF saw promise. Follow the story here.
JDRF, a biological cure for T1D is only one part of the solution. Knowing that the number of young children diagnosed with T1D is expected to double every 15–20 years, and that the disease is occurring at an earlier age than ever before, JDRF, and the NIH and other government agencies have made significant progress in the field of prevention.

The ultimate aim of the JDRF Prevention Program is to develop a childhood vaccine to immunize against the triggers that set off the autoimmune attack which causes T1D. While we work toward that goal, the program also supports research into other therapies that would stall the progression of T1D and prevent insulin dependence from occurring. We are also funding efforts to map T1D onset so that we can gain a full understanding of its causes and early mechanisms, which will enhance our ability to identify and halt the disease at its earliest stages.

For years, scientists have been studying the progression of T1D before symptoms manifest in order to explore the possibilities of even earlier intervention, and now they know more than ever before. One breakthrough in our understanding of the disease came from a decade-long study we funded, published in The Journal of the American Medical Association (JAMA), last summer. The study followed children from infancy to determine the presence of islet autoantibodies, which indicate the activation of the autoimmune attack on insulin-producing beta cells in the pancreas, ultimately leading to T1D. The study revealed that the vast majority of children who had two or more islet autoantibodies invariably progressed to develop symptomatic T1D (which requires insulin). Based on this research and other information, JDRF is leading the discussion in the diabetes field about what defines a diagnosis of T1D.
At a scientific meeting in March 2014, JDRF Chief Scientific Officer Richard Insel, M.D., reviewed evidence on the need to change the diagnostic criteria of T1D to recognize the fact that disease onset begins before symptoms appear. In acknowledging that the disease actually starts before a person becomes insulin-dependent, prevention options become more relevant. Diagnosing a person with T1D during the asymptomatic phase of the disease would have a host of implications for research, development and regulatory guidelines for clinical trials, as well as increased awareness of the disease.

Why this Matters:
JDRF is leading the community in considering how to accurately redefine the way T1D is classified or staged. Staging is a method for measuring the severity of specific, well-defined diseases. It defines discrete points in the course of individual diseases and possesses clinical significance for prognosis and choice of therapeutic modality. JDRF-funded research is looking into the earliest stages of T1D to confirm a strong link between the presence of multiple autoantibodies and a subsequent diagnosis of T1D and insulin dependence.
Creating a World Without T1D

JDRF was created—and is still led—by people who have a personal connection to T1D. Our staff and volunteers throughout the country and abroad have an unrelenting passion for and commitment to removing the impact of T1D from people’s lives until we find a cure.

JDRF

<table>
<thead>
<tr>
<th>FUNDING MORE THAN</th>
<th>ADVOCATES FOR</th>
<th>HAS FUNDED</th>
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<tbody>
<tr>
<td>50 CLINICAL STUDIES</td>
<td>$150M SPECIAL DIABETES PROGRAM FEDERAL FUNDING</td>
<td>$1.9B T1D RESEARCH</td>
</tr>
</tbody>
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6 INTERNATIONAL AFFILIATES

- Australia
- Canada
- Denmark
- Israel
- Netherlands
- United Kingdom

Click on each flag above for more information.
TOUCHOUT THE UNITED STATES
96 CHAPTERS AND BRANCHES

FY2014 CONDENSED FINANCIAL

$225M PUBLIC SUPPORT & REVENUE
- $15M International Affiliates
- $129M Special Events, Including Walk
- $67M Contributions
- $14M Investment Return & Other
- $15M Special Events, Including Walk
- $67M Contributions
- $14M Investment Return & Other
- $129M Special Events, Including Walk
- $225M Public Support & Revenue

$215M FUNCTIONAL EXPENSES
- $51M Public Education
- $120M Research
- $26M Fundraising
- $18M Management & General
- $51M Public Education
- $120M Research
- $26M Fundraising
- $18M Management & General
- $215M Functional Expenses

To view the full FY2014 Audited Financial statement prepared by KPMG LLP, please visit jdrf.org/about-jdrf/financials

Click or tap on the icon to learn more about each region.
As of March 2015
Thank You to our Supporters

JDRF is the largest global funder of T1D research. It is because of our treasured supporters that we are able to fund work that will continue to impact the lives of everyone living with this disease for generations to come. Their passion, determination, energy and generosity push us to do more. Together, we will achieve our vision of a world without T1D.

JDRF WALK

JDRF thanks all of our dedicated families, volunteers and local businesses who supported the JDRF Walk Program throughout FY2014. Your support is essential to JDRF’s fundraising strength and global growth.

We also express our deepest gratitude to our many corporate partners for their commitment and support of the JDRF Walk, both nationally and internationally. We extend a special thank you to our FY2014 National Presenting Sponsors, Medtronic and Lilly and our National Principal Partners: Advance Auto Parts, Ford, Marshalls, Novo Nordisk and Walgreens.

JDRF RIDE TO CURE DIABETES

Thank you to the thousands of riders who took part in the six JDRF Ride to Cure Diabetes. With over $6.4 million raised in FY2014, the JDRF Ride continues to be one of JDRF’s most important fundraising events that touches all who take part. Special thanks to Novo Nordisk, the Presenting Sponsor of the JDRF Ride to Cure Diabetes.

JDRF GALA

Thank you to all the guests, supporters and volunteers who make each JDRF Gala successful and inspirational. We would like to extend a special “thank you” to all of the FY2014 Honorees who led their chapters in raising more than $100,000 through the 2013 Gala Program.
Thank You to our Partners

**JDRF BETA SOCIETY**

The JDRF BETA Society members are those who have made a lasting commitment to T1D research by naming JDRF as a beneficiary in their estate plans or by making a life income gift. We thank you for your planned giving commitment to JDRF.

**JDRF CORPORATE PARTNERS**

With the support of our corporate partners, JDRF is able to increase the amount of research we fund and reach more people to raise awareness of our mission. Our corporate partners encourage their employees to volunteer their time, and engage their customers and vendors on our behalf. We thank each of our partners and their communities for their generosity and commitment in helping us turn Type One into Type None.

**THE LEONA M. AND HARRY B. HELMSLEY CHARITABLE TRUST**

The Leona M. and Harry B. Helmsley Charitable Trust is essential to our past and future success. As leading funders in T1D research, JDRF and The Leona M. and Harry B. Helmsley Charitable Trust are committed to strategically leveraging our financial and organizational resources on behalf of the millions of people who live with this disease. Since 2009, The Leona M. and Harry B. Helmsley Charitable Trust and JDRF have jointly provided nearly $76 million to support multiple significant projects that aim to accelerate the development and availability of better treatments, devices and diagnostics for T1D. Helmsley has provided more than $37 million in actual funding commitments towards these collaborative initiatives.
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*Listings as of March 2015