

JDRF 2020

Top Advances

1. Young Adult Reversed T1D + Clinical Trial of Baricitinib

If you haven't already heard, T1D was reversed in a young man. This was a precision medicine treatment that corrects the effect of a genetic mutation, and the young man has been off insulin treatment for more than 2 years.

2. Drug Delays T1D Onset by Nearly 3 Years

A follow-up on the clinical trial testing the drug teplizumab- a therapy that blocks the blood marker CD3, which activates immune cells- demonstrated that it could delay the onset of T1D for nearly three years in people almost certain to develop the disease- adding a year to the previous results. This was the first ever study in humans to show a delay in the onset of type 1.

3. Special Diabetes Program

The Special Diabetes Program (SDP) has received several patches of funding this year while Congress has been working on a longer-term renewal of the program. Recently, the JDRF Advocacy team had WONDERFUL news to share! Congress passed a 3-year, \$150 million for T1D research! This is a big, big win!

4. Screening for T1D-Related Antibodies

JDRF has launched a brand-new screening initiative for T1D, called T1Detect, designed to make early detection of T1D easier and more accessible to a broad population.

5. Insulin Activity

In December 2017, the T1D community got a jolt after a publication that tested the insulin concentration in 18 vials, said that "none of the vials met the minimum labeled concentration standard." In other words, the insulin was not at the recommended dose; in fact, the percentage of insulin was around 40% (as opposed to a minimum required dose of 95%). So JDRF, the American Diabetes Association (ADA), and The Leona M. and Harry B. Helmsley Charitable Trust issued a request for proposals (RFP) to verify the findings.

6. Regulatory Approval of Several T1D Therapies and Technologies

The second artificial pancreas system—the Tandem t:slim X2™ insulin pump with Control-IQ™ technology—ushered us into the New Year, but it was only available for people 14 years and older. In June, however, the FDA expanded the device for children ages 6 and older.

7. Predicting Which Children Will Develop T1D

What if there were a way to more precisely estimate future T1D risk? JDRF-funded scientists in The Environmental Determinants of Diabetes in the Young (TEDDY) study developed a model that can help predict which children will develop T1D during the first 10 years of life.

8. A Potential First-in-Class Adjunct Therapy

A JDRF-funded clinical trial by vTv Therapeutics provided evidence that treatment with TTP399— an oral therapy to be used in conjunction with insulin—resulted in significant improvements in HbA1c with reduction in insulin dose and, importantly, without increasing the risk of life-threatening events associated with T1D: diabetic ketoacidosis (DKA) and severe low blood sugar.

9. England to Provide Pregnant Women with CGM Technology

It's a milestone for pregnant women with T1D and JDRF: the National Health Service (NHS) England and the National Institute Health and Care Excellence (NICE) will provide CGM devices to pregnant women with T1D.

This is something that JDRF can be proud of— evidence for it came from the JDRF-funded CONCEPTT study, which proved that CGM use during pregnancy improves the health outcomes for both mothers and babies and reduces the cost for neonatal hospitalization, an otherwise frequent occurrence.

10. Europe Supports Autoantibodies

In the spring of 2020, the European Medicines Agency (EMA) presented a letter of support to the Critical Path Institute's T1D Consortium—who JDRF and like-minded organizations have partnered with—to facilitate the development and validation of autoantibodies for T1D for regulatory use. This regulatory endorsement will help provide sponsors with the confidence to use autoantibodies in clinical trials evaluating novel therapies focused on the delay and/or prevention of T1D.