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Phil Shaw

General Manager
212.308.7433
pjs @thejdca.org

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FLASH REPORT: Boston Trip

Earlier this week the JDCA visited with a number of researchers in the Boston area, where we were also fortunate to attend the annual T1D Exchange Meeting. A few highlights are presented below.

The Bionic Pancreas

Dr. Ed Damiano and his team at Boston University continue to make strong progress on the Bionic Pancreas. The Bionic Pancreas is a closed loop system that adapts to each person's body and would not require daily maintenance. Reports from people with diabetes who participated in last year's human clinical trials have been overwhelming positive. These trials involved 30 adults and 32 children (under close supervision at diabetes summer camp). Results from these patients will be published early this summer. The next step is further clinical testing in adults and children later this year.

BCG

Dr. Denise Faustman and her team at Massachusetts General Hospital are ramping up to commence phase II human clinical trials this fall. The key premise behind this project is that BCG, an established tuberculosis vaccine, may halt the autoimmune attack so that any residual beta cells can regenerate. The upcoming phase II trial, which will involve 120 people, should confirm whether or not BCG will meaningfully impact people with T1. The trial is slated to commence in September and will last for five years, with results expected in fall of 2019. One factor that has delayed the timetable is the unavailability of BCG in the U.S. As a result, Faustman's team has set up their own small-batch production site in Bethesda, Maryland.

Joslin

Following a strategic research review in the winter of 2013, Joslin is in the process of implementing structural and priority changes. The previously insular organization appears to be adopting a more collaborative approach with both academics and industry, and many new research staff have come on board. Joslin describes its research allocations as 40% type 1 cure, 40% type 2 cure, and 20% type 1/type 2 complications. In regards to type 1 cure work, Joslin's main areas of focus are beta cell imaging, T-cell reprogramming, and regenerating residual beta cells found in the livers of people with established T1. All cure work is still in relatively early stages of development (pre-human clinical trials).

T1D Exchange Annual Meeting

Roughly 100 people attended the 2014 annual T1D Exchange meeting in Boston on May 6, 2014. Participants represented some of the most influential organizations in T1 research, including research centers, industry, innovative start-ups, and major donors. The meeting provided a platform for T1D professionals and entrepreneurs to interact. The meeting covered a wide range of topics, including:

- Updates on the T1D Exchange's clinic network, and Biobank. Unique research results utilizing the exchange were shared, including one which demonstrated that many people with established T1D have some amount of residual beta cells.
- Innovations in T1 diabetes therapies, including wearable devices, faster acting insulin, and advances in thinking about technology for treatments.
- A panel discussion of the challenges of living with diabetes.
- The value of collecting patient data for the purpose of accelerating treatments. One key theme emerging from this session was the desire for open-source programming language so that products from all manufacturers can interact.
- Enhancing patient engagement in the clinical trial process.