JDRF: JDRF is the leading global organization funding type 1 diabetes (T1D) research

Vision: A world without type 1 diabetes

Mission: Accelerating life-changing breakthroughs to cure, prevent and treat T1D and its complications
JDRF History & Overview

*Type One into Type None*

- Founded in 1970
- Public Non-Profit – 501(c)(3)
- Contributed more than $2B to T1D research
  - ~ $100M Research Funding in FY2017
- Currently funding 50 human clinical trials of potential T1D therapies
- ~ 80% of JDRF expenditures directly support T1D research and research-related education
## JDRF Funding Mechanisms: Traditional

<table>
<thead>
<tr>
<th>Funding Mechanism</th>
<th>JDRF Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grants</strong></td>
<td>Industry Discovery &amp; Development Partnerships (IDDP)</td>
</tr>
<tr>
<td><strong>History</strong></td>
<td>~ 2005</td>
</tr>
<tr>
<td><strong>Vehicles</strong></td>
<td>Co-Funded T1D Research Projects</td>
</tr>
<tr>
<td><strong>SRI</strong></td>
<td>Avg. 1-2X</td>
</tr>
<tr>
<td><strong>Innovative</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Leverage</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Limited</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Payback</strong></td>
<td></td>
</tr>
<tr>
<td><strong>JDRF Standard T &amp; C</strong></td>
<td>Royalty Upon Product Commercialization</td>
</tr>
<tr>
<td><strong>Capped Royalty</strong></td>
<td></td>
</tr>
</tbody>
</table>
Industry Discovery & Development Partnership Program

To Date Since Program Inception:
- 90+ collaborative partnerships
- 60+ partner companies
- Committed >$170M JDRF research funding
- Leverage: Companies matching funding & follow-on investments >$1B
JDRF IDDP Program: Sample Partner Companies
Accelerate life-changing outcomes for people with type one diabetes (T1D) through catalytic commercial investments

Evolving the JDRF business model with an innovative new funding tool
# JDRF Funding Mechanisms: Expanded

<table>
<thead>
<tr>
<th>Funding Mechanism</th>
<th>JDRF Research</th>
<th>JDRF T1D Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>1970 → ~ 2005</td>
<td>January 2017</td>
</tr>
<tr>
<td>Vehicles</td>
<td>SRI, Innovative</td>
<td>Convertible Notes</td>
</tr>
<tr>
<td>Leverage</td>
<td>Limited</td>
<td>Avg. 5X +</td>
</tr>
<tr>
<td>Payback</td>
<td>JDRF Standard T &amp; C Capped Royalty</td>
<td>Same as Other Equity Holders &amp; Often Pre-Commercialization</td>
</tr>
</tbody>
</table>

- **JDRF Research**
  - Grants
  - IDDPM

- **JDRF T1D Fund**
  - Direct Investment
  - January 2017
  - Convertible Notes
  - Equity
  - Avg. 5X +
  - Same as Other Equity Holders & Often Pre-Commercialization

* Industry Discovery & Development Partnerships
JDRF T1D Fund: An Opportunity for T1D Impact Philanthropy

- **Directly fund promising T1D companies**
- **Leverage donations by catalyzing private capital investment in the T1D space**
- **Further leverage donations by reinvesting returns in the mission via evergreen structure**

*Create market for T1D investments and fundamentally change development ecosystem by investing and educating stakeholders*
Obvious Need to Accelerate a T1D Investment Market

Great outcomes in T1D require great research AND commercial investment.

We must catalyze T1D investment by pooling our business and philanthropic resources.

- 70+ human clinical trials in 2017
- Capability to produce islet cells
- First generation artificial pancreas

- 0.002% of healthcare VC ‘05-’15 invested in novel T1D therapies
- Private capital focused on only a few devices and a few scientists
- Research foundation model is not ideal for investment activities

Source: Biotechnology Industry Organization, February 2015
Introducing the JDRF T1D Fund

We have developed a scalable, mission-driven venture philanthropy platform exclusively focused on investment in early-stage T1D commercial opportunities.

Initial $80M target

- Independent board with separate and empowered investment committee and dedicated professional investment team
- Full access to resources, talent and network of JDRF
- ~$65 million in commitments including $32 million unrestricted financial commitment from JDRF as of January 2018
- Reinvestment of capital and gains by the Fund
- Eight portfolio companies as of December 2017
Venture Philanthropy as a Critical Catalyst

A venture philanthropy fund can focus exclusively on catalyzing T1D investment without the constraints of private funds.

Traditional Venture Capital
- Portfolio diversified across diseases
- Considers risk across the portfolio
- Focused on rate of return
- Economic motive for manager

Venture Philanthropy
- Able to take T1D concentration risk
- Focuses on best T1D opportunities
- Not focused on rate of return
- Fully mission oriented

Source: J. Drazen et al, NEJM May 4, 2017

New England Journal of Medicine: Venture philanthropy can “share the financial risk of therapeutic development, shorten the early translational pipeline, and advance research...”
Mission Success Built on Good Businesses

For our portfolio to impact T1D, every opportunity must be financially attractive to catalyze private capital investment.

Individual Investments are aligned with JDRF priorities and evaluated both on ability to accelerate patient outcomes and financial/investment criteria so that we:

1. Attract needed outside capital
2. Maximize donor dollar impact by returning capital and gains to reinvest

Portfolio evaluated on mission impact
Commitment from the Global Leader in T1D

The T1D Fund has an unmatched advantage among investment vehicles because it leverages JDRF’s leadership in T1D research and advocacy and its role as the leading voice of the T1D community.

- Four-year, $32m investment contribution
- Four-year support of Fund overhead
- Pharma and research relationships
- Scientific diligence support
- Patient and clinician network
- Advocacy, regulatory and reimbursement support

The JDRF brand and expertise are valued by companies and investors, and open many doors.
Therapeutic Focus

The Fund’s investments will focus on therapeutic areas prioritized by JDRF, but with an exclusive focus on the best commercial opportunities.

<table>
<thead>
<tr>
<th>ARTIFICIAL PANCREAS</th>
<th>Accelerate the commercialization of significantly more automated and miniaturized closed-loop systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>METABOLIC CONTROL</td>
<td>Catalyze increased focus on the development of highly innovative drugs that improve glycemic and metabolic control in T1D</td>
</tr>
<tr>
<td>ENCAPSULATION &amp; REPLACEMENT</td>
<td>Lead the development of glucose-sensitive insulin-producing cells and protect them from autoimmunity</td>
</tr>
<tr>
<td>PREVENTION</td>
<td>Drive the eradication of T1D by investing in vaccine development and other prevention strategies</td>
</tr>
<tr>
<td>RESTORATION</td>
<td>Develop therapies that impede beta cell destruction and restore natural beta cell function</td>
</tr>
</tbody>
</table>
Compelling Investments Require More Capital

The Fund has closed eight investments in its first year. We believe the opportunities in front of us are compelling but will require additional capital.

Cumulative Opportunity Funnel in First Year

- *Bona fide Opportunities*: ~200
- *Initial Diligence*: ~60
- *Deep Diligence*: ~20
- *Negotiation*: 14
- *Approved*: 8
- *Closed*: 8

$25M / year investment rate estimated

- 8 investments in initial year; anticipate 6-8 per year going forward
- Estimate $3-5M over the life cycle of each investment (including follow-on investments)
Fund Needs Scale for Maximum Impact

Anticipated deal volume and size requires at least $80M in initial investment assets over first four years, and ideally much larger scale over time.

- **T1D Fund Deal Flow**
  - Proactive strategic sourcing, including platform investments
  - New fund relationships

- **“JDRF” Deal Flow**
  - “Warehoused” pre-fund deals
  - JDRF funded opportunities
  - Unsolicited requests

- **Follow-on Investments**
  - Reserves for equity deals as needed

**Quality Opportunities**
(average 6-8/yr in steady state)

- Anticipated deal volume and preferred size results in at least ~$25M/year in investment opportunity