



Canadian Clinical
Trial Network
Accelerating Diabetes Breakthroughs

Artificial Pancreas Standards and Technical Platform Project

Background:

JDRF's Artificial Pancreas Project is working towards a breakthrough that would dramatically improve the lives of millions of people with type 1 diabetes (T1D): an automated system to control insulin therapy based on real-time changes in blood glucose levels.

Currently, the lack of an open industry standard for interoperability and communication is a barrier to the research community and marketplace. Closed, proprietary systems produced by major manufacturers make it difficult for researchers to leverage and build upon existing technology. As well, these closed systems limit the innovation that is possible for other nontraditional entrants to the market that may be able to accelerate the progress of the artificial pancreas (AP) and other interim diabetes management tools.

The goal of this project is to bring industry together, representing JDRF as an honest broker, on the development and demonstration of open standards to produce innovative diabetes technologies.

Key Project Objectives:

- To develop international standards for interoperability and device communication, to be finalized by the IEEE 11073 Personal Health Device Working Group and the Continua Health Alliance Working Group as a guideline for the following: blood glucose meter, continuous glucose monitor, and insulin pump.
- To design and develop a prototype mobile AP management app that runs on a mobile device.
- To demonstrate a next generation AP prototype that will include a standardized blood glucose meter, standardized CGM, a standardized insulin pump and a standardized AP management app, which will be realized on a mobile platform.

The diabetes technology prototypes and artificial pancreas mobile system prototype developed in this project will pave the way for further development of systems that will facilitate research in an outpatient setting and clinical trials leading toward regulatory approval. In addition, the open standards developed during this project will accelerate research and innovation, helping to bring artificial pancreas technology closer to the point where it may be available to every person with diabetes.

Project Contact:

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