

Diabetes Cell Therapy Initiative (DCTI)

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Research Areas



Tool Development

Resource

At a Glance

- Status: **Active Consortium**
- Year Launched: **2010**
- Initiating Organization: **Government of the Netherlands**
- Initiator Type: **Government**
- Location: **Europe**

Abstract

DCTI is a research initiative to improve and make beta-cell replacement therapy accessible for more patients with diabetes. The main research goals are to increase the availability of high-quality islets for transplantation, identify factors for long-term islet function and survival, and develop alternative transplantation sites with the use of biomaterials.

Mission

DCTI aims to improve and make beta-cell replacement therapy accessible for more patients with diabetes. The main research goals are to increase the availability of high-quality islets for transplantation (improving pancreas preservation and islet isolation), identify factors and compounds for long-term islet function and survival, and develop alternative transplantation sites using biomaterials to improve long-term functional outcome of beta-cell replacement therapy.

The biomaterial device with an optimal geometry and topology mimics the islet microenvironment and can be seeded with islet tissue. To create an advantageous microenvironment, synthetic compounds, matrix proteins, or supporting cells that facilitate islet engraftment and/or survival will be incorporated.

In addition, adult islet progenitor cells will be used in the device to explore its potential use in stem cell therapy. Therefore the development of a biomaterial device for beta-cell replacement therapy is focused not only on improvement of current islet transplantation but also on future beta-cell therapy using cells from alternative sources.

Structure & Governance

Financing

To accelerate the search for a cure for Type 1 diabetes, the Dutch Diabetes Research Foundation set up an expertise center for cell therapy in 2008. In this expertise center, DCTI and three other excellent projects aimed at finding a cure for Type 1 diabetes through beta-cell therapy are included. The Dutch Diabetes Research Foundation facilitated DCTI project with a €1 million grant and monitors its progress.

Links/Social Media Feed

Homepage

<http://www.dcti.net/>

Sponsors & Partners

Dutch Diabetes Research Foundation
Galapagos
Leiden University Medical Center (LUMC)
Polygenics
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(UMCG)
University of Twente
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