International Diabetes Federation Europe

Projects

Innovating Advanced Cell Therapy for Diabetes

Name: ISLET

Duration: 2020-2025

Funded by: Horizon 2020

ISLET

Background & Objectives

People living with Type 1 Diabetes (T1D) require daily injections of insulin to mimic the function of the pancreas and compensate the lack of insulin production.

Despite advances in insulin delivery systems and blood glucose monitoring, managing glycaemia as closely as is achieved through the body's normal response to lower the risk of developing complications is difficult.

One solution is to develop **insulin-producing cells to remove the need for injections**.

Islet transplantations already exist but are currently only available to those who experience severe issues with diabetes management; are constrained by the lack of donors; and require immunosuppression, leaving people vulnerable to infection.

This project aims to build and implement a new and innovative programme for the **production and marketing of human pluripotent stem cell (hPSC)-derived advanced therapy medicinal products** (ATMPs) for the treatment of people living with T1D.

Within this project, we recently initiated a **dialogue between scientists and young people living with diabetes** who are part of IDF Europe's Youth group, YOURAH, to explore the best ways of broadening understanding of scientific research among the general public. Some of the members of the group developed a video in which they shared their stories, inspirations and experiences of young people living with diabetes.

IDF Europe's role

✓ Ensure the perspectives of people living with diabetes are represented throughout the project

✓ Raise awareness of diabetes and advanced therapies.

✓ Disseminate and communicate around the project and its outcomes.

Deliverables

- A first generation cell-therapy product consisting of insulin-producing beta cells derived from human pluripotent stem cells.
- Next generation cell-therapy by engineering islet-like clusters from human pluripotent stem cells in the lab.
- A pipeline to people living with T1D consisting of a Good Manufacturing Procedure (GMP) compliant manufacturing

Expected Impact

Over the long term, new scalable sources of islets for transplantation, leading to a reduced burden and improved quality of life for people living with diabetes.

Scan the QR code for more information and a complete list of the project partners.

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