EU_H2020 RESEARCH FOR DIABETES

A SYMPOSIUM

@ TERMIS EU 2019

27TH MAY RHODES, GREECE

EU_H2020 RESEARCH FOR DIABETES AT

TERMIS EU Chapter Meeting 2019

Tissue Engineering Therapies: From Concept to Clinical Translation & Commercialisation

Type 1 diabetes is a chronic disease in which the insulin-producing islet cells of the pancreas are attacked by the immune system and destroyed. In the last decades, islet cell transplantation has emerged as a promising treatment option for restoring insulin production and effectively normalizing blood glucose levels. However, despite the tremendous potential of this cell-based therapeutic approach, major limitations, such as the scarce availability of donor insulin-producing cells and the gradual loss of islet graft function due to immune rejection, have significantly impacted on its application in the clinical routine. Advances in cell reprogramming and biomaterial technologies have provided key tools to overcome these barriers.

This symposium will focus on the most recent developments on novel biomaterial designs and encapsulation methods to enable islets or islet-like cells immunoisolation, and to improve their survival and function after transplantation.

BIOCAPAN

BIOactive implantable CApsule for PANcreatic islet immunosuppression free therapy
www.biocapan.eu

DRIVE
DIABETES-REVERSING IMPLANTS FOR ENHANCED VIABILITY AND LONG-TERM EFFICACY

DIabetes-reversing implants for enhanced viability and long-term efficacy
www.drive-project.eu

elastislet

Tailored Elastin-like Recombinamers as Advanced Systems for Cell Therapies in Diabetes Mellitus: a Synthetic Biology Approach towards a Bioeffective and Immunoisolated Biosimilar Islet/Cell Niche
www.elastislet.eu

S10 - Diabetes | Room 3 - Rodos Palace

BIOMATERIALS AND DEVICES FOR THE TREATMENT OF DIABETES MELLITUS

Chairs: J. Carlos Rodriguez-Cabello, Eimear B. Dolan

14.00 **BIOCAPAN: An innovative microcapsule-based advanced therapy medicinal product for the treatment of diabetes mellitus type I**
Frederic Bottausci - CEA - Atomic Energy and Alternative Energies Commission

14.20 **The DRIVE consortium - Living implants and delivery devices for the treatment of type 1 diabetes**
Garry Duffy - National University of Ireland

14.40 **ELR-based biomaterials**
Carmen Garcia Arevalo - Universidad de Valladolid

14.50 **Formulation of a functionalized biomaterial to support pancreatic islet viability in transplantation**
Liam McDonough - Royal College of Surgeons in Ireland

15.00 **Elastin-inspired Recombinamers for Cell/Islet Niches**
Mariana Oliveira - University of Aveiro

15.10 **Encapsulated human induced pluripotent stem cells (hiPSC) for the cell therapy of type 1 diabetes mellitus (T1D): preliminary in vitro and in vivo data**
Riccardo Calafiore - Università degli studi di Perugia

15.20 **Novel water-based, detergent-free decellularization to produce bioactive ECM-based scaffolds for pancreatic islets transplantation**
Carlos Gazia - Wake Forest University School of Medicine

TERMIS VENUE

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