

Curriculum Vitae

Helena Montuoro

PROFESSIONAL EXPERIENCE

Research Associate I – Diabetes Research Institute, University of Miami, Miller School of Medicine

Helena Montuoro is a Research Associate I at the Diabetes Research Institute (DRI), University of Miami, where she works on research focused on type 1 diabetes (T1D). She earned her M.Sc. in Biomedical Engineering from Politecnico di Milano (Biomechanics and Biomaterials) and completed her master's thesis at the DRI in Dr. Alice Tomei's lab, optimizing a soft-lithographic microfluidic device for the conformal encapsulation of pancreatic islets using PEG-based hydrogels, with the goal of developing a minimally invasive, immunoprotective strategy for islet transplantation in T1D. During this work, she also received scientific support from Dr. Diana Velluto and Dr. Chris Fraker.

She is currently part of Dr. Estefanía Quesada-Masachs' lab, contributing to studies on the immune mechanisms involved in T1D initiation and progression, with a focus on the role of T cells, macrophages, and HLA class I and II molecules, leveraging advanced microscopy and high-resolution image analysis in human pancreatic tissues and 3D islet/organoid models.