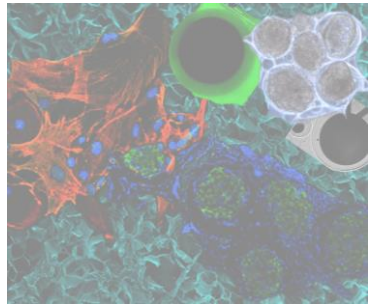
Miller School of Medicine
Diabetes Research Institute



ISLET IMMUNOENGINEERING LAB

Alice A. Tomei, Ph.D.

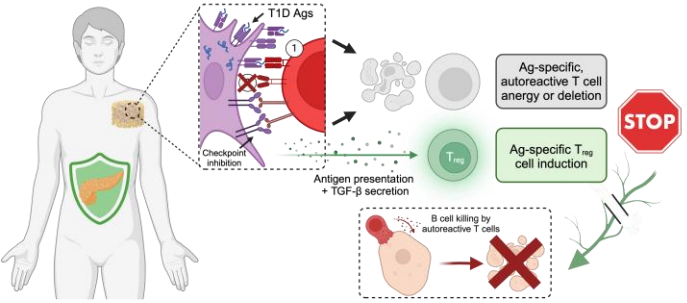
The goal of the Islet Immunoengineering Lab is to apply bioengineering and immunology sciences to develop novel immunoengineering platforms to prevent rejection after islet transplantation and to promote antigen-specific immunomodulation for the treatment of type 1 diabetes.

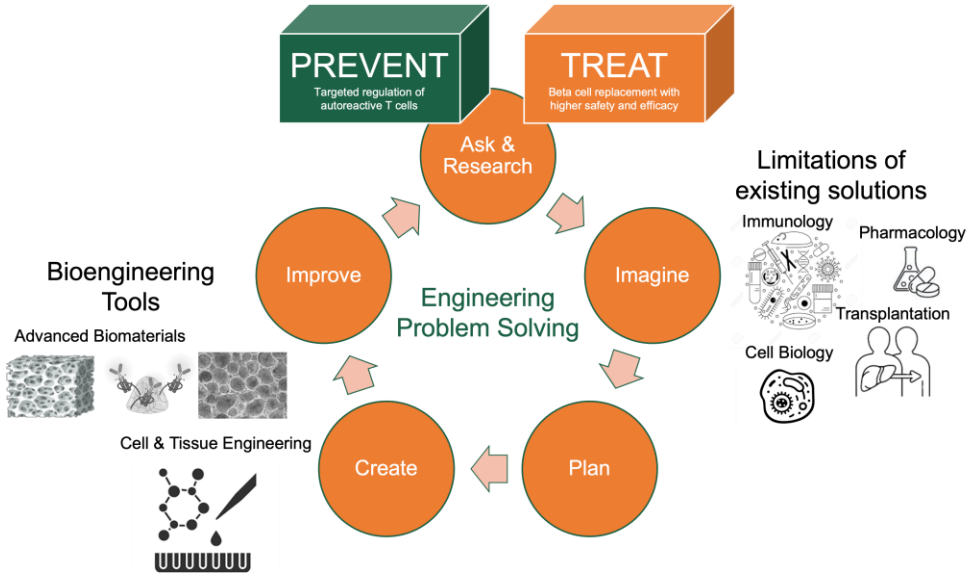
- ✓ 1.84 million people with T1D (US)
- ✓ 5 million people to be diagnosed by 2050

- ✓ 86 billion $/year in health costs and lost income

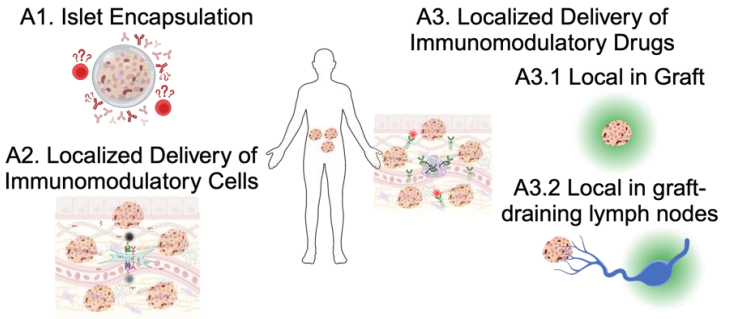
Immunoengineering Approach: to Address Unmet Clinical Needs of Type 1 Diabetes

Targeted regulation of autoreactive T cells through implantable stromal cell constructs for T1D prevention





Cell immunoisolation (Encapsulation) and/or Local Immunomodulation



MIAMI COLLEGE of ENGINEERING

DIABETES RESEARCH INSTITUTE
UNIVERSITY OF MIAMI