

**AN ENGINEER'S APPROACH TO IMPROVING
CELL THERAPY IN TYPE 1 DIABETES**



Cherie Stabler, Ph.D.

Chair and Professor of Biomedical Engineering
University of Florida

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Zarrow Hall
Room #145



ABSTRACT

Cellular transplantation has the potential to be a transformative treatment for people living with insulin-dependent diabetes. The success of this approach, however, is hindered by universal challenges in tissue engineering, such as a poor implant environment and inflammatory and immunological responses. So how does an engineer contribute to resolving these problems? In my laboratory, our research has focused on three primary strategies: the development of scaffolds to house cells in more favorable sites; the production of bioactive biomaterials to direct favorable responses; and the engineering of benchtop models that provide new insights into the immunological response to these implants. Beyond the laboratory, as the Departmental Chair of the University of Florida Department of Biomedical Engineering, I support a broader academic enterprise that seeks to provide access to world-class education while advancing translational, cutting-edge, transdisciplinary research within a supportive and collaborative community.

BIO

Dr. Cherie Stabler is the J. Crayton Pruitt Family & UF Foundation Preeminence Term Professor and Departmental Chair in the Department of Biomedical Engineering, College of Engineering at the University of Florida, and an Affiliate Member of the UF Diabetes Institute. Her research focuses on developing translational biomaterial platforms for cellular implants, with particular emphasis on cell-based therapies for Type 1 diabetes. Serving as the Chair, she supports a dynamic and engaged academic community that leads the nation in educational access and experiential learning, as well as in translational research at the interface of engineering and biomedical sciences. Dr. Stabler is the current Chair of the Americas Chapter of the Tissue Engineering and Regenerative Medicine International Society (TERMIS-AM). Dr. Stabler is an elected fellow of the Biomedical Engineering Society (BMES), the American Institute for Medical and Biological Engineering (AIMBE), and the Academy of Science, Engineering, and Medicine of Florida (ASEMFL).