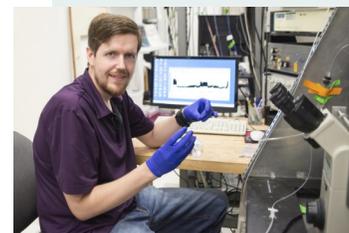
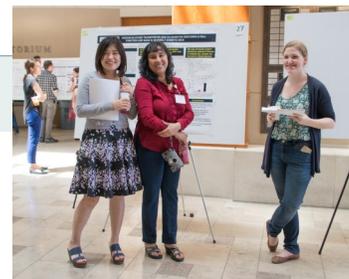


Center for the Investigation of  
Membrane Excitability Diseases  
(CIMED)



T32 DK108742

Imaging, Modeling and Engineering  
of Diabetic Tissues

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- According to the Centers for Disease Control, the number of Americans with diagnosed diabetes more than tripled (from 5.6 million to 20.9 million) between 1980 and 2011, predicting a continually increasing diabetes disease burden. There is a clear need for truly novel approaches to decrease this burden. To develop such approaches will require bringing the full breadth of modern technological, computational and biological advances to tackling diabetes mechanisms and complications.
- This requires the development of an interdisciplinary workforce with backgrounds in the physical sciences and engineering, geared to the development of innovative technologies for treatment of diabetes and related diseases.
- This program has the possibility of transforming diabetes research – and hence therapies – by harnessing burgeoning advances in (i) imaging, from molecular to tissue levels, (ii) modeling, both biological and computational, and (iii) tissue engineering, driven by researchers in the physical, computational and biomedical engineering fields, to address questions directly and broadly relevant to diabetes and its complications.

#### MENTORS AND TRAINEES

- Each trainee will be dually mentored (either equally involved or primary and secondary), one with a strength in bioengineering/physical sciences, and one with a strength in diabetes or metabolism more broadly.
- Two new pre-Doc and one new post-Doc slot are available each year, with maximum of two years support available.
- The goals of the program include : defining the fields of bioengineering and physical sciences, as well as diabetes and metabolism, as broadly as possible, involving young faculty mentors on the cutting edge of these research areas, selecting outstanding faculty who are leaders in these fields, sparking new collaborations between the life science and technology-based faculty, supporting already-formed clusters of relevant research that cross departments and disciplines, including mentors who share a commitment to pre- and post-Doctoral education and training, and a willingness to participate in program activities.
- **If interested in participating as mentor or trainee, please fill out the proposal form, or contact Dr. Nichols for more information**