



Michigan Tech
Biomedical Engineering

Graduate Seminar

The Department of Biomedical Engineering presents

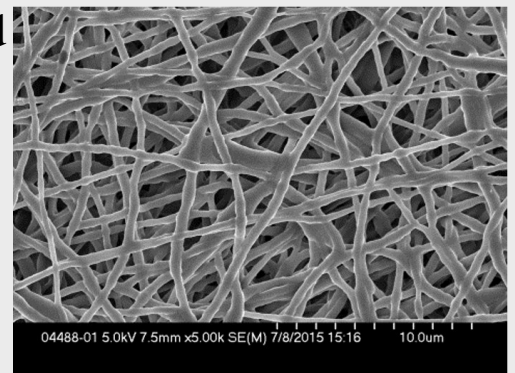


Brandon Tefft, Ph.D.

Medical College of Wisconsin
Marquette University

Endothelialization of implantable cardiovascular devices

Regenerative engineering promises to deliver next-generation tissue and organ replacements capable of remodeling, repair, and growth. Such capabilities would provide for improved safety and durability compared to existing treatment options. Emerging nanotechnologies are enabling this exciting paradigm shift in medicine by allowing for designed control over cellular activities. This seminar will cover the development of nanoparticles and nanofibers used to capture and retain endothelial cells with magnetic force. This seminar will also cover newer approaches for enhancing endothelial cell adhesion based on modulation of molecular signaling pathways. These approaches are being applied to implantable cardiovascular devices including coronary stents, stent-grafts, vascular grafts, and heart valves for the purposes of improving healing and blood-compatibility. Both in vitro and large animal implantation studies will be presented.



**Friday, November 13
at 3:00 via Zoom**

[HTTPS://MICHIGANTECH.ZOOM.US/J/82689143526](https://michigantech.zoom.us/j/82689143526)