

**Pharmaceutical Sciences Seminar Series**

Wednesday, March 20, 2024  
4:00pm  
NCRC Building 10 South Atrium  
[Zoom](#)

**“A novel multi-drug delivery platform for facile surface engineering and immune modulation”**

Presented by:



**Evan Scott, Ph.D.**

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Northwestern University

**Abstract:** Self-assembled nanobiomaterials that are engineered to achieve specific biodistributions and mechanisms of degradation hold great promise for controlled modulation of the immune system and drug delivery in general. Taking advantage of the morphological and chemical flexibility of self-assembled polymeric systems, we have taken a holistic multi-component targeting approach to achieve cell-selective intracellular delivery and enhanced treatment efficacy during nanotherapy. Interfacial phenomena are an essential and often overlooked component of immunology, and we aim to better understand and engineer the bio/nano interface between soft nanobiomaterials and cells of the immune system. This has allowed us to decrease non-specific clearance of therapeutics by innate immune cells during controlled delivery applications for improved targeting and decreased side-effects. Here, I will present some of our ongoing work towards developing novel nanobiomaterials and bio/nano interfaces, as well as recent applications of these soft nanomaterials for applications in cancer, infectious disease, and treatment of anaphylaxis.

**Biography:** Dr. Scott is the Kay Davis Professor of Biomedical Engineering at Northwestern University. He has a BS and PhD in Biomedical Engineering respectively from Brown university and Washington University in St. Louis and completed his postdoctoral work at the EPFL in Switzerland. He received the NIH Director’s New Innovator, the National Science Foundation CAREER, and the Biomedical Engineering Society Mid-Career Awards, and is a fellow of the American Institute for Medical and Biological Engineering.