

## Pharmaceutical Sciences Seminar

Wednesday, March 8, 2023

4:00pm

Hybrid

NCRC Building 10 Research Auditorium or [Zoom](#)

**“Engineered biomaterials for lymph node drug delivery  
and disease modeling enable next-generation approaches in cancer immunotherapy”**

Presented by:



### **Susan N. Thomas**

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and Parker H. Petit Institute of Bioengineering and Bioscience  
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**ABSTRACT** The advent of the cancer immunotherapy era has created wide-reaching new opportunities for drug delivery and biomaterial technologies to impact cancer therapy. Major barriers to the safer and more effective treatment of cancer using immunotherapy include achieving sufficient drug doses in target tissues at appropriate time scales as well as enabling drug synergies by co-delivery of combination therapies. More effective modeling of immunotherapy effects in disease-relevant preclinical models also represents a critical hurdle to the effective translation of newly developed therapies, that could likewise enable the development of personalized immunotherapy approaches to improve patient care. This talk will highlight recent advances from the Thomas lab in addressing current major challenges to achieving more effective cancer immunotherapy by leveraging engineered biomaterials. These include enabling technologies for controlled delivery of therapeutics to lymph nodes, tissues where anti-tumor immune responses are initiated and regulated, and modeling the tumor immune microenvironment for immunotherapeutic drug screening.

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