

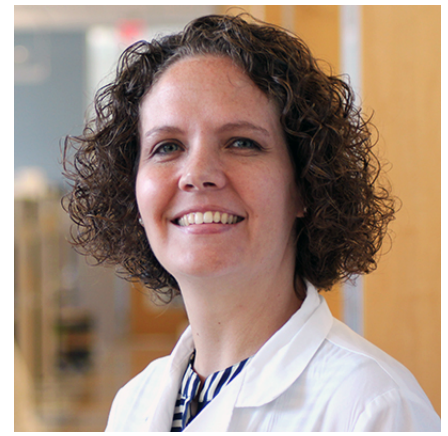
UNIVERSITY OF MIAMI

THE DR. JOHN T. MACDONALD FOUNDATION  
BIOMEDICAL NANOTECHNOLOGY INSTITUTE  
BioNIUM



# BioNIUM

## Lecture Series



**DR. KRISTY AINSLIE PRESENTS:**

**Acetalated Dextran: A spoonful of sugar helps the  
medicine (and vaccines) go down!**

**Wednesday, March 10, 2021 @ 3:30 PM**

**[CLICK HERE TO JOIN ZOOM MEETING](#)**

MEETING ID: 997 2133 7764  
PASSCODE: 685471

## ABOUT THE LECTURE

Acetalated dextran (Ac-DEX) is an acid-labile polymer originally developed for vaccine formulations, with the idea that vaccine elements could be encapsulated in the biopolymer to be phagocytosed by antigen presenting cells, resulting in pH shift in the phagosome that results in triggered intracellular release. Since its original development, Ac-DEX has also illustrated highly tunable release kinetics based on the cyclic and acyclic acetal coverage of the pendent dextran hydroxyl groups. This finely tunable degradation rate as well as the acid sensitivity has illustrated that microparticulate formulations can be used to optimize universal flu vaccine efficacy. Additionally, these material properties can be used to formulate nanofibrous scaffolds that optimally deliver chemotherapeutics in glioblastoma resection cavities.

## ABOUT THE SPEAKER

Dr. Ainslie is Professor and Vice Chair of the Division of Pharmacoengineering and Molecular Pharmaceutics at UNC Eshelman School of Pharmacy, with affiliations in the UNC/NC State Joint Department of Biomedical Engineering and UNC Department of Microbiology and Immunology. Her lab focuses on modulation of immune responses to prevent and treat cancer, infectious and autoimmune diseases. After completing a PhD in chemical engineering and a post doc in biomedical engineering, she started at Ohio State University in 2009 and moved to UNC in 2014. She has over 60 peer reviewed publications and has received nearly \$20M in federal funding as PI to support her work. Her research has helped to shine a light on the role of degradation, and co-delivery of antigen/adjuvant in vaccine microparticles in the context of infectious disease prevention. <https://ainslielab.web.unc.edu/>