

Center for Bioengineering Innovation

— 2016 Lecture Series —

Engineering New Strategies to Treat Disease in the Central Nervous System

Dr. Rachael Sirianni

**Assistant Professor of Neurobiology
Barrow Brain Tumor Research Center
Barrow Neurological Institute**

The field of drug delivery has been filled with promise of development of a universal nanocarrier that is capable of delivering any drug specifically to a single tissue site with minimal off-target effects.

However, a true “magic bullet” drug delivery system has yet to be translated to human use. What would it take to design nanoparticles for targeted drug delivery that could reach the clinic? In this talk, Dr. Sirianni will discuss development of a modular polymeric platform for improving drug delivery and function in the brain and spinal cord.

This work will focus on the importance of tracking polymer fate within the body, translational drug discovery and development, and early application in preclinical models of human disease, including neuro-oncology, neurodegenerative disorders, and human cognition.

Friday, December 2, 2016

1-2 p.m.

Biology (building 21), room 256

**For more
information, visit
nau.edu/cbi/events**



Rachael Sirianni, PhD, earned her undergraduate degree in bioengineering at Arizona State University (ASU) in 2003 and her doctorate in biomedical engineering at Yale University in 2008. She completed a postdoctoral fellowship in diagnostic radiology at the Yale School of Medicine in 2011, at which point she joined the Barrow Brain Tumor Research Center as principal investigator in the Laboratory for Nanomedicine.

Dr. Sirianni has an interdisciplinary background, having published journal articles in the fields of polymeric drug delivery, neurobiology, imaging, and neuro-oncology. She was the recipient of several competitive awards, including a predoctoral NIH training grant (2006-2008), a postdoctoral NIH training grant (2008-2011), multiple travel awards to national and international conferences, and a young investigator award from the Biomedical Engineering Society.

Dr. Sirianni holds adjunct positions in the biomedical engineering and chemical engineering departments at ASU. Her research program at Barrow is driven by the translational goal of identifying more effective drug therapies for the treatment of central nervous system disorders. This work focuses on central nervous system targeted drug delivery and tissue engineering to model the tumor microenvironment.