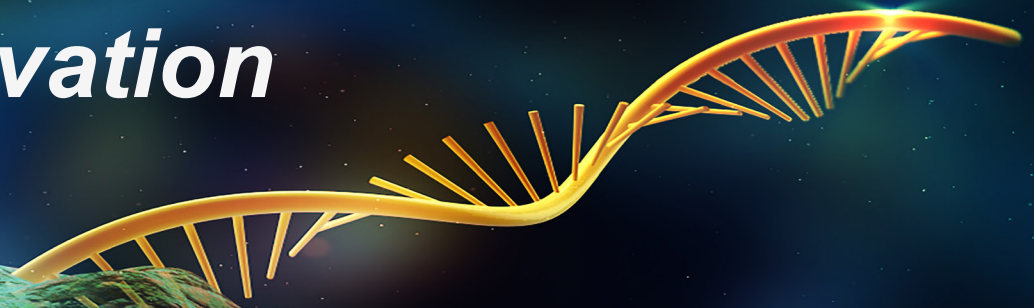


RNA Innovation Seminars



Monday, February 1, 2021 4:00 PM
[Zoom Registration](#)



Regulating the axonal proteome through mRNA transport and translation

Jeff Twiss, MD, PhD

SmartState Chair in Childhood Neurotherapeutics
Professor of Biological Sciences
University of South Carolina

Abstract

Neurons are extremely polarized cells with axonal and dendritic processes extending 100 to 1000 fold longer or more than the cell body diameter. Our lab has been interested in how axons grow to such great distances and how they respond to injury. mRNAs are transported into axons, with their localized translation providing the axon with autonomy to respond to different stimuli by modifying their local proteome. Transport, translation, and stability of axonal mRNAs is driven by interactions with RNA binding proteins and different signaling cascades. I will focus on recent work that gives insight into how specificity of these mechanisms is driven for different cohorts of axonal mRNAs.