

# GDCB SEMINAR

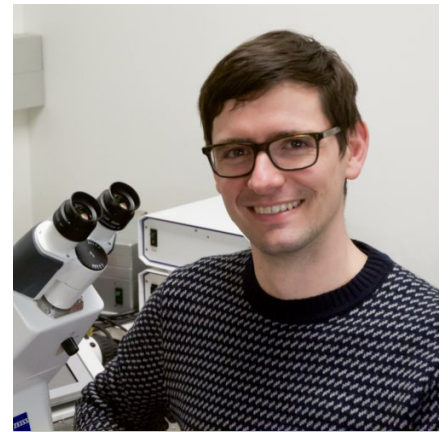
Tuesday, August 23, 2022 — 1:10 p.m. \*

1414 Molecular Biology Building

## 'The complex world of membrane trafficking that maintains neuronal polarity'

**Abstract:** Neurons are polarized cells that typically have one axon and multiple dendrites. To fulfill their different functions in electrochemical signaling, axons and dendrites maintain different complements of membrane proteins. Neurons achieve this polarized distribution of axonal and dendritic membrane proteins by vesicle trafficking and disruption of trafficking is associated with many neuronal diseases. Due to the size and geometric complexity of neurons, our understanding of neuronal trafficking mechanisms remains fragmentary. The Bentley laboratory uses cultured hippocampal neurons and live-cell microscopy to understand the trafficking mechanisms that maintain neuronal polarity. In this seminar, I will highlight examples of the novel molecular tools we developed and share recent progress in understanding neuronal membrane trafficking.

**Host:** Mohan Gupta, associate professor in the Department of Genetics, Development and Cell Biology



**Marvin Bentley**

Rensselaer Polytechnic Institute

Assistant Professor,  
Department of Biological Sciences

*\* Please note new time for GDCB Seminars.*

IOWA STATE UNIVERSITY

Department of Genetics, Development and Cell Biology