

# Bonn Lecture Series in Neuroscience



## Mechanisms Underlying Quantal Synaptic Vesicle Recycling

***Prof. Dr. Ege Kavalali***

The University of Texas Southwestern, Dallas

Monday, April 30, 2018, 4.00 pm  
Clinic for Epileptology, Conference room,  
Ground Floor

### Research Interests

Our research interests are focused on physiological properties of central presynaptic terminals. Dr. Ege T. Kavalali's laboratory uses electrical and optical recording techniques to investigate the mechanisms that govern synaptic vesicle recycling. He also studies the role of neuronal activity in regulation of spatial organization and maturation of individual synaptic terminals.

### Biosketch

As an undergraduate Dr. Kavalali studied electrical engineering at Bogazici University in Istanbul, Turkey. In 1995, he completed his Ph.D. in Rutgers University where he worked with Dr. Mark Plummer.

He joined the Department of Neuroscience in September 1999, following completion of his postdoctoral studies with Dr. Richard W. Tsien in Stanford University at the Department of Molecular and Cellular Physiology.

## Selected Publications

Optical detection of three modes of endocytosis at hippocampal synapses. Chanaday NL, **Kavalali ET**. *Elife*. 2018

Selective molecular impairment of spontaneous neurotransmission modulates synaptic efficacy. Crawford DC, Ramirez DM, Trauterman B, Monteggia LM, **Kavalali ET**. *Nat Commun*. 2017

Synaptotagmin-1- and Synaptotagmin-7-Dependent Fusion Mechanisms Target Synaptic Vesicles to Kinetically Distinct Endocytic Pathways. Li YC, Chanaday NL, Xu W, **Kavalali ET**. *Neuron*. 2017

Single synapse evaluation of the postsynaptic NMDA receptors targeted by evoked and spontaneous neurotransmission. Reese AL, **Kavalali ET**. *Elife*. 2016

Loss of Doc2-Dependent Spontaneous Neurotransmission Augments Glutamatergic Synaptic Strength. Ramirez DMO, Crawford DC, Chanaday NL, Trauterman B, Monteggia LM, **Kavalali ET**. *J Neurosci*. 2017