



## PROGRESS IN NEUROSCIENCE PINS

Seminar Series of the  
Brain & Mind Research Institute  
Weill Cornell Medical College (WCRC)  
&

The Graduate Program in Neuroscience of  
WCRC and Sloan Kettering Institute

Thursday, 1/25/18, 4 PM, coffee at 3:45 PM

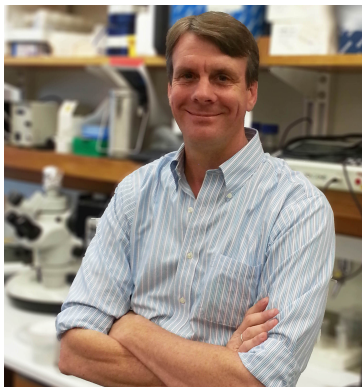
**Weill Auditorium**



### “Accelerating the maturation of human stem cell derived neurons by transient activation of mTOR signaling”

Stewart Anderson, MD

Professor of Psychiatry, Associate Director, Lifespan Brain Institute  
Children’s Hospital of Philadelphia and UPenn School of Medicine



The main focus of his laboratory concerns the molecular and cellular mechanisms that govern the development of the mammalian forebrain. Using mouse genetics, forebrain slice and dissociated culture techniques, as well as mouse and human embryonic stem cells in cell culture and transplantation experiments, they study the development of the cerebral cortex. They are particularly interested in understanding the molecular underpinnings behind the fate determination and axon targeting of subclasses of GABAergic interneurons implicated in the neuropathology of schizophrenia. New directions in the Anderson lab include the study of mitochondria in interneuron migration, maturation, and function. In addition, they are generating mouse and human stem cell-derived interneurons for use in cell-based therapies for seizures, psychotic disorders, and as tools for the study of gene-gene and gene-environment interactions in neuropsychiatric disease.

#### Recent Relevant Publications:

1. Tischfield DJ, Kim J, Anderson SA (2017). Atypical PKC and Notch inhibition differentially modulate cortical interneuron subclass fate from embryonic stem cells. **Stem Cell Reports**. May 9;8(5):1135-1143. PMC ID pending. NIHMS ID: NIHMS871395
2. Donegan, J, Tyson J, Branch S, Beckstead S, Anderson S, Lodge D. (2016) Stem cell derived interneuron transplants as a treatment for schizophrenia: preclinical validation in a rodent model. **Molecular Psychiatry**. Oct;22(10):1492-1501 PMC5290293
3. Petros TJ, Bultje RS, Ross ME, Fishell G, Anderson SA (2015). Apical vs. basal neurogenesis directs cortical interneuron subclass fate. **Cell Reports**. 13(6):1090-5.



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