

Edward Holson

“HDACs in memory and cognition: Development of isoform selective inhibitors with improved CNS drug properties”

Abstract: Deficits in cognition and memory are associated with many disease states including Alzheimer’s disease, Rubinstein Taybi Syndrome and Schizophrenia. Altered acetylation states and the effects on specific gene expression and protein regulation underlie components of CNS disorders. Hypoacetylation states are found in neurological contexts and HDACs offer an attractive target to remedy these altered acetylation states. We describe our efforts to optimize HDAC inhibitors with greater isoform selectivity, improved CNS drug properties and efficacy in mouse models of learning and memory.

Dr. **Edward Holson** is the Director of Medicinal Chemistry at the Stanley Center for Psychiatric Research, The Broad Institute of MIT and Harvard. Ed completed his PhD in organic chemistry at the University of Michigan at Ann Arbor in the laboratory of Dr. William Roush and worked at Merck & Co, and Infinity Pharmaceuticals prior to joining the Broad Institute. In February 2008, Ed joined the medicinal chemistry group at the Stanley Center to design and implement strategies towards developing novel therapies in CNS related disorders including schizophrenia, bipolar and cognitive functional impairment. These strategies include key collaborations within the academic communities of MIT, Harvard and Massachusetts General Hospital.
