**Malcolm A. Leissring, Ph.D.**

**Bio**

Dr. Malcolm Leissring began his research career at the UC Berkeley in 1988 investigating fundamental mechanisms of learning and memory formation. After receiving a Masters degree from San Francisco State University, Dr. Leissring sought to apply this knowledge to Alzheimer's disease, electing to pursue his graduate studies in the laboratory of Dr. Frank LaFerla at UC Irvine, who has developed one of the most successful and widely studied Alzheimer's mouse models in use today. Dr. Leissring conducted his post-doctoral research in the laboratory of Dr. Dennis Selkoe at Harvard Medical School, a world-renowned Alzheimer's disease researcher. In Dr. Selkoe's laboratory, he carried out a seminal study showing that Alzheimer's disease could be completely prevented in mice by proteases that break down the amyloid ß-protein (Aß), the primary constituent of the plaques that litter the brains of Alzheimer's disease patients. Dr. Leissring has continued pioneering work on Aß-degrading proteases, focusing in particular on the discovery and characterization of different proteases as well as the development of novel therapies targeting Aß catabolism. To these ends, the Leissring laboratory uses a wide variety of techniques, including high-throughput compound screening, rational drug design, and cell and animal modeling. Recently, Dr. Leissring developed the first potent inhibitors of insulin-degrading enzyme (IDE), a structurally unusual zinc-metalloprotease that is strongly implicated in the pathogenesis of both Alzheimer's disease and diabetes. Dr. Leissring current research is focused on using these novel IDE inhibitors both as probes to investigate the mechanistic links between Alzheimer's and diabetes and as potential pharmacophores for the development of therapies aimed at enhancing insulin signaling.