

As a practicing clinical neuroanesthesiologist and basic scientist, I have conducted experiments in fruit flies, zebrafish, mice, and humans, gaining mechanistic insights across the phylogenetic tree. Clinically, I care for neurosurgical patients at the Hospital of the University of Pennsylvania. My laboratory seeks to understand the molecular and neuronal mechanisms culminating in entry into as well as exit from the anesthetized state. I was amongst the first to speculate that the forward process through which patients enter states of general anesthesia is not identical to the reverse process through which they exit. Such anesthetic hysteresis carries implications for all state transitions including abrupt and covert—awareness under anesthesia, and sluggish or delayed emergence. For more than a decade, I have attempted to identify endogenous neural systems that regulate sleep and wakefulness and upon which general anesthetics may exert their hypnotic effects.

I have been an active member of SNACC for the past 7 years. I have presented multiple times at SNACC symposia, served on the SNACC research committee since 2015, and has helped with the awarding of the William L. Young Awards. In addition, I serve on the ASA Neurotrack committee, planning both SNACC and ASA meeting content. I have been continuously funded by the NIH for more than a decade. I am actively involved in teaching and mentoring. I am currently the David E. Longnecker Associate professor of Anesthesiology and Critical Care and the Director for Research Education at Penn.