This week’s seminar will be virtual; there will be no in-person presentation.

Meeting link: https://purdue-edu.zoom.us/j/9586081075

“Intranasal carnosine mitigates alpha-synuclein pathology and motor dysfunction in the Thy1-aSyn mouse model of Parkinson’s disease.”

Josephine Brown, M.S.
PhD Student
Presenting MS thesis research from the University of Cincinnati
Jason Cannon Lab

Tuesday, December 1, 2020
4:30-5:30 PM Eastern Time (US and Canada)

Research: Parkinson’s disease (PD) is a debilitating neurodegenerative motor disorder. The goal of this study was to evaluate intranasal (IN) carnosine’s efficacy in slowing progression of motor deficits and alpha-synuclein (aSyn) accumulation in Thy1-aSyn mice, a model of PD. After baseline behavioral testing, IN carnosine was administered (0.0, 2.0, or 4.0 mg/d) for 8 wk. Mice were then reassessed for motor and olfactory function. Neuronal expression of aSyn and tyrosine hydroxylase (TH) were assessed in the olfactory bulb (OB) and in the substantia nigra pars compacta (SNpc) using design-based stereology. Carnosine dose-dependently improved motor behavior. Thy1-aSyn mice treated with IN carnosine exhibited fewer aSyn(+) somata in the SNpc vs. vehicle-treated mice. Carnosine treatment did not affect the number of aSyn(+) somata in the OB, nor the number of TH(+) cell bodies in the SNpc. In summary, IN carnosine decreased aSyn accumulation in the SNpc, which may underlie IN carnosine’s mitigation of motor deficits in Thy1-aSyn mice.