



West Virginia University®

C. Eugene Bennett Department of Chemistry

Unraveling the Neurochemical Mechanisms of Chemobrain

Prof. Michael Johnson

Department of Chemistry

University of Kansas



Chemotherapy-induced cognitive impairment ('chemobrain') is a syndrome in which deficits in executive function occur as a result of administration of cancer chemotherapy agents. In this seminar, findings obtained in two model organisms, rats and zebrafish, will be discussed. Rats treated with chemotherapeutic agents commonly used in humans have revealed deficits in fundamental components of executive function, including inhibition, working memory, and attentional shifting. Importantly, these deficits were also accompanied by specific functional neurochemical abnormalities, measured with fast-scan cyclic voltammetry (FSCV). Also described will be work in which we have developed methodology to measure sub-second neurotransmitter release events in intact zebrafish whole brain and have applied these techniques to measure the impact of chemotherapy exposure on neurotransmitter release and uptake.

Date: Wed, Sept 6, 2017

Time: 4:30-5:30 pm

Location: 208 Clark Hall

Students, meet the speaker over coffee and cookies in the Bennett Conference room at 3:30 pm