

Oral Defense Announcement

University of Missouri – St. Louis Graduate School

An oral examination in defense of the co-authored dissertation for the degree
Doctor of Philosophy in Psychology with an emphasis in Behavioral Neuroscience

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M.A. in Psychology, May, 2013, University of Missouri-St. Louis
B.A. in Psychology, December, 2010, University of Missouri-St. Louis

Neuroimaging and Cognitive Outcomes in Adults with Human Immunodeficiency Virus and Early Life Stress

Date: June 8, 2017

Time: 1:00 p.m. to 3:00 p.m.

Place: Missouri Institute of Mental Health Rm. 199L

Abstract

Brain abnormalities persist in individuals with human immunodeficiency virus (HIV) despite the use of highly active antiretroviral therapy (HAART). To date, limited work has focused on the association between early life stress (ELS) and brain integrity in individuals with HIV, although ELS is highly prevalent in this population. The present study was conducted to determine whether ELS corresponds to the expression of persistent HIV-related neuroimaging abnormalities and cognitive dysfunction. A total of 130 HIV+ individuals on HAART and 76 HIV- individuals underwent 3T structural magnetic resonance imaging, diffusion tensor imaging, and neuropsychological assessment. Individuals were free of major psychiatric illness and neurological confounds. Participants were stratified into high or low ELS groups based on self-reported exposure to early life adversity using the Early Life Stress Questionnaire (ELSQ). No significant interactions were observed between HIV serostatus and ELS on white matter microstructural integrity, brain volumes, or cognition. However, HIV+ individuals exhibited significantly greater whole-brain white matter microstructural abnormalities, smaller brain volumes, and worse cognition compared to the HIV- group. Collapsed across HIV serostatus, individuals with high ELS demonstrated more severe whole-brain white matter microstructural abnormalities compared to individuals with low ELS. Results of present study suggest that high ELS is not a primary contributor to the neuropathogenic model of HIV in HAART-treated individuals. Evidence of persistent brain abnormalities among treated HIV+ individuals is consistent with results from other studies, further emphasizing the need to monitor cognitive health in patients after sustained HIV treatment.

Defense of Dissertation Committee

Robert Paul, Ph.D. - Chairperson

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Carissa Philippi, Ph.D.