

Neuroscience Seminar Series

Friday, September 8th, 2017 at 11:30

Amphi Giroud

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CNS innate immune responses to flaviviruses impair learning and memory

Memory impairment following neuroinvasive infection with West Nile virus (WNV) is associated with inflammatory-mediated loss of hippocampal synapses with lack of recovery. WNV-recovered mice display impaired spatial learning and persistence of phagocytic microglia without loss of hippocampal neurons or volume. Hippocampi of mice with poor spatial learning show increased expression of genes that drive synaptic remodeling by microglia, including the classical complement pathway and those that would limit adult neurogenesis, including interleukin (IL)-1, and increased markers of proinflammatory astrocytes. Adult neurogenesis and synaptogenesis are fundamental features of hippocampal restoration after injury, suggesting viruses might also impact these processes. This talk will provide an overview of flavivirus effects on neural cells with a focus on mechanisms of WNV-mediated impact on adult neurogenesis and synaptic repair.

Those interested in meeting with the speaker please contact

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