It is unclear whether or not changes in the peripheral immune cells are a causal mechanism or consequence of altered neurotransmission in neurodegenerative disorders such as Parkinson’s disease (PD). For example, does idiopathic PD start in the periphery, in the brain, or both occur in parallel? Discovery of a link, or lack thereof, between these possibilities would be the first step for the identification of disease mechanism(s). Another less explored research area is brain-gut microbiota axis in stroke, TBI, PD and addiction. The goal of this course is to discuss key recent and historical findings and the implications for future advances in these research areas. This journal club will provide Ph.D. and masters students with the opportunity to further develop their skills in the reading, interpretation, and communication of current scientific research in the exciting area of CNS-periphery bidirectional neuroimmune communication.