

Abstract

Parkinson's Disease is a neurodegenerative disorder that is affected by dopaminergic and noradrenergic neuronal loss primarily found in the substantia nigra and is more prevalent in males. TH can be used to identify prominent noradrenergic regions in the brain in relation to Parkinson's. Although much is known about the substantia nigra's role in Parkinson's pathology, the role of the A2 region in the pons and the role of the NE system is not yet well understood and its discrepancies in males and females. Our experimental approach uses the Immunohistochemical (IHC) method to image the brain and observe neurons throughout the fore and hindbrain in order to uncover discrepancies between our male and female mice. This study found that the difference in expression of TH in male and female mice was not statistically significant. This model will establish understanding into why Parkinson's disease is more prevalent in males compared to females.