



# JAK/STAT pathway inhibitors to treat neuroinflammation: a novel treatment for Parkinson Disease patients

Rehan Shah<sup>1</sup>  
Judy Genshaft Honors College

1. To test the proposed hypothesis, a Parkinson's disease model will be induced in mice using 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) according to the protocol outlined by Jackson-Lewis et al. (2007). Mice will be divided into three groups. The first group will receive Ruxolitinib orally at a dose of 5 mg/kg, the second group will receive Ruxolitinib at 10 mg/kg, and the third group will serve as the vehicle control, receiving dimethylformamide (DMF). Oral gavage will be used to administer these treatments daily for two weeks.
2. Following this treatment period, Parkinson's disease symptoms will be evaluated in the MPTP-treated mice, with particular focus on akinesia,