

Section III: Results

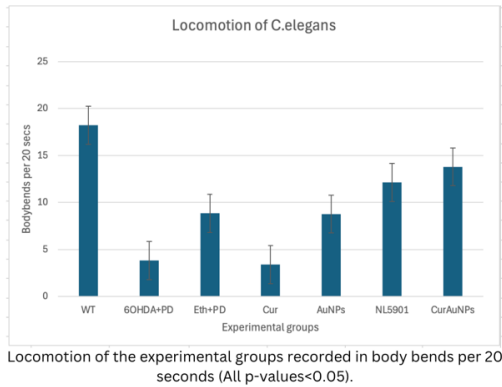


Figure 1 highlights the locomotion behavior of the control groups and the experimental groups. The Wildtype *C. elegans* N2 strain is the negative control as it exhibits the standard or 'normal' locomotion behaviors. As seen in the graph, the wildtype moves at a rate of 18 body bends per 20 seconds. The

locomotion of the 6-OHDA-induced PD groups is significantly reduced – moving at a rate of 4 body bends per 20 seconds. ($p < 0.05$) The Ethanol-PD group is the respective vehicle control for the 6-OHDA worms. The vehicle control showed to move at a rate of 9 bends per 20 seconds. For the NL5901 worms, their locomotion is higher than the 6-OHDA, showing the drastic difference that the induced neurotoxin causes. For the experimental groups, the locomotion of the worms exposed to curcumin did not change significantly as seen in Figure 1. However, the AuNPs and the CurAuNPs groups' locomotion did increase and improve, especially the CurAuNPs. The CurAuNPs treatment group is the closest to the wildtype control and shows the most improvement from the 6-OHDA induced PD worms.