

Supplementary Figure 1. Hierarchical clustering of organophosphate pesticides, pyrethroid pesticides, and cannabinoids based on tetramers in relation to Parkinson's disease in the Comparative Toxicogenomics Database. We created a heatmap in RStudios (gplots version 3.1.3, RStudios version 2022.12.0+353, R version 4.2.2) to assess the data availability between chemicals and genes. The Chemical-Gene-Phenotype-Disease (CGPD) tetramer counts for every chemical-to-gene connection were subjected to two-directional hierarchical clustering with Euclidean distance for measure and Ward's method for cluster analysis (Ward, 1963. *J Am Stat Assoc*, 1963;58(301), 236–244). Darker blue colors indicate higher tetramer counts for the chemical-gene relationship.

