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The isolation and annotation of the B1 phage PhatLouie

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In the fall semester at Detroit Mercy, we discovered a novel bacteriophage from “the theater tree” on Detroit Mercy’s campus. The phage was isolated via enrichment culture and plating and revealed lytic plaques. The plaques were purified and amplified to isolate DNA for sequencing. Whole-genome sequencing analysis revealed PhatLouie to be a B1 phage. Currently, we are annotating all predicted genes to determine validity of gene model and potential function. We have identified several genes with known functions, including Portal Protein, Polymerases, Tape Measures, Minor and Major Tail Proteins, and an Endonuclease. The transmembrane protein in PhatLouie has two transmembrane domains. Surprisingly to some in our group, not all genes have a currently known function. We hope that in the future we can continue to identify functions for all genes in PhatLouie so that our phage may contribute to our overall understanding of phage biology.