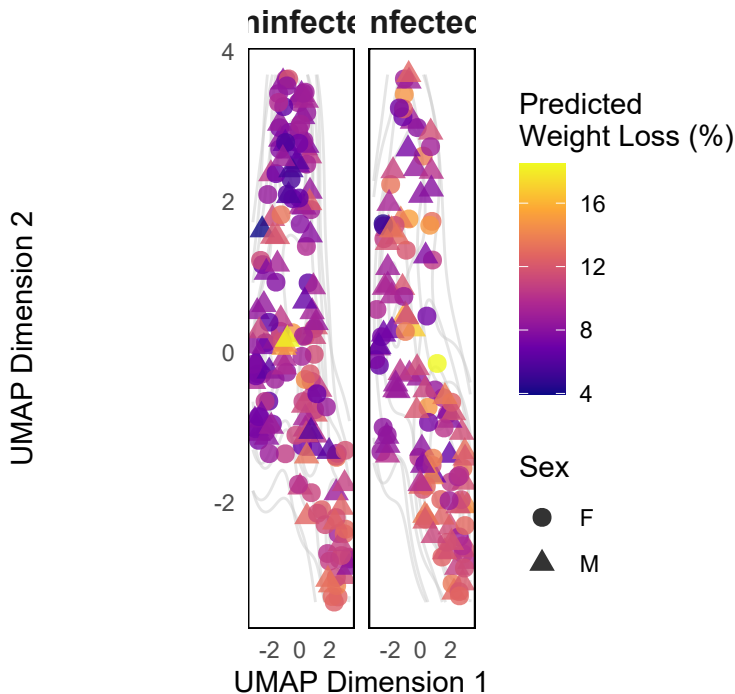
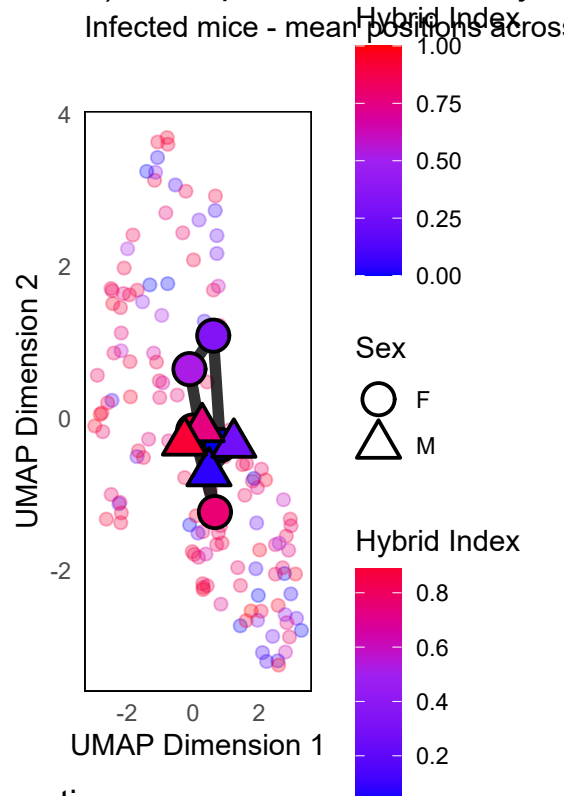


a) Immune State Space (UMAP)



b) Sex-Specific Immune Trajectory



e) Pathway-Specific Sex × HI Interactions

