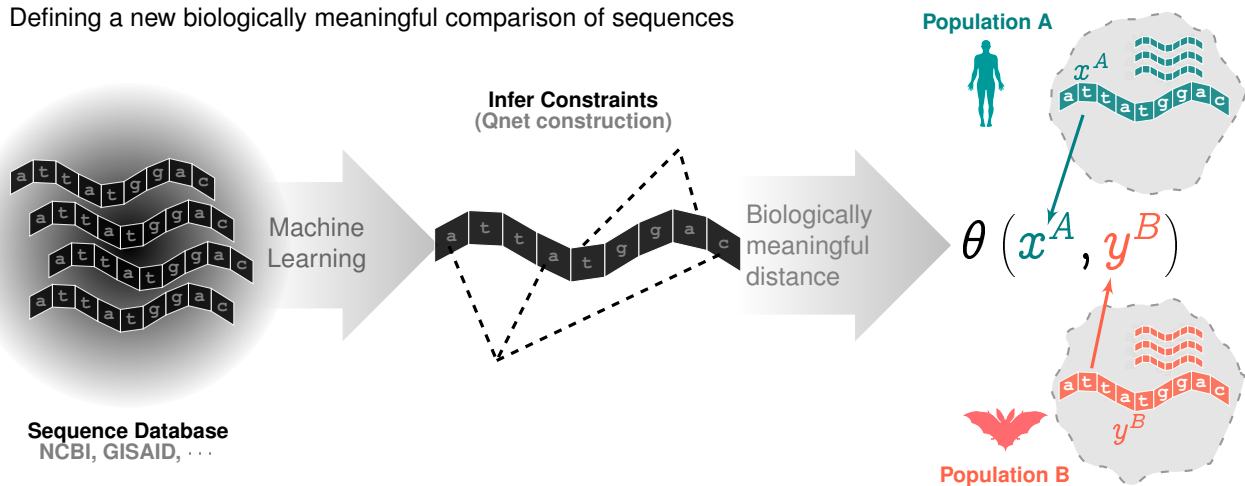
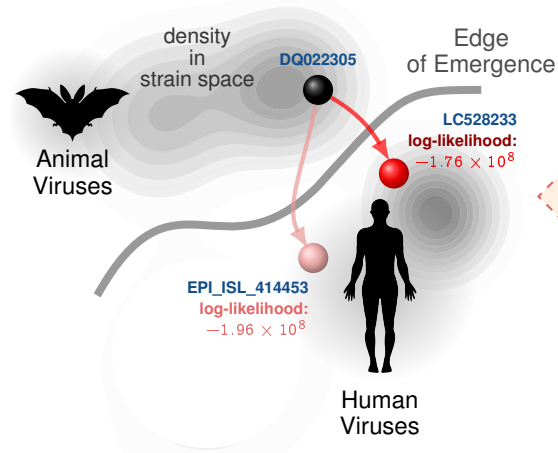


a. Defining a new biologically meaningful comparison of sequences



b. Quantifying probability of spontaneous jump



c. Rank order host-specific strains by jump likelihood

