Source: [KBhBIO101Viruses]

1 | Viral Genetic Mutations

1.1 | Genetic Shift

Whole segments of genome exchange abruptly as two flu viruses infect the same cell to create a new strand. This usually occurs due an error in a polymerase-driven process.

1.2 | Genetic Drift

Single/groups of nucleotides flip slowly over time due to mistakes in [KBhBIO101RNAReplication]. Viruses recombinate by crossing-over mechanism (remember how [KBhBIO101Retroviruses] HIV need protease to cut parts? when that shuffles) or genome segment reassortment (two viruses cross-talk by infecting the same host cell). Think! the flu

The former is an environment-dependent process, where the latter is able to be modeled as it is due to transcription mistake.

1.3 | Mutation w.r.t. [KBhBIO101TypesOfViruses]

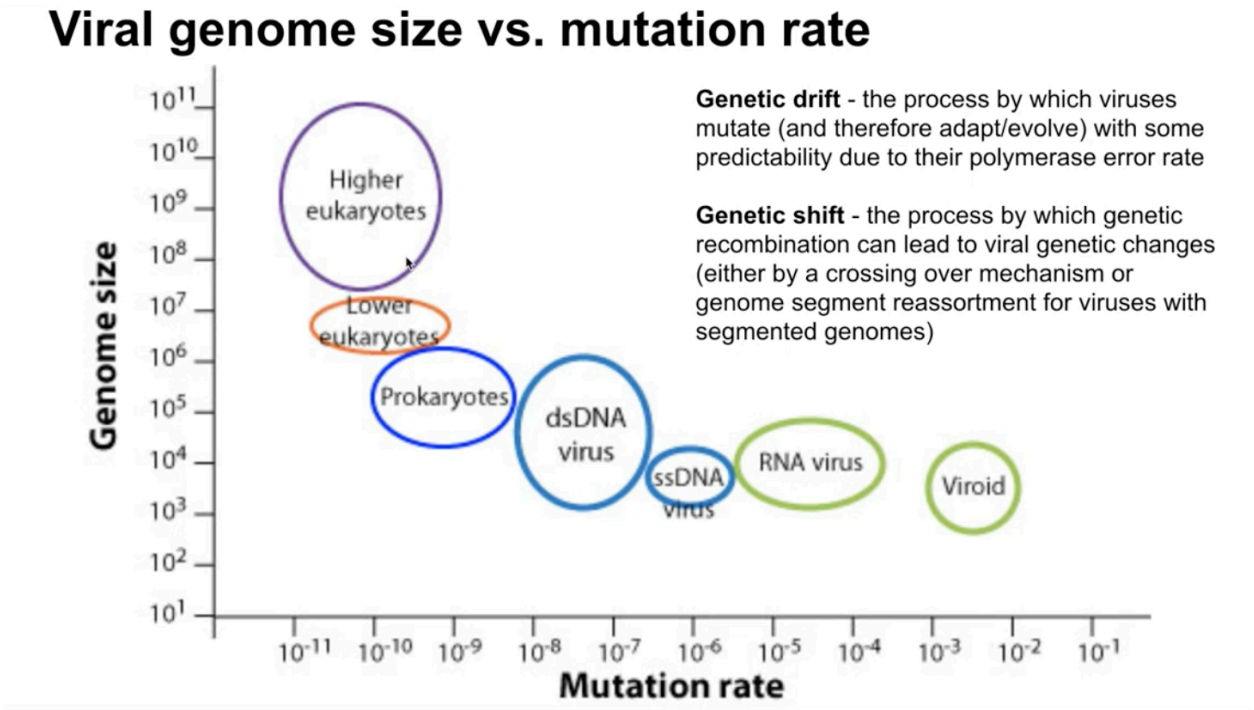

Figure 1: Screen Shot 2020-10-12 at 11.24.39 PM.png

- **RNA viruses** could mutate more because it does not have checks
- **More complex+largest viruses** (DNA viruses) harder to mutate