



Vedhika Raghunathan

Herz Global Impact Award

Ph.D. Student, Microbiology and Molecular Genetics
Second Year ARCS Scholar

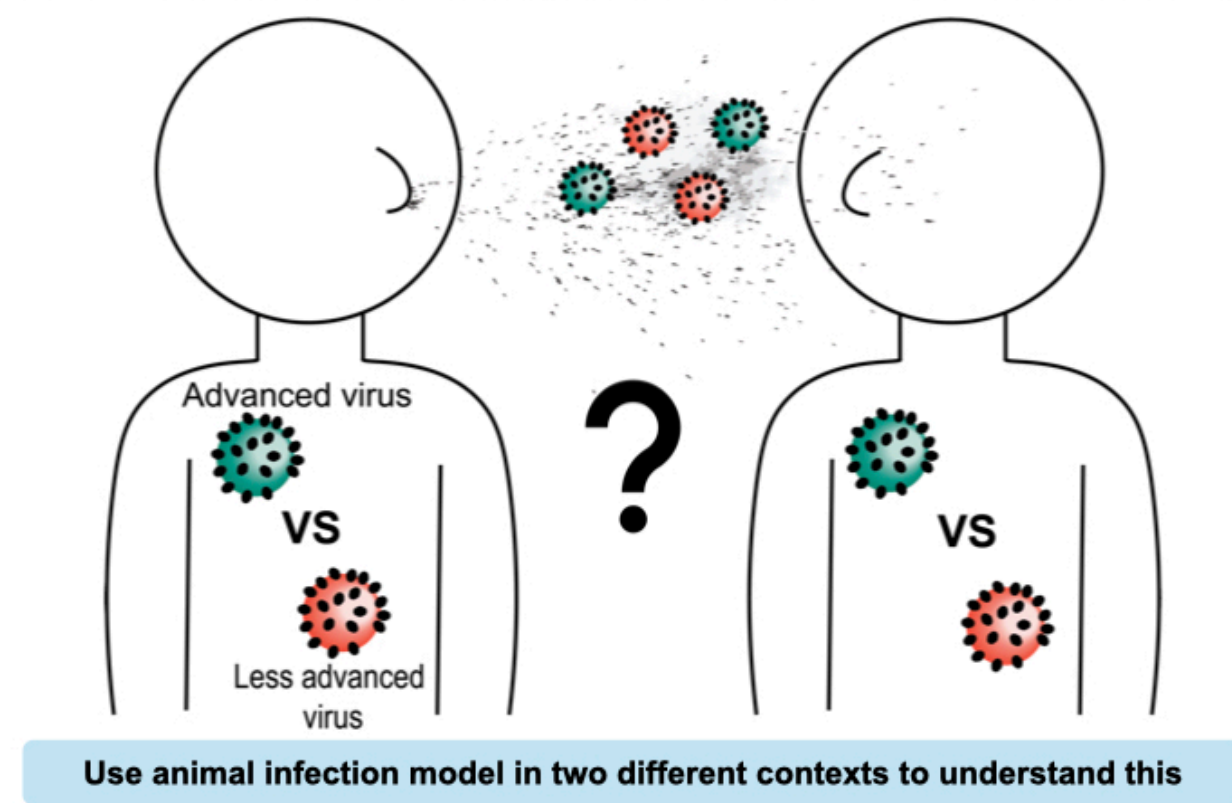


EMORY UNIVERSITY

How do Influenza A viruses evolve within and between individual hosts?

By using an animal infection model, we can understand how influenza A viruses evolve within hosts and between hosts during transmission to better prepare for seasonal epidemics and pandemics.

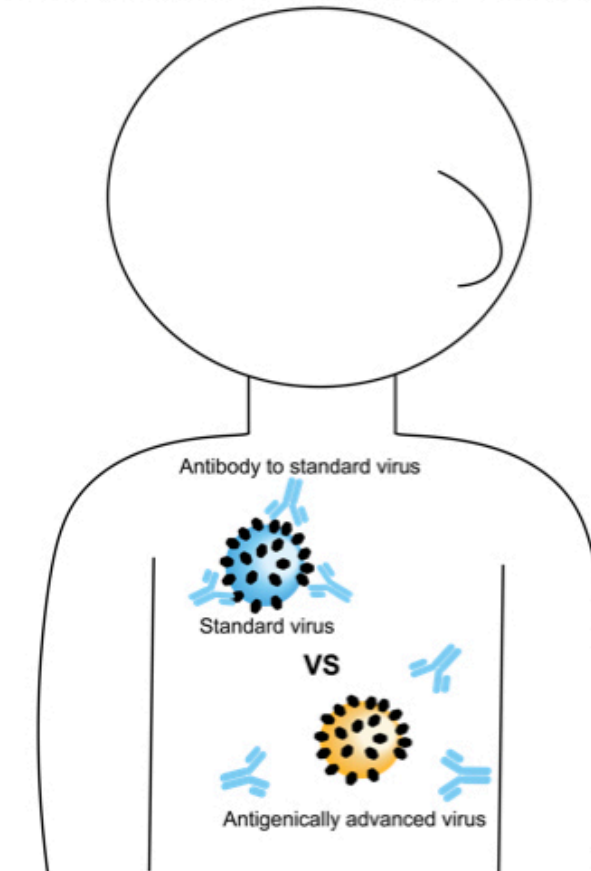
Problem: do not know how advanced viruses emerge initially
How are more advanced viruses selected for within and between hosts?



Selection of seasonal influenza A viruses within hosts with pre-existing immunity

Every year, virus changes slightly to evade immune response.

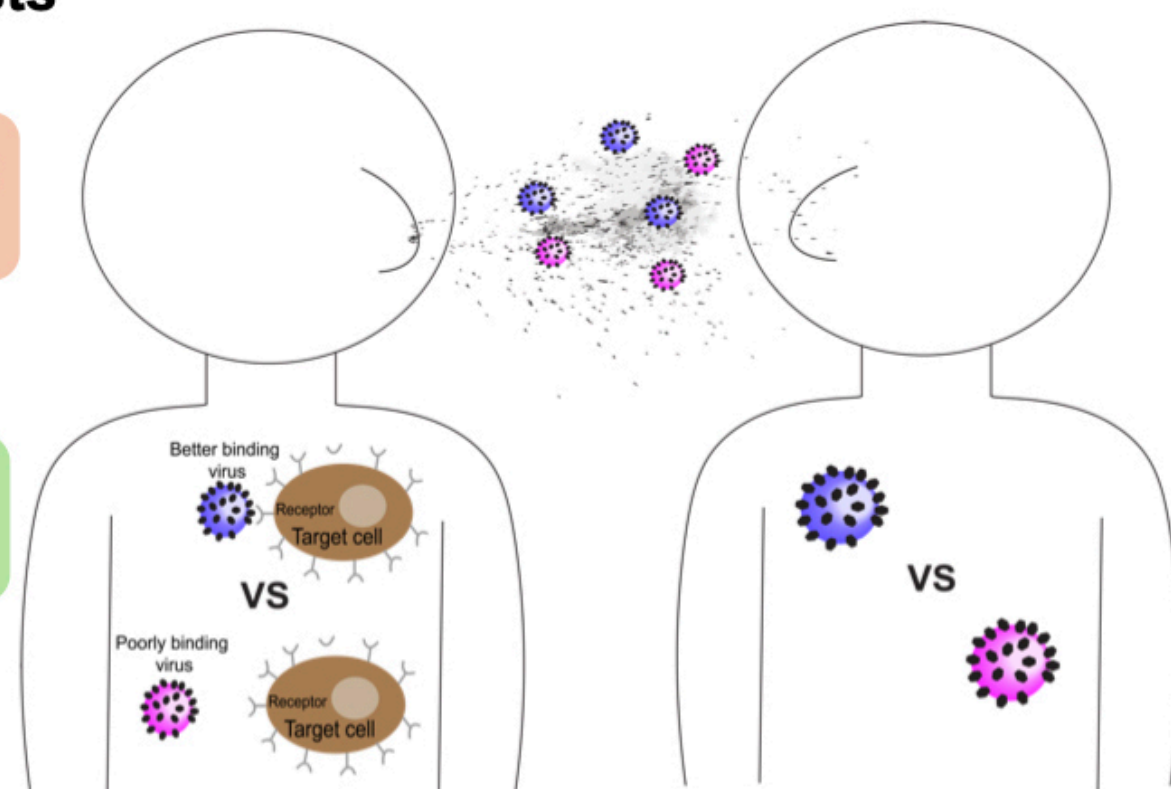
How do antigenically advanced viruses succeed within hosts with pre-existing immunity?



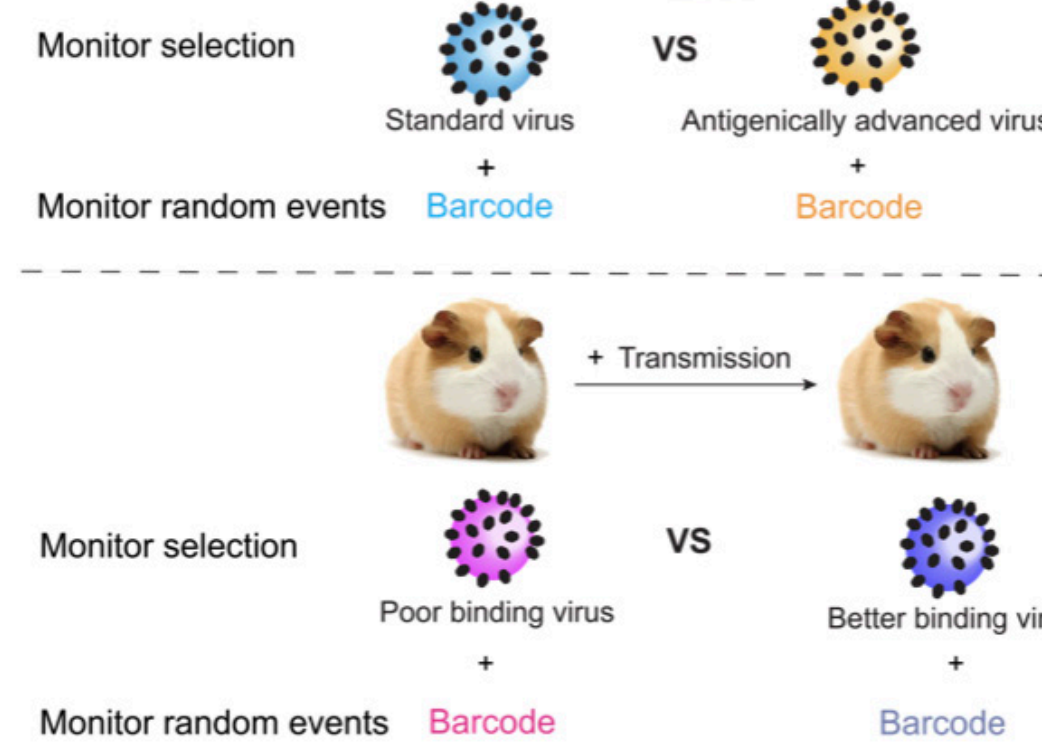
Selection of high cell-binding influenza A viruses within and between hosts

Novel viruses can differentially bind to target cells to initiate infection.

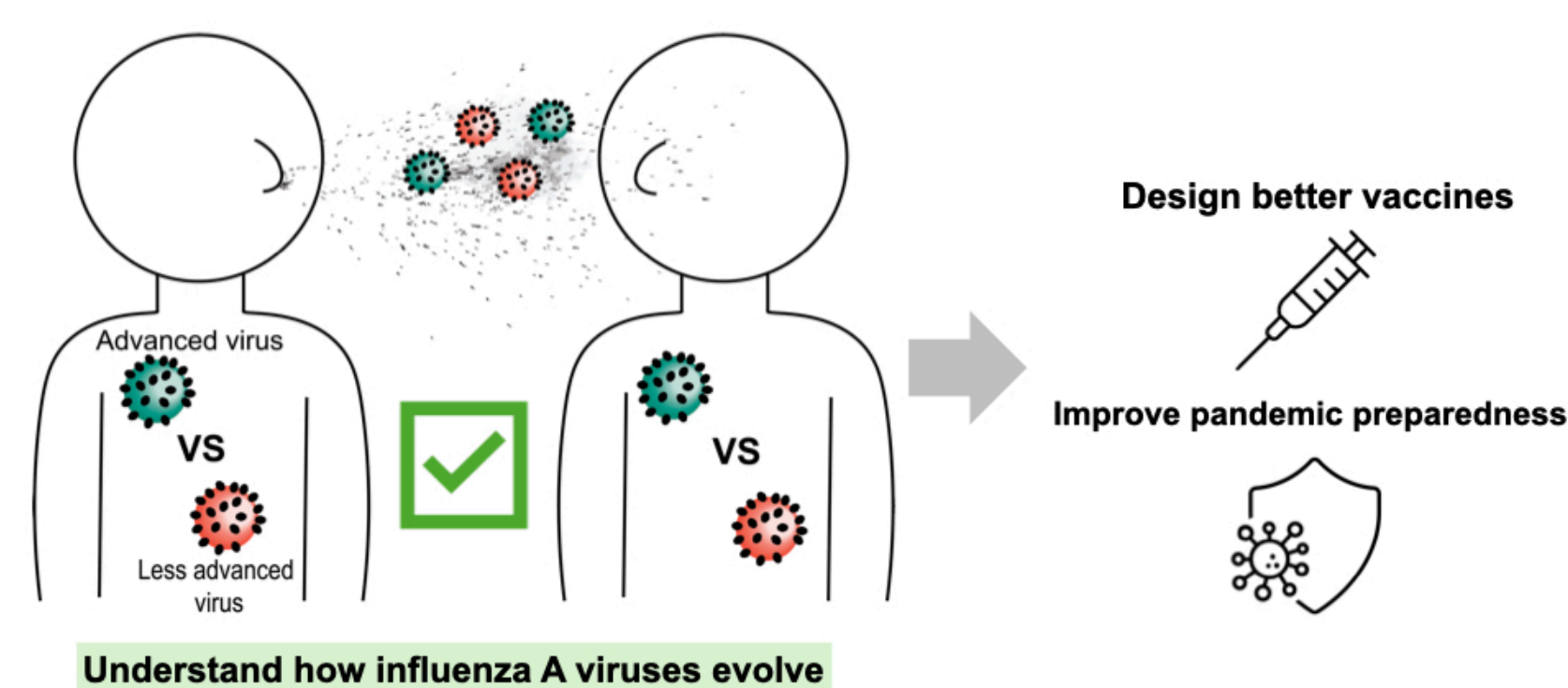
How do better binding viruses succeed within hosts and between hosts during transmission?



Experimental system



Important to understand how influenza A viruses evolve



Understand how influenza A viruses evolve

