



Vedhika Raghunathan

Herz Global Impact Award

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

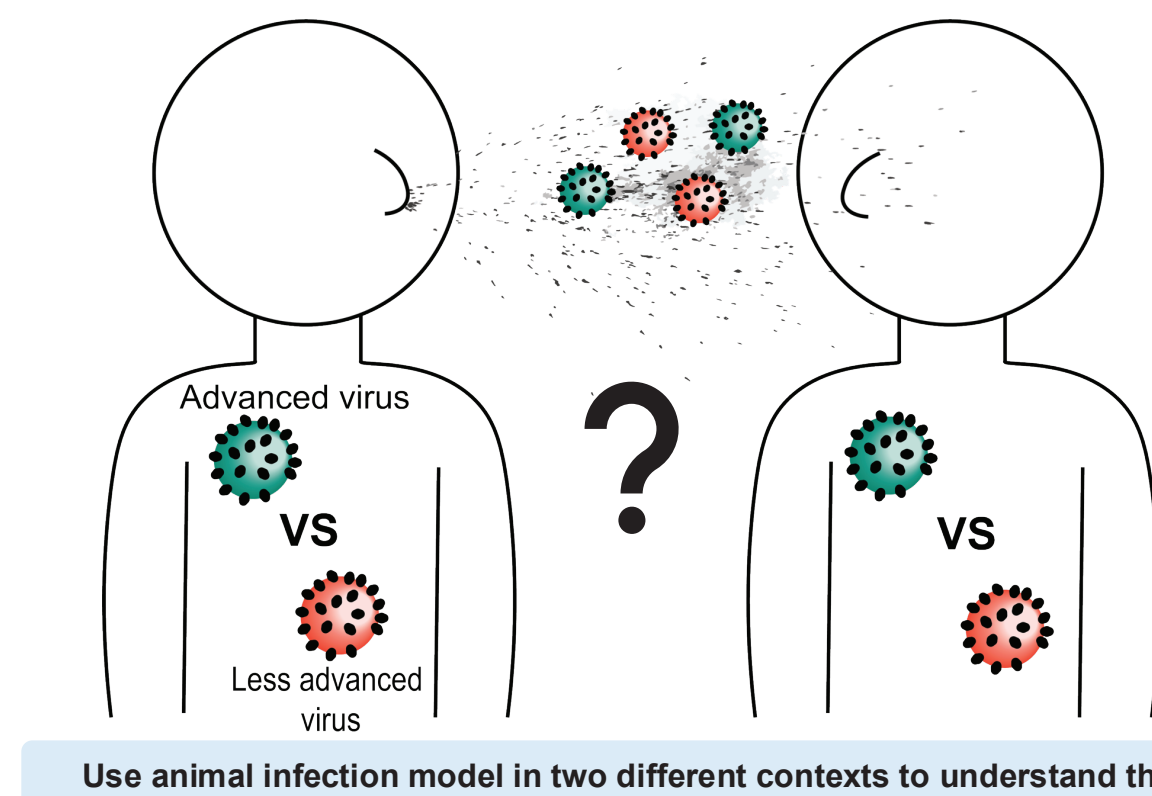


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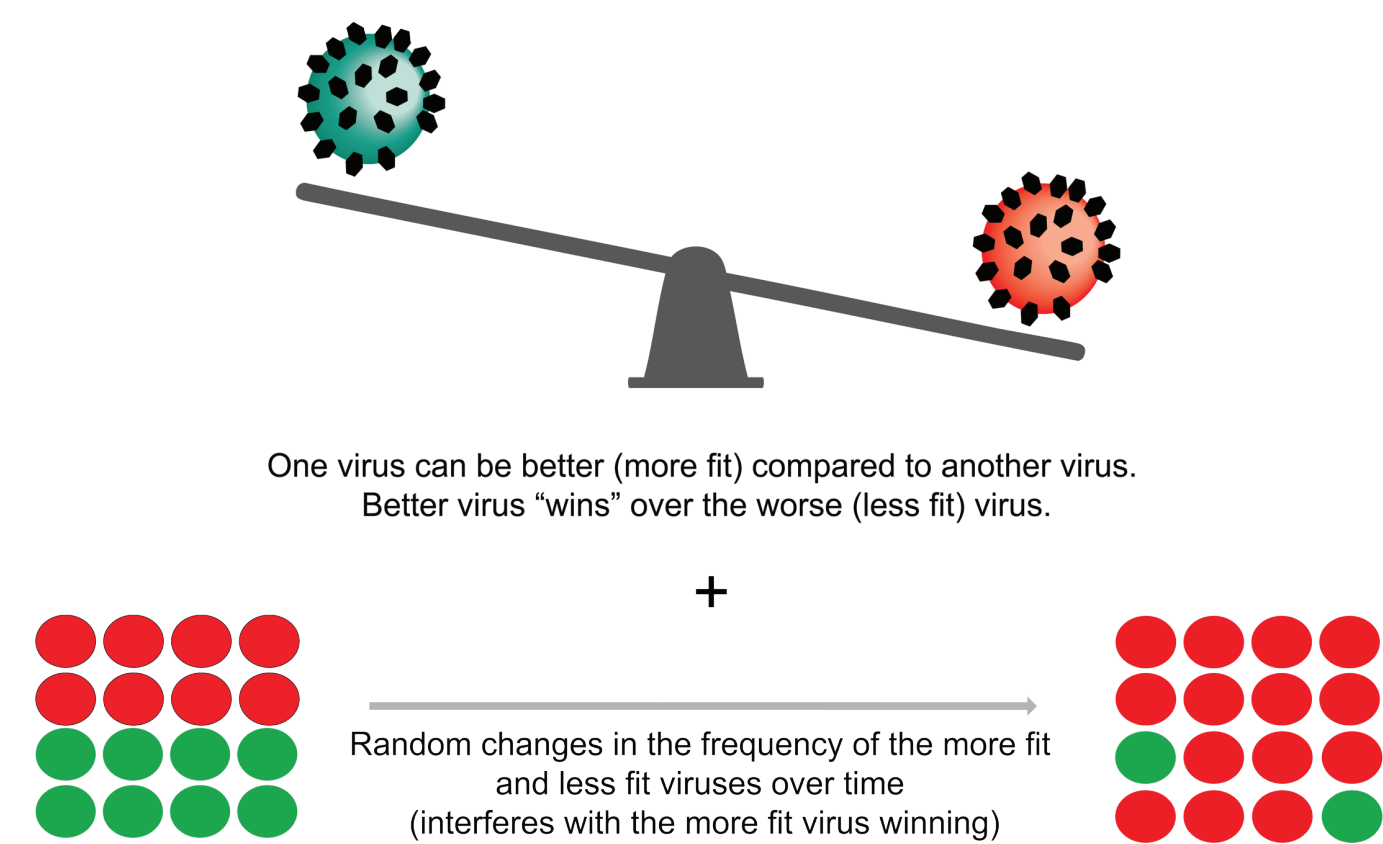
How do influenza A viruses evolve within and between individual hosts?

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.

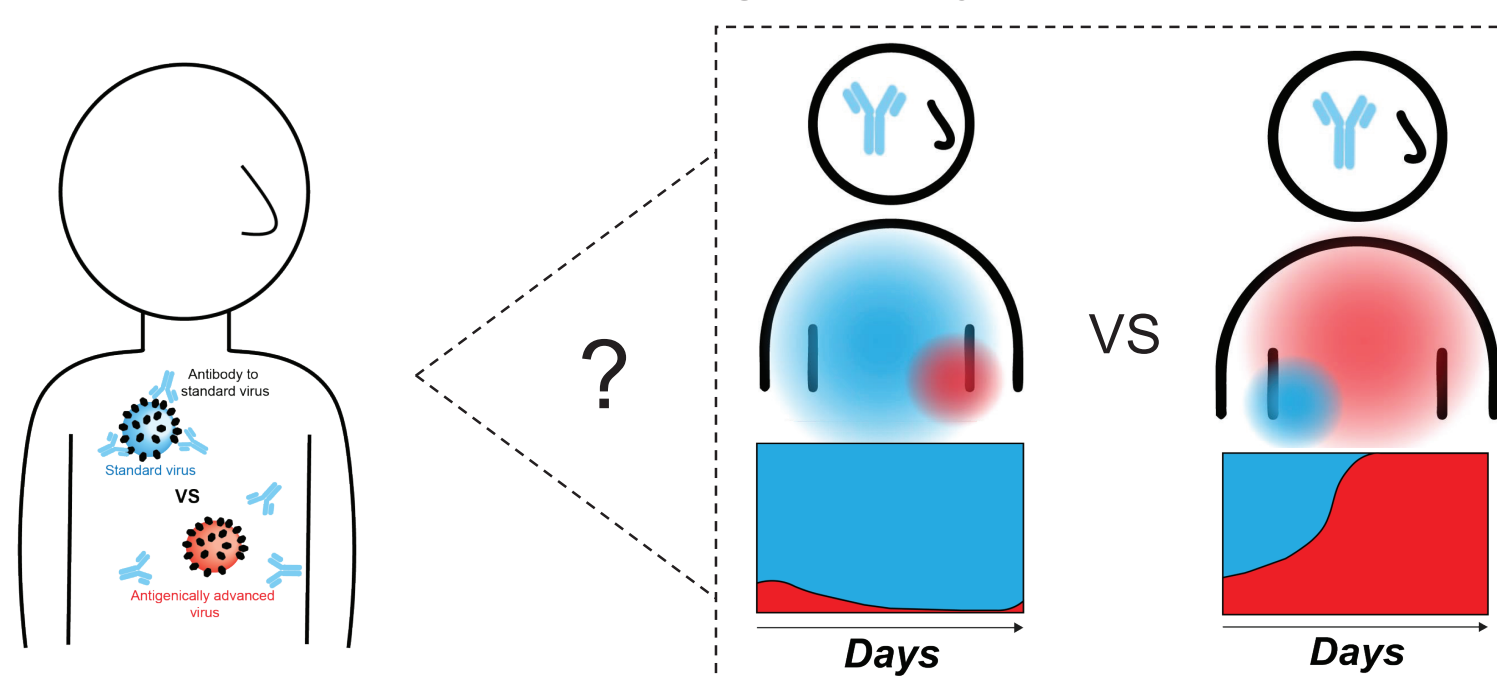
Problem: Do not know how advanced viruses emerge initially
How are more advanced viruses selected for within and between hosts?



Competing forces can shape viral evolution

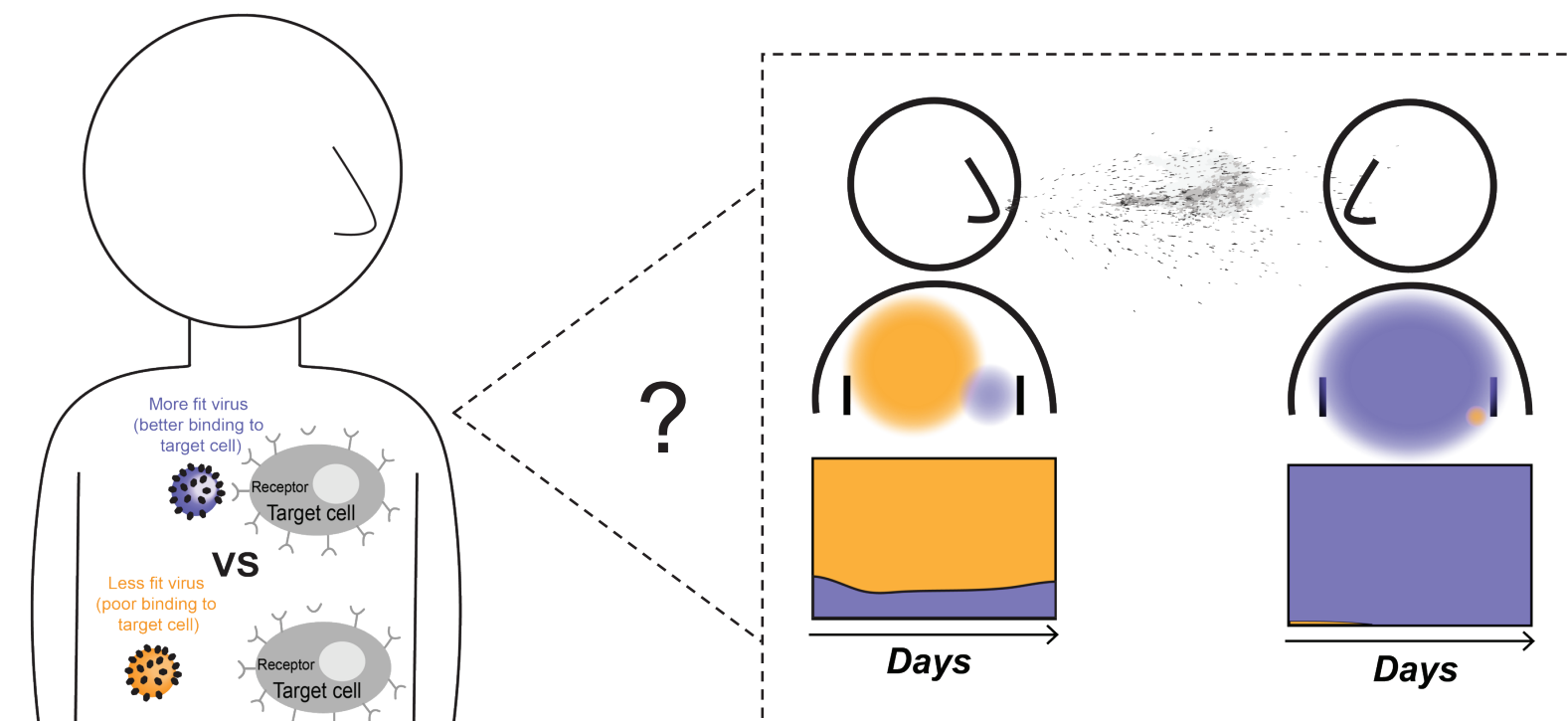


Selection of seasonal influenza A viruses within hosts with pre-existing immunity



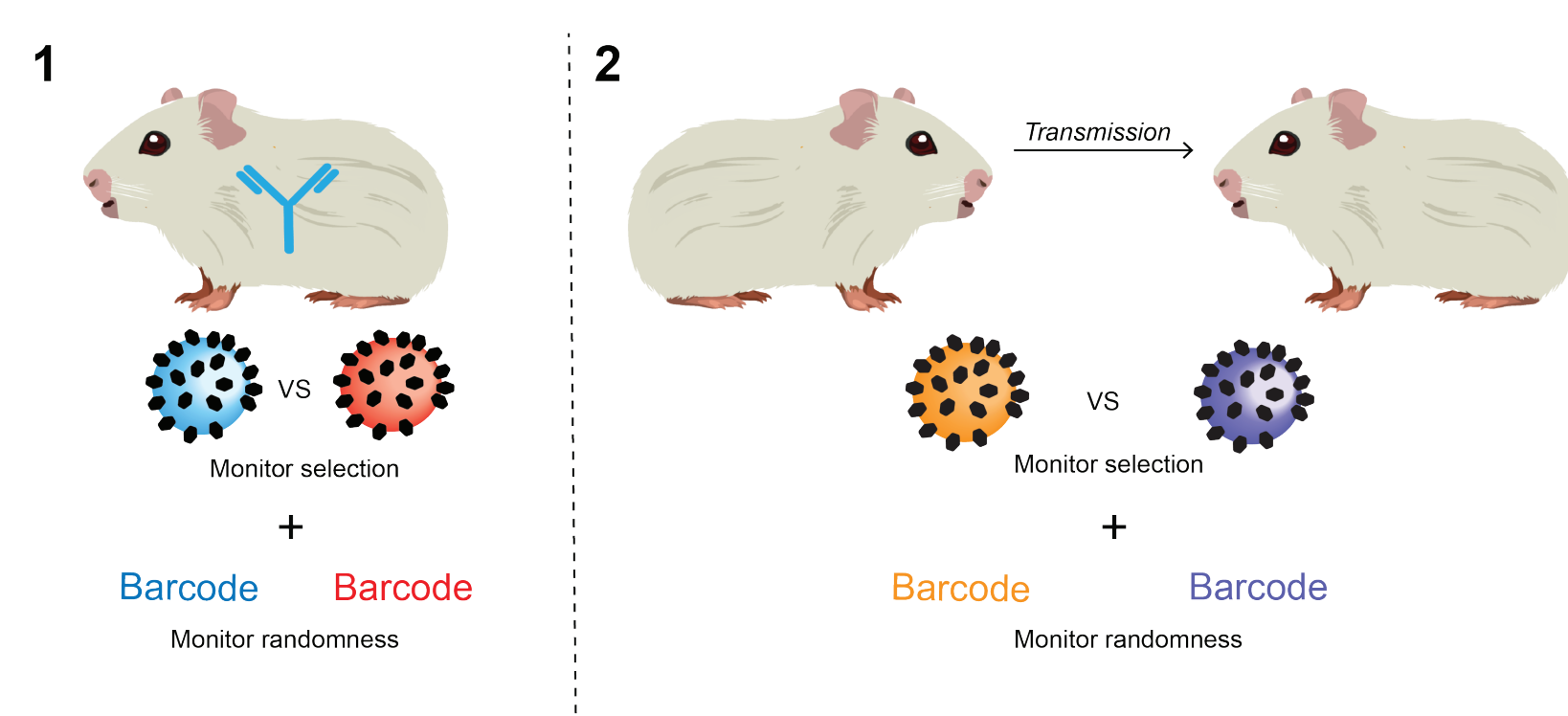
What conditions enable antigenically advanced viruses to succeed within hosts with pre-existing immunity?

Selection of influenza A viruses between hosts during transmission

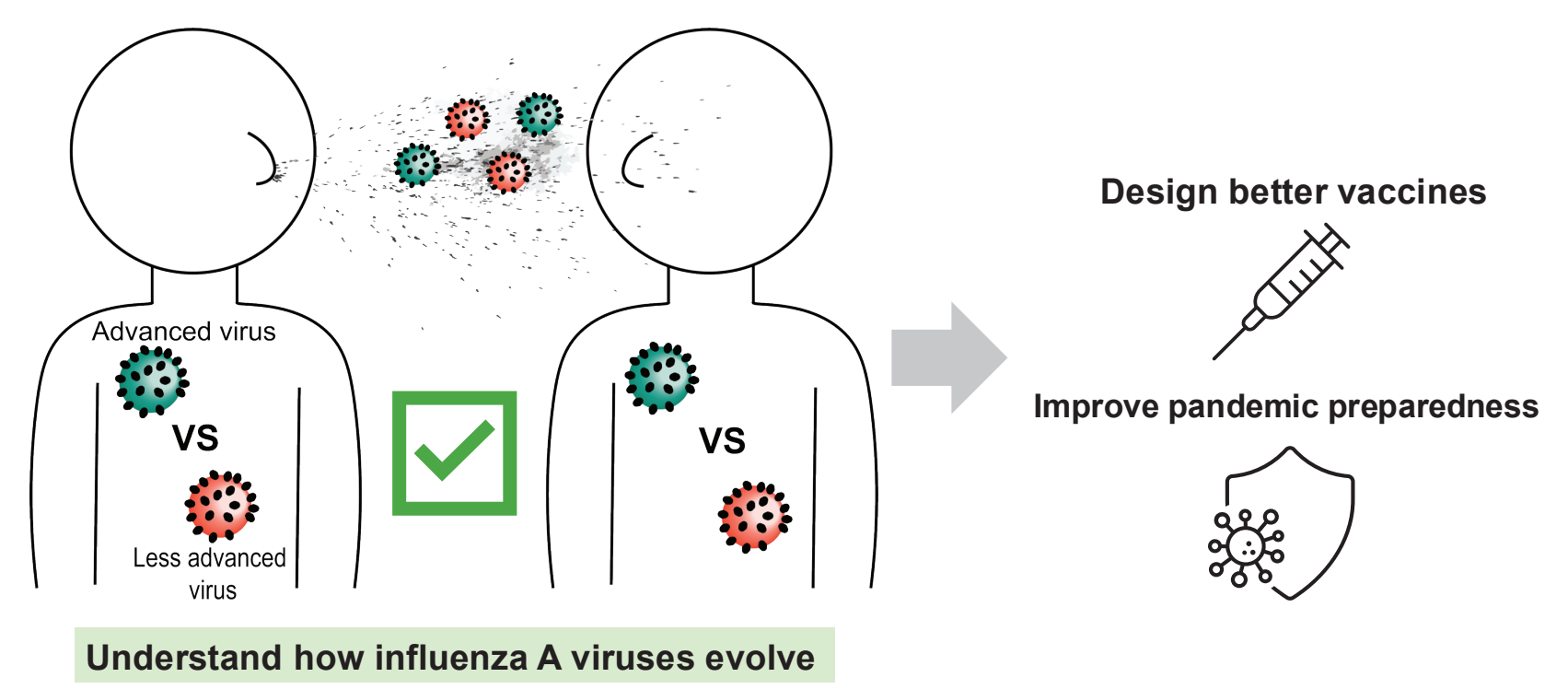


Do more fit viruses succeed between hosts during transmission?

Experimental system



Important to understand how influenza A viruses evolve



Scholar Awards Celebration
November 12, 2025



Igniting
Innovation
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