Center for Inference and Dynamics of Infectious Diseases Seminar

Influenza evolution… getting personal

Adam S. Lauring, MD, PhD

Principal Investigator and Assistant Professor
Lauring Lab,
Department of Microbiology and Immunology,
Department of Ecology and Evolutionary Biology
University of Michigan

Tuesday August 7, 2018 10:00AM - 11:00AM

Pelton Auditorium, B1-065

Fred Hutchinson Cancer Research Center

Light refreshments will be served; registration not necessary to attend this event

Abstract: While influenza virus evolution has been well characterized on the global scale, much less is known about how the virus evolves within infected individuals. My laboratory has been interested in these local scale processes with the goal of understanding the extent to which global processes are recapitulated at the host level and how within host processes contribute to larger evolutionary dynamics. I will present our recent work on influenza virus evolution in cultured cells, in individual hosts, and within households. I'll briefly review our characterization of the fitness effects of point mutations and our extensive study of mutation rates using a new twelve class Luria Delbruck fluctuation test. I'll devote the majority of the talk to studies of influenza virus evolution within and between naturally infected human hosts. Here, we have used high depth of coverage sequencing to determine the relative impact of positive selection and genetic drift on mutation frequencies within hosts. Finally, I will cover our recently published study of transmission bottlenecks in a household cohort. [link]

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Contact: Jesse Bloom (jbloom@fredhutch.org) with questions
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