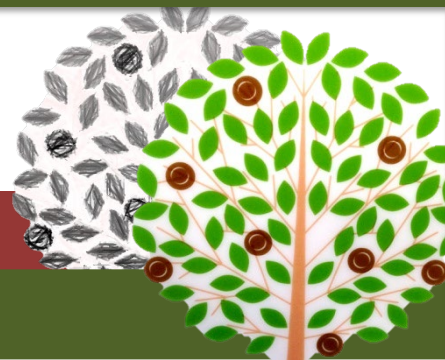


**ON-SITE BIOLOGY COLLOQUIUM**

Friday, 26 Jun 2026 | 4 pm | S3 05-02 Conference Room 1

Hosted by Professor Ryan Chisholm

Map to Block S3



Less can be more: On the outsized-impacts of inefficient viral infections

Joshua Weitz*Professor of Biology & Clark Leadership Chair in Data Analytics, University of Maryland, College Park***About the Speaker**

Prof. Joshua S. Weitz holds the Clark Leadership Chair in Data Analytics and is Professor of Biology at the University of Maryland, College Park where he holds affiliate appointments in Physics and Health Computing. Weitz previously served as faculty in Biological Sciences at Georgia Tech from 2007-2023 where he founded the Interdisciplinary Graduate Program in Quantitative Biosciences. Weitz leads a multidisciplinary research team whose central goal is to understand how viruses transform human and environmental health. He is an author on more than 170 peer-reviewed publications and three books, including his most recent 'Asymptomatic: The Silent Spread of COVID-19 and the Future of Pandemics' (Johns Hopkins University Press, 2024). Weitz is a Simons Foundation Investigator, a Fellow of the American Association for the Advancement of Science, and a Fellow of the American Academy of Microbiology.

This talk explores the outsized impacts of what appear to be inefficient or asymptomatic infections. In the first part of this talk, I explore how viruses of microbes transform the fate of microbial cells, populations, and ecosystems. Despite conventional assumptions of efficient infections and rapid lysis, these viral infections of microbes include a spectrum of fates including inefficient infections, failed infections, partial expansion into susceptible populations, and latency. As I show, the inefficiency can drive larger ecological impacts in practice and present challenges to leveraging bacteriophage for use as part of antibacterial control. In the second part of this talk, I revisit competing narratives of the COVID-19 threat and explain via models and epidemic data how SARS-CoV-2's ability to silently spread between individuals made it catastrophic for society as a whole. The gap between individual and population level outcomes had another effect: fueling misinformation that continue to animate current public health policy in the U.S. – including new threats from vaccine-preventable pathogens.