



Immune interactions and SARS-CoV-2 evolution

Wednesday, December 16, 12:00 pm ET

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Topics covered during this webinar:

- Host-virus interactions that drive the deterministic aspect of virus evolution.
- Understanding the pathology of infectious disease
- Viral genomics at short and long-time evolutionary scales that can be used to understand which features most impact a virus in ways that can inform antiviral therapies.
- Review of approaches to quantifying how the immune system interacts with SARS-CoV-2.
- Which processes are likely most relevant to COVID-19 pathogenesis and treatment.



Speaker: Benjamin Greenbaum, MSKCC

Moderator: Nicolas Vabret, Mt. Sinai

Dr. Greenbaum is a computational biologist with a PhD in theoretical physics from Columbia University, where he was an undergraduate major in Physics and Philosophy. He trained in the Theoretical Division of Los Alamos National Laboratory and the Simons Center for Systems Biology at the Institute for Advanced Study in Princeton, where he was a Long-Term Member. Dr. Greenbaum utilizes techniques from statistical physics, information theory, and evolutionary biology to better understand the interaction of host tumor RNA with the innate immune system, the role of neoantigens in the evolution of tumors both generally and in response to immunotherapy, and various aspects of virus evolution.

About the CRRG

The COVID Research and Resources Group (CRRG) aims to connect physicists and other scientists through COVID-related research and education efforts. If you would like to join CRRG, visit our website, find our community on engage.aps.org, or email crrg@aps.org and we will connect with you.