

APR **WED**  
**5** 10:30 AM | SSC 2315

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### Topic: Novel approaches to vaccine design for HIV-1 and EBV

I am an Associate Professor in the Vaccine and Infectious Disease Division at Fred Hutch. The overall goal of my research is to obtain a high-level understanding of protective antibody responses to viral antigens and to use this information to design and test safe and effective vaccines. We routinely apply this “reverse vaccinology” approach to viral pathogens of public health importance.

Here I will describe how structures of protective broadly neutralizing antibodies (bNAbs) in complex with the HIV-1 Envelope protein have helped to define barriers to the elicitation of bNAbs through vaccination and led to the development of an engineered germline-targeting immunogen that is currently under evaluation in a Phase 1 clinical trial.

I will also describe how we have applied the reverse vaccinology paradigm to Epstein-Barr virus (EBV) vaccine development. Our lab was the first to characterize human monoclonal anti-EBV antibodies that neutralize infection. When passively delivered to humanized mice and non-human primates, these antibodies protect against EBV infection establishing experimental proof of concept that an EBV vaccine should seek to elicit neutralizing antibodies. Based on these encouraging results we have been developing subunit vaccines to elicit protective antibodies in murine and non-human primate challenge models.



All welcome to attend

Light refreshments will be served

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