Clinical studies in which people are given a carefully monitored infection, with healthcare support, have provided great insights into the natural history, prevention and treatment of human infectious diseases. Some infections, such as HIV and TB, are not suitable for such studies. Nonetheless, in the HIV Vaccine Trials Network, we conduct exploratory work in our clinical trials that provide insights into homeostatic conditions of the immune system while investigating immune response variability. We have found evidence for a role of the microbiome in vaccine response heterogeneity, and several preclinical and clinical investigations are underway to investigate mechanisms behind the microbiome–immune axis; studies underway include gnotobiotic conditions in mice, childhood vaccine responses in cystic fibrosis induced dysbiosis, and multi-omics longitudinal studies in mother-infant pairs. Bacterial, viral, and parasitic human infection studies that have been or will be conducted at Fred Hutch are also a great opportunity to investigate immune phenotypic variation.

Tuesday, January 22, 2019
3:00 - 4:00 pm
Pelton Auditorium