UCI University of California, Irvine

Institute for Interdisciplinary Salivary Bioscience Research

Multiplex Salivary Antibody Assay to Measure SARS-CoV-2 Infection and Vaccination at Population-Scale

June 3rd, 2021

10:00am PST

Zoom Webinar

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ABSTRACT

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the cause of an ongoing pandemic that has infected millions of people across the globe. Informed implementation of government public health policies depends on accurate data on SARS-CoV-2 immunity at a population scale. Detection of SARS-CoV-2 salivary antibodies could serve as a noninvasive alternative to serological testing for monitoring of SARS-CoV-2 infection and seropositivity at a population scale. This talk will focus on the development and utility of a saliva-based multiplex SARS-CoV-2 antibody immunoassay based on Luminex technology that comprised 12 CoV antigens, mostly derived from SARS-CoV-2 nucleocapsid (N) and spike (S). The use of saliva-based antibody testing may be a valuable noninvasive and scalable alternative to blood-based antibody testing. Implications for population-based and behavioral research will be discussed.

Dr. Christopher Heaney is an Associate Professor in the Departments of Environmental Health and Engineering, Epidemiology, and International Health at the Bloomberg School of Public Health at Johns Hopkins University where he directs the Environmental Health Microbiology and Immunology Laboratory. He earned his MS in environmental health microbiology and virology and his PhD in epidemiology at the University of North Carolina Gillings School of Global Public Health in 2008.

His research focuses on environmentally-mediated impacts on health and well-being, specifically community land use, waste disposal, and food production practices, and integrates the academic disciplines of environmental microbiology, molecular biology, immunology, epidemiology, and community-based participatory research (CBPR).

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