



Pacific Center for  
Emerging Infectious Diseases  
Research



UNIVERSITY  
of HAWAII  
MĀNOA

## 2018 COBRE MINI-SYMPOSIUM



### Research at the Biosecurity Research Institute

**Stephen Higgs, Ph.D.**  
Kansas State University  
Manhattan, Kansas

Kansas State University's Biosecurity Research Institute is a unique facility, comprising BSL-3/3Ag research laboratories, which offer diverse and multidisciplinary research and training opportunities, including research on food-borne pathogens, plant pathogens and foreign animal diseases in both large animal and small animal models.



### Tracking Emerging Antimicrobial-resistant *Neisseria gonorrhoeae*

**Alan R. Katz, M.D., M.P.H.**  
University of Hawaii at Manoa  
Honolulu, Hawaii

*Neisseria gonorrhoeae* has developed resistance to penicillin, tetracyclines, and fluoroquinolones. The Hawaii Department of Health's Sexually Transmitted Diseases Clinic has been one of the original Centers for Disease Control and Prevention (CDC) Gonococcal Isolate Surveillance Project (GISP) sites and has participated in GISP since its inception in 1986.



### Human Papillomavirus Natural History and Associated Malignancies

**Brenda Y. Hernandez, Ph.D.**  
University of Hawaii at Manoa  
Honolulu, Hawaii

We were among the first groups to demonstrate high rates of human papillomavirus (HPV) infection in the cervix and anus of women; to demonstrate the transmission dynamics of HPV infection in male-female couples; to show that oncogenic and non-oncogenic HPV types can be transmitted between genital and non-genital sites; and to develop and validate self-collection methods for evaluating HPV genital infection in men.



### Structure, Composition and Maturation of Zika and Related Flaviviruses

**Richard J. Kuhn, Ph.D.**  
Purdue University  
West Lafayette, Indiana

Previously, we solved the structure of Zika virus to near atomic resolution. Using quantitative mass spectrometry, we have developed a complementary tool to cryo-EM to bridge the gap in dissecting particle composition and protein stoichiometry. Our studies indicate prM cleavage is inefficient, suggesting an expanded role of uncleaved prM in flavivirus biology. We have examined this possibility using prM-specific antibodies in biochemical and structural experiments.

**March 9, 2018 at 2:00–4:00 P.M.**

**Medical Education Building, Room 202, Kaka'ako**

**For further information, call 692-1654**

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