iTHEMS Colloquium

The eyes have it: Influenza virus infection beyond the respiratory tract

Dr. Jessica Belser

Research Microbiologist
Influenza Division
US Centers for Disease Control and Prevention (CDC)
USA

2023 7/11 Tuesday (JST) 14:00 - 15:30

Okochi Hall Bldg. C32 **& via Zoom**
at RIKEN Wako Campus

Zoom Registration

Influenza viruses are typically considered a respiratory pathogen, but are nonetheless capable of causing ocular complications in infected individuals and establishing a respiratory infection following ocular exposure. While both human and zoonotic influenza A viruses can replicate in ocular tissue and use the eye as a portal of entry, many H7 subtype viruses possess an ocular tropism in humans, though the molecular determinants that confer a non-respiratory tropism to a respiratory virus are poorly understood. In this presentation, I will discuss the establishment of several mammalian models to study ocular exposure and ocular tropism, ongoing investigations conducted in vitro and in vivo to elucidate properties associated with ocular-tropic viruses, and ways in which this information can improve efforts to identify, treat, and prevent human infection following ocular exposure to influenza viruses. Continued investigation of the capacity for respiratory viruses to gain entry to the respiratory tract and to cause ocular complications will improve understanding of how these pathogens cause human disease, regardless of the virus subtype or exposure route.