Enterovirus 71 (EV71) is a human enterovirus species A of the genus *Enterovirus* within the *Picornaviridae* family, and it is known to be one of the causative agents of hand-foot-and-mouth disease (HFMD). HFMD is considered to be a mild and self-limiting disease in general. However, in some infants and young children, HFMD caused predominantly by EV71 can be complicated by neurological manifestations. Thus, EV71 infection is a serious public health concern. Unfortunately, there is still very little information concerning EV71 pathogenesis, and vaccines or anti-EV71 drugs have yet to be developed.

**Members**

Kyosuke Kobayashi


"The development of vaccine and anti-viral drugs and that of experimental models for the evaluation of these agents are important for controlling emerging and re-emerging viral infections. We will study the basic principles of neurotropic enterovirus infection and provide knowledge and technologies to control infectious diseases."
Research Topics

**Mechanism of Enterovirus 71 infection**

We recently found that Scavenger receptor B2 (SCARB2) is a receptor for EV71. SCARB2 plays a central role in early stages of EV71 infection. SCARB2 is able to mediate binding of the virus at the cell surface, internalization of the virus and initiation of uncoating.

**Development of an animal model for Enterovirus 71 infection**

The transgenic mouse expressing human SCARB2 is susceptible to EV71. It is a useful model for the study of EV71 pathogenesis and vaccine efficacy test.