生命科学セミナー

Using *Drosophila* to discover and study new human disease causing genes

Assistant Professor, Baylor College of Medicine

Shinya Yamamoto, DVM, PhD

16:00-17:30, January 23(Thu), 2020

Pharmaceutical Sciences Campus, Lecture Building 1F,

(薬学研究科教育棟１階)

Multimedia lecture room（マルチメディア講義室）

Many rare and undiagnosed diseases are caused by mutations in the patient's genomic DNA. Identification of mutations responsible for these disorders can facilitate the understanding of biological functions of these genes in human biology. In the past decade, we have been using both forward and reverse genetics approaches in Drosophila melanogaster (fruit flies) in combination with state-of-the-art human genomics techniques to discover new human disease causing genes. Through sophisticated genetics tools in flies, we have been able to further study and dissect the underlying molecular mechanisms of many rare neurological diseases, which often provides new insights into more common diseases including Alzhemier's disease and Zika virus mediated microcephaly. Opportunities for basic scientists to directly contribute to clinical and translational research are increasing globally due to establishment of collaborative consortiums such as Undiagnosed Diseases Network (UDN, USA), Rare Disease Models and Mechanisms Network (RDMM, Canada) and Initiatives for Rare and Undiagnosed Diseases (IRUD, Japan), and model organism researchers are playing a critical role in this world-wide endeavor.

京都大学大学院生命科学研究科

連絡先　システム機能学分野

井垣達吏　内線番号 7684