Medical Chemistry Seminar

"Innate immune protection against virulence factors in Drosophila"

Dr. Samuel Liegeois

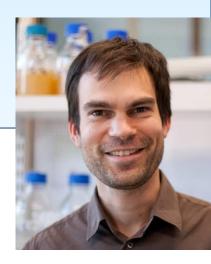
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Date: February 15 (Wed), 2023

Time: 16:00-17:30

Venue: Seminar Room 102 Building A

(医学部A棟102室)



The innate immune system is known to fight directly against microbes. Our recent work has demonstrated that it can also indirectly act against their virulence factors. First, in the gut attacked by pore-forming toxin-secreting bacteria, the apical cytoplasm of enterocytes is extruded into the gut lumen. This response is evolutionarily conserved in mice and in human Caco-2 cells. Second, some Toll-regulated peptides mediate the protection against toxins: Bomanins mediate the protection against specific fungal toxins, although Baramicin protects against different toxins produced by fungi and bacteria. Finally, double mutants of two other genes, encoding peptides with strong similarities, are more sensitive to various microbes and virulence factors. We are investigating the molecular pathways underlying such antitoxin mechanisms.

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