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Monday, February 13, 2023

16:00-17:00

1F Auditorium, DB Building C, Kobe / Broadcast online via Zoom

Zoom meeting URL will be announced on the event day by e-mail.

※This seminar is open only to BDR members.

Innate immune protection against virulence factors in *Drosophila*

Summary

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, mainly secreted toxins. 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.