

生命科学セミナー

Molecular Biology of Pheromone Detection (フェロモン受容の分子生物学)

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The vomeronasal organ (VNO) plays a key role in mediating the social and defensive responses of many terrestrial vertebrates to species- and sex-specific chemosignals. Over 250 putative pheromone receptors have been identified in the mouse VNO, but the nature of the signals detected by individual VNO receptors has not yet been elucidated. In order to gain insight into the molecular logic of VNO detection leading to mating, aggression, or defensive responses, I sought to uncover the response profiles of individual vomeronasal receptors to a wide range of animal cues.

In this seminar, I will first give a broad overview of mouse pheromones. Subsequently, I will explain the experiments that led to the functional characterization of a large number of vomeronasal receptors and discuss implications to the study of innate behaviors.

Reference: Isogai, Y., Si, S., Tan, T., Pont-Lezica, L., Kapoor, V., Murthy, V., and Dulac, C. (2011) Molecular organization of vomeronasal chemoreception, *Nature* 478: 241-5.

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