Poster Presentation

[PS02] ポスター発表(学生 B:コアタイム1)

Sat. Mar 30, 2024 11:30 AM - 12:30 PM Sakura (Student) (Sakura)

[PS02-97]Evaluation of odorants discrimination of Drosophila odorant receptor Or13a-expressing senser cell by a high-throughtput system

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The sensitive and precise detection of environmental chemical signals plays a crucial role throughout the life cycles of insects, with odorant identity encoded through the combinatorial activation of large families of odorant receptors. In response to this, we have developed a technology to generate sensor cells expressing the insect odorant receptors along with a co-receptor and a calcium indicator. Nonetheless, the determination of whether the odorant receptor-based sensor cell can effectively detect a varied spectrum of chemical compounds remains uncertain. In this study, we conducted assays encompassing four distinct categories of odorants on the sensor cell using an in vitro high-throughput odorant screening system. As a result, the sensor cell employing the odorant receptor Or13a of *Drosophila melanogaster* demonstrates a comparable odorant-evoking profile to the public database. This suggests a potential capacity for our sensor cells to discriminate between different types of odorants, aligning with the discriminatory abilities observed in insects.