

Webinar

Neuronal circuit mechanism underlying decision making: insights from fruit flies

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Have you ever wondered how the sweet smell of a flower fades away as you keep sniffing it? Or why we take our loved ones to a restaurant with nice food aroma around? Although we do not pay attention, in reality, it is the sense of smell or olfaction that drives these behavioural responses. It remained a mystery how the brain receives and processes olfactory inputs and turns them into building blocks of cognition. These behaviours are also ubiquitous and evident in fruit flies, *Drosophila melanogaster*. Therefore, we used *Drosophila* to decode underlying circuit mechanisms of these phenomena and further revealed their neuroethological relevance. In this talk, I will give examples of a few odour guided behaviours that flies display in their natural habitat and comprehend how different olfactory neurons in a context dependent manner process the odour information to make perfect sense of it. Thus, by studying these simple form of behaviours in these intelligent yet humble fruit flies provide major insights into important neural pathways underlying decision making process.

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