



QUANTITATIVE AND SYSTEMS BIOLOGY COLLOQUIUM: Seeing Scents to Understand Our Sense of Smell



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About the Speaker:

Aashish Manglik, MD, PhD is an associate professor at UCSF in the Departments of Pharmaceutical Chemistry and Anesthesia. His research examines G protein-coupled receptor signaling using diverse approaches.

Abstract:

Our sense of smell enables us to navigate a vast space of chemically diverse odor molecules. In humans, approximately 400 odorant G protein-coupled receptors encoded in the human genome enable us to detect and discriminate this vast diversity of potential odorants. The fundamental molecular logic of how odorant receptors recognize such a diverse set of odorants to give rise to our perception of smell has remained mysterious. A central challenge is that we lack a structural framework to connect which odorant receptors are activated by any given odorant. I will describe our efforts to decode fundamental principles of odorant recognition by odorant receptors. Analogous to our deep understanding of the visual sensory system, a central hope for our work is that a foundational understanding of odorant molecular recognition may eventually enable precise prediction of an odor precept from the chemical structure of an odorant.

Date:

4/24/2025

Time:

10:30 AM - 11:45 AM

Location:

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