

BCH 252 Seminar Series



Gaëlle Talross, Postdoctoral Researcher, Yale University

Seminar Title: “Neuronal long non-coding RNAs: Insights from the fly olfactory system”

Abstract: Long non-coding RNAs (lncRNAs) are well-suited to modulate neuronal function, yet much about their roles remains to be understood. Using the robust experimental toolkit inherent to the fly chemosensory systems, I investigate the roles of neuronal lncRNAs. In this seminar, I will highlight the discovery and functional characterization of a specific lncRNA that contributes to the modulation of olfactory receptor neurons in response to starvation, providing new insights into neuronal regulation.

Biography: I'm fascinated by the mysteries of how long non-coding (lnc) RNAs shape neuronal function, a key to unlocking insights into neurological disorders.

During my Ph.D. training with Dr. Joseph Gall and Dr. Nicholas Ingolia at Johns Hopkins University, I explored the intricate facets of lncRNAs. My discoveries include (i) demonstrating that stable intronic sequence (sis) RNAs can be exported to the cytoplasm and how, and (ii) showing that a class of sisRNAs modulates snoRNA levels, which are crucial for ribosomal function. Additionally, I (iii) uncovered insights into the dual nature of 7SL RNA and (iv) contributed to the discovery that specific lncRNAs encode micropeptides.

As a postdoctoral fellow guided by Dr. John Carlson at Yale University, I've established a groundwork to use the fly chemosensory systems for probing the non-coding roles of neuronal RNAs across molecular, cellular, physiological, and behavioral dimensions. My research reveals connections between RNAs and neuronal functions and sets the stage for exploring the mechanisms that drive these processes.

Tuesday, January 28, 2025 12:00 p.m. - 12:50 p.m. PST

In-Person: Genomics Auditorium 1102A

[Zoom Link](#) | Meeting ID: 925 6927 3073 | Passcode: 689525

Host: Dr. Jikui Song