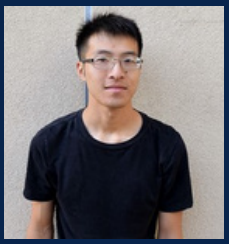
UC RIVERSIDE

BCH 252 Seminar Series



Timothy Tam, Biochemistry & Molecular Biology Graduate Student, UC Riverside

Seminar Title: "Characterizing the Coupling Interaction of *E. coli* RNA Polymerase and Ribosome"

Abstract: The colocalization of RNA polymerase (RNAP) and ribosomes was observed as early as the 1970s when Miller visualized *E. coli* cellular contents in an electron micrograph (Miller et al., 1970). Multiple ribosomes could be observed attached to an mRNA transcribed by a DNA-bound RNAP. A closer examination of the DNA-bound RNAP reveals instances where the ribosome contacts the RNAP. Recent structural studies have elucidated two distinct binding sites between the RNAP and ribosome. Binding at one site excludes binding at the other. What influences preferential binding at one site over the other is not yet well understood. To comprehend how RNAP shifts between these binding sites, we site-specifically labeled the RNAP and ribosome with fluorophores for studying on a single molecule level using zero-mode waveguides.

Tuesday, December 5th, 2023 12:00 p.m. - 12:50 p.m. PST

In-Person: Genomics Auditorium 1102A

Host: Dr. Seán O'Leary