



VIRTUAL BIOLOGY COLLOQUIUM

Friday, 3 Mar 2023 | 10 am | Online Zoom Session

Hosted by Assistant Professor Phua Siew Cheng

Illuminating the Biochemical Activity Architecture of the Cell

By Zhang Jin

Vice-chair and Professor of Pharmacology, Departments of Chemistry & Biochemistry and Bioengineering, Co-director, Center for Cell Signaling, University of California San Diego



About the Speaker

The complexity and specificity of cellular processes require spatial microcompartmentation and dynamic modulation of the underlying biochemical activities, such as dynamic phosphorylation and dephosphorylation catalyzed by specific protein kinases and phosphatases, respectively. We hypothesize that cellular biochemical activities are spatially organized into an “activity architecture” and reorganization and restructuring of this activity architecture lead to disease. In this talk, I will introduce a series of genetically encoded fluorescent biosensors that we have developed to monitor biochemical events in living cells, and then present a couple of studies where we combine quantitative fluorescence imaging with targeted perturbations as well as biochemical and functional assays to probe the subcellular regulation of cAMP/PKA and ERK signaling pathways.

Dr. Jin Zhang received her PhD in Chemistry from University of Chicago in 2000. After completing her postdoctoral work in the laboratory of Roger Tsien at UC San Diego, she joined the faculty of Johns Hopkins University School of Medicine in 2003. She was promoted to Professor of Pharmacology, Neuroscience and Chemical and Biomolecular Engineering in 2013. In 2015 she moved back to UC San Diego and is currently Professor and vice Chair in Department of Pharmacology. She is also a member of the Moores Cancer Center and an Affiliate Professor in Departments of Bioengineering and Chemistry & Biochemistry at UC San Diego. She co-directs the Center for Cell Signaling San Diego with Dr. Alexandra Newton. Research in her lab focuses on developing enabling technologies to probe the active molecules in their native environment and characterizing how these active molecules change in diseases including cancer.

Join Zoom Meeting | [LINK](#)
Meeting ID: 850 5504 5289
Password: 242188



Virtual Seminar Etiquette:

- ✓ Please “mute” upon arrival into the meeting room.
- ✓ Questions can be asked after the presentation. You are encouraged to verbally ask questions or submit your questions via chat group.
- ✓ By being present at this meeting, **information presented is a privilege** and you agree that you would **NOT UNDERTAKE** any forms of recording/photo-taking.