

2ND INTERNATIONAL CONFERENCE ON CELL SCIENCE AND REGENERATIVE MEDICINE



Kunxin Luo

Department of Molecular and Cell Biology, University of California,
Berkeley, California, USA

Regulation of Hippo/TAZ signaling by phase separation

Abstract: Transcription regulation involves the coordination of a large number of transcription factors and complexes on specific DNA regions in response to a diverse array of signals. liquid-liquid phase separation (LLPS) has been shown to play a critical role in transcriptional initiation, elongation and super-enhancer-driven transcription activation. However, it is not clear whether pathway-specific transcription factors also employ LLPS to regulate gene expression. Using Hippo signaling pathway as a model, we demonstrated for the first time that pathway-specific transcription factors also engage the phase separation mechanism for efficient and specific transcription activation. These LLPS condensates may serve as scaffolds to concentrate proteins with similar functions, or to insulate protein complexes that act in different signaling pathways to generate specificity.

Keywords: Hippo signaling, phase separation, TAZ

Biography: Dr. Kunxin Luo is a Professor of Cell and Developmental Biology in the Department of Molecular and Cell Biology at University of California, Berkeley.