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11:30am - 1:00pm

CKB 303

Investigating the mechanoregulatory role of fibronectin in tumor progression and wound healing

Abstract:

Fibronectin is the first extracellular matrix protein assembled by cells during physiological and pathological processes. With binding sites for cells, other matrix proteins, and growth factors fibronectin provides essential mechano-regulatory cues in tissue as its molecular structure is flexible and sensitive to cell traction. However, it is unclear how microenvironmental factors influence the assembly of fibronectin to modulate its function during tumor progression and wound healing. In this talk, I will discuss our recent work in developing model systems to explore the influence of microenvironmental stimuli on fibronectin structure-function during tumor progression and wound healing processes.

About the Speaker

Dr. Karin Wang is an Assistant Professor of Bioengineering at Temple University. She received her BS in Applied Math and Statistics and BE/MS Biomedical Engineering from Stony Brook University in 2010. She received her PhD in Biomedical Engineering from Cornell University in 2015, studying the material properties of matrix proteins in tumor stroma and was awarded NSF DGE GK-12 Teaching Fellowships. During her postdoctoral training from 2015-2018 to investigate the underlying physical drivers of collective cellular migration, she was a NIH NCI F32 Postdoctoral Fellow in the Molecular and Integrative Physiological Sciences Program in the T.H. Chan School of Public Health at Harvard University. She was a Discussion Leader at the GRC for Signaling by Adhesion Receptors, invited speaker at the FEBS: Forces at Biological Interfaces and World Congress of Biomechanics, and has served on several NSF and NIH panels.