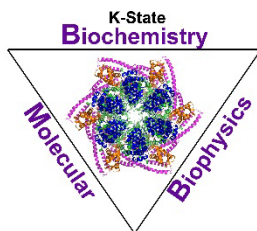


Ackert Hall, Room 120
Wednesday, September 17, 2025
4:00 P.M.



Coffee and Cookies
Chalmers Hall, Room 168
3:45 P.M.

Biochemistry

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Molecular

Biophysics

Seminar

Metabolic signals in longevity regulation across scales

Dr. Meng Wang

Janelia Research Campus, Howard Hughes Medical Institute

Dr. Meng Wang's research aims to decode the chemical language that governs cellular homeostasis and organismal healthspan. One of the central questions in biology is how cells maintain homeostasis while adapting to continuous internal and external changes. Metabolic activity, a cornerstone of cellular homeostasis, produces metabolites that are essential for cellular functions and are highly conserved across species. Her lab has discovered that specific metabolites can act as chemical communication cues operating across multiple spatial scales, from organelles to organisms, through specific signaling mechanisms. This metabolic perspective links cellular dynamics with organismal physiology, offering novel strategies to promote healthy aging and longevity. In parallel with these mechanistic studies, her group has contributed to the development and application of cutting-edge imaging platforms that enable the study of metabolism in both space and time. These technological advances have revealed previously unknown spatial heterogeneity in metabolic organization and allowed high-resolution tracking of dynamic metabolic changes during aging.

**Dr. Wang is a guest speaker with the
ADVANCE Distinguished Lecture Series**