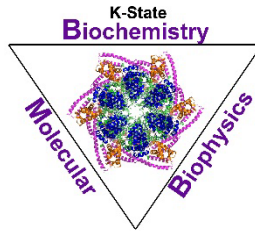


Ackert Hall, Room 120
Wednesday, February 21, 2024
4:00 P.M.



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

Biochemistry
&
Molecular
Biophysics

Seminar

Molecular Mechanisms of Heavy Metal Stress Tolerance in Plants

Sanju Sanjaya

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West Virginia State University

Acclimation to dynamically changing environmental conditions (such as heavy metal stress) is critical for plant growth, development, and survival. A freshwater aquatic angiosperm Duckweed (*Spirodela polyrhiza*) grows directly in water and has distinct responses to heavy-metal stress. One essential stage of acclimation to adverse conditions involves membrane lipid remodeling and the sequestration of toxic lipid intermediates from damaged membranes into neutral lipids. I will discuss how plantlets accumulate metabolites, including lipids and carbohydrates, under heavy metal stress and how the gene networks mediate this response based on *S. polyrhiza* and *Arabidopsis* findings.