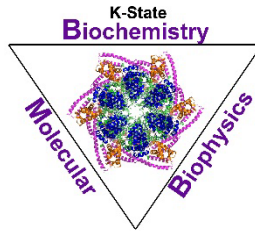


Ackert Hall, Room 120  
Wednesday, January 31, 2024  
4:00 P.M.



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

**Biochemistry**  
&  
**Molecular**  
**Biophysics**

**Seminar**

**To Grow or Die:  
Sphingolipid Homeostatic Regulation**

**Edgar Cahoon**

Biochemistry  
University of Nebraska-Lincoln

Regulation of sphingolipid homeostasis in plants is critical for maintaining sufficient glycosphingolipid amounts to support growth while limiting accumulation of biosynthetic intermediates that trigger programmed cell death, until needed for microbial pathogen defense. Central to sphingolipid homeostatic regulation is the ORM protein, which functions as a negative regulator of serine palmitoyltransferase (SPT), the first step in long-chain base synthesis. I will discuss how sphingolipid homeostasis is maintained and how this regulation can be overridden for pathogen defense, based on findings from Arabidopsis ORM mutants and a recent cryo-EM structure of the Arabidopsis SPT complex.