Department of Biochemistry and Molecular Biophysics Seminar

Wednesday, April 1 at 4:00 p.m. in Ackert 120

Coffee and cookies at 3:45 p.m. in Chalmers 168

Dr. Anna Zolkiewska, Professor

Kansas State University
Department of Biochemistry and Molecular Biophysics

CLPB in the mitochondrial intermembrane space: Big secrets of the tiny subcellular compartment

CLPB, a member of the AAA+ family of proteins, is present exclusively in the intermembrane space of mitochondria in mammalian cells. Loss-of-function mutations in the human *CLPB* gene are the cause of severe pathologies and typically lead to premature death within days, weeks, or months after birth. Unfortunately, the function of CLPB and the underlying cellular and molecular defects resulting from CLPB deficiency are not well understood. One common clinical feature of patients with *CLPB* mutations is neutropenia, defined as an abnormally low count of neutrophils, leading to an increased susceptibility to infections. This presentation will discuss the results of our recent studies on the role of CLPB in the regulation of programmed cell death in neutrophil precursor cells, protein-protein interactions, and mitochondrial cristae morphology.