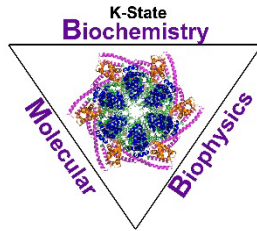


Ackert Hall, Room 120
Wednesday, October 23, 2024
4:00 P.M.



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

Biochemistry
&
Molecular
Biophysics

Seminar

**Drug repurposing screens for novel therapeutics
and biology in essential genetic pathways**

Hans Martin Dalton

Molecular Biosciences
University of Kansas

There are hundreds of genes absolutely necessary for life. Hypomorphic mutations in these genes can lead to rare, debilitating diseases. Paradoxically, impairing multiple essential genes can sometimes be better than a single mutation, and loss of essential genes later in life can instead sometimes be beneficial. We create disease models of these genes in the fruit fly, *Drosophila*, and in human cell lines. Using these models, we perform drug repurposing screens to find new potential therapeutics and learn more about their basic biology. In particular, we study glycosylation and protein synthesis pathways and their associated diseases. This talk will discuss these rare diseases, a drug repurposing screen with a connection between dopamine and glycosylation, and some of the new essential gene projects in the Dalton lab.