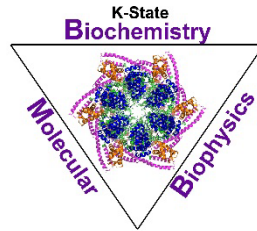


Ackert Hall, Room 120
Wednesday, February 26, 2025
4:00 P.M.



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

Biochemistry
&
Molecular
Biophysics

Seminar

Building our brains: Lessons from the RNA world

Debra Silver

Molecular Genetics and Microbiology
Duke University

How is the brain assembled and sculpted during embryonic development? Addressing this question has enormous implications for understanding neurodevelopmental disorders affecting brain size and function. In evolutionary terms, our newest brain structure is the cerebral cortex, which drives higher cognitive capacities that help define us as a species. **The overall goal of my research lab is to elucidate genetic and cellular mechanisms controlling cortical development and contributing to neurodevelopmental pathologies and brain evolution.** We are guided by the premise that the same mechanisms at play during normal development were co-opted during evolution and when dysregulated, can cause neurodevelopmental disease. My research program employs a multifaceted strategy employing animal and organoid models, imaging and omics. This talk will highlight some of our recent discoveries including how spatial and temporal control of RNA impacts neural progenitor morphology and function, as well as the genetic underpinnings of brain evolution and disease.