Cell Dynamics: Division, Motility, and Apoptosis
Saturday, March 26th, 2016 • 9:00-11:30 am • 1101 KHS

Discovery of Cell Cycle Protein Binding Events and Their Role In Fission Yeast Cytokinesis
- Sla1/sid1 mutants autophagy ring component prior to cytokinesis
- Strains of sid1-1/2 struggle to properly form rings and division is abnormally affected
- sid2 phosphatase aids in M11 localization, potentially by stabilizing phosphate groups
- sid2 directly binds M11 at both its amino and carboxy terminus

Nato3 Overexpression in the Midbrain and Neural Tube Induces Ectopic Expression of Floor Plate Cell Markers
- Nato3 is a brn4 transcription factor endogenously expressed in the floor plate region
- Increased Sia, Fosq, and Lmx3 expression from Nato3 overexpression in the chick embryo
- In the spinal cord, Nato3 overexpression induced Lmx3 expression but not Shh or Fox2
- Nato3 induces expression for markers of a dopaminergic neuron lineage regionally and temporally

Characterization of an apoptotic developmental mutation in the outer ommatidia of Drosophila melanogaster
- Sauron is a mutation in Drosophila melanogaster from the "55-Khdj-jbl0" line producing slit eyes.
- Sauron creates apoptosis in ommatidia during development, but does not affect pigment levels.
- The mutation was isolated by cloning sauron with lines that suppress recombination.
- Sauron is an autosomal dominant second chromosome mutation but the locus is not known.

Visualization of Prostate Cancer Metastasis Regulation by Tetraspanin CD82 Protein
- The CD82 tetraspan membrane protein is found in prostate cancer cells only before metastasis
- CD82 is overexpressed in prostate cancer cells after metastasis
- Prostate cancer cells without CD82 produced less-distinct Paclitaxel localization
- CD82 is necessary along with Paclitaxel and moderate amounts of CD-15 to prevent metastasis

Loss of Protein Kinase N Affects Programmed Cell Death of Nurse Cells in Drosophila melanogaster During Oogenesis
- Protein kinase N, a Rho-effector, appears to be required for normal nurse cell death.
- When wild type is crossed to the UAS-PknRNAi, a phenotype is not present.
- When UAS-PknRNAi is crossed to the same C4 drivers, nurse cell death is rescued.