CON 664 2011: Course Syllabus

Course Directors:
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MWF 10:30-11:30, Vollum M1441
Papers from the current literature will be assigned in class and posted on Sakai.
You are responsible for the assigned readings.
*Textbook readings are for background information in order to understand the lectures.

SECTION I  CELL COMPARTMENTALIZATION
Jan 3  Enns. Introduction & Nuclear transport
Jan 5  Skach. Cellular compartmentation, protein trafficking I
Jan 7  Skach. Protein trafficking II
Jan 10 Skach. Protein degradation and quality control
Jan 12 Thomas. Golgi
Jan 13: JOURNAL CLUB (Skach)
Jan 14 Thomas. Vesicle transport I
Jan 17 MLK Holiday
Jan 19 Thomas. Vesicle transport II
Jan 21 Enns. Endocytosis and sorting pathways
Jan 24 Mayinger. Lipid signaling and organelle identity  I
Jan 26 Mayinger. Lipid signaling and organelle identity  II
Jan 27: JOURNAL CLUB (Mayinger)
Jan 28 Enns. Protein sorting in polarized cells
Jan 31 Hill. Cell biology of antigen presentation

Feb 2 EXAM I  on Section 1, lectures 1-11. 5 PM  reserved 5 - 8 PM

SECTION 2  CELL-CELL COMMUNICATION, CYTOSKELETON AND CELL CYCLE
Feb 4  Musil. Cell-cell interactions: tight and gap junctions
Feb 7  Musil. Cell-cell interactions: adherens junctions and desmosomes
Feb 9  Schnapp. Principles of the cytoskeleton and molecular motors
Feb 10: JOURNAL CLUB  TBA
Feb 11  Schnapp. Motor-cargo interactions and transport regulation
Feb 14  Schnapp. Mitosis
Feb 16  Sears. Cell cycle- drivers
Feb 18  Sears. Cell cycle- checkpoints
Feb 21 President's Day
Feb 23  Dai. Apoptosis & autophagy
Feb 24: JOURNAL CLUB  Farrens
February 25  EXAM II on Section 2  5 - 8 PM

SECTION 3  SIGNALING WITHIN AND BETWEEN CELLS
Feb 28  Maurer.  Cell communication I
March 2  Maurer.  Cell communication II
March 4  Farrrens.  G-protein coupled receptors
Mar 7  Rotwein.  Tyrosine and serine kinase receptors
March 9  Rotwein.  Intracellular signaling networks
March 10:  JOURNAL CLUB  Rotwein

SECTION 4  MEMBRANE AND SOLUTE TRANSPORT
March 11  Landfear.  Structure & Function of membrane transporters
March 14  Dawson.  Membrane transporters: Energetics of cell composition
March 16  Dawson.  Ion channels: Origins and modulation of membrane potentials
March 17  Dawson:  Evening Problem session (~5:00-6:00)

March 18 EXAM III on Section 4 material.  10:30-12:30