



Misdirected, hijacked and used as
camouflage:



Membrane traffic in human disease.

BIOL 842 CELL BIOLOGY & BIOCHEMISTRY SEMINAR

In this seminar, we will discuss primary literature addressing issues of membrane traffic in human disease.

Topics will include:

How do viruses like HIV prevent their host cells from being destroyed by the immune system?

How do viruses invade our cells?

How do viruses mask themselves in our own cellular components?

Intracellular bacteria.

Toxics that flow the wrong way.

Why don't cancer cells respond to apoptotic signals?

Why do cancer cells overgrow?

How do cancer cells influence their environment to promote their own growth?

Does membrane traffic influence susceptibility to schizophrenia?

Students taking this class will leave with a firm grasp the functions of membrane traffic in normal cellular biology, the major membrane traffic pathways and molecular players and how these pathways or mutations of these pathways or pathogenic influence on these pathways contribute to normal and diseased states. We will primarily review hypothesis driven laboratory based research delving into the above topics with limited discussion of epidemiological studies.

Course design: Each week students will lead a discussion about papers selected for that meeting. One of the goals of this course is to teach students how to lead a discussion. After a short formal presentation detailing the background for the papers, students will lead a round-table discussion similar to the sorts of round table discussion a professor might lead in an undergraduate seminar. In the round table discussion, the leader may pose questions to other class participants about experimental design and interpretation of results.

Prerequisites: This course requires a foundation in cell biology, biochemistry and genetics. Most first year graduate students should have these foundations.

Initial meeting:

Regular meeting: TBD

Instructor:

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