

EMERGING AND RE-EMERGING PATHOGENS

Fall 2003

9/1/03

Date	Lecture	Lab
September 1	<ul style="list-style-type: none"> - Intro to course - assign Davis Article (Mon) - discuss Davis article (weds) - assign Levy 1-70 	<ul style="list-style-type: none"> - Basic techniques (M) - Sampling and selection of organisms from the environment
September 8	<ul style="list-style-type: none"> - discuss Levy reading (M) - assign 71-148 - how are bacterial cells different from animal cells? <ul style="list-style-type: none"> - discuss Weds - paper chase with spice story (W) 	<ul style="list-style-type: none"> - Determine antibiotic production by various bacteria (M) - presentation of data and stats (W) - how to write materials and methods and results sections - determine antibiotic activity of different materials
September 15	<ul style="list-style-type: none"> - discuss Levy reading (M) - assign 149-320 - paper chase with cattle feeding paper (M) <ul style="list-style-type: none"> - how to read a paper - discuss cattle paper (W) - assign finding antibiotic resistance paper (due Sept 24) - Quiz (Weds) 	<ul style="list-style-type: none"> - Determination of additional resistances in tetracycline resistant organisms (M)
September 22	<ul style="list-style-type: none"> - discuss Levy reading (M) - what are the processes of the central dogma and how are they different in prokaryotes and eukaryotes? <ul style="list-style-type: none"> - discuss central dogma (W) - how do various antibiotics work and achieve selective toxicity? 	<ul style="list-style-type: none"> - Growth curves versus antibiotic production in Serratia (M) - Test Serratia mutants for antibiotic production (M)
September 29	<ul style="list-style-type: none"> - discuss antibiotic mechanisms (M) - what are mechanisms of antibiotic resistance? <ul style="list-style-type: none"> - discuss mechanisms of resistance (W) - What are a host's innate defenses against infectious disease? <ul style="list-style-type: none"> - By what mechanisms do bacteria cause disease? - Quiz 	<ul style="list-style-type: none"> - PCR analysis of tetracycline resistant organisms (M) - writing an introduction and discussion - Test Serratia medium samples (W) - analyze PCR products (W)

October 6	<ul style="list-style-type: none"> - discuss defenses and pathogenesis mechanisms (M) - how does the reproduction of viruses differ from that of bacteria? - discuss viral life cycle (W) <ul style="list-style-type: none"> - exp of DNA and RNA viruses - What is required for an organism to “emerge”? 	
October 13	<ul style="list-style-type: none"> - discuss mechanisms of emergence for bacteria and viruses (M) - Midterm Exam (W) 	- Paper due
October 20		Fall Break
October 27	- selection of pathogens: SARS, HIV, West Nile, Influenza A, Hepatitis C & E, multiply-resistant tuberculosis, spongiform encephalopathies, <i>E. coli</i> serotype O157:H7	<ul style="list-style-type: none"> -Project planning - Selection for triclosan resistant bacteria - Determine the level of tetracycline resistance versus particular genes Select
November 3		- Selection for increased triclosan and tetracycline resistance
November 10		- Continue project
November 18	- Quiz	- Continue project
November 24		
December 1		- Prepare posters
December 8		<ul style="list-style-type: none"> - Present posters - Paper due
		Final Exam – Thurs, Dec 18, 2:00