

ABIO 340 Virology Syllabus

Dr. Wm. Jackson
Spring 2003

You will be expected to endorse the USCA HONOR PLEDGE on every assignment: 'On my honor as a University of South Carolina Aiken student, I have neither given nor received any unauthorized aid on this assignment/examination. To the best of my knowledge, I am not in violation of academic honesty'.

Review. Fifteen percent of your final grade will be from a semester research project. Each student will be provided with the name of a virus family to research. The student will conduct a literature search and prepare a written report on the virus family. This report will provide information on the viruses' morphology, molecular biology, pathology, epidemiology, and host range. It should also include a discussion on the means of viral replication. The report should be double-spaced and include appropriate visual aids and a bibliography. The paper should have at least five references, only one of which can be a web site. If more web sites are required, additional text/journal references must be included (2 for every web site). Each report will be presented as a MS PowerPoint presentation to the entire class at the end of the semester.

Format, Written

Introduction

Classification and Morphology

Molecular Biology and Replication Strategy

Host(s) and Epidemiology

Human Diseases Associated with the Family

Diagnosis and Pathology

Treatment and Prevention

TENTATIVE LABORATORY SCHEDULE		
WEEK	DATE	TOPIC
1	1.9.03	No Lab
2	1.16.03	Review of Virus families; Literature search
3	1.23.03	Standard curve: Determination of protein concentration
4	1.30.03	Hemolysis and Hemagglutination
5	2.6.03	Bibliography due
6	2.13.03	Determining Virus Titer
7	2.20.03	Determining Virus Multiplicity of Infection
8	2.27.03	First draft due
9	3.6.03	Molecular Biology
	3.13.03	SPRING BREAK
10	3.20.03	Final draft due; Gene Therapy and Virology
11	3.27.03	Gene Therapy and Virology
12	4.3.03	Presentations due
13	4.17.03	Virus Presentations
14	4.24.03	Virus Presentations

TENTATIVE LECTURE SCHEDULE

WEEK	DATE	TOPIC	CHAPTER
1	1.9.03	An Introduction to Virology	1
2	1.14.03	Quiz ; An Outline of Virus Replication and Viral Pathogenesis	2
	1.16.03	An Outline of Virus Replication and Viral Pathogenesis	2
3	1.21.03	Quiz ; Viral Diseases within Populations and Individual Animals	3
	1.23.03	Viral Diseases within Populations and Individual Animals	3
4	1.28.03	Quiz ; Patterns of Some Viral Diseases of Humans	4
	1.30.03	Patterns of Some Viral Diseases of Humans	4
5	2.4.03	Quiz ; Patterns of Some Viral Diseases of Humans	4
	2.6.03	Virus Structure and Classification	5
6	2.11.03	Quiz ; Virus Structure and Classification	5
	2.13.03	Virus Structure and Classification	5
7	2.18.03	Quiz ; The Beginning and End of the Virus Replication Cycle	6
	2.20.03	The Beginning and the End of the Virus Replication Cycle	6
8	2.25.03	The Beginning and the End of the Virus Replication Cycle	6
	2.27.03	Midterm Examination	---
9	3.4.03	Host Immune Response to Viruses: The Nature of the Vertebrate Immune Response	7
	3.6.03	Host Immune Response to Viruses: The Nature of the Vertebrate Immune Response	7
	3.11.03	SPRING BREAK – No Classes	
	3.13.03		
10	3.18.03	Quiz ; Host Immune Response to Viruses: The Nature of the Vertebrate Immune Response	7
	3.20.03	Viruses Use Cellular Processes to Express their Genetic Information	13
11	3.25.03	Quiz ; Viruses Use Cellular Processes to Express their Genetic Information	13
	3.27.03	Replication of Positive-Sense RNA Viruses	15
12	4.1.03	Quiz ; Replication of Positive-Senses RNA Viruses	15
	4.3.03	Replication Strategies of RNA Viruses Requiring RNA-Directed mRNA Transcription in the First Step in Viral Gene Expression	16
13	4.8.03	Quiz ; Replication Strategies of RNA Viruses Requiring RNA-Directed mRNA Transcription in the First Step in Viral Gene Expression	16
	4.10.03	No Classes	
14	4.15.03	Replication of Cytoplasmic DNA Viruses	19
	4.17.03	Replication of Cytoplasmic DNA Viruses	19
15	4.22.03	Quiz ; Retroviruses	20
	4.24.03	Retroviruses	20
Final	5.6.03	Final Exam at 11:00AM in SBDG 200	