

## INSTRUCTIONS FOR MICROBIAL PATHOGENS/DISEASE PROJECT

The purpose of this project is to research a microbial pathogen and the disease it produces in humans. The assignment is divided into five parts. The first four papers you submit will be incorporated into the final, comprehensive term paper. A scoring rubric for this project is attached.

Each written assignment must be **typed using 12 point font**, double spaced, one inch page margins. Literature cited (a minimum of five references for the final comprehensive paper) should be recent (since 1990), and from scientific publications. A complete Literature Cited page must be included with each of the five papers. There must also be numerical citations (which correspond to the citation list) within the body of the paper. (The style manual for this assignment is Council of Biology Editors (CBE) and may be found on-line at [www.bedfordbooks.com/rd/ctcbe.html](http://www.bedfordbooks.com/rd/ctcbe.html)). The entire project is worth 200 pt.

You may select any pathogen or disease from the list provided below, or of your own choice with approval of your instructor. NOTE: the entire project will be on a single organism/disease. You will research the literature regarding your specific pathogen/disease and write four short papers and one final comprehensive review of your findings. The review will be 6-8 typed pages.

Your **first paper** is information about the pathogen including (a) morphological characteristics, (b) type of catabolism, (c) environmental conditions required for growth, and (d) genetics/pathogenic mechanisms. The **second paper** concerns the disease, including a (a) brief history, (b) clinical symptoms/virulence/progression of the disease state, and (c) diagnostic procedures (including how the pathogen is identified in the clinical laboratory). The **third paper** will discuss epidemiology of the disease including (a) individuals at risk, (b) transmission mechanism(s), and (c) human behavior(s) involved in its spread. The **fourth paper** presents a discussion related to control of the pathogen/disease that includes (a) methods of prevention, (b) infection control and (3) clinical treatment. **The final paper is a compilation of the previous four papers. In addition it will have a discussion of your own thoughts related to the pathogen, spread of the disease, and possible avenues of research that might further enhance our understanding of the organism or disease. (NOTE: the first four papers should be 1-2 pages in length and are worth 25 points each. Also remember you will present your findings to the class in December.**

The written assignment is **due December 8, 2003 at the beginning of the period**. Any late paper will have an automatic 10% deduction in points.

### Choices for your semester research project:

#### Reportable (at the National level) Infectious Diseases in the United States

Acquired immunodeficiency syndrome (AIDS)	Lyme disease
Anthrax	Malaria
Botulism	Measles (rubeola)
Brucellosis	Meningococcal disease
Chancroid	Mumps
Chlamydia trachomatis, genital infection	Pertussis (whooping cough)
Cholera	Plague
Coccidioidomycosis	Poliomyelitis, paralytic
Congenital rubella syndrome	Psittacosis
Cryptosporidiosis	Rabies, animal
Diphtheria	Rabies, human
Encephalitis, California serogroup viral	Rocky Mountain spotted fever
Encephalitis, eastern equine	Rubella (German measles)
Encephalitis, St. Louis	Salmonellosis
Encephalitis, Western	Shigellosis
Escherichia coli O157:H7	Streptococcal disease, invasive, group A
Gonorrhea	Streptococcus pneumoniae, drug-resistant
Haemophilus influenzae, invasive disease	Streptococcal toxic-shock syndrome
Hansen disease (leprosy)	Syphilis

Hantavirus pulmonary syndrome  
Hemolytic uremic syndrome, postdiarrheal  
Hepatitis A  
Hepatitis B  
Hepatitis C; non-A, non-B  
HIV infection, pediatric  
Legionellosis

Syphilis, congenital  
Tetanus  
Toxic-shock syndrome  
Trichinosis  
Tuberculosis  
Typhoid fever  
Yellow fever

**Please check with your instructor if you would like to write about any other disease/organism.**