1-2003

MICB 407.01: Topics for Clinical Diagnosis - Laboratory

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MICB 407
TOPICS FOR CLINICAL DX LAB
LAB – MONDAYS – 5:15 HS 404 UNLESS OTHERWISE INDICATED

Note: Student will be required to pick a topic (disease, testing procedure, or other subject related to the clinical lab), research the topic in clinical journals/texts, prepare a scientific report and present a short oral report to the class during lab session. Topics must cleared with instructor. Written reports will be graded for scientific content and format.

Feb 3 Lecture and discussion: Laboratory safety, OSHA regulations for blood borne pathogens. Talk about and examine safety devices used in the lab for protection of laboratory workers. Discuss the OSHA blood borne pathogen plan to include Hepatitis B, C and HIV

Feb 10 Lecture and hands on demonstration**: Diagnostic Immunology and Endocrinology** Discuss and utilize rapid diagnostic tests for identification of streptococcal, mycoplasma, helicobacter, staphylococcal agents, and viral pathogens involved in mononucleosis. Discuss various immunological tests (EIA, ELISA, counterimmunoeletrophoresis, and latex aggl'n) used in the lab.

Collect samples for culture of mycelial and yeast phase fungi. Bring samples to Feb 24 lab.

Feb 17 Holiday

Feb 24 Lecture and demonstration**: Diagnostic MYCOLOGY** (Quiz over first two labs) Discuss mycology and various methods used in the clinical lab to identify mycelial and yeast phase fungi. Observe 35mm slides and discuss clinical case studies with fungal etiology

Inoculate selective media for isolation of mycelial and yeast phase fungi

Mar 3 Work on identification of fungi. Discussion on rapid work up of clinically important bacteria. Hand out bacteria for culture.

Mar 10 Finish Mycology. Continue to work on bacterial identification using rapid testing and the API identification scheme. (Quiz over last two labs)

March 17: continue clinical bacteria isolate identification

Mar 24 SPRING BREAK

March 31: Handout unknown bacterial agents for identification. Inoculate selective and differential media for isolation and identification of unknown bacteria. Observe clinically important gram stains. Discuss case histories.

Apr 7: Work on isolation and identification of unknown bacteria samples. Utilize rapid testing and API biochemicals to identify bacteria. Schedule appointment to bring bacterial isolates to the Western Montana Clinic lab to be tested on the Vitek microbiology instrument.

Apr 14: Finish bacterial identifications.

Apr. 21 Hand back Vitek identification reports. Presentation of research reports to class. Overhead projector available.

Apr 28 Final lab test: Hand in written research reports and lab notebooks to be graded.

Final grade determinations:

- 2 quizzes worth 50 pts each > Research paper worth 30 pts >Notebook 30 pts
- Final test worth 100 pts > Bacterial unknown worth 30 pt

NOTE: Non-scheduled lab time will be necessary for media determinations and work up

MICROBIOLOGY 407
CLINICAL DIAGNOSIS LABORATORY
SPRING SEMESTER, 2003

TIME/DATE: 5:10-7:00 PM WEDNESDAY HS 405 (unless otherwise indicated)

FEBRUARY 7 Tour St. Patrick Hospital and WMC labs. Meet at St. Pat's lab at approx. 5:15-5:30 pm (SPH lab is located near the elevators past main entrance)

FEB 14: Lecture and demonstration- diagnostic immunology and endocrinology

FEB 21: Lecture and demonstration – diagnostic microbiology - *QUIZ*

FEB 28: continue with microbiology – handout unknown samples - *QUIZ*

WORK INDEPENDENTLY THIS WEEK WITH UNKNOWNS

March 7: Mycology identification scheme and work on bacterial unknowns

March 14: a. Finish isolation of bacterial unknowns and prepare slanted cultures for storage over Spring break.
b. Look at mycelial and yeast phase fungi. Perform tease mounts and lactophenol cotton blue preparations. Set up rapid diagnostic yeast identification kit.

MARCH 21: Spring break

March 28: Examine yeast identification results. Finish mycelial fungi identification

DURING THE WEEK OF MARCH 25TH-SCHEDULE A 1-2 HR BLOCK OF TIME TO SET UP BACTERIAL UNKNOWNS ON VITEK INSTRUMENT AT WMC LAB

WEEK OF APRIL 2ND -- GET UNKNOWN RESULTS BACK FROM VITEK AND FINISH NOTEBOOKS AND FINAL BACTERIAL UNKNOWN REPORTS

ADDITIONAL – SCHEDULE A 2-HOUR VISIT TO OBSERVE IN THE WESTERN MONTANA LAB. THIS CAN BE IN PHLEBOTOMY, OR IN THE TECHNICAL AREAS OF THE LAB (CAN BE SCHEDULED ANYTIME PRIOR TO FINAL EXAM.)

April 11: >FINAL EXAM
> NOTEBOOKS AND UNKNOWN REPORTS DUE

FINAL GRADE DETERMINATION:
- 40% QUZZES
- 20% WRITTEN REPORT – UNKNOWN WORK-UP
- 05% NOTEBOOK RECORD OF LABS
- 35% FINAL TEST