The Microscope in the Clinical Laboratory

- Is an essential tool to the Medical Laboratory Scientist (MLS)
- To provide quality, consistent results the MLS must be knowledgeable of microscope:
  - Use
  - Care
  - Maintenance
  - Best practices

Microscope Use in the Student Laboratory

- Manual microscopy with brightfield microscopes
- You are responsible for the competent use and care of your brightfield microscope
- Assigned ONE brightfield microscope for the whole summer

The Microscope – Dust and Daily Cleaning

- Dust
  - Greatest cause of harm
  - Storage to decrease/eliminate dust 'exposure'
- Daily cleaning with lens cleaner and lens paper

The Microscope – Immersion Oil

- Immersion Oil
  - Only used with oil immersion lens/objective
  - Cleaning after usage
    - Step 1 – use dry lens paper to remove excess oil
    - Step 2 – use lens paper with lens cleaner applied to it for additional cleaning

Microscope Use and Ergonomics

- Check your comfort
- Do not want your shoulders or neck to be strained
- Adjust your chair height appropriately
Microscope Use and Care Document

• Located on Blackboard in the MLS 407 Microscopy Unit and in Dropbox on the Student Laboratory iPads

• Primary microscope reference throughout the year in ALL courses

Reading and Homework Assignments

1. Watch: Watch video on Blackboard
2. Read: Microscope Use and Care document
   a. Read: Chapter 1, pages 1-18
   b. Complete: Study questions, pages 19-20
      1-9, 12-15, 17-18, 20
   a. Introduction (page 1-13)
   b. Parts of a Light Microscope (page 1-5)
   c. Microscope Lens (page 1-27)
   d. Using a Light Microscope (page 1-18)
   e. Other types of Microscopy (page 1-8)
5. Complete: Microscopy Homework Quiz on Blackboard prior to in-class activity. Quizzes not submitted prior to this time will receive a zero.

Microscope Use and Eyeglasses

If you wear eyeglasses –

• You can take them off during scope work, but keep the following in mind:
  − If you wear toric eyeglasses you will need to keep them on
  − You will need to remove gloves or use a clean paper towel to take them on and off
  − Will need to set them on a “dirty” workspace
  − It can be difficult to see a report form to record results if you are near sighted
  − Can clean eyeglasses at the end of lab with an alcohol wipe