Veterinary Science
Preparatory Training for the Veterinary Assistant

Floron C. Faries, Jr., DVM, MS
Bacteriologic Tests

Floron C. Faries, Jr., DVM, MS
Objectives

- List and describe procedures for the four general methods of bacteriologic diagnosis
- Identify the different morphologies of bacteria
- Describe the process of Gram’s stain
- Describe the equipment required to perform a culture
- Describe the agglutination test
- Describe the process of animal inoculation
General Methods

- Direct microscopic examination
- Culture
- Serologic tests
- Animal inoculation
Direct Microscopic Examination

- Procedures
  - Unstained blood smear on slide
  - Stained blood smear on slide

- Bacteria identification
  - Shapes
    - Cocci – spherical shape
    - Bacilli – rod shape
    - Spirilla – spiral shape
Gram’s stain

- Gram-positive – blue color
  - Gentian violet, iodine, alcohol
- Gram-negative – red color
  - Red dye
Culture

- **Procedure**
  - Autoclave, growth media, incubator
  - Growth characteristics
  - Gram’s stain slide smear
  - Tube sugar reactions
Serologic Tests

- Procedure
  - Detect antibody level in serum
    - Agglutination test – antibodies react with antigen
Animal Inoculation

Procedure

- Inoculate laboratory animals (rabbit, guinea pig)
- Examine tissues of laboratory animals
  - Histopath tissue slide
  - Gram’s stain slide smear
  - Tube sugar reactions