**Introductory Medical Microbiology**

**Laboratory Notes**

**BIOL 2161L**

# CLASSIFICATION OF COMMON BACTERIA

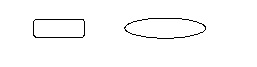
**MORPHOLOGICAL EXAMINATION**:  Choose a prepared slide labeled “Typical Bacteria” or “Bacterial Types.”  Focus with all  objectives in sequence;  sketch what you see on high-dry and then proceed to oil-immersion.  Sketch the examples you see on oil.  Look for the different morphological types.  Describe the bacteria you see according to shape and arrangement:

* **BY SHAPE:**

**coccus** – round or spherical shaped organism.

http://www.highlands.edu/academics/divisions/scipe/biology/labs/rome/classi3.gif

                                                **bacillus** – rod



                                             **spirillum** – spiral or curve

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* **BY ARRANGEMENT:**

Another important characteristic that can lead to identification is arrangement of cells. The arrangement of a group of cells arises due to the nature of their division. As the cells divide in different planes, different arrangements occur. The following are some common arrangements associated with the common shapes of bacterial cells:

**Cocci: Division in one plane**

1.        **Diplococci**: These arrangement occurs when a cell divides and the pair stay together after division

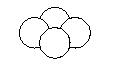


2**.        Streptcocci**: After division, the cells stay together and form a chain of cells

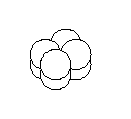
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**Cocci: Division in multiple planes**

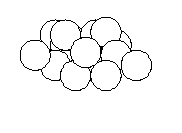
3.        **Tetrads:** Tetrads are produced when cellular division occurs in two planes and the cells remain together



1. **Sarcinae:** Sarcinae are described as packets or cube-like bundles of cells. They are formed when division occurs in three planes and the cells remain together



1. **Staphylococci:** When division occurs in multiple planes and a grape-like bunch of cells is formed or a broad sheet of cells is formed, that is referred to as a staphylococci arrangement.

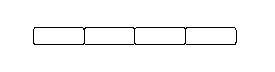
   

**Bacilli:** Division occurring across the short axis

1. **Diplobacilli:** two bacilli that are paired together

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1. **Streptobacilli:** cells form a chain



**Note: Bacilli have fewer arrangements because division takes place only across the short axis.**

You will need to be familiar with these terms as many textbooks and references use these terms to describe bacterial characteristics. You will also be using these terms for your exams. It is good practice to use these terms in lab when trying to describe bacterial cells to your partner or the instructor.

***Use the space provided below fork sketches and notes:***