

# Immunology

## Lec. 3

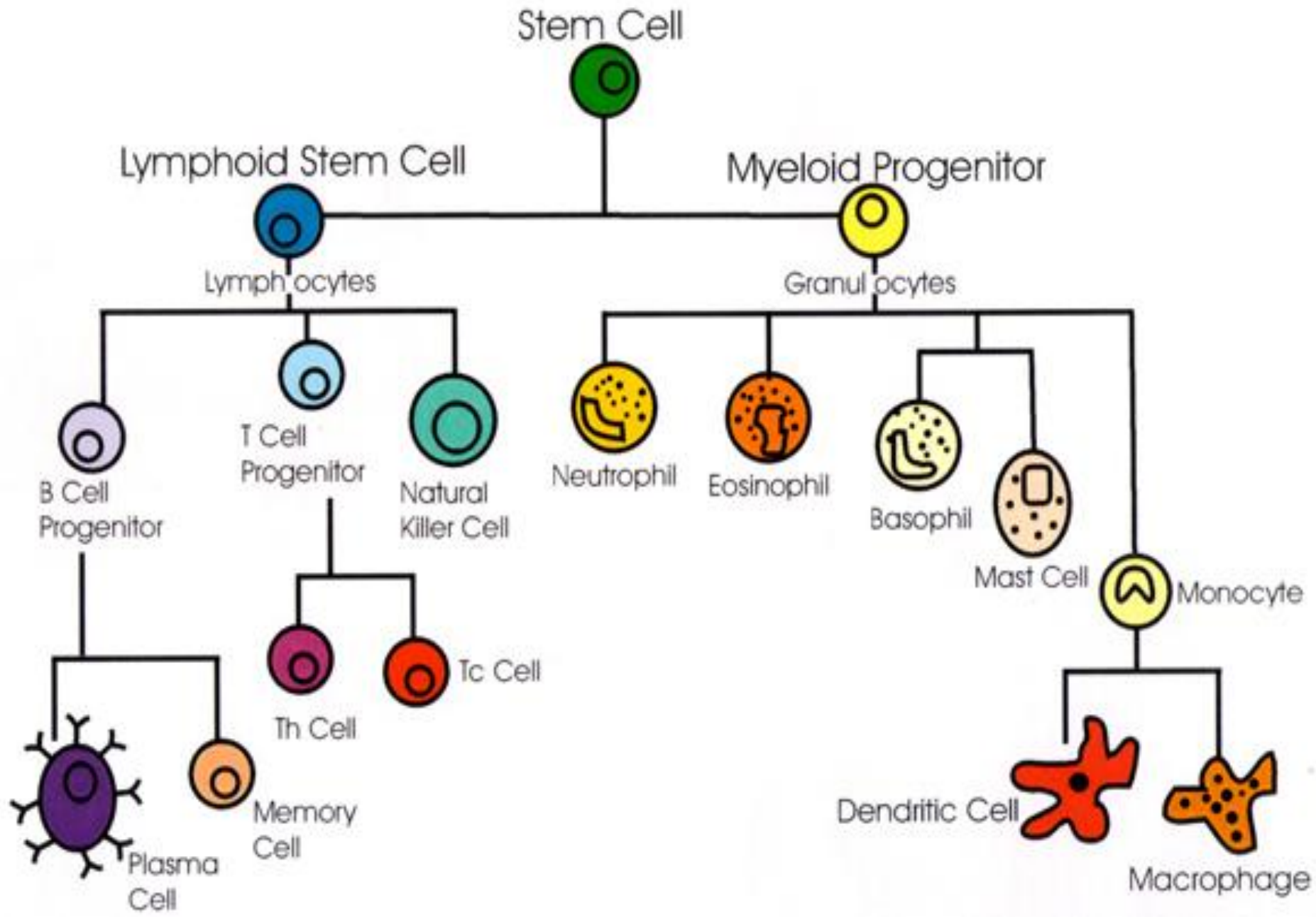
### **The lymphocytes**

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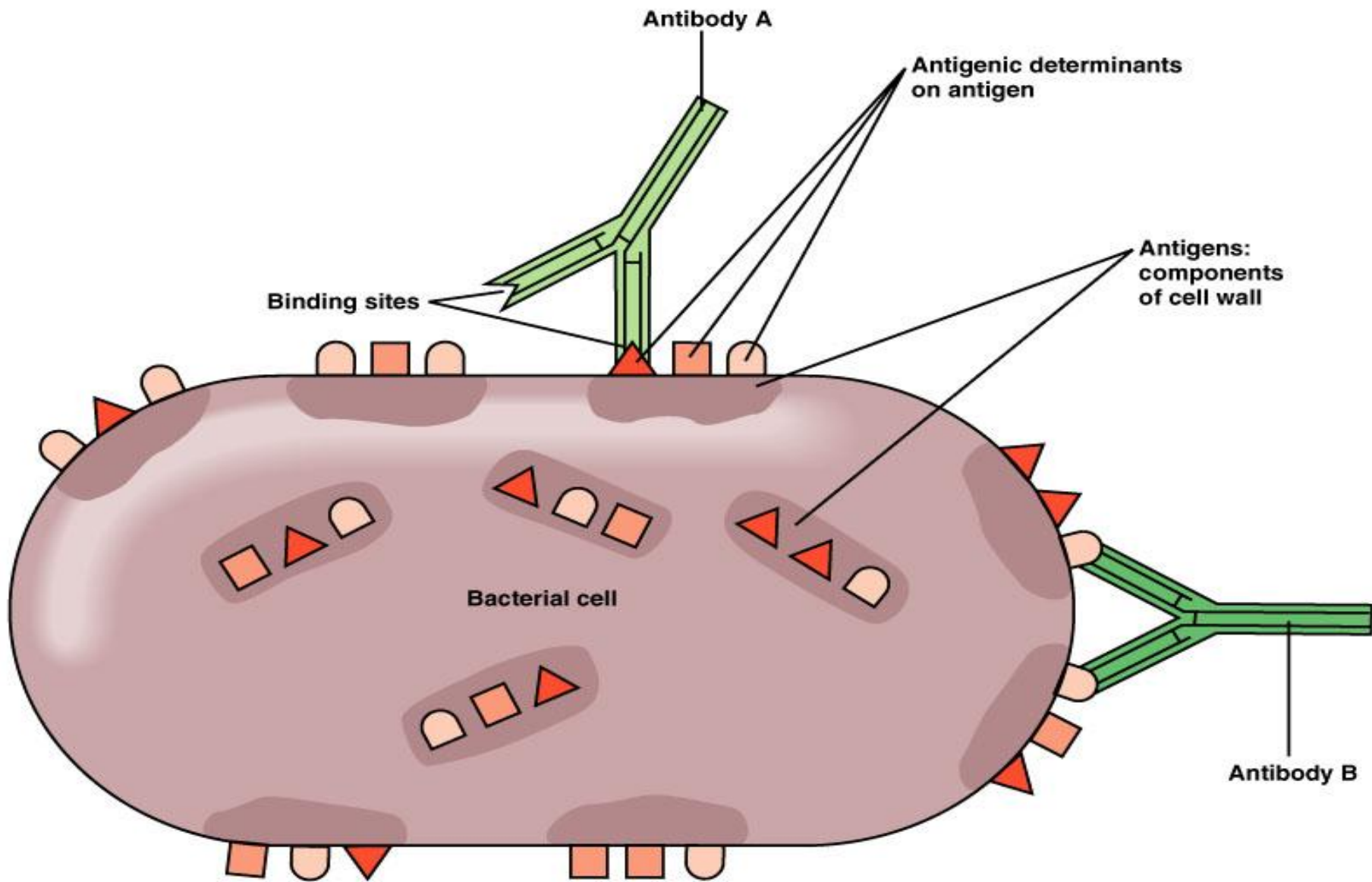
# *The lymphocytes*

- 1-The lymphocytes are one of the classes of white blood cells, capable of responding to antigens in specific host defense mechanism.
- 2-Under the microscope, all lymphocytes look like, differing only in size and other physiologically variable feature.
- 3- The lymphocytes fall in to three large sets, the *T-cell*, *B-cell* and *natural killer (NK) cells*.

# Cells of the Immune System



- **Antigens:-** are substances that are recognized by a particular immunoglobulin or T-cell receptor and they can serve as the target of an immune response.
- **Immunogens:-** are any substance that is capable of inducing an immune response.
- **Antigenic determinant or epitope:-** is the specific site to which a particular immunoglobulin or T-cell receptor binds.



- **The characters of good immunogenic:-**
- **A/ Chemical composition**
- **B/ Molecular Size**
- **C/ Foreignness**

- **Antibodies**

- Antibodies are glycoproteins, which are sensitized, and secreted by plasma cells in response to specific antigenic stimulation and it forms about 20% of plasma protein.
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- ▶ The primary function of an antibody in body defenses is to combine with antigen, which may be enough to neutralize bacterial toxins or some viruses.
- ▶ A secondary interaction of an antibody molecule with another effector agent such as *complement* is usually required to dispose of larger antigens such as bacteria.

