AP Biology

Chapter 43 - The Immune System

Guided Reading Assignment Campbell's 10\textsuperscript{th} Edition

\textbf{Essential Knowledge}

2.D.4 Plants and animals have a variety of chemical defenses against infections that affect dynamic homeostasis

LO 2.29 The student can create representations and models to describe immune responses.
LO 2.30 The student can create representations or models to describe nonspecific immune defenses in plants and animals.
LO 2.43 The student is able to connect the concept of cell communication to the functioning of the immune system.

1. Label the diagram below:
2. Label the diagram and describe the process of phagocytosis by macrophages.

3. Describe the role of histamine in the inflammatory response.

4. Define the following terms:
   a. Natural Killer (NK) cells
   b. Antigen
   c. Epitope
   d. B lymphocyte
   e. T lymphocyte

5. Label the diagram concerning antigen receptors on lymphocytes.

6. Contrast the way T cell receptors recognize and bind with antigens with the way that B cell receptors do?
7. Label the diagram concerning clonal selection of B cells:

8. Contrast the primary immune response with the secondary immune response.

9. Define the following terms:
   a. Humoral immune response
   b. Cell-mediated immune response
   c. Helper T cell

10. Label the following overview of the acquired immune response:
11. Label the diagram concerning the role of helper T cells

12. Contrast active and passive immunity:

13. How does the immune system respond to your blood type?

14. How does the immune system respond to blood of a different type?

15. Describe how MHC molecules are responsible for rejection of tissue or organ transplants.

16. Label the diagram concerning the allergic response.