Week 5 Immune System

Learning Objectives:

- Discuss the fundamental need for the immune system.
- Identify physical and chemical barriers against pathogenic invasion.
- Describe mechanisms of immune invasion by pathogens.
- Predict the outcome of scenarios of immune deficiency.
- Summarize the key features of innate and adaptive immune responses.
- Describe antigen-antibody interactions.
- Classify immune cell types by their role in responses.
- Define immunological memory and its importance.

Introduction:

Immunity refers to the body's ability to defend itself against disease and infection. Immunity can be categorized into two different forms: innate or adaptive. We will explore the 2 types of immunity. Have you ever wondered what infections look like from the pathogen's perspective? If our immune systems are so amazing, why do we get sick at all? The immune system is a complex army of cells and tissues that work together to protect your body from infection. In this simulation, you'll play the part of a pathogen and try to establish an infectious colony within a human body. You will come face to face with the major cells and organs of the immune system. As the immune system fights back, you will gain a unique perspective on how immune cells work to destroy incoming pathogens.

By exploring data maps from pivotal moments in human history you will see how an individual's immunological status contributes to the health of their community and the spread of disease worldwide. You'll meet the key cells involved in immune memory and explore the role of immunization in protecting people from preventable diseases. You will undertake a series of challenges in preparation for an important global health investigation.

Assignment:

Part 1 Labster "Introduction to Immunology: Explore the immune system and save the world"

As you complete the lab, have the lab report ready to record data. The theory section is a helpful resource.

Part 2 Complete the lab report.