

IMMU 411: Immunological Memory: New Insights Into Influencing Factors and Mechanisms

When you are infected with a pathogen, your body generates a protective immune response to control and eliminate that threat. Months or even years later, you get infected again, but now your body response is faster and stronger, and you don't get sick anymore. This is called immune cell memory. It is well established that T and B lymphocytes are the main memory cells of the adaptive immune response, however recent studies have shown that cells from our innate immune system may also be "trained" to respond more efficiently to a second encounter with a pathogen. This course will bring the latest insights into immune memory, highlighting the difference between innate and adaptive immunological memory and how factors such as vaccines, diet, and infectious diseases influence memory development.

Learning Objectives

- Define and distinguish innate and adaptive immune cell memory.
- Recognize recent discoveries in immune memory, specifically how infectious diseases, vaccines, and diet influence memory development
- Predict how innate or adaptive memory responses may be protective, such as by limitation of infection, or deleterial, such as by hyperinflammation in tissues.
- Integrate this knowledge in different areas of research or in your daily life.

Credits: 2

Class Type: Graduate Course

Prerequisites:

IMMU 403

The above course or equivalent graduate-level immunology course or knowledge.

Program: Immunology and Microbiology

Availability Summer 2022