

Editorial

Elaborative the note on immunology and immune system

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EDITORIAL

Immunology deals with studies related to different aspects of the immune system like the structure, cells, response against antigens, function, and disorders, in all organisms; it is also an emerging branch of medical science. The immune system consists of chemicals process collection of cells, and mechanism that aim to protect foreign antigens from the body, such as microbes (organisms such as, parasites, bacteria, and fungi), cancer cells, viruses, and toxins, the immune system consists of two lines of defense; adaptive immunity and innate immunity.

Innate immunity is the first line of defense and rapid defense against the antigen, and it is an independent- antigen defense mechanism used by the host within hours of encountering an antigen.

It has no memory cell, reacts and recognizes against microbes only, and also eliminates succeeded microbes that entered the host. Three types of barriers are present they are Physical barriers, Chemical barriers, and Mechanical barrier. On other hand, adaptive immunity is second-line defense and also antigen-specific, antigen-dependent therefore, includes a lag time between body via lymph or blood so that they can detect antigens entering the body from different sources. An important branch of immunology is immunotherapy, where components of the antigens or immune system are used to treat a disorder or disease as a form of treatment.

The Immune system has different forms and types of cells whereas the Hematopoietic stem cells in the bone marrow are divided into 2 types of cells called as the lymphoid stem cell and the myeloid progenitor.

A Lymphoid stem cell is further divided into lymphocytes whereas lymphocytes are subdivided into T lymphocyte, B lymphocyte, and NK cells. T lymphocyte is divided into a plasma cell and memory cell and B lymphocyte are divided into THz cell and Tic cell. Myeloid progenitor is further divided into Granulocytes whereas Granulocytes are subdivided into Neutrophil, Eosinophil, Basophil, Mast cells, and monocytes. Monocyte is divided into dendritic cell and Macrophage.

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