Short Communication

iMedPub Journals
www.imedpub.com

Annals of Clinical and Laboratory Research
ISSN 2386-5180

2020
Vol.8 No.6:334

DOI: 10.36648/2386-5180.8.6.334

Structure and Function of the Immune System

Anusha Polampelli*

Dept of Pharmacy, St. Peters Institute of Pharmacy, India

*Corresponding author:
Anusha Polampelli

anusha2polampalli@gmail.com

Dept of Pharmacy, St peters Institute of Pharmacy, India

Abstract

The immune system is the main defence system. It protects the body from the environmental agents like microbes thereby protecting the integrity of the body. The immune system does this by recognizing between the self and non self. It is divided into two types innate immunity and specific immunity.

Keywords: Immune system, Cellular immunity

Received: November 11, 2020, **Accepted:** November 20, 2020, **Published:** November 27, 2020

Citation: Polampelli A (2020) Structure and Function of the Immune System. Ann Clin Lab Res. Vol.8 No.6:334

Introduction

Structure: The primary central lymphoid organs are bone marrow and the thymus. The thymus is located in the anterior part of the thorax at the base of the heart. The thymus function is to provide appropriate microenvironment for the development of small lymphocytes to become T lymphocytes. These cells are involved in the cellular immunity.`The secondary lymphoid structures called peripheral lymphoid organs. These include the spleen, lymph nodes, tonsils, Peyer's patches and diffuse.

Organs of the Immune system

Thymus: The thymus is located in the anterior part of the thorax at the base of the heart. The main function of the thymus is to convert immature lymphocytes to T-lymphocytes.

Liver: The liver is the main organ that is responsible for synthesizing the proteins of the complement system. The liver contains the phagocytic cells that ingest bacteria in the blood while the blood passing through the liver.

Bone Marrow: The bone marrow is the part where all cells of the immune system develop from primitive stem cells.

Tonsils: These are the collections of lymphocytes in the throat.

Lymph Nodes: These are the collection of B and T lymphocytes throughout the body.

Spleen: It is a collection B and T lymphocytes and the monocytes. It filters the blood and provides a site to interact between the organism and cells of the immune system.

Blood: Blood is the part of the circulatory system it carries the proteins of the immune system from one part of the body to another.

Cells of the immune system

The main cells of the immune system are Bone marrow, Stem cells, Thymus, B-Cells, Cytotoxic T-cells, Helper T-cells, Plasma Cells, Immunoglobulins, Neutrophils (Polymorphonuclear PMN Cell), Monocytes, Red Blood Cells, Red Blood Cells, Platelets and Dendritic Cells.

Functions of the immune system

The immune system gets activated by different things these are called the antigens When the antigens attach to a specific receptors on the immune system the processors are triggered by the body, The main aim of the immune system is to fight against the foreign antigen, to remove and to recognize and neutralize the harmful substances from the environment and to fight against the disease causing organisms like cancers.

Types of immune system

Innate immunity: It is a type of general protection. Everyone is born with this immunity.

Adaptive immunity: It develops throughout our lives.

Passive immunity: It is a type of immunity that is borrowed from other sources and the time period it lasts only for short time.