

# **Practical Immunology**

## **Lab : 5**

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**College of Medical Technology**

**Department of Medical Laboratory Technology**

**Practical Immunology 2023**

**LAB 5**

**Stage 3rd**

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### ANTIGENS

#### What is an antigen?

An antigen is a substance that is recognizable to the immune system.

#### What are antigen types?

Generally for the human body they are on two types: Self and non-self “or foreign” antigens.

And they are aslo on two types according to their quality “antigenicity” which are good and poor antigens, depending on their (molecular size, complexity, structural stability, degradability, foreignness).

#### Examples of antigens:

- 1- Proteins
- 2- Chemicals
- 3- Food
- 4- Viruses

#### What are adjuvants?

It's any substance that increases the memory immune response to a co-administered antigen.

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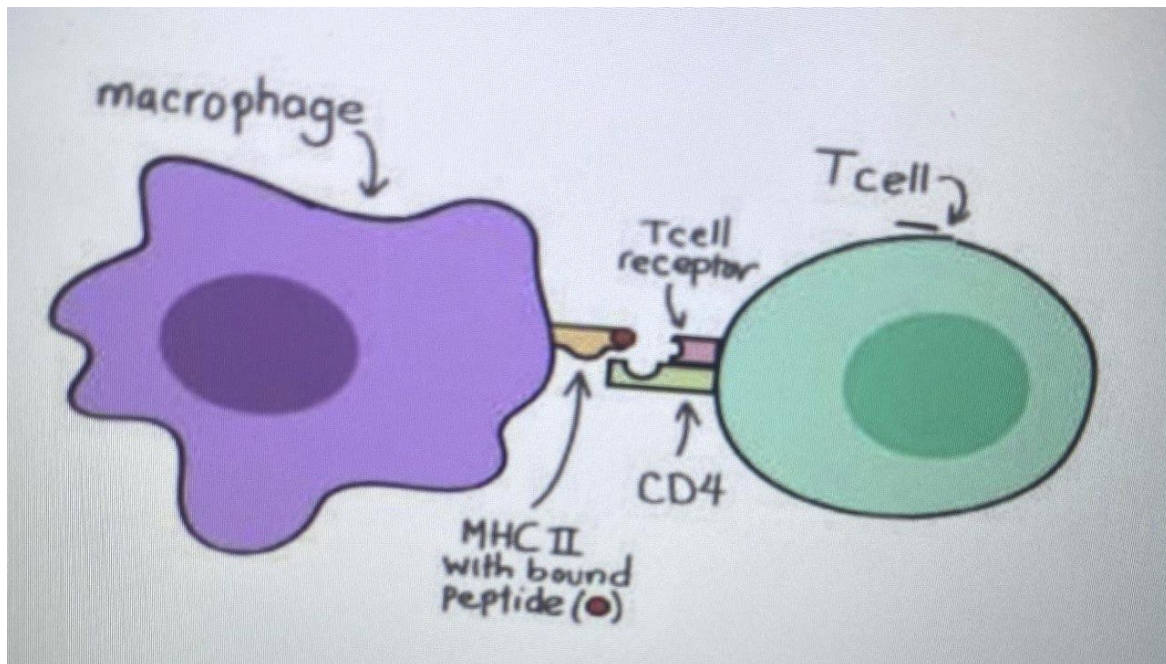
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### Antigenic determinants for B-cells and T-cells

The recognition of antigens by B-cells and T-cells is done as

the following:

1. B-cells have embedded antibodies in their cell membrane which are responsible for the recognition of the antigen and binding to it then destroying it and presenting it on their MHCII (major histocompatibility complex) to be recognized by the T-helper cell and then stimulating other lymphocytes and making them effectors which then carrying out the immune response.



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2. T-cells vary in their recognition methods but generally they engulf (or phagocytosis) the antigen then they present it on their membranes on their MHCII for T helper cells to initiate the immune response.