# The People's Democratic Republic of Algeria Ministry of Higher Education and Scientific Research University Center of Mila Faculty of Science and Technology Department of Natural and Life Sciences

## TD 02 – Immunology

#### **Check the correct answer(s):**

- Plasma cells derive from:
  - o Macrophages
  - o T4 lymphocytes
  - o B lymphocytes
  - Cytotoxic lymphocytes
- B lymphocytes:
  - o Possess membrane receptors identical to antibodies
  - o Form clones, each specific to a single epitope
  - o Only appear after a secondary response
  - o Can differentiate into memory B cells
- Indicate the type of cells not involved in the innate response:
  - o Mast cells
  - Lymphocytes
  - o Macrophages
  - o Dendritic cells
- Among the various groups of blood cells, only one originates from the bone marrow and is transformed in the thymus:
  - o B lymphocytes
  - o T lymphocytes
  - o Polymorphonuclear cells
  - Plasma cells
- Worn-out blood cells are destroyed in:
  - o The bone marrow
  - o The spinal cord
  - $\circ \quad \text{The thymus} \\$
  - The spleen
- When a B lymphocyte encounters an antigen, it can produce:
  - o A memory lymphocyte and a plasma cell
  - o A memory lymphocyte and a cytotoxic lymphocyte
  - o A polymorphonuclear leukocyte
  - o An inflammatory reaction
- Histamine is secreted by:
  - o Mast cells
  - o Lymphocytes
  - o Basophilic polymorphonuclear cells
  - Basophilic polymorphonuclear cells

### 2) Complete and explain the link between the natural and specific immune response

Macrophages, dendritic cells, cytokines, neutrophils.

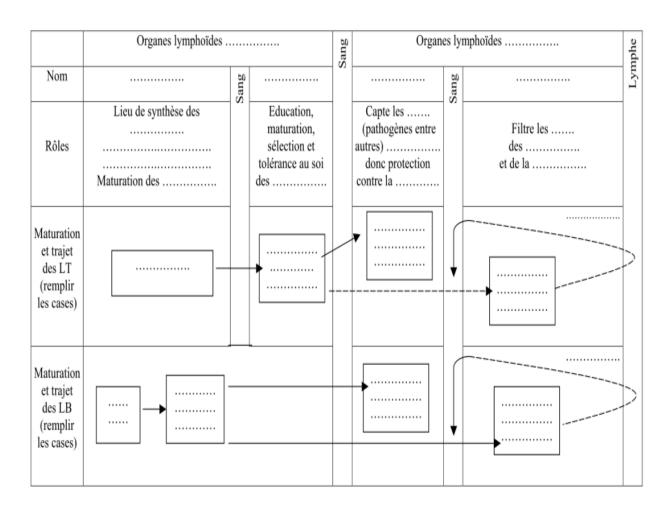
Lymphocytes, B lymphocytes, natural killer cells.

Antigen presentation, memory cells.

Response against antigens.

Complete the following tables:

Non-specific Immunity	Specific Immunity



# **TD 02 – Immunology Correction**

1) Check the correct answer(s):		
• Plasma	cells derive from:	
	Macrophages	
	Γ4 lymphocytes	
	B lymphocytes □	
	Cytotoxic lymphocytes	
B lympl	• • • •	
	Have membrane receptors identical to antibodies □	
	Form clones, each specific to a single epitope □	
	Appear only after a secondary response	
	Can differentiate into memory B cells □	
	e which type of cells does not participate in the innate immune response:	
	Mast cells	
o 1	Lymphocytes	
	Macrophages	
。 I	Dendritic cells	
• Among	the various groups of blood cells, only one originates from the bone marrow and	
matures	s in the thymus. It is:	
o I	B lymphocytes	
0 7	Γ lymphocytes □	
o <b>I</b>	Polymorphonuclear cells	
	Plasma cells	
• Worn-o	out blood cells are destroyed in:	
o <b>I</b>	Bone marrow	
0 \$	Spinal cord	
0 7	Гһутиѕ	
0 \$	Spleen □	
	B lymphocyte encounters an antigen, it can give rise to:	
	A memory lymphocyte and a plasma cell □	
	A memory lymphocyte and a cytotoxic lymphocyte	
	A polymorphonuclear leukocyte	
	An inflammatory reaction	
	ine is secreted:	
	By mast cells □	
	By lymphocytes	
	By basophilic polymorphonuclear cells □	
o 1	By neutrophilic polymorphonuclear cells	
2) Complete and explain the link between innate and specific immune responses:  Macrophages, dendritic cells, cytokines, neutrophils → Innate immune response  Lymphocytes, B lymphocytes, natural killer cells → Adaptive immune response  Antigen presentation, memory cells → Adaptive immunity components  Response against antigens → Overall immune response function		

# Complete the following table:

## **Non-Specific Immunity**

## **Specific Immunity**

Immediate response

Innate immune cells (macrophages, neutrophils, NK cells) Adaptive immune cells (B and T lymphocytes)

No memory

Generalized response

Delayed response

Memory formation (memory B and T cells)

Targeted response against specific antigens

