

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

	Organes lymphoïdes			Sang	Organes lymphoïdes			Lymph
Nom	.....	Sang	.....		.....	Sang	.....
Rôles	Lieu de synthèse des		Education, maturation, sélection et tolérance au soi des		Capte les (pathogènes entre autres) donc protection contre la		Filtre les des et de la	
Maturation et trajet des LT (remplir les cases)	.....		.....		.....		.....
Maturation et trajet des LB (remplir les cases)	.....		.....		.....		.....

1) Check the correct answer(s):

- **Plasma cells derive from:**
 - Macrophages
 - T4 lymphocytes
 - **B lymphocytes** ☐
 - Cytotoxic lymphocytes
- **B lymphocytes:**
 - **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** ☐
- **Indicate which type of cells does not participate in the innate immune response:**
 - Mast cells
 - **Lymphocytes** ☐
 - Macrophages
 - Dendritic cells
- **Among the various groups of blood cells, only one originates from the bone marrow and matures in the thymus. It is:**
 - B lymphocytes
 - **T lymphocytes** ☐
 - Polymorphonuclear cells
 - Plasma cells
- **Worn-out blood cells are destroyed in:**
 - Bone marrow
 - Spinal cord
 - Thymus
 - **Spleen** ☐
- **When a 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
- **Histamine is secreted:**
 - **By mast cells** ☐
 - By lymphocytes
 - **By basophilic polymorphonuclear cells** ☐
 - 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

Immediate response

Innate immune cells (macrophages, neutrophils, NK cells)

No memory

Generalized response

Specific Immunity

Delayed response

Adaptive immune cells (B and T lymphocytes)

Memory formation (memory B and T cells)

Targeted response against specific antigens

