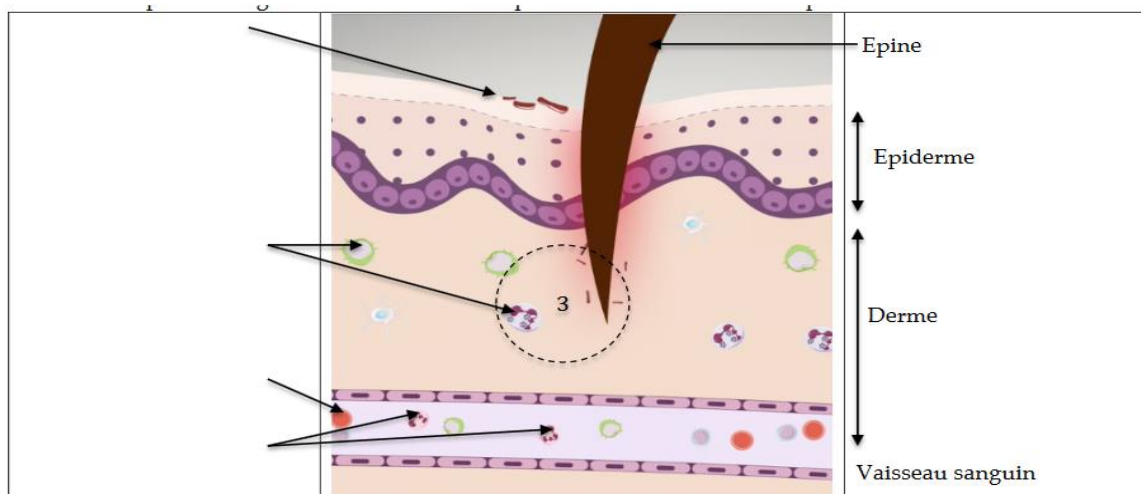


**The People's Democratic Republic of Algeria**  
**Ministry of Higher Education and Scientific Research**  
**University Center of Mila**  
**Faculty of Science and Technology**  
**Department of Natural and Life Sciences**

**TD 04 – Immunology**

**Exercise 01:**

**Complete the caption: an injury breaks the skin's natural barrier.**



2. What is the role of sentinel cells, where are they located, how do they act, and which ones are the first to take action?
3. What are the characteristic clinical signs of the inflammatory response?
4. Which cells intervene afterward? How?

**Exercise 02:**

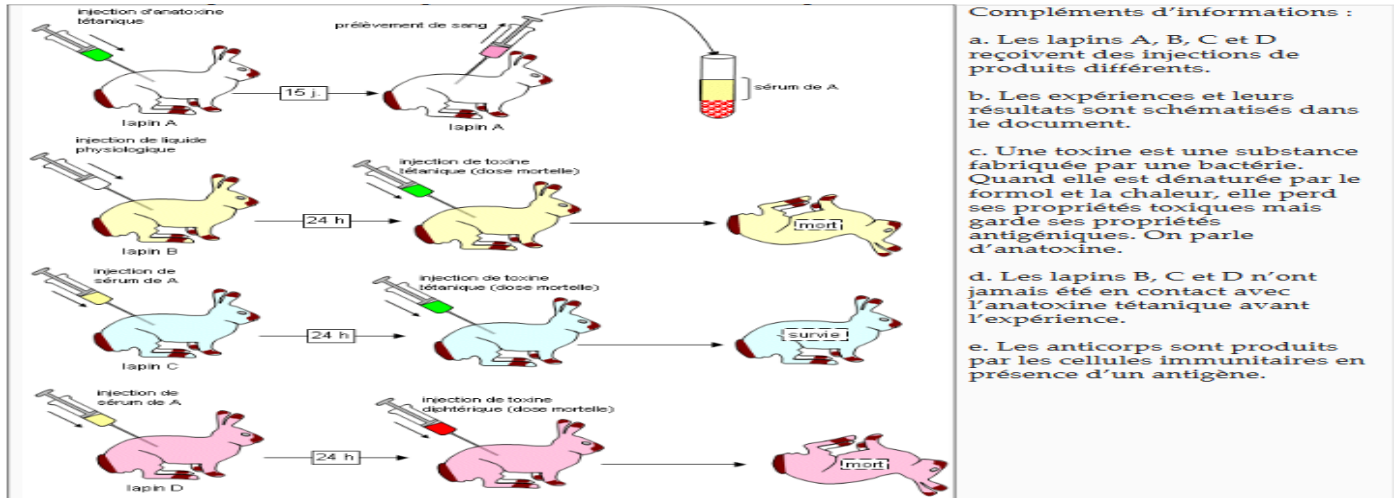
We are monitoring the evolution of serum antibody levels against *Toxoplasma gondii* (the parasite responsible for toxoplasmosis) in three pregnant women.

1. Comment on the cases of the three women and their three newborns.
2. How can we determine if the newborns are infected with *Toxoplasma*?

Femme	Anticorps	Durée de la grossesse				Nouveau-né
		1 mois	3 mois	6 mois	9 mois	
A	IgG	<1	<1	<1	<1	<1
	IgM	<1	<1	<1	<1	<1
B	IgG	<1	10	200	120	100
	IgM	<1	60	15	<1	<1
C	IgG	60	60	200	300	250
	IgM	<1	<1	<1	<1	<1

### Exercise 03:

The adaptive immune response contributes to the body's defense against external threats. The following experiments help highlight some characteristics of this adaptive immune response.



MCQ:

☐ The specific action against antigens during the immune response can be deduced from experiments on:

- a) Rabbits B and C
- b) Rabbits B and D
- c) Rabbits C and D
- d) Rabbits A and C

☐ The adaptive immunity related to the action of soluble molecules is demonstrated by the experiment on:

- a) Rabbit C
- b) Rabbit A
- c) Rabbit D
- d) Rabbit B

☐ Knowing the existence and role of antibodies, we can say that:

- a) The serum of A contains no antibodies.
- b) The serum of A contains anti-diphtheria antibodies.
- c) The serum of A contains anti-diphtheria and anti-tetanus antibodies.
- d) The serum of A contains anti-tetanus antibodies.