## 

# NEW THERAPEUTIC ANTIBODY FRAGMENTS TO TREAT TOXOPLASMOSIS

## CONTEXT

Toxoplasmosis is a pandemic parasite infection affecting all hot-blood animals.

Toxoplasmosis displays several clinical forms:

- Congenital toxoplasmosis;
- Ocular form that can lead to the blindness;
- Neurotoxoplasmosis (encephalitis, behaviour disorders).

Few indicators:

- Seroprevalence = 7 to 80%, depending on countries (37% in France)
- 200 000 to 300 000 new cases in France per year.
- 800 000 to 1 000 000 patients with ocular toxoplasmosis in France.

The current treatments are heavy (monitoring), not specific, and exhibit low efficiency and many adverse effects.

### TECHNOLOGY

Therapeutic antibody fragments targeting specifically a surface antigen of the infectious tachyzoite form of the *Toxoplasma gondii* parasite involved in parasite binding to host cells

Efficiency demonstrated in a mouse model of ocular toxoplasmosis with a singlechain variable fragment (scFv).

### ADVANTAGES

• Very high specificity of the treatment.

- Higher theorical tolerance and lower monitoring than current treatments.
- In situ treatment by intravitreal injection (commonly used in ophthalmology) to treat ocular toxoplasmosis.
- Treatment appropriate to all mammalians.

## **INTELLECTUAL PROPERTY**

Priority filing: April 2016.

SANTÉ Infectious diserses Immunology

## **#KEYWORDS**

Toxoplasmosis Therapeutic antibody Parasitology

## PARTNERSHIP

Available for codevelopment and/or licensing out

### **RESEARCH TEAM**

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