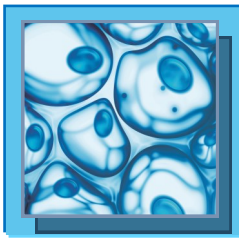

# ANIMAL HEALTH
# VETERINARY VACCINE

SATT NORD
Technology Transfer Office

## KEYWORDS:

* Subunit vaccine
* Nanoparticles
* Toxoplasmosis
* Mucosal route
* Intradermal route
* Sheep


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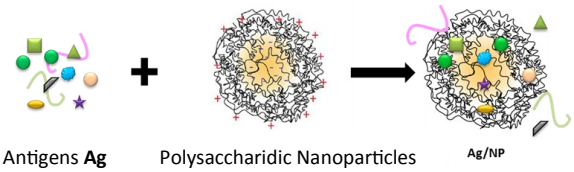
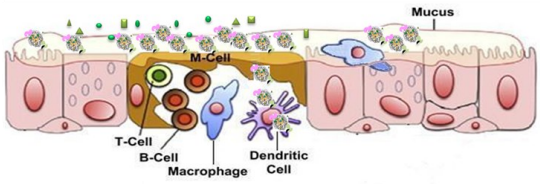
## DEVELOPMENT OF A VACCINE TO TREAT OVINE TOXOPLASMOSIS

Design of a subunit vaccine administered by mucosal or intradermal route and using polysaccharidic nanoparticles with lipidic heart.
The nanoparticles are able to deliver the antigens to the immune cells and induce a strong cellular response protective against toxoplasmosis infection.




## BENEFITS:

- Injection by mucosal route,natural route of infection, or intradermal route.
- Raises a protective cellular response without stimulating a strong humoral response
- Protects against abortion
- Protects cyst formation
- Long shelf life
- Stable
- Able to support cold chain rupture
- Multidose vaccine

## APPLICATIONS:

- Ovine toxoplasmosis vaccination
- Veterinary vaccines against neosporosis, chlamydiosis...

## INTELLECTUAL PROPERTY:

- Patent EP12370002.3
A pharmaceutical composition comprising a solid nanoparticle and at least an antigen for the treatment against intracellular pathogenic agent.
- PCT /Fr 13/000 239

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## DEVELOPMENT STATUS:

**Proof of concept in mice:**

- Characterization and formulation of the association nanoparticles /extract of antigens.
- Vaccination and challenge by mucosal route on unanesthetized mouses .
- 100% survival rate and reduction of 70% in the number of brain cysts

**Vaccine clinical trial on pregnant ewes and challenge with toxoplasma gondii on going.**

- Induction of specific and protective humoral and cell responses.


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Reference: Nanotoxo - 09/2014 - version 3.0 GB