

# Licensing Opportunity

**PACTT is proposing an exclusive licence on the use of new antigenic compositions derived from Plasmodium falciparum for the development of a malaria vaccine.**

**Field:**

- Malaria vaccine

**Development Phase:**

- First steps of development granted by a not-for-profit organization.
- Toxicology underway.

**Patent Status:**

- Priority date: May 7, 2008.
- Extended in PCT in due time, patent application WO2009136373, filed in the name of the University of Lausanne and Institut Pasteur naming as inventors G. Corradin, P. Druilhe, A. Jafarshad and C. Roussilhon.

**Innovative aspects:**

- New unstructured antigens that are targets of a protective immune response.
- Rapid vaccine manufacturing.

**Additional information is available upon request** (N Ref. IDF 06/08)

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## *New malaria vaccine candidate*

**Background**

Plasmodium falciparum, the causative agent of malaria, is a major public health problem principally in sub-Saharan African countries. Malaria causes more than 300 million acute illnesses and at least one million deaths annually. Although there has been some progress in the control and treatment of malaria, the development of a safe and effective vaccine remains an urgent unmet medical need. An effective vaccine is expected to be one that not only reduces the risk of infection by Pf sporozoites, but also induces immunity against Pf blood stage parasites and protects against morbidity and mortality from the disease.

**Description of the invention**

The present invention relates to the antigenic polypeptide p27A, a blood-stage protein of Plasmodium falciparum with yet unknown function, in the field of malaria vaccination.

**Proof of concept**

p27A is an unstructured polypeptide derived from the MAL6P1.37 protein of Plasmodium falciparum, with a limited polymorphism, a high antigenicity, a high immunogenicity and a high parasite-killing activity in the Antibody-Dependent Cellular Activity (ADCI). It was also shown that the total proportion of individuals who, under natural exposure to a malaria parasite, respond by specific IgG1 and IgG3 is very high. Prevalence for p27A was measured to be 86% for IgG1 and 82% for IgG3.

Moreover, the polypeptide of the invention is strongly associated with clinical resistance against malaria. Parasite-induced antibodies that are specific for the polypeptides of the invention are present in individuals who resist to malaria and are absent, or present at low titers, in individuals who have malaria attacks.

**Applications**

This invention aims at the use of a combination of immunogenic peptides in the preparation of a vaccine capable of stimulating an immune response against various Pf strains and preventing malaria-related morbidity and mortality.

**References**

"Vaccine potentials of an intrinsically unstructured fragment derived from the blood stage-associated Plasmodium falciparum protein PFF0165c", Infect Immun., 2009 Dec.