



Scientific/Technical offer to licensing

Ref. OTRI

200813R-Galvez, J

Knowledge area

Pharmacology
Organic Chemistry
Physical Chemistry

Collaboration

Technology available to licensing
Other collaborations may be considered

Potential radical cure for malaria

Inventors: Jorge Gálvez Álvarez, Ramón García-Domenech (Universitat de València), Dominique Mazier, Nassira Mahmoudi, Khémaïs Farhati, Martin Danis (Université Pierre et Marie Curie-Paris VI and Assistance Publique-Hopitaux de Paris) and Francis Derouin (Université Paris Diderot-Paris 7).

Background: The actual treatment of malaria is based on molecules directed against the parasite and more specifically its erythrocytic phase. Despite the high efficiency of anti-malaria compounds, few of them combine a wide scope on the different phases of the parasite (primaquine), but their toxicity restricts their use.

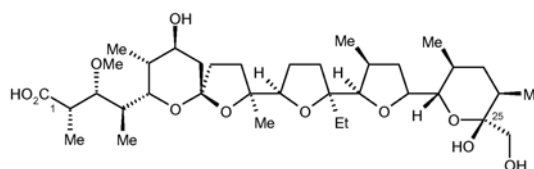
The invention: This offer describes a new antimalaria molecule, MONENSINE, which has the unique property to target the first obligate stages in mammal (including dormant forms hypnozoites), from sporozoite inoculation to the full maturation of the hepatic schizonts, and the events necessary for efficient parasite transmission by *Anopheles*.

Applications: The main application of the technology is in the **pharmaceutical area**, in pharmaceutical composition for the treatment and prevention of malaria.

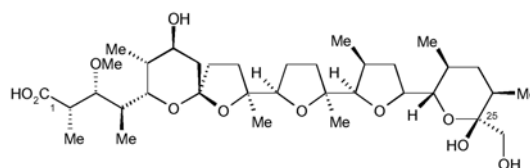
- True causal prophylaxis in malaria endemic area (activity against pre-erythrocytic parasites)
- Radical cure (activity against hypnozoites)
- Inhibition of mosquito transmission (activity against gametocytogenesis)
- Upstream action against the spread of disease

Advantages: The most remarkable advantages provided by this technology are:

- Inhibition of mosquito transmission decreases the dissemination of drug resistance (activity against gametocytogenesis)
- Molecule easily produced by fermentation
- *In vitro* activity at picomolar range
- True causal prophylaxis in malaria endemic area (activity against pre-erythrocytic parasites)
- Radical cure (activity against hypnozoites)
- Upstream action against the spread of disease



Monensin A



Monensin B

Avda. Blasco Ibáñez, 13
46010 Valencia (Spain)
Tel. +34 96 3983943
marta.garces@uv.es
www.uv.es/otri

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