Post-doc position

In the Framework of a French research contract (ANR), the group "*New antiplasmodial molecules and pharmacological approaches*" from CNRS Unit (LCC-CNRS, UPR8241, Toulouse, France) proposes a post-doc position for 12 months, possibly renewable.

The aim of this work will be to study malaria artemisinins-resistance.

This team has already made a major breakthrough by selecting *in vitro* a unique tool, the stable and highly artemisinin-resistant *Plasmodium falciparum* strain F32-ART[5], and by demonstrating that malaria artemisinin resistance involves young parasite stages which survive toxic effect of the drug through temporary growth arrest[5]. Very recently, this strain and its twin sensitive line permitted also to understand the molecular basis of malaria artemisinin resistance with identification of the gene K13 and thus to perform the epidemiological monitoring of isolates with decreased sensitivity to artemisinins in the field[1].
The quiescence phenomenon in *P. falciparum* linked with artemisinins-resistant parasites survival must be now clarified in order to quickly find therapeutic solutions to circumscribe these resistant parasites with selection of compounds or drug combinations active against artemisinins-resistant parasites.

The candidate must have completed a Ph.D. and should have a good expertise in cell culture and/or pharmacology and/or biochemistry and/or proteomics and/or cellular imaging (flow cytometry, cell labelling) and/or molecular biology. Previous experience in the *Plasmodium* culture will be also appreciated.

Interested applicants should send by e-mail (with reference PDP-ANR-14 in subject line) their CV with contact details of two/three references to:

Dr Françoise BENOIT-VICAL (Francoise.Vical@inserm.fr) **before 25th October 2014**.

For any inquiries, please contact Dr Françoise BENOIT-VICAL
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Selected Publications from the team on this topic

1. Ariey F, *et al.* 2014. A molecular marker of artemisinin resistant *Plasmodium falciparum* malaria. *Nature* 505: 50-55.
2. Robert A, *et al.* 2013. Correlation between *Plasmodium yoelii nigeriensis* susceptibility to Artemisinin and alkylation of heme by the drug. *Antimicrob Agents Chemother* 57: 3998-4000.
3. Witkowski B, *et al.* 2012. Evidence for the contribution of the hemozoin synthesis pathway of the murine *Plasmodium yoelii* to the resistance to artemisinin-related drugs. *PLoS One* 7: e32620.
4. Dechy-Cabaret O & Benoit-Vical F, 2012. Effects of Antimalarial Molecules on the Gametocyte Stage of *Plasmodium falciparum*: The Debate. *J Med Chem* 55: 10328-10344.
5. Witkowski B, *et al.* 2010. Increased tolerance to artemisinin in *Plasmodium falciparum* is mediated by a quiescence mechanism. *Antimicrob Agents Chemother* 54: 1872-7.
6. Witkowski B, *et al.* 2009. Resistance to antimalarial compounds: methods and applications. *Drug Resist Updat* 12: 42-50.
7. Benoit-Vical F, *et al.* 2007. Trioxaquines are new antimalarial agents active on all erythrocytic forms, including gametocytes. *Antimicrob Agents Chemother* 51: 1463-72.
8. Robert A, *et al.* 2005. The antimalarial drug artemisinin alkylates heme in infected mice. *Proc Natl Acad Sci U S A* 102: 13676-80.