

## **Optical diagnosis of human malaria parasites**

Zoueu T. Jérémie, Diomandé K., National Polytechnic Institute of Yamoussoukro, BP

1083 Yamoussoukro - Ivory Coast (West Africa) Africa

Tel: 00(225)30 64 66 84, fax: 00(225)30 64 66 85; Email: jzoueu@aviso.ci

### **Background:**

We have performed a Laser Induced Fluorescence (LIF) of *chlorophyll a* in palm oil tree's leaflets, based on the sensitivity to the stresses. The simple experimental device, based on the technique of laser induced fluorescence was automated with the aim of improve quality of the fluorescence spectra and to facilitate their treatment. This technique is now applied to diagnose human malaria parasites.

### **Outcome:**

- ◆ Optical methods for diagnosis of human diseases
- ◆ Optical methods to distinguish proteins

### **Progress to date:**

We are performing measurements in order to characterize the various species of the plasmodium (oval, vivax, falciparum, malariae) at various stages (ring, trophozoite, Schizont, gametocyte) of their evolution. The absorption and fluorescence of Acids amino, which are the basic constituents these proteins, are all in the range of 200 and 400 nm. We are working now to differentiate these bands.

### **Funding is sought to:**

- ◆ Characterized the blood sample prepared for thin thick blood technique
- ◆ Attribution of the parasites peaks

### **Timeline:**

We are checking techniques to distinguish the peaks of parasites more precisely