

In vivo study update  
from Guyana

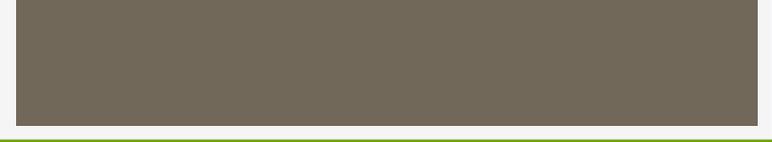
## *Monitoring the therapeutic efficacy of Antimalarial drugs in Guyana*

|  |                            |
|--|----------------------------|
| Artemether - Lumefantrine              | (P.falciparum) 2004 - 2005 |
| Artesunate - Mefloquine                | (P.falciparum) 2004 -2005  |
| Mefloquine                             | (P.falciparum) 2004 - 2005 |
| Artemether - Lumefantrine              | (P.falciparum) 2007- 2008  |
| Artemether - Lumefantrine + Primaquine | (P.vivax) 2009-2010        |
| Artemether-Lumefantrine                | (P.falciparum) 2011- 2012  |

## RESULTS FROM PREVIOUS STUDY IN GUYANA

- Conducted for approx 14 moths, from May 2011 to July 2012.
- A total of 2465 a total of 92 patients were enrolled, only 68 continued and finished the total period of 28 days

- 86.95 % between 15-49 years old
- 64 % miners
- 35 % other professions
- Gender: 91.30 % male and 8.6 % female,



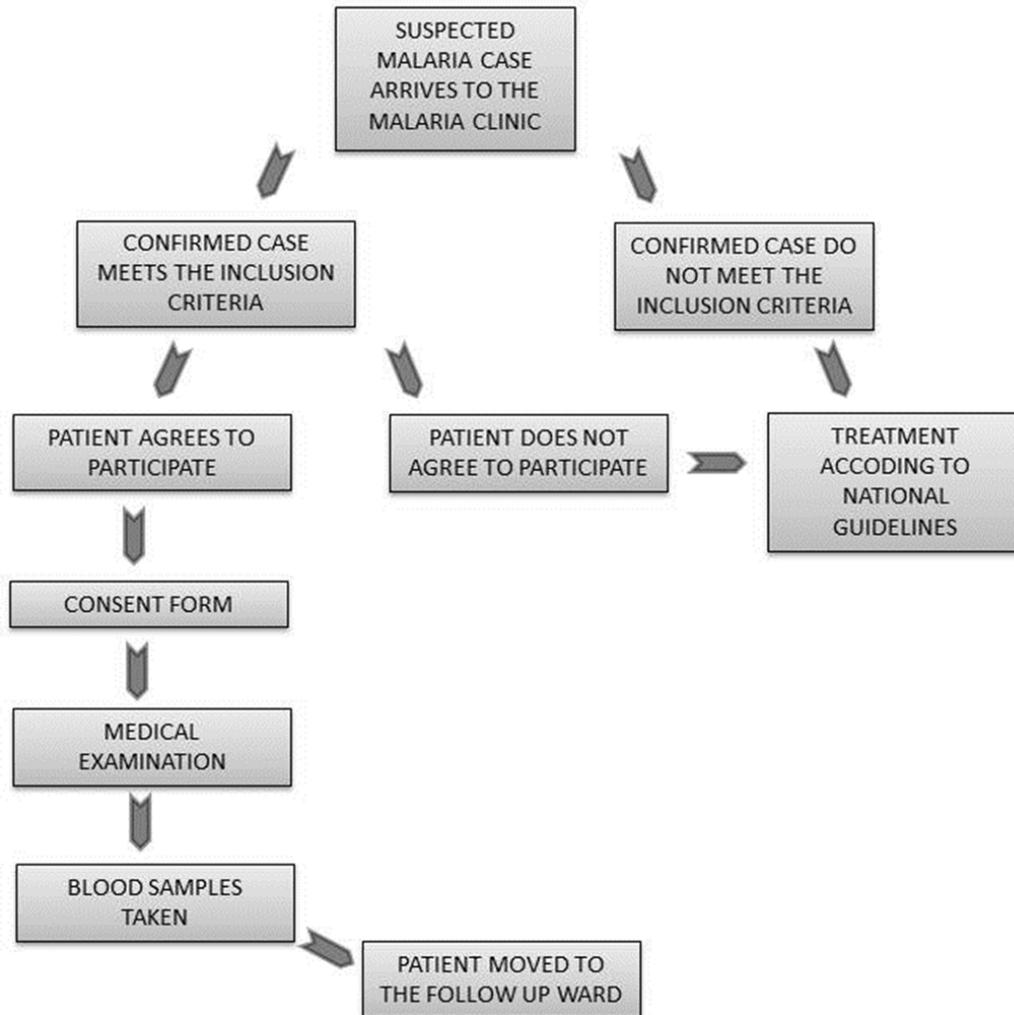
The region visited before the diagnosis is distributed

- 9.78 % from region 1
- 57 % from region 7
- 25 % from region 8
- 1.09 % from region 9

## Preliminary report

- Artemether-lumefantrine has a cure rate of 91.10 %.
- Significant decrease of efficacy was noted as compared to previous studies in 2004 and 2008. (100% and 98.5% respectively)

# IDENTIFICATION AND RECRUITMENT OF PATIENTS



## METHODOLOGY FOR TREATMENT USED FOR THE 2014 STUDY

- Treatment with artesunate (4mg/kg) for 7 days
- Single dose primaquine (0.75 mg/kg) on day 8
- Rescue treatment: Artemeter-Lumefantrine Combination therapy (ACT)

## FOLLOW UP METHODOLOGY USED FOR THE 2014 STUDY

- Pts kept in-patient facility for 7 days and given compensation
- Blood sample for genotyping
- Blood smear every 8 hours to establish parasite clearance rate
- Set FIXED times of 2pm, 10pm and 6am
- Follow up patients actively on day 14, 21 and 28

## PROGRESS FROM THE 2014 STUDY

- Five PATIENTS HAVE BEEN ENROLLED TO DATE:

ART-001:

21 year old, female. Infected in Arakaka, Region1 .First time malaria patient

Treatment: Artesunate.

DAY 3: negative parasitemia.

ART-002:

22 years old, female. Infected in Arimu, Region 7.

Has had malaria before and taken over the counter treatment

DAY 3: Parasites not cleared after day 6....

# CHALLENGES

- Recruitment of patients
- Patient loss
- Take samples every 8 hours
- Track and follow patients after 28 days