

MALARIA DURING PREGNANCY: THE
WORK OF MANY PEOPLE IN CAMEROON,
GEORGETOWN UNIVERSITY AND THE
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MALARIA DURING PREGNANCY

- Severe disease with deleterious consequences: Mothers high risk of anemia, maternal mortality. Babies likely low birth weight from prematurity and IUGR
- Infants exposed to malaria in utero more likely to have increased numbers of malaria episodes in early life
- Increased susceptibility due to placenta: infected erythrocytes accumulate at maternal fetal border: VAR2CSA
- In 1999 we showed that 25% of women with malaria in placenta were peripheral blood smear negative by microscopy. Used HRP2 to increase sensitivity. Change in clinical practice for diagnosis in preg

PREGNANT WOMEN AND CHILDREN DESERVE BETTER



MALARIA
in Pregnancy



IMPM

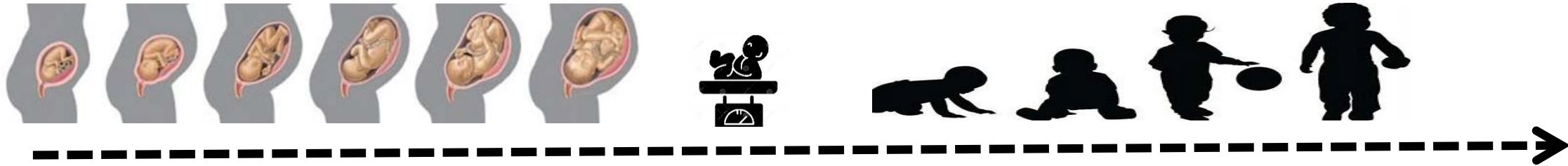
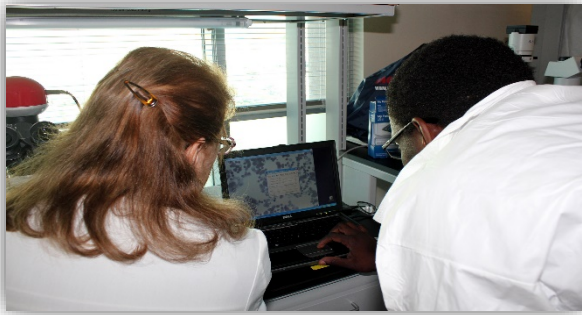


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SERIES OF LONGITUDINAL STUDIES: IMPACT ON FETUS, NEW BORN AND YOUNG CHILDREN

- Question? How in utero exposure to malaria antigens alters an infant's susceptibility to malaria during the first year of life, if it influences the primary antibody response when infant is infected
- Our recent studies: Fetus respond to malaria antigen producing IgM and IgG from 26 weeks of gestation
- Babies exposed to small amounts, not large amounts, of malaria antigen in utero have more clinical and slide episodes of malaria early in life. Implications in areas where SP reduces but does not clear all parasites in pregnant women
- Students who are next generation of scientists are very involved

RESEARCH MAKES A DIFFERENCE



**Epidemiology
/pathogenesis:**

**Placental malaria:
Sequestration of
parasites in the placenta.**



**Poor
pregnancy
outcomes**

Increased susceptibility to malaria

**Acquisition of
immunity**

Maternal Var2CSA antibodies

Fetal immune development

Childhood immune development

Translation



IPTp-SP



**Improved
pregnancy
outcomes**

**Rapid diagnosis:
HRP2 protein**



Candidate antigens for vaccine development

THANK YOU
MERCI