Abstract Template

Immunomodulatory and Anti-malarial Effects *Ajuga remota* and *Caesalpinia volkensii* Extracts during *Plasmodium berghei* Infection in Balb/C Mice

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Abstract (not more than 300 words)

Artemisinin remains the first line treatment for malaria for over a decade, however there are concerns about emerging resistance especially after recrudesce was observed in South East Asia. This, therefore, stresses the need to search for alternative effective antimalarial treatment. Several other plants apart from *Artemisia annua* have been found to have comparable anti-malarial effects either as a single preparation or a combination of different plants. This study evaluated the anti-malarial activity of *Ajuga remota* and *Caesalpinia volkensii* leaf extracts during *Plasmodium berghei* infection in Balb/c mice. The plants' leaves were extracted using ethanol and petroleum ether respectively. The impact of individual and combinations of these plant extracts on the immune response was evaluated in Balb/C mice infected with *P. berghei*. Serum and spleens samples were obtained at days 0, 2, 4, 6, 8 up to day 10 post-infection and levels of immunoglobulin G and interferon-γ were determined using Enzyme Linked Immuno-sorbent Assays. *In vivo* antimalarial activity assessed using the 4-day suppressive assay, showed that, *P. berghei* growth in mice was suppressed by 83.66% using a combination of *A. remota* and *C. volkensii* plant extracts, while each of the extracts suppressed growth of parasites by -23.31% and 4.34% respectively. Overall interferon-γ concentrations were elevated in the first few days post infection then decreased while immunoglobulin G levels varied during the sampling time frame. In conclusion, a combination of *A. remota* and *C. volkensii* plant extracts is more effective at suppressing parasite growth *in vivo* indicating a synergistic or additive effect.

Keywords—*Ajuga remota, Caesalpinia volkensii, IgG, IFN-γ, Plasmodium berghei*

Professional Biography (100-150 words)

Lucy is an upcoming scientist at Jomo Kenyatta University of Agriculture and Technology, Kenya who is about to complete her MSc in Immunology. She is currently working at Jkuat as a part-time teaching assistant at the department of Zoology. Lucy is a research intern at the Institute of Primate Research Karen-Kenya (IPR). Her project involved plant extracts

combined therapy in mice study. She was also involved in HPV vaccine study in experimental baboons.

Recent Publications (up to 5)
Plant extracts combined therapy in mice study (in preparation)
HPV vaccine study in experimental baboons (in preparation)


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Any Comments:

It is my interest to learn and interact with fellow immunologists all over the world. Kindly consider me for a scholarship to attend this conference. I will appreciate it if you reply to me via this email wanjerikamau@gmail.com. Thank you in advance.