

GUEST SEMINAR

with

Dr. Naomi Maina and Dr. Simon Karanja

Jomo Kenyatta University of Agriculture and Technology, Kenya

Wednesday, September 2, 2015

at **3:00 pm** in **SSC 2315**

Toxoplasmosis: The forgotten threat in Kenya

Toxoplasmosis is a neglected but important zoonosis caused by *Toxoplasma gondii*. Risk factors associated with its occurrence and the burden of the disease in man in Kenya have not been well understood. Consequently, a multi-pronged research project to determine the epidemiology and characterization of *T. gondii* infection in man and animals was conducted. This involved a cross-sectional household survey and laboratory experimental studies. The prevalence of the disease was assessed in baboons and slaughterhouse workers from Thika District using commercially available antibody (anti-*T. gondii* IgG and IgM) ELISA kits. Further, DNA was extracted and the 529 repeat element amplified by nPCR. Potential risk factors associated with *Toxoplasma* infection included; cat and free-range chicken ownership, source of food for cats, mode of waste disposal and lack of awareness on toxoplasmosis. The overall sero-prevalence was higher (44.6%) in slaughterhouse workers than in baboons (31.0%). *Toxoplasma gondii* DNA was detected in 39.1% of the workers and 33.3% of the baboons. Higher levels of infections were noted in the chicken slaughter house workers and using nPCR, 80% of free range chicken sampled were positive. Cryobanks of 48 bradyzoites isolates have been generated. 34/48 of isolates were further propagated in mice and Tachyzoites were obtained from mouse peritoneal cavity and cryo-preserved. In an effort to develop a mouse model for toxoplasmosis, 5/7 mice infected and treated with 8mg/l dexamethasone showed clinical signs of toxoplasmosis. Histopathological results indicated, foci of gliosis that ranged from small to large clusters of cells with characteristic zones of necrosis. Other lesions included leptomeningeal inflammation. There was evidence of cysts lodged in the brain and heart muscle. The significance of these findings will be discussed.

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EVERYONE IS WELCOME TO ATTEND

