Effect of *Brugia pahangi* co-infection with *Plasmodium berghei* ANKA in gerbils (*Meriones unguiculatus*)

Olawale Quazim Junaid 1,2 - Indra Vythilingam 1 - Loke Tim Khaw 1,3 - Sinnadurai Sivanandam 1 - Rohela Mahmud 1

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Abstract
Malaria and lymphatic filariasis (LF) are two leading and common mosquito-borne parasitic diseases worldwide. These two diseases are co-endemic in many tropical and sub-tropical regions and are known to share vectors. The interactions between malaria and filarial parasites are poorly understood. Thus, this study aimed at establishing the interactions that occur between *Brugia pahangi* and *Plasmodium berghei* ANKA (PbA) co-infection in gerbils. Briefly, the gerbils were matched according to age, sex, and weight and grouped into filarial-only infection, PbA-only infection, co-infection, and control group. The parasitemia, survival and clinical assessment of the gerbils were monitored for a period of 30 days post *Plasmodium* infection. The immune responses of gerbils to both mono and co-infection were monitored. Findings show that co-infected gerbils have higher survival rate than PbA-infected gerbils. Food and water consumption were significantly reduced in both PbA-infected and co-infected gerbils, although loss of body weight, hypothermia, and anemia were less severe in co-infected gerbils. *Plasmodium-*