POTENTIAL TARGETS FOR VACCINE DEVELOPMENT AGAINST INFECTION CAUSED BY *TRYPANOSOMA BRUCEI BRUCEI* PARASITE

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African trypanosomes, such as *Trypanosoma brucei*, are a group of unicellular eukaryotes responsible for sleeping sickness in man and related diseases in other mammals caused by bite of tsetse fly. Recently we cloned two potential antigenic candidate genes from *Trypanosoma brucei brucei* for DNA vaccine development and showed that murine mice immunized with plasmid DNA encoding their genes were able to induce IgG antibodies that bind to crude lysate from *Trypanosoma brucei brucei* (Silva MS *et al.*, *in preparation*). The aim of this work was the development of an efficient DNA vaccine protocol against experimental African Trypanosomiasis. Genomic DNA from *Trypanosoma brucei* has been purified from blood of infected mice. Four antigenic candidate genes from *Trypanosoma brucei*, denominated Invariant Surface Glycoprotein (ISG), Serum Resistance-Associated Gene (SRA), Trans-sialidase (TSA) and Phospholipase-C (PLC) have been PCR amplified and cloned in pVAX1 and pET plasmids, both used for expression of recombinant protein in mammals and *E. coli*, respectively. After successful cloning and protein expression of the ISG, SRA, TSA and PLC genes, the experimental vaccination protocols will be optimised and humoral and cellular immune responses analysed in murine models.