

Integration and expression of Bm86 in transfected *B. bovis* parasites

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Abstract:

Babesia bovis is a tick born protozoan intraerythrocytic parasite causing acute hemolytic disease of cattle. Live attenuated *B. bovis* parasites are so far the most effective preventive strategy against the disease. In addition, cattle vaccinated with a tick midgut antigen, Bm86, have been shown to elicit protective immunity against ticks. Recently, we have developed a transfection method for *B. bovis* to stably express exogenous genes. Our long term goal is to produce a dual anti *Babesia* and anti tick vaccine using transfected parasites. Thus, we initially plan to test whether *B. bovis* stably transfected with a gene encoding Bm86 are able to induce anti Bm86 antibodies that protect against tick infestation upon infection of cattle. Our preliminary results suggest that gene integration and expression of Bm86 was successful in transfected *B. bovis*.