

[Attenuation of Theileria lestoquardi infected cells and immunization of sheep against malignant ovine theileriosis](#)

**ABSTRACT:**

Malignant ovine theileriosis caused by *Theileria lestoquardi* is an economically important disease infecting small ruminants in the Sudan. The disease causes massive losses among sheep in many regions of Northern Sudan. The present studies were done to isolate lymphoblastoid cells infected with malignant ovine theileriosis and attenuate them by passage using culture media to develop and produce schizonts candidate vaccine, then test its efficacy and safety by exposing immunized lambs to field challenge in an area endemic with *T. lestoquardi*. In the present experiments we isolate and established an in vitro culture of *T. lestoquardi* infected lymphoblast cell line. Long-term culture of *T. lestoquardi* infected lymphoplastoid cells was shown to result in attenuation of their virulence and lambs inoculated with different doses of such cells at passage 105 exhibited very mild reactions with fever that lasted for 1-5 days and parasitaemia of <0.2%. The experimental lambs immunized with this candidate vaccine were immune and protected when exposed to field challenge in an area endemic of ovine theileriosis, while morbidity and mortality among non-immunized animals reached 76.9% and 46.15%, respectively, and they exhibited the clinical signs of malignant ovine theileriosis that included, high fever, loss of appetite, enlargement of lymph nodes, jaundice, loss of weight and death. The present study demonstrates the efficacy and the safety of this attenuated cell line as a live attenuated candidate vaccine.

No preview · Article · Aug 2013 · Vaccine