

SUMMARY

Theileria annulata is an obligate intracellular protozoa parasite of the phylum apicomplexa. *T. annulata* causes tropical theilariosis in cattle and is transmitted by the ticks of the genus *Hyalomma*. *Theileria* sporozoites invade bovine leukocytes, develop into a multinucleate syncytial schizont form and alter the metabolic activity of the infected host cell. Infected leukocytes do not undergo apoptosis and display uncontrolled proliferation like cancer cells.

AP-1 is a transcription factor that controls a number of cellular processes including differentiation, proliferation and apoptosis. AP-1 plays a role in cell transformation in *Theileria* infected leukocytes.

TA15705 protein also known as Ta9 expressed at *T. annulata* macroschizont is a target of cytotoxic T cells and B cells. The study was carried out between September 2008 and October 2009 to characterise the TA15705 protein and determine its role in parasite-induced AP-1 activation. In the present, it was shown that TA15705 was an inducer of AP-1 which plays a role in transformation event of infected cells. It was also demonstrated that TA15705 was co-localises with the parasite and secreted into the cytosol of infected B lymphocytes and macrophages.

Keywords: TA15705, AP-1, *Theileria annulata*, Apoptosis