



Original Article

Experimental african trypanosomiasis: effects on plasma melatonin concentration and pineal gland histology in rodents**Charles I. Maina*¹, Apolony O. Oucho², Chebii Kiptanui³, Samuel M. Kimani¹**¹Department of Biological Sciences, Egerton University, P.O. Box 536 - 20115, Egerton, Kenya.²Department of Biological Sciences, University of Eldoret, P.O. Box 1125 - 30100, Eldoret, Kenya.³Department of Human Pathology, Moi University, P.O. Box 1146 – 30100, Eldoret, Kenya.**Abstract**

Trypanosomiasis remains a major public health problem to man over much of tropical Africa. The disease is caused by protozoan parasites of the genus *Trypanosoma* and is fatal if untreated. The effects of *T.b.brucei* infection on plasma melatonin concentration and pineal gland histopathology was investigated in male albino rats. Twelve rats were each infected intraperitoneally with 0.2ml of infected blood containing approximately 1.0×10^4 live *T.b.brucei* parasites. Twelve other rats served as uninfected controls. Trypanosomes were detected in the blood of infected rats 5-8 days post-infection. There was a significant difference ($P=0.0382$) in plasma melatonin concentration between control and experimental rats. Histopathological changes in the pineal gland of experimental rats included tissue degeneration and pinealocytes with pyknotic nuclei. These histopathological changes were responsible for the decrease in plasma melatonin concentration in the experimental rats.

Keywords: Trypanosomiasis, Melatonin, Pineal gland, Histopathology

***Corresponding Author: Charles I. Maina**, Department of Biological Sciences, Egerton University, P.O. Box 536 - 20115, Egerton, Kenya. Tel +254 728425209. Email: cimaina@yahoo.com