

**EFFICACY OF COMBINED THERAPY OF DIMINAVETO<sup>®</sup> AND INTROMIDIUM<sup>®</sup> IN  
ALBINO RATS EXPERIMENTALLY INFECTED WITH *Trypanosoma brucei brucei***

<sup>1\*</sup>Okpala, Michael Ikenna, <sup>1</sup>Obi, Chukwunonso Francis, <sup>1</sup>Ezeh, Ikenna Onyema, <sup>2</sup>Nwobi,  
Lotanna Gilbert, <sup>1</sup>Nzeakor, Terry Adaku, <sup>1</sup>Aneru, Ganiyu Efficiencie, <sup>1</sup>Ezeokonkwo, Romanus  
Chukwuduruo

<sup>1</sup>Department of Veterinary Parasitology and Entomology, University of Nigeria, Nsukka, Enugu  
State, Nigeria.

<sup>2</sup>Department of Veterinary Physiology and Pharmacology, University of Nigeria, Nsukka, Enugu  
State, Nigeria.

**Abstract**

The effect of Diaminaveto<sup>®</sup> (diminazene aceturate) and Intromidium<sup>®</sup> (isomethamidium chloride) combination in rats infected with *Trypanosoma brucei* was evaluated. 40 albino rats were used for this study. The rats were grouped into 8 groups of 5 rats each. Rats in group 1 were not infected while groups 2-8 were inoculated intraperitoneally (IP) with  $1 \times 10^6$  trypanosomes. Rats in group 2 were untreated. Rats in groups 3-8 were treated on day 17 post infection. Groups 3 and 4 rats were treated with 3.5 mg/kg Diaminaveto<sup>®</sup> (DM) and 0.5 mg/kg Intromidium<sup>®</sup> (IM) respectively. 7 mg/kg DM and 1 mg/kg IM were administered to rats in groups 5 and 6 respectively. Groups 7 and 8 were treated with 7 mg/kg DM and 1.0 mg/kg IM respectively and these treatments were reversed after two weeks. Level of parasitaemia, clinical signs, survivability, body weight changes, rectal temperature (RT), haematological indices (packed cell volume, hemoglobin concentration, total leucocytes count and differential leucocyte count) and rate of parasite clearance were used to evaluate the efficacies of the drugs and their combination. There was a significant ( $P < 0.05$ ) reduction in PCV, HbC, TLC and weight of rats post infection (PI). These indices were reversed post treatment (PT), though this reversal was faster and lasted

longer in rats in groups 7 and 8. The results of the study showed that the combined therapy of DM and IM at different time intervals was more efficacious than single treatment regimen of either DM or IM.

**Keywords:** *Trypanosoma brucei*; Isometamidium chloride; Diminazene aceturate; Rats

**Author for correspondence:** Dr M. I. Okpala  
**Department:** Veterinary parasitology and Entomology, UNN.  
**Email:** [michael.okpala@unn.edu.ng](mailto:michael.okpala@unn.edu.ng)