ANTITRYPANOSOMA EFFECT OF METHANOL FRUIT POD EXTRACT OF *ACACIA NILOTICA* (Linn)IN ACUTE *TRYPANOSOMA BRUCEI* INFECTION IN WISTAR RATS.

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INTRODUCTION

- Definition of Trypanosomosis
- African animal trypanosomosis (AAT)
- Virulence of *T. brucei brucei*
- Susceptible animals and clinical signs.

Statement of Research Problem

- Drug resistance and toxicity.
- Lack of interest by the pharmaceutical industry to invest into research and development of new antitrypanosomal drugs.
- Effect on the economy

Justification of the study

- Trypanosomosis is a disease for which both humans and animals whether economic, social or wild stand the Risk of epidemics
- Current trend in research
- The present study will explore the antitrypanosomal potential of one of the abundant indigenous plant *Acacia nilotica* with the hope of finding alternative treatment of trypanosomosis.

General Aim of the Study

- To determine the effect of the antitrypanosomal effect of methanol fruit pod extract of *Acacia nilotica (Linn)* in acute *Trypanosoma brucei* infection in Wistar rats.

Objective of the Study

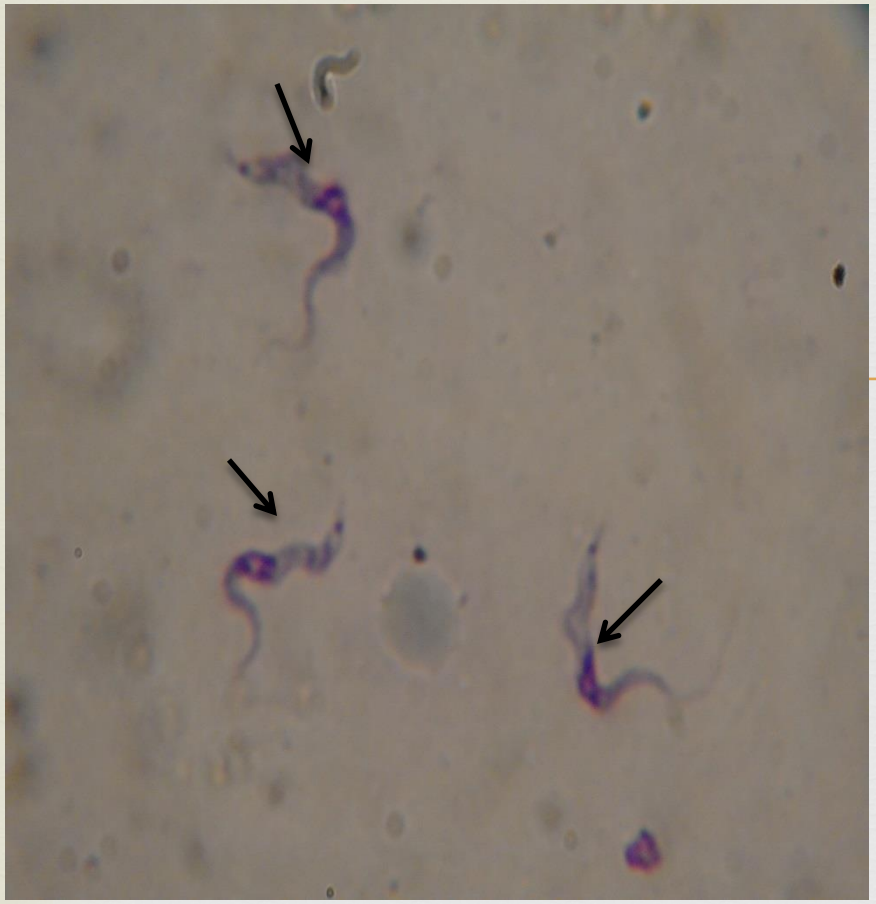
- determine the effect of the methanol extract of the fruit pods of *Acacia nilotica* on parasitemia in experimental *Trypanosoma brucei* infection in Wistar rats.

- determine the effect of the methanol extract of the fruit pod of *Acacia nilotica* on the PCV in Wistar rats experimentally infected with *Trypanosoma brucei.*

- determine the effect of the methanol extract of the fruit pods of *Acacia nilotica* on survival rate in experimental *Trypanosoma brucei* infection in Wistar rats.

MATERIALS AND METHODS

- Collection and identification of the plant material and extraction
- Phytochemical Analysis of the Extract
- Determination of the LD_{50} of the extract
- Test organism



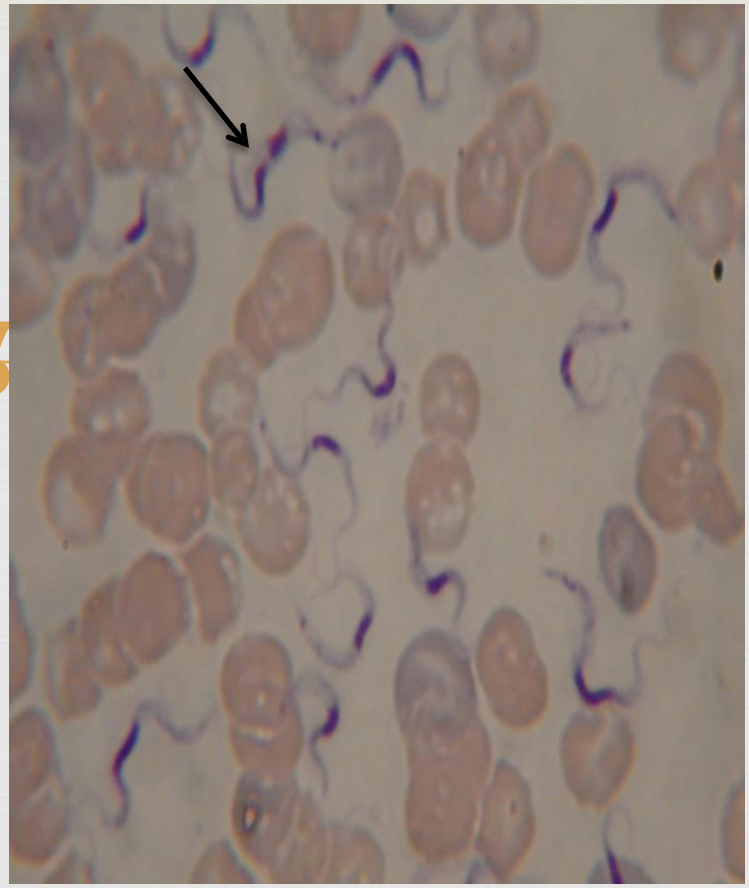


Plate I: *Trypanosoma brucei brucei* on thin blood smear with arrows pointing to the parasite

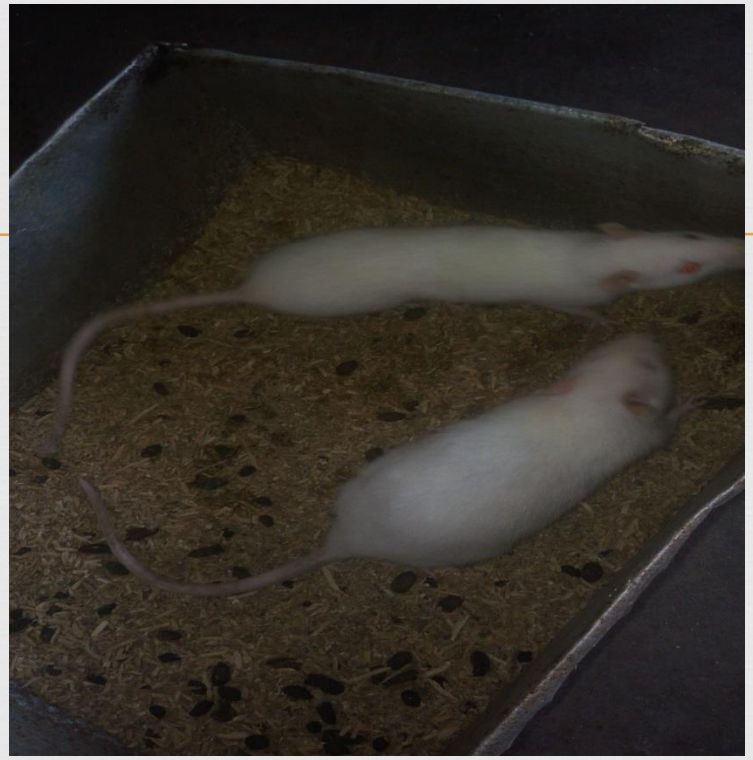


Plate II: Wistar rats in a cage

Plate III: *Acacia nilotica* plant with fruit pods

Materials and method cont…

- Experimental animals and Inoculation with the Parasite.
- Treatment of the Experimental Infected Rats
- Blood Sample Collection and Analysis
- Determination of survival rate
- Statistical Analysis

RESULTS AND DISCUSSION

Active Ingredient	Pod Extract
Carbohydrate	+
Anthracene derivatives	+
Steroids and Triterpenes	+
Cardiac glycosides	+
Saponic glycosides	+
Flavonoids	+
Tannin	+
Alkaloid	+

Key: + = Present

Table 1: Qualitative phytochemical analysis of methanol fruit pod extract of *Acacia nolitica*.

Determination of LD_{50}:

LD_{50} was determined to be ≥5000 mg/kg since no mortality was recorded on administration of the highest dose

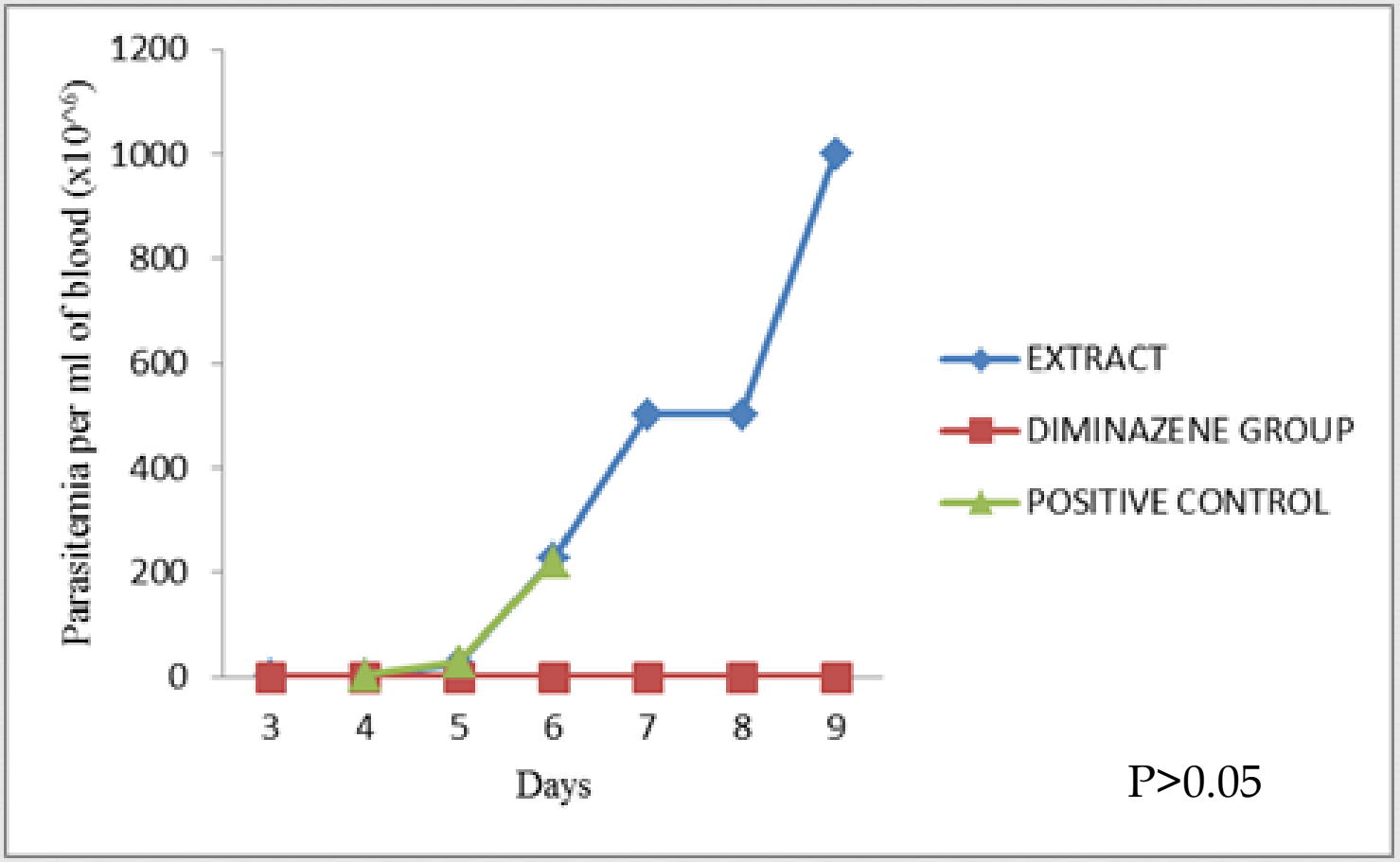


Figure 1: Parasitemia values of *T. brucei* infected rats treated with methanol fruit pod extract of *Acacia nilotica* and the untreated group.

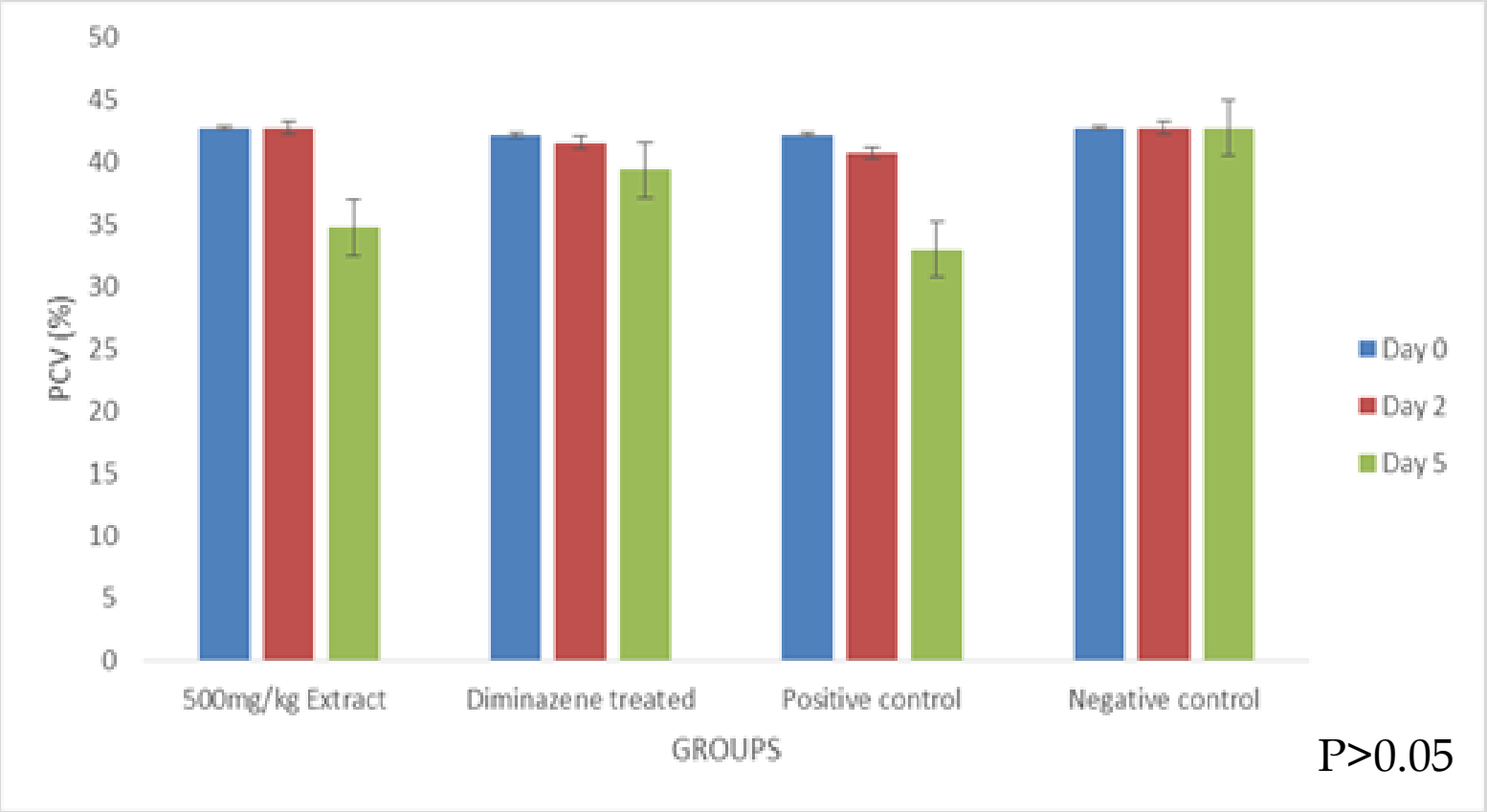


Figure 2: Changes in packed cell volume values of rats infected with isolates of *Trypanosoma brucei brucei*and treated with fruit pod extract of *Acacia nilotica*.

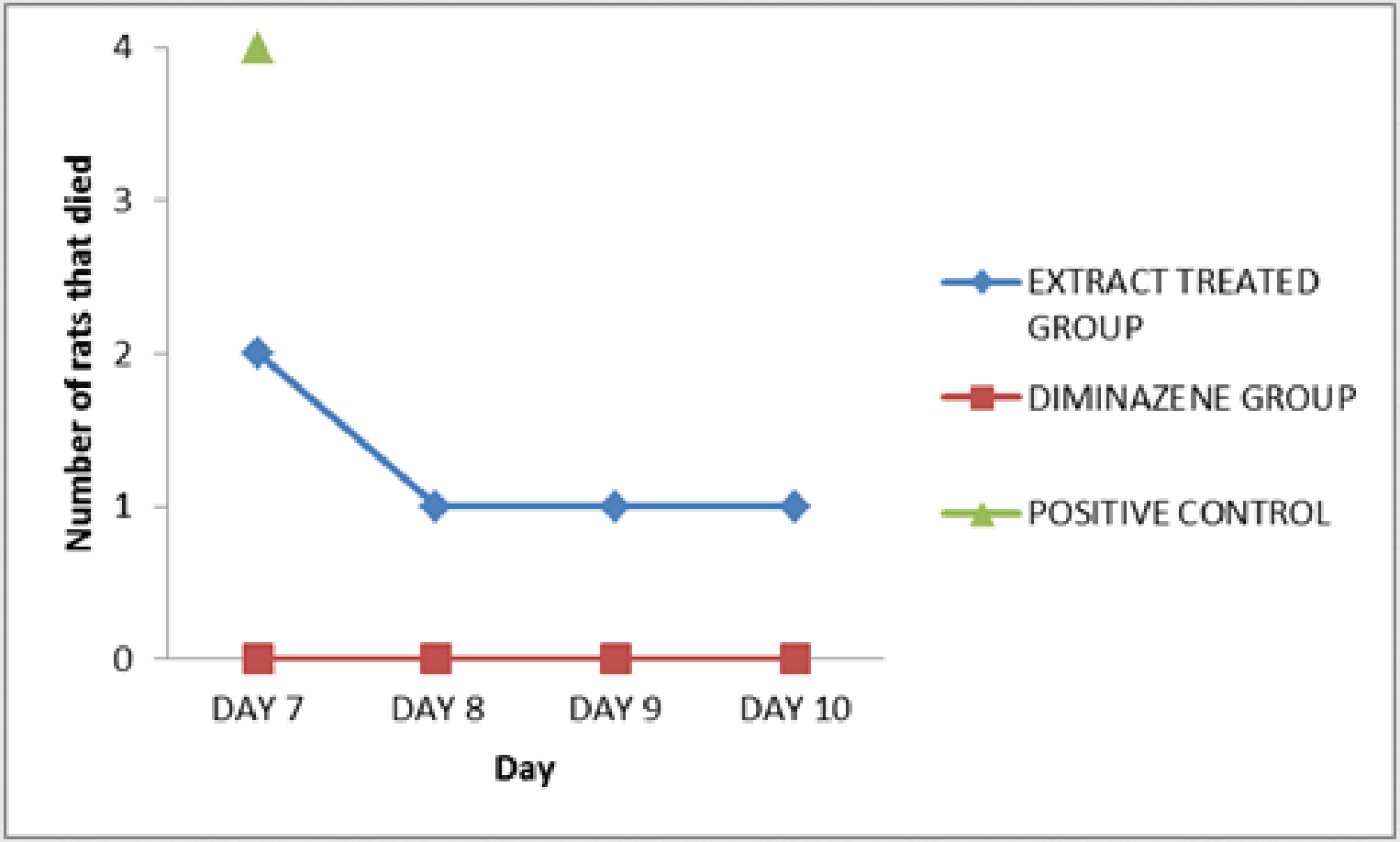


Figure 4: Effect of *Acacia nilotica* fruit pod extract on survival period in the extract treated group.

CONCLUSION

- The methanol extract of the fruit pod of *Acacia nilotica* at the dose rate (500mg/kg) used had no effect on the parasitemia nor the packed cell volume of the infected rats.

- But might have contributed in prolonging the survival period of the infected treated rats.

RECOMMENDATION

- We recommend that more studies be carried out using the extract at higher doses to ascertain the dose that may elicit antitrypanosomal effect on experimental *Trypanosoma brucei brucei* infection in Wistar rats

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THANK YOU FOR LISTENING