Evaluation of the genotoxic potential of a thiosemicarbazone derived from pregnenolone by the micronucleus test in mouse bone marrow.
MU0009

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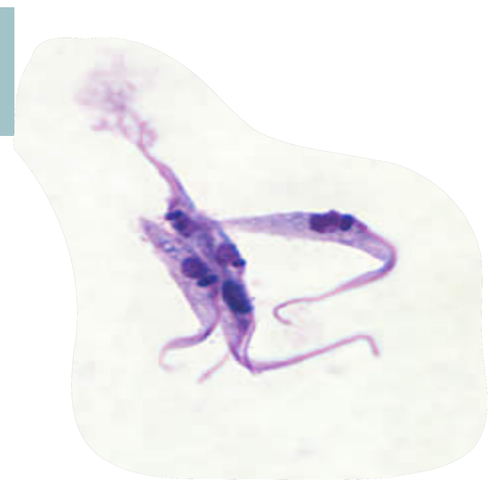
INTRODUCTION

Dehydroepiandroesterone (DHEA) → Non competitive **inhibitor of G6PDH** → Cell death in Trypanosomatids[1]

Hybrids molecules of steroids and thiosemicarbazone → **Potent *in vitro* trypanocidal activity[2]**



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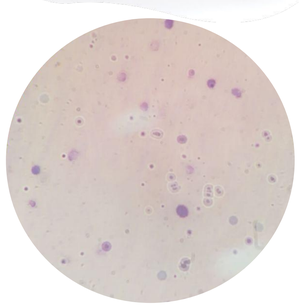
MATERIALS AND METHODS

5 mg/kg
10 mg/kg
15 mg/kg

PC: Cyclophosphamide 50 mg/kg
NC: 200µl of distilled water with 2% of dimethyl sulfoxide (DMSO)

Three groups of five Swiss albino mice, male, 6-8 weeks old



Micronucleated polychromatic erythrocytes (MPE) analysis - ANOVA one way, SPSS 21.0.

RESULTS

Do not exist significative difference between concentrations of the thiosemicarbazone and the negative control for $p < 0.05$

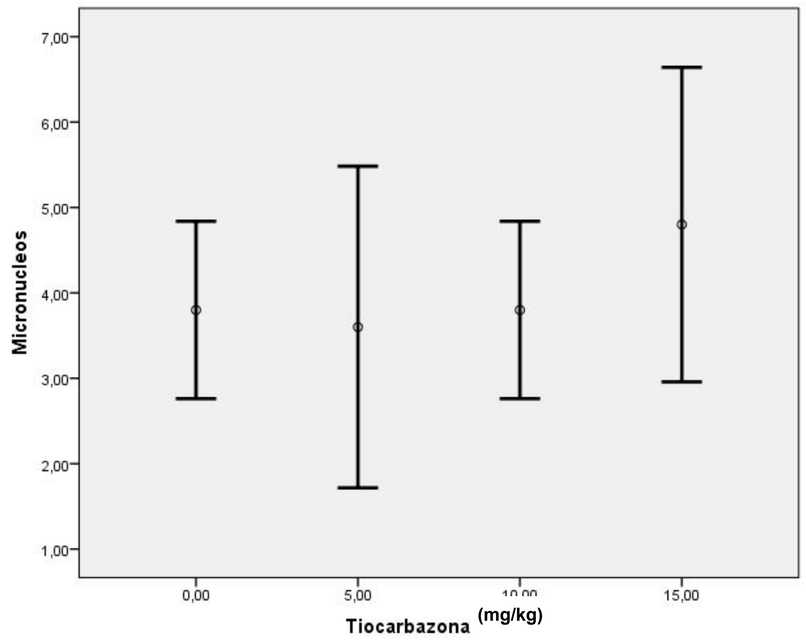


Fig. 1. Confidence interval of 95% for the mean of the micronucleus caused by the thiosemicarbazone

RESULTS

	N	Micronucleus mean	Standard Deviation
CN	5	**3.8000**	**.83666**
5 mg/L	5	**3.6000**	**1.51658**
10 mg/L	5	**3.8000**	**.83666**
15 mg/L	5	**4.8000**	**1.48324**
Total	20	**4.0000**	**1.21395**

Treatment group	N	PCE	MNPCE	%MNPCE±SD	Treatment time
CP	5	5000	174	*5.8±3.3	24 hs

CONCLUSION

The results indicate that the thiosemicarbazone derived from pregnenolone shows no genotoxic effect in mouse bone marrow in a 48 h treatment. These results are very promising in the validation process of this compound as an antiparasitic agent.

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