



# CRUDE LEAF EXTRACTS OF CITROPSIS ARTICULATA AND MYSTOXYLON AETHIOPICUM ARE POTENTIAL PHYTOMEDICINE FOR ENHANCING REPRODUCTIVE PERFORMANCE OF MALE ANIMALS



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## Introduction

Poor male reproductive performance is one of the major constraint to livestock breeding. Rural farming communities use various herbal remedies for reproductive health. The present study validated the effects of *Citropsis articulata* (Omuboro) and *Mystroxylon aethiopicum* (Esasi) on sexual performance using male wistar rats as animal model.

## Material and methods

- Study design: Experimental study with male adult wistar albino rats
- Voucher specimen authentication and extraction (Freeze drying of aqueous extracts)
- Phytochemistry (Marinova. et al., 2005)
- Testosterone, LH, FSH and Prolactin assay: ECOBAS E911 immunolyser machine and Histology of testis though H and E staining with microscopy
- Study clearance : COVAB-Ethical Review Committee

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## Results

Table 2: Effects on hormones level of rats treated with the aqueous extracts of *C. articulata* and *M. aethiopicum* for 21 days

Hormone	Controls		<i>Citropsis articulata</i>			<i>Mystroxylon aethiopicum</i>		
	Negative	Positive	150mg/kg	300mg/kg	450mg/kg	150mg/kg	300mg/kg	450mg/kg
TESTO (ng/ml)	0.27±0.12	1.55±0.46	0.71±0.20	1.05±0.41	2.59±0.49**Aa	1.73±0.56	4.43±1.04**Aa	6.49±1.56***Aa
FSH (miU/ml)	0.10±0.0	0.10±0.0	0.10±0.0	0.10±0.0	0.11±0.00	0.10±0.0	0.10±0.00	0.10±0.00
LH (miU/ml)	0.10±0.0	0.10±0.0	0.10±0.0	0.10±0.0	0.11±0.00	0.10±0.0	0.11±0.01	0.13±0.01**Aa
PRL (uIU/ML)	1.00±0.0	1.00±0.0	1.00±0.0	1.00±0.0	1.00±0.0	1.00±0.0	1.00±0.0	1.00±0.0

Values expressed as mean±SEM, n=3, p<0.05, \*p<0.05, \*\*p<0.01, \*\*\*p<0.001, A-significant when compared with negative control a-significant when compared with positive control

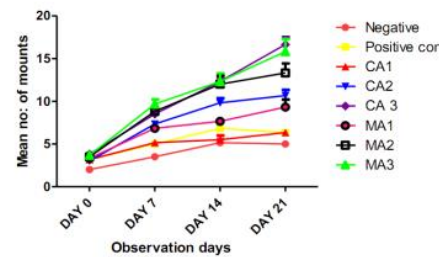


Figure 1: Effects of aqueous extracts on mounting frequencies male rats treated with *C. articulata* and *M. aethiopicum* on given days. CA= *C. articulata* MA= *M. aethiopicum* CA1/MA1 = 150mg/kg; CA2/MA2 = 300mg/kg; CA3/MA3 = 450 mg/kg

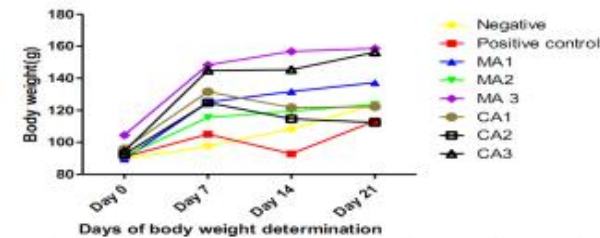
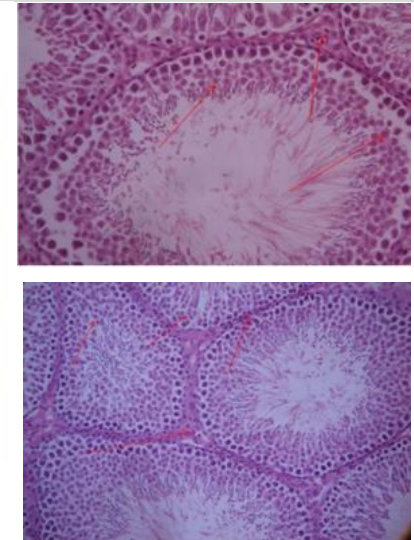
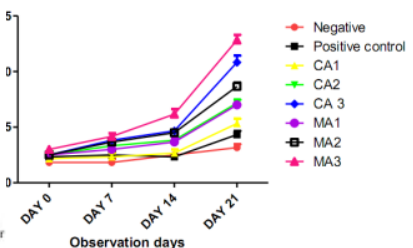


Figure 3: Effects of aqueous extracts on body weights of male rats treated with *C. articulata* and *M. aethiopicum* for given days. CA= *C. articulata* MA= *M. aethiopicum* CA1/MA1 = 150mg/kg; CA2/MA2 = 300mg/kg; CA3/MA3 = 450 mg/kg



Increased spermatogenesis



Effects of aqueous extracts on intrusion frequencies of male rats treated with *C. articulata* and *M. aethiopicum* on given days. CA= *C. articulata* MA= *M. aethiopicum* CA1/MA1 = 150mg/kg; CA2/MA2 = 300mg/kg; CA3/MA3 = 450 mg/kg

**Conclusion:** Both plant extracts enhanced male sex hormones, spermatogenesis and sexual performance. Taken together, the extracts can potentially be used as low cost technology for management of infertility in male farm animals.