$$R(r) = P(g_r) \circ Q = \sum_{x=1}^{n} g_{rx} P(g_x)$$

where r = 1, . . . ,n, $g_{rx} = g_r \otimes g_x$, g_r, $g_x \in G$, $P_{x=1}(g_r)$,$P(g_x)$ are permutation matrices, and o is matrix multiplication. Hence, if $<G; \otimes >$ is a group, then its operation $\otimes$ is associative and its matrix R (r) exhibits unique pattern that is determined by PA: its diagonal entries are all equal to g_{rx} for all r. This pattern can therefore be used as a simple *Associativity Test* for finite systems that are defined in terms of their structure matrices. The test is easy to apply and it involves only the formation and evaluation of n R (r) matrices as against the n^3 pairs of triple products normally required for testing a finite system of order n.

HEALTH SCIENCES

ANTI-FERTILITY EFFECTS OF KANDI-KANDILAAN [*STACHYTARPHETA JAMAICENSIS* (L. VAHL)] LEAF EXTRACTS ON THE FIRST 10 DAYS OF PREGNANCY OF ALBINO RATS *(RATTUS NORVEGICUS)*

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The effect of *Stachytarpheta jamaicensis* (L. Vahl) leaf extracts on the first 10 days of pregnancy in albino rats was investigated using 0%, 15% and 30% concentrations given orally and with five replicates per treatment.

The 30% extract caused a significant decrease in RBC, hematocrit, number of pups, placenta and corpora lutea. However, there was an increase in hemoglobin and WBC values.

The 15% extract caused an increase in RBC and WBC counts, hematocrit and hemoglobin values but had no significant effect on the number of pups, placenta and corporal lutea. There was ova lost between ovulation and implantation for the control group while both the 15% and 30% extract-treated rats had an average of 0.5. Histoanalyses of the liver and lungs showed congestion, necrosis and hemolytic spots. Also, there were scars and mummified fetus in the placenta of the 30% extract-treated rats.

Results indicated that *Stachytarpheta jamaicensis* (L. Vahl) leaf extract at 15% and 30% levels affected the normal reproductive physiology of albino rats on the first 10 days of pregnancy. These results also support earlier reports that it has abortifacient and anti-fertility effects.