D-39: Anti-fertility active steroidal glycoside from *Calotropis gigantea*

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Anti-fertility agents obtained from indigenous plants would be highly acceptable to rural people in developing countries. 25% of marketed drugs in the developed countries are also plant derived. Thus the acceptability of new anti-fertility drugs from indigenous plants should be very high. Therefore a project to investigate medicinal plants for anti-fertility activity was initiated.

The objective of the study is to isolate the anti-fertility constituents present in *Calotropis gigantea* which would effectively interfere with the process of implantation and/or disrupt early pregnancy, are active orally and can be taken post coitally.

The root bark of *C.gigantea* was extracted with diethyl ether and extract was fractionated using chromatography (silica gel). The column was eluted with 100% ethyl acetate, 50% ethyl acetate-methanol and 100% methanol. 50% ethyl acetate-methanol fraction was further purified by gel filtration and flash chromatography in order to isolate the active constituents. The extract and fraction obtained from chromatography were subjected to bioassay using WHO bioassay protocol MB 30. Ten female Sprague-Dawley rats were assessed for each experimental and control group. Two groups of animals were assayed for each experiment. The animals were dosed orally for 10 days.

The diethyl ether extract from root bark of *C.gigantea* 2 column fractions obtained from diethyl ether extract (*viz.* 100% ethyl acetate and 50% ethyl acetate-methanol) were found to have anti-fertility activity. The flash chromatography fraction was found to have anti-fertility activity (dose: 5.16 mg/kg), with the pregnancy rate of 0% compared to the control group which had 100% pregnancy rate. This fraction was found to be almost a single compound by TLC.

The ^{1}H/NMR, C13 NMR and ^{1}H COSY data indicated that the active compound present in this fraction was most likely to be a steroidal glycoside.