CHAPTER II

Design of Experiments

Part I Study on estrogenic activity in plants.

Long range dose response curves of standard estradiol and estrone were performed applying mouse uterine weight method (19). Two selected appropiate doses were used as standard in the assay of estrogenic activity in plant tested. The two doses of standard estrogens and two doses of plant extracts were given simultaneously to 4 groups of animal, composed of 5-8 mice in each group. Control groupreceived the same volume of peanut oil. The plant extracts that shown estrogenic activity were tested for parallelism with the standard and relative potency is calculated.

Part II Study on antispermatogenic effect of various plant extracts in rats and mice.

Experiment were designed as follows :

Expt. 1 Effect of alcohol extract of M. charantia (small variety) fruit on spermatogenesis in mice.

Various concentrations of extract were given orally in dose of 400, 800 mg/kg/day (equivalent to 14, 28 gm of fresh plant/ kg/day) for continuous 15 days and 60 days (table 3-6 respectively).

Expt. 2 Effect of alcohol extract of M. charantia (large variety) fruit on spermatogenesis in mice.

Various concentrations of extract were given orally in dose of 200, 400 mg/kg/day (equivalent to 22.9, 45.8 gm fresh plant/kg/day) for continuous 15 days and 60 days (Table7-10, respectively).

Expt. 3 Effect of volatile oil of Ocimum basilicum, whole plant extracts on spermatogenesis in rats.

Various concentrations of extract were given orally in dose of 145.6,291.3,320,482.6 mg/kg/day (equivalent to 50,100,200 gm fresh plant/kg/day for continuous 15 days and/or 60 days (table 11-18, respectively).

Expt. 4 Effect of volatile oil of O. sanctum, whole plant extracts on spermatogenesis in rats.

Various concentrations of extract were given orally in dose of 92.3, 184.6 mg/kg/day (equivalent to 100 & 200 gm fresh plant/kg/day) for continuous 15 days and 60 days (table 19-22, respectively).