The present thesis deals with the role of ventral prostate on testicular and adrenocortical activities.

Testicular steroidogenic activity was based upon the biochemical estimation of two important steroid biogenic enzymes, i.e., $\Delta^5$-3$\beta$-hydroxysteroid dehydrogenase and 17$\beta$-hydroxysteroid dehydrogenase. Serum level of testosterone has also been measured for assessing the androgenic activity of testis which has been supported by measuring the serum gonadotropins (FSH & LH) and prolactin (PRL). To show the effect on the gametogenic function quantitative studies of spermatogenesis were performed by counting the germ cell nucleus. Adrenocortical activity was evaluated through estimation of adrenal $\Delta^5$-3$\beta$-hydroxysteroid dehydrogenase activity and serum level of corticosterone.

To explore the role of ventral prostate on testicular and adrenocortical functions, the following experiments have been performed:

1. Removal of ventral prostate in mature rats and the effects observed after different durations.
2. Administration of aqueous extract of ventral prostate to prostatectomized mature rats.
3. Administration of solvent extract of ventral prostate to prostatectomized mature rats.

(iii)
(4) **In vitro** effects of ammonium sulphate fractionated ventral prostatic peptides on testicular and adrenal activities in normal rats.

(5) Administration of fraction III of ventral prostatic peptides to prostatectomized mature rats.

(6) Removal of ventral prostate in immature rats at 35 days of age and the effects observed at 50, 55 and 60 days of age.

The following parameters have been studied in each experiment:

(a) Testicular weight and adrenal weight.

(b) Testicular $17\beta$-hydroxysteroid dehydrogenase and $\Delta^5$-$3\beta$-hydroxysteroid dehydrogenase activities.

(c) Testicular acid and alkaline phosphatase activities.

(d) Serum levels of FSH, LH, PRL, testosterone and corticosterone.

(e) Adrenal $\Delta^5$-$3\beta$-hydroxysteroid dehydrogenase activity.

(f) Spermatogenesis by counting the number of germ cells at stage VII of the seminiferous cycle.
Thus, the thesis has been divided into six major sections:

(i) Introduction
(ii) Aims of the present investigation
(iii) Materials and Methods
(iv) Experimental protocol with results
(v) Discussion
(vi) Summary and Conclusion