The present thesis deals with the studies on steroidogenesis in female rats in altered tricarboxylic acid cycle.

The steroidogenic capacities of adrenals and ovaries have been studied by suppressing the tricarboxylic acid cycle with sodium malonate, an inhibitor of succinic dehydrogenase enzyme involved in the tricarboxylic acid cycle of carbohydrate metabolism. Studies have been performed mainly histochemically and in certain cases biochemically only to substantiate certain histochemical observations.

The thesis has been divided into six chapters. In the first chapter, an attempt has been made to review the literatures discussing the relative importance of tricarboxylic acid cycle and pentose phosphate pathway on steroidogenesis by steroid-producing organs. The second chapter deals with the experimental designs and methods employed. The third and fourth chapters cover the findings together with discussion on the steroidogenic capacities of adrenals and ovaries in mature and immature female rats, respectively, following malonate administration. Besides these, steroidogenesis by steroid-producing organs has also been studied in vitro in presence or absence of the tricarboxylic acid cycle inhibitor, and these studies have been accommodated in the fifth chapter. What has been achieved and concluded from the present investigation finds place in the last chapter, the sixth one.