In utero exposure of alcohol has been identified as causing Fetal Alcohol Syndrome (FAS). Globally FAS is a major health hazard. The number of offsprings subjected to the ill effects of alcohol is alarmingly increasing. The specific symptoms of FAS are:- The children suffer from a prenatal onset growth deficiency and they continue to grow poorly in postnatal life for years. They have a very typical facial appearance, reduced central nervous system performance including mental retardation and an increased frequency of other major anomalies. A large number of studies have been carried out to show the changes induced by ethanol during pregnancy. Most of these studies have been on behavioural changes, functions of CNS in the offspring etc. Studies on various metabolic processes are scarce. The studies related to FAS have been carried out using pure ethyl alcohol. But usually people consume alcoholic beverages. Alcoholic beverages contain in addition to ethyl alcohol various other pharmacologically active components, which may be either hepatoprotective or hepatotoxic. Not much research work have been carried out using alcoholic beverages especially country liquors. Two popular country liquors of Kerala are Arrack and Toddy (Coconut palm wine). The role of non alcoholic portion of these beverages after in utero exposure is lacking. So in order to understand the role of these beverages
and their equivalent amount of ethanol on maternal reproductive performance and teratogenic effects, lipid metabolism, carbohydrate metabolism and liver function, we have studied the following aspects.

1. Studies on chemical constituents of beverages.

2. Changes in the reproductive performance of the dams.

3. Teratogenic changes in the fetuses on 13th day and 19th day.

4. Changes in the activities of Glutamic-oxaloacetic transaminase (GOT) Glutamic pyruvic transaminase (GPT) in the serum and liver in 19th day dams.

5. Changes in the levels of serum GOT, GPT and GGT in 19th day dams.

6. Changes in the levels of alcohol dehydrogenase and aldehyde dehydrogenase in 19th day dams and fetuses.

7. Histopathological changes in the liver.

8. Changes in the levels of blood glucose, liver glycogen and enzymes of carbohydrate metabolism in 13th and 19th day dams and fetuses.
9. Changes in the levels of enzymes of citric acid cycle in 13th and 19th day dams and fetuses.

10. Changes in the levels of circulating insulin in 13th and 19th day dams.

11. Changes in the levels of lipids and related enzymes in 13th day and 19th day dams and fetuses.

The results of these investigations are discussed in detail in this thesis.