AIMS AND OBJECTIVES
It is now beyond doubt that the perinatal period is an extremely critical period of development during which carcinogen exposure by the transplacental and/or translactational routes can lead to the manifestation of cancers in the progeny and subsequent generations.

If these routes also permit the passage of chemopreventive agents then there is every possibility that these exogenous agents can counteract the initiation of pediatric tumors and thereby act as modifiers of perinatal carcinogenesis, much as they do in the single generation model systems.

Among the many areas of chemoprevention, the modulation of enzyme activities involved in carcinogen metabolism seems to be one of extreme effectivity. Many chemopreventives do alter the activities of carcinogen metabolizing enzymes. Therefore we chose to study the neonatal hepatic carcinogen metabolizing enzyme system and its modulation to assess the potential neonatal chemopreventive abilities of some substances and also to gauge the presence of their active principle(s) in the neonatal circulation.

The main objectives of this work are:

1. To investigate the possibility of the passage of certain chemopreventive and environmental agents from mother to the $F_1$ generation;

2. To investigate the effect of such translactational exposures of certain chemopreventive agents on the levels/activities of some hepatic xenobiotic metabolizing enzymes in the $F_1$ generation in terms of a neonatal chemopreventive approach;

3. To investigate the translactational passage and effect of certain environmental agents on the levels/activities of some hepatic xenobiotic metabolizing enzymes in the $F_1$ generation in terms of neonatal toxicity;
4. To investigate differences in levels/activities of adult hepatic xenobiotic metabolizing enzymes during the lactating and non-lactating physiological states; and

5. To investigate the effect of certain dietary chemopreventive and environmental agents on the levels/activities of some hepatic xenobiotic metabolizing enzymes in the nursing mother.