AIM OF THE PRESENT WORK

At present, there is a dangerous swing towards artificial and bottle feeding of infants in developing countries like India. The development of a breast milk substitute was originally intended to be used only for infants whose mothers were either unable or unwilling to undertake breast feeding. Most of the babyfood formulae are based on cow's milk and available evidences indicate that the short term effects of bottle feeding in scientifically advanced and economically well off industrialised countries are not usually bad. However, substitution of mothers' milk with cow's milk or artificial milk substitutes definitely produces long term adverse effects on nutrition and development of new-born infants of economically backward communities. The high cost involved in such substitution increases the economic hardship of poor parents.

Human breast milk represents the optimal food for human infant. It has ideal composition of almost all essential nutrients necessary for optimal growth, development and maturation of the infants. The bioavailability of the nutrients from the mothers' milk is higher than that from the milk of any other species or from the artificial milk substitutes. Furthermore the antimicrobial and immunological protection given by mothers' milk is very important for the infants of developing countries where risks of infections are high and health care facilities are limiting.
A large volume of informations is available in the literature on major nutritionally important constituents like protein, carbohydrate, lipid, trace elements, vitamins etc. of the human milk. As reviewed in the previous chapter, the macro constituents of breast milks of different Indian communities (which are heterogenous with respect to ethenic groupings, living conditions, dietary habits) were analysed by different groups of the workers. The present study includes the studies on different microconstituents of the milk of India (Bengalee) mothers. Some of these microconstituents like enzymes, are present normally in the milk and others like some microorganisms and drug residues are accidentally or deliberate incorporated in the milk. The functional role of most of these microconstituents is not elucidated as yet. These constituents of the human milk may not have direct role in the infant's nutrition but may influence the growth and development of the infants indirectly. For example, the enzymes in the milk may indicate the nutritional and pathological status of the lactating mothers. The description of the milk is incomplete without the detail informations on these microconstituents.