INTRODUCTION

The incidence of common infections of the intestinal and respiratory systems are less significant in breast-fed than non-breast fed infants ***(Gordon et al., 1963 ; Cunningham, 1981)***. Even when enteric pathogens are introduced during breast feeding by contaminants from the surface of the nipple and areola, microbial colonization of the intestinal tract is infrequent ***(Mata and Urrutia, 1971)***. The protection by human milk resides in a complex system of host defense factors which in the most part is distinct from other mammalian milks ***(Goldman and Goldblum, 1985 ; Goldman et al., 1985)***.

An hypothesis was developed which predicts that human milk protects against infections of the alimentary tract of the breast-fed infant by non-inflammatory mechanisms. Human milk is poor in the initiators and mediators of inflammation and rich in anti-inflammatory agents. Furthermore, many of the

anti-inflammatory agents are comparatively resistant to digestive enzymes and therefore might be expected to remain active in the gastrointestinal tract of the recipient infant *(Goldman et al., 1986)*. Breast feeding raises the resistance against infection by increasing the levels of immunoglobulins and the immunity of infants *(Atallah, 1987)*.

The production and secretion of immunologic factors (lysozyme, lactoferrin, secretory IgA and specific IgA to E. Coli) in breast milk may be linked to the ontogeny of the production or catabolism of those components at mucosal tissues of the recipient infant *(Butte et al., 1984)*. Therefore, the immunologic components found in breast milk appear to play a specific immunologic role in the protection of the nursing infant *(Slade and Schwartz, 1987)*.

Antimibrobial activity in breast milk plays a major role in protecting the breast from microbial infection. Prevention of mastitis in the lactating

woman, as well as protecting the mother herself from a potentially serious infection, may also be of paramount importance to the infant, since, severe infection may compromise milk secretion both in current and subsequent lactations *(Prentice et al., 1985)*.

AIM OF THE WORK:

The aim of the present work is to assess the immunological change in expressed human milk during the course of lactation and breast infection (lactional mastitis). Moreover to evaluate the immunological role of milk in the defense against infection for both mother and infant. The present study also identified the micro-organisms commonly found in expressed human milk.