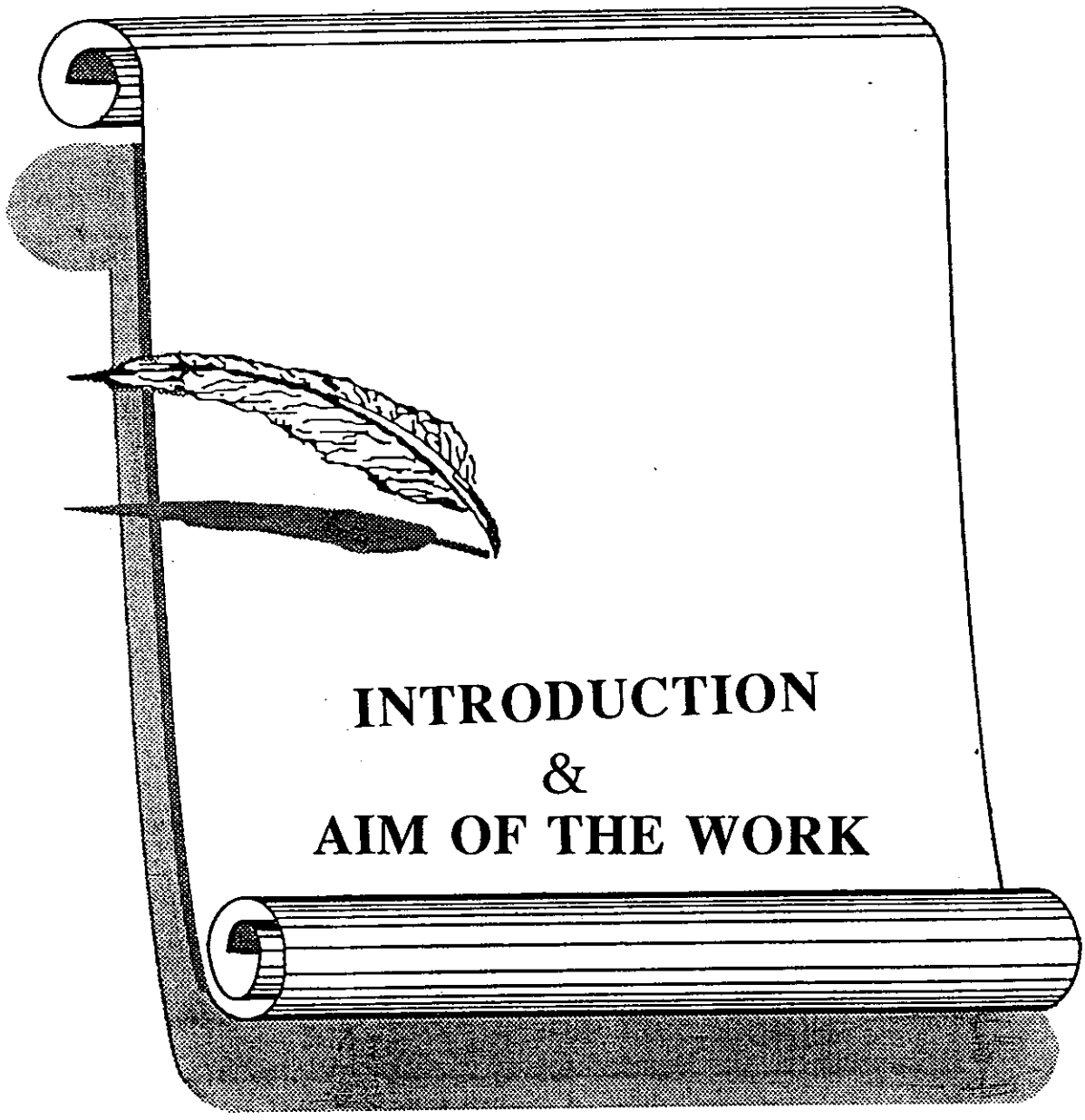

# INTRODUCTION
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Etiological factors in chronic liver diseases are numerous and variable. Factors determining the outcome of chronic liver diseases are not fully understood, but clearly both cellular and humoral immune responses of the host are important determinants (Anastassakos et al, 1988).

Cytokines are essential transmitters of cell to cell communication in many physiological and pathophysiological processes (Junmingle and Janvilcek, 1987). They are essential for communication not only in extrahepatic sites but also within the liver itself. They also regulate metabolism of aminoacids, proteins, carbohydrates, lipids and minerals (Andus et al, 1991).

Interleukin-2 is a cytokine produced by T lymphocytes in response to antigenic stimulation. It acts upon B lymphocytes, T lymphocytes, natural killer cells and macrophages causing activation of lymphocytes and macrophages together with stimulation of lymphokines secretion (Richard, 1992). The gene for IL-2 is located on chromosome number 4 (Siegel et al, 1987).

Interleukin-4 is another cytokine also produced by T lymphocytes. It was originally described as a cytokine primarily active on B cells (King et al, 1988) and later was found to have a growth promoting activity on T cells (Spits et al, 1987). It causes lymphocyte proliferation, macrophage activation and promotes $IgG_1$ and IgE production and decreases $IgG_3$ production (Richard, 1992).

It is the action of IL-2, in concert with other interleukins that allow full T cell activation to proceed (Richard, 1992).

The level and activity of cytokines may be abnormal in many liver diseases. However, little information exists on the role of cytokines in the initiation or prepetuation of liver diseases (perlmutter, 1991).

The present study was carried out to determine whether there is an abnormality in the levels of interleukins 2 and 4 in children with chronic liver diseases and to clarify whether these serum tests could be used in the field of diagnosis of chronic liver diseases.