Almost every individual in the tropical regions of the world is suffering from parasitic infections of one kind or the other. According to some recent reports, millions of people are affected by different helminth parasites including hookworms which account for 1000 million cases annually. Heavy burdens of hookworm parasites cause severe anaemia which may sometime prove fatal and can also lead to intellectual and growth retardation. Recently, chemotherapy targeted to heavily infected individuals has come out as a realistic approach, however, the permanent control measures of the disease are still lacking. Hence, there is an urgent need to evolve an alternate strategy for controlling the hookworm disease. The existing knowledge about the molecular immunology of hookworm infection is very poor and characterisation of hookworm antigens may provide valuable leads about the antigenic molecules of the possible immunoprophylactic and immunodiagnostic significance.

The studies reported here are directed towards the characterisation of somatic as well as excretory-secretory antigens of *Ancylostoma ceylanicum* - a human hookworm, which has been used for chemotherapeutic screening of potential anthelmintics in our Institute. The antigens from adult and infective larval stages of *A. ceylanicum* were also analysed in order to identify the common/cross-reactive and stage/parasite specific antigens of *A. ceylanicum*. The potential of these antigens (somatic extracts from adult and larval
stages as well as of excretory-secretory products from adult *A. ceylanicum*) in inducing protective immunity in experimental animals to challenge infection was investigated and the larval somatic extracts showed significant degree of protection. The information obtained from these findings may be of great importance for the identification of antigens of possible protective potential.