Aims and Objectives
AIMS

The present study was undertaken to identify and purify the immunoreactive low mass of secretory proteins of *M. tuberculosis* and to study their immunoprotective potential against experimental tuberculosis for the development of safe and effective vaccine and also to explore the potential of some of these protein antigens for the development of effective diagnostic tool.

OBJECTIVES

1) To optimize the conditions of harvesting of culture filtrate proteins for the isolation of secretory proteins of *M. tuberculosis*.

2) To purify major secretory proteins of *M. tuberculosis* using chromatographic and electrophoresis techniques.

3) To optimize and standardize the conditions for performing ELISA to titrate the antibody / antigens of *M. tuberculosis*.

4) To study the cellular and humoral response elicited by the purified antigens of *M. tuberculosis*.

5) To study the protective efficacy of most immunoreactive secretory proteins of *Mycobacterium tuberculosis* against *M. tuberculosis* infection in mouse model.

6) To obtain a cocktail of secretory proteins as antigens relevant for serodiagnosis, since no single antigen is known to represent whole tuberculosis population.

7) To develop simple, and more reliable methods for diagnosis of pulmonary as well as extra-pulmonary tuberculosis.