AIM AND OBJECTIVES

Aim of the study
The aim of this study was to determine whether immune responses in active TB might be modulated by the regulatory immune networks often seen in chronic helminth infections that could have a negatively impact on the course of active tuberculosis.

Objectives of the study

1. To determine the influence of helminth infections on the immune responses to TB antigens in latent tuberculosis

   1.1. To study the modulation of mono- and dual cytokine expressing CD4\(^+\) and CD8\(^+\) Th1, Th2 and Th17 cell subsets in latent tuberculosis with concomitant hookworm infection.

   1.2. To determine the systemic levels of Th1, Th2 and Th17 cytokines in latent tuberculosis with concomitant hookworm infection.

   1.3. To study the modulation of mono- and dual cytokine expressing CD4\(^+\) and CD8\(^+\) Th1, Th2 and Th17 cell subsets in latent tuberculosis with concomitant filarial and strongyloides infection.

   1.4. To determine the systemic levels of Th1, Th2 and Th17 cytokines in latent tuberculosis with concomitant strongyloides infection.
2. To determine the influence of helminth infections on the immune responses to TB antigens in active tuberculosis

2.1. To study the modulation of mono- and dual cytokine expressing CD4\(^+\) and CD8\(^+\) Th1, and Th17 cell subsets in active tuberculosis with concomitant filarial and strongyloides infection.

2.2. To determine the systemic levels of Th1, and Th17 cytokines in active tuberculosis with concomitant filarial and strongyloides infection.

2.3. To study the various biomarkers associated with active tuberculosis with concomitant strongyloides infection.