3.1 Aims

Aim of this thesis is to study the relationship of T-regulatory cells with HIV-1 disease progression and to evaluate the mechanisms behind the susceptibility to tuberculosis during HIV-1 infection.

3.2 Objectives

1. To estimate number of Treg cells in HIV-1 infected individuals with and without pulmonary tuberculosis infection.

2. To study the expression of Foxp3 and its splice variants in association with the disease.

3. To study the expression of HO-1 and its correlation with effector CD4+ T-cell functions.

4. To study the immunological factors, modulated by *M.tuberculosis* in HIV-1 individuals.

5. To study the expression of CxCR4 and CCR5 on the CD4 T-cell subpopulations in HIV-TB co-infected patients.