Aims and Objectives

In the first papers concerning the etiology of tuberculosis, I have already indicated the dangers arising from the spread of the bacilli containing excretions of consumptives, and have urged moreover that prophylactic measures should be taken against the contagious disease. But my words have been unheeded. It was still too early, and because of this they still could not meet with full understanding. It shared the fate of so many similar cases in medicine, where a long time has also been necessary before old prejudices were overcome and the new facts were acknowledged to be correct by the physicians.

…Robert Koch
Chapter III

AIMS AND OBJECTIVES

The present study is focused on the development of effective vaccination strategies against tuberculosis (TB). Principally, the efforts were focused on two different strategies:

1. To develop an effective pre-exposure prophylactic vaccine against TB.
2. To develop a post-exposure therapeutic vaccination strategy to shorten the duration of chemotherapy and to prevent the reactivation of latent TB infection.

The specific objectives were as follows:

1. Development of a multigene mutant of *Mycobacterium tuberculosis* by deleting the function of virulence associated genes and evaluation of its protective efficacy in guinea pigs.
2. Evaluation of the immunotherapeutic potential of adjunctive immunotherapy with DNA vaccines in a murine model of latent TB to shorten the duration of chemotherapy and to prevent the reactivation of latent infection.