

## CHAPTER II

### OBJECTIVES

The objectives of this thesis were:

1. To characterize the neutralizing capability of murine monoclonal antibody against S1 subunit of PT both *in vitro*, *ex vivo* and *in vivo*
2. To identify mimotope /epitope of PT specific monoclonal antibody by using peptide phage display technology
3. To produce humanized-murine antibody fragment (HuScFv), and
4. To test the pertussis toxin-neutralizing activity of the HuScFv