

## CHAPTER VII

### CONCLUSION

In conclusion, this study attempted to study the kinetics of antigen-specific ASC in the blood circulation of *V. cholerae*-primed rats after an oral immunization with liposome-associated oral cholera vaccine containing unmethylated bacterial CpG DNA (ODN#1826). The results showed that the vaccine could elicit the specific anamnestic immune response as soon as 2 or 3 days after boosting the primed-rats with the oral vaccine. The results implied that the vaccine should be rapidly effective for the vaccinated residents of cholera endemic areas after *V. cholerae* re-exposure.

An ideal cholera vaccine should not only prevent the disease that is important in people of the developing areas who have been naturally primed but should be able to provide protection in travellers from the cholera naïve parts as well. The developing countries where cholera is epidemic, require the high degree of effectiveness of protective immune response, *i.e.* high and sustained antibody titer and good immunological memory; while a rapidly induced mucosal immunity is needed for people of developed countries who are travelling to the endemic areas. Vaccine is a valuable tool for provoking protection for travellers and health personnels who are traveling to or working in the areas where cholera is endemic and who are naïve to cholera antigen exposure. Thus, data on the kinetics of specific ASC as an indicator of vaccine response in non-primed animals/and individuals would be a useful information on how soon after taking the vaccine, the effector mechanism would be operated and ready to protect the host. The liposome associated oral cholera vaccine containing CpG DNA, thus, should be studied in non-primed animals and humans as well.