

CHAPTER II

OBJECTIVES

The objectives of this current research were as follows:

1. To investigate the association between *Pvdhfr* and *Pvdhps* genotypes and *in vitro* sensitivity of *Plasmodium vivax* isolates collected from Mae Sot, Tak Province to antifolates (pyrimethamine, chlorcycloguanil, WR99210, sulfadoxine, and dapsone) using two *in vitro* systems, i.e, short term *in vitro* sensitivity assay based on schizont maturation inhibition and yeast expression assay;
2. To determine the distribution of the *Pvdhfr* and *Pvdhps* genotypes in *P. vivax* field isolates collected from different endemic areas of Thailand along the international borders; and
3. To determine the association between *Pvdhfr* and *Pvdhps* genotypes of *P. vivax* field isolate collected from different endemic areas of Thailand along the international borders and their sensitivities to antifolates (pyrimethamine, chlorcycloguanil, and WR99210) using yeast expression assay.