CHAPTER II
OBJECTIVES

General objective

To determine the health benefits regarding the properties of antioxidant, anti-glycation, anti-obesity and anti-hypertension of Thai herbal teas in comparison to conventional tea (*C. sinensis*)

Specific objectives

1. To optimize and investigate extraction solvent systems of tea extracts toward their biological properties against oxidative stress, glycation, obesity and hypertension through enzymatic perspectives. .
2. To investigate antioxidant activities in relation to their properties against glycation, pancreatic lipase and ACE of fifteen Thai herbal teas in comparison to five conventional teas from *C. sinensis* including green tea, white tea, black tea, oolong tea and pu–erh tea.

Expected Results and Benefits

The results obtained from present study will provide information as follows:

1. Antioxidant agents that were obtained from teas extracted under the optimized extraction conditions may result in a higher recovery yield.
2. A relation between antioxidant agents extracted from tea samples and their potential properties against glycation, obesity and hypertension.

3. Types of conventional and herbal teas that possess a rich potential source of antioxidant, anti–glycation, anti–obesity and anti–hypertensive activities.

The information gained from tea extracted with hot water at 95 °C (the general condition for making tea) could provide supportive evidence of the fundamental knowledge to promote the usage of these conventional and herbal teas as the excellent choices of healthy beverages for health conscious individual or patient under oxidative stress condition, overweight, obesity and hypertension. In addition, by investigating tea extracts under optimized conditions will provide suitable and effective extracted methods that may increase recovery yield of bioactive compounds. This information would benefit further development of healthy food applications and even drug discovery for prevention and treatment of oxidative stress, obesity and hypertension.