Thesis Title THE *IN VITRO* EFFECTS OF DENGUE-2 VIRUS ON THE PLATELETS IN NORMAL SUBJECTS

Name Narumon Laohareungpanya

Degree Master of Science (Pharmacology)

Thesis Supervisory Committee

Udom Chantharaksri, Ph.D.

Prida Malasit, M.D.,M.R.C.P.

Bruce L. Innis, M.D.

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ABSTRACT

Thrombocytopenia is a constant finding in DHF/DSS. The mechanisms leading to thrombocytopenia is still not clearly understood. Although many mechanisms have been proposed, the massive disappearance of platelets from the circulation and the concurrent homeostasis adaptation of various blood components including those circulating cells caused limitation to the understanding how dengue virus affected platelets in the studies that performed in the pateints. This study was designed to clarifiy the direct effect of dengue virus on the changes that occured in the platelets. The mechanisms leading to the defects have also been studied by using antithrombotic agents as aspirin and heparin.

The interaction of dengue-2 virus with the normal platelets were found to induce both the abnormal platelet functions as assayed by the increase response to low dose of ADP(2uM) and the loss in platelet number by the dengue

virus *in vitro*. The change in platelet number was found after the changes in platelet function. These effects were not found in anticomplement dose heparin (25u/c.c) and they were cyclo-oxygenase dependent. These would suggest that the thrombocytopenia is probably due to the mild pro-aggregatory properties of dengue viruses and the complement factor might be one of the causes that requires further clarification.