

CHAPTER V

CONCLUSION

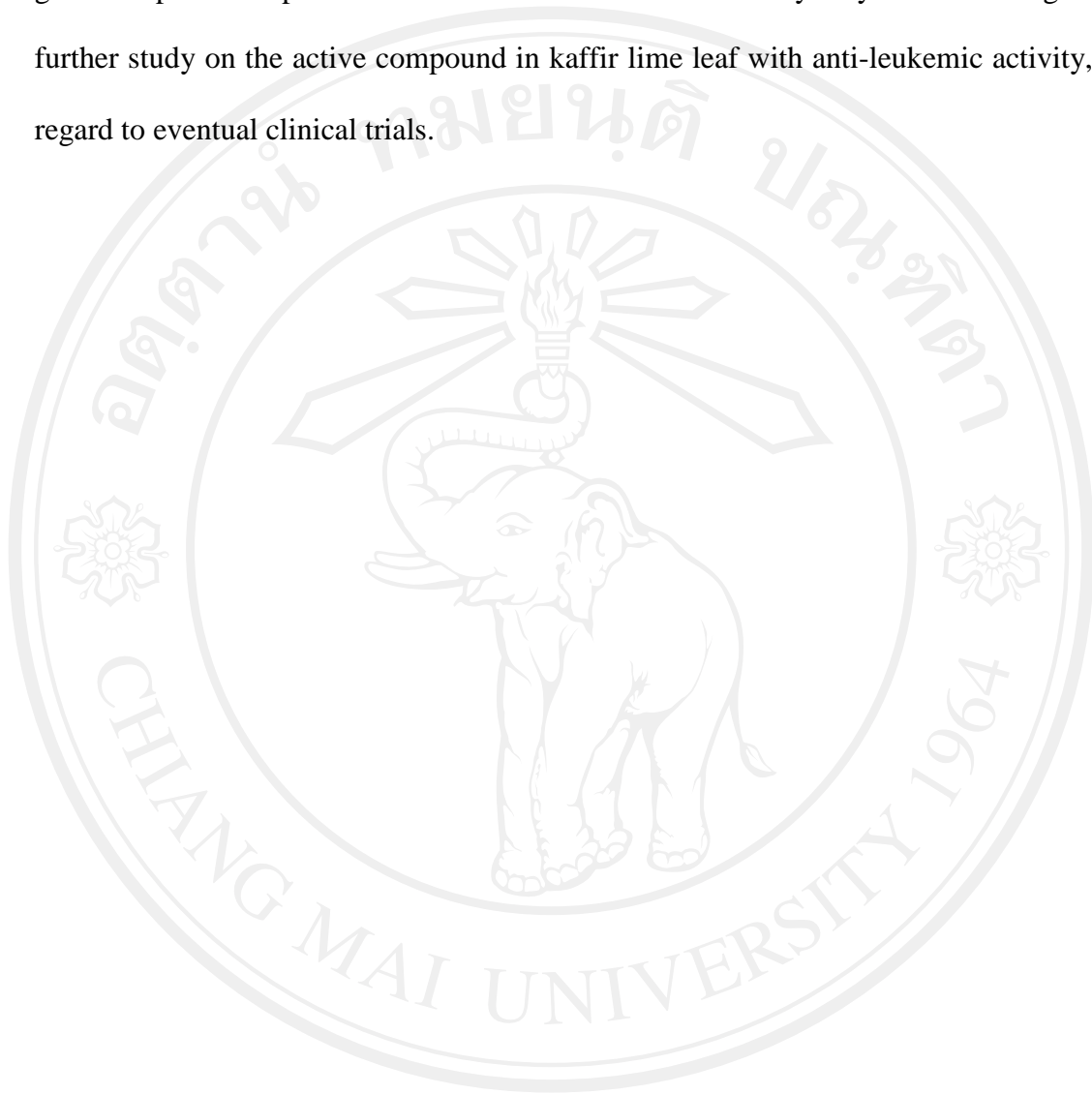
Leukemia is a hematologic malignancy. The overexpression of the *WT1* gene and WT1 protein play a role in leukemogenesis. This study demonstrated the effect of crude kaffir lime leaf fractional extracts, including ethanol, hexane, ethyl acetate, n-butanol, and methanol fractions on K562, Molt4, U937 and HL60 cell lines.

The cytotoxic effect of crude kaffir lime leaf fractional extracts showed that the ethyl acetate and hexane fractions exhibited the strongest cytotoxicity on all leukemic cell lines, whereas the ethanol and n-butanol fractions had lesser effects than the ethyl acetate and hexane fractions, and the methanol fraction had no cytotoxic effect on all leukemic cell lines.

The effect of crude kaffir lime leaf fractional extracts on *WT1* gene expression in K562, Molt4, U937 and HL60 cell lines, and WT1 protein expression in K562 and Molt4 cell lines, showed that non-cytotoxic concentrations of the crude kaffir lime leaf hexane fraction extract had optimum inhibitory effect on both *WT1* gene and WT1 protein expression in all leukemic cells. The effect of concentrations and durations of hexane fraction with non-cytotoxic concentration on *WT1* gene and WT1 protein expression in K562 cell line, used as representative cell, showed that hexane fraction could decrease WT1 mRNA and WT1 protein levels.

In summary, crude kaffir lime leaf hexane fraction extract can decrease *WT1*

gene and protein expression in leukemic cell lines. This study may be used as a guide for further study on the active compound in kaffir lime leaf with anti-leukemic activity, with regard to eventual clinical trials.



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

Copyright© by Chiang Mai University

All rights reserved