CHAPTER V
CONCLUSION

This study demonstrated the effect of mangosteen peel fraction extracts including butanol, ethanol, ethyl acetate, methanol, and hexane fractions on four leukemic cell lines (K562, U937, Molt4, and HL60). The main results are as follows:

1. Hexane and ethyl acetate fractions showed the greatest cytotoxic effect on the K562 cell line. The IC_{50} of the hexane fraction and ethyl acetate fraction were 11.9 and 12.5 µg/ml, respectively. The strongest inhibitory fraction on K562 was the ethyl acetate fraction. The WT1 mRNA level was inhibited about 39%.
2. Ethyl acetate fraction had the most cytotoxic effect on the Molt4 cell line. The IC_{50} of the ethyl acetate fraction was 4.6 µg/ml, but the strongest inhibitory effect on Molt4 was from the ethanol fraction. The WT1 mRNA level was inhibited by about 44%.
3. Ethyl acetate fraction had the most cytotoxic effect on the U937 cell line. The IC_{50} of ethyl acetate fraction was 5.2 µg/ml, but the strongest inhibitory effect on U937 was from the ethanol extract. The WT1 mRNA level was inhibited about 35%.
4. Ethyl acetate fractions had the most cytotoxic effect on the HL-60 cell line. The IC_{50} of the ethyl acetate fraction was 8.9 µg/ml. but the strongest inhibitory effect on Molt4 was the butanol fraction. The WT1 mRNA level was inhibited by about 43%.
5. The treatment with non-cytotoxic concentrations of each mangosteen peel extract decreased the WT1 mRNA and WT1 protein in dose and time- dependent manners in all leukemic cell lines.
6. The WT1 protein levels were decreased with increasing concentration of ethyl acetate fraction in K562 and ethanol fraction in Molt4 cell lines.

The WT1 protein levels were decreased with increasing time of treatement in K562 with the ethyl acetate fraction and Molt 4 in ethanol fraction