

## CHAPTER V

### Conclusion

Kaffir lime leaf is Thai herb or medicinal plant. It's also used in Thai food recipes. Thus Kaffir lime leaf is safe for human use either drugs or foods. This study investigates the effects of purified fractions from hexane fractional extract from kaffir lime leaf. The purified fractions were previously examined their activity including cell cytotoxicity and WT1 protein expression. The purified fraction No. 9, 10, and 11 were selected for this experiment to examine their activity cell cycle distribution and cell cycle regulatory proteins at related phase after treatments on K562 and Molt4 cells.

This study can be concluded the activities of purified fraction No. 9 as follows:

1. The purified fraction No. 9 showed potent cytotoxic effects on K562 and Molt4 cells in a dose dependent manner.
2. The non-cytotoxic dose ( $IC_{20}$  value) of purified fraction No. 9 decreased total cell number by a dose- and time-dependent manner in both K562 and Molt4 cells.
3. The anticancer activity of kaffir lime leaf purified fraction No. 9 was confirmed by increase K562 cell populations at G2/M phase by a dose- and time-dependent manner.
4. The purified fraction No. 9 induced p53 level in K562 and Molt4 cells. This phenomenon indicated that cell cycle progression was inhibited at G2/M phase. Moreover, it inhibited cyclin A, cyclin B, and cdc2 protein expression in both cell lines. This experiment confirmed the result of cell cycle arrest by flow cytometer.