CHAPTER VI

CONCLUSION

I. Five isoflavone markers including puerarin, daidzin, genistin, daidzein and genistein applied for detection of isoflavone content in occurrence with methanol extract of the powder and an adapted protocol for HPLC analyis is a practical analytical method to adapt for the study of active compounds in *P. mirifica* and its products.

II. Different preparative including methanol ethanol and water extract of the powder and spray dry of the tuber juice exhibits different amount of total isoflavone content.

III. It is found that the wild *P. mirifica* collected from 29 provinces located in the north, north-eastern, central and southern part of Thailand exhibits highly variation in isoflavone content including puerarin, daidzin, genistin, daidzein and genistein. Such a variation is affected by various factors including genetics and environmental factors in the location of the collected sites.

IV. It is found that the field grown *P. mirifica* in difference location, including Chieng Rai, Bangkok and Ratchaburi exhibits highly variation in isoflavone content including puerarin, daidzin, genistin, daidzein and genistein. Such a variation is affected by various factors including genetics, environmental factors of the field and differentiation of the tubers.

V. The data exhibits in this study could benefit for the selection of high isoflavone clone in *P. mirifica* as well as the preparative of *P. mirifica* derived materials for commercial purposes.

VI. More studies are need to set up the practical condition as well as standards to establish HPLC fingerprint in *B. superba* and *M. collettii*

Perspective of the studies

The establishment of the practical and reliable HPLC fingerprint analysis for *P. mirifica*, *B. superba* and *M. collettii* in this study could play a great impact on the commercialized development of the plant products. Evaluation for the high quality materials is a key of success in such developments and it could be practically reached by our established protocols. Besides, genetics of the plants are the most important factors for high quality raw material and it could be practically guide by our established protocol and data as well.