CHAPTER V

CONCLUSION

The heartwoods of *X. xylocarpa* var. *kerrii* were collected from Loei province and Mae Hong Son province, Thailand. Plant specimen from Loei has been isolated 4 pimarane-type diterpenoids including sandaracopimaradiene-3-one, sandaraco pimaradiene-3β-ol, sandaracopimaradiene-3β,18-diol and a new compound which was identified as 8(9),15-isopimaradiene-3-one,14β-ol.

The plant specimen from Mae Hong Son was found to have β-sitosterol and stigmasterol, sandaracopimaradiene-3-one, sandaracopimaradiene-3β-ol, sandaraco-pimaradiene-3β,18-diol, sandaracopimaric acid and a new compound which was identified as sandaracopimaradiene-2α, 3β-diol.

The crude hexane extract and crude ethyl acetate extract exhibited against human cancer cell lines while crude acetone extract no activity. Five isolated compounds showed cytotoxic activity against 5 cancer cell lines: sandaracopimaradiene-3-one, sandaraco pimaradiene-3β-ol, sandaracopimaradiene-3β,18-diol, sandaracopimaric acid, and 8(9),15-isopimaradiene-3-one,14β-ol. Thus, the investigation of bioactive substances from this plant was archived. Furthermore, this study has also provided additional chemotaxonomic information for *X. xylocarpa* Taub.

This report can be supported for data of the ancient Thai medicine that using the heartwood were treated for the symptoms of ovary cancer and lung cancer. In addition, it also exhibits cytotoxic activity against human gastric carcinoma cell line. It is worthy for developing chemical structure and cancer medicine of these compounds.