CHAPTER V

CONCLUSION

Phytochemical investigation of the seeds of *Pachyrrhizus erosus* (L.) Urban led to the isolation of 8 flavonoids, namely dehydroneotenone [**2**], (+)-dolineone [**4**], (+)-12a-hydroxydolineone [**8**], (+)-12a-hydroxypachyrrhizone [**11**], (-)-12a-hydroxyrotenone [**12**], neotenone [**15**], pachyrrhizin [**17**] and (+)-pachyrrhizone [**18**]. Some isolates were revised and completed the ^{1}H- and ^{13}C-NMR assignments. Phytochemical study on the stem bark of *Millettia leucantha* Kurz var. *leucantha* afforded 11 flavonoids, including 2 new chalcones, 2',4',6'-trimethoxy-3,4-methylene dioxydihydrochalcone [**281**] and 2,4,6,β-tetramethoxy-3',4'-methylenedioxychalcone [**282**], together with 2 new natural products, namely 2',4'-dimethoxy-3,4-methylene dioxychalcone [**279**] and 2',4',6'-trimethoxy-3,4-methylenedioxychalcone [**285**], along with 7 known compounds, including 3',4'-methylenedioxy-7-methoxyflavone [**68**], dihydromilletenone methyl ether [**102**], lanceolatin B [**103**], karanjin [**115**], 2'-hydroxy-3,4,4',6'-tetramethoxychalcone [**280**], desmethoxykanugin [**284**] and 3',4'-methylenedioxy-5,7-dimethoxyflavone [**287**]. (+)-12a-Hydroxydolineone [**8**] showed moderate anti-HSV activity against HSV-1 at IC_{50} 25.5 μg/ml, whilst (+)-12a-hydroxypachyrrhizone [**11**] inhibited both HSV-1 and HSV-2 at IC_{50} 18.0 and 18.5 μg/ml, respectively. Dihydromilletenone methyl ether [**102**] from *M. leucantha* also exhibited moderate anti-HSV activity at IC_{50} 17.0 μg/ml against HSV-1 and 36.3 μg/ml against HSV-2, whereas 2',4',6'-trimethoxy-3,4-methylenedioxydihydro chalcone [**281**] could inhibit both HSV-1 and HSV-2 at IC_{50} 15.5 μg/ml and 17.0 μg/ml, respectively. Desmethoxykanugin [**284**] showed moderate COX-2 inhibitory activity at IC_{50} 0.96 μM. Additionally, cytotoxic effect against NCI-H460 cell line was proved to pertain to 2',4'-dimethoxy-3,4-methylenedioxychalcone [**279**] (IC_{50} 7.36 μg/ml) and 2',4',6'-trimethoxy-3,4-methylenedioxychalcone [**285**] (IC_{50} 3.69 μg/ml). All isolated compounds, however, exhibited no antimicrobial activity.