

CHAPTER 4

CONCLUSIONS

4.1 The Chemical Composition of *Globba reflexa*

Five pure compounds were isolated from the rhizomes of *Globba reflexa*. They were identified to be stearyl palmitate (26), methyl palmitate (27), (*E*)-15,16-bisnorlabda-8(17),11-dien-13-one (28), villosin (29), coronarin D (32) and mixture of β -sitosterol (13), stigmasterol (30) and campesterol (31). The structure of all compounds were identified by comparison of spectroscopic and some physical data with those reported in the literature. All compounds were reported for the first time from *Globba reflexa*.

4.3 Biological Activities

Three compounds; (*E*)-15,16-bisnorlabda-8(17),11-dien-13-one (28), villosin (29) and coronarin D (32) were tested for antimycobacterial and cytotoxic activities against human oral epidermoid carcinoma (KB), human breast adenocarcinoma cancer (MCF7), human small cell lung cancer (NCI-H187). All compounds were inactive against *Mycobacterial tuberculosis*. For the cytotoxicity assays, compound 29 showed the strongest activities against NCI-H187 and KB cells with IC₅₀ values of 2.12 and 6.85 $\mu\text{g/mL}$, respectively. Compounds 28 and 32 showed moderate to weak activity against all cell line with IC₅₀ ranging from 16.25-49.22 $\mu\text{g/mL}$. Moreover compounds 28 and 32 were tested antiplasmodial. They were inactive against *Plasmodium falciparum*.