

CHAPTER V

CONCLUSION

The current study examined the potential anticancer activity of different *Clinacanthus nutans* extracts and their corresponding compounds identified by GC-MS. The study showed that the chloroform extract of the plant expressed the maximum number of compounds in GC-MS analysis compare to other solvent extracts. Among the fourteen chemical constituent that was identified in GC-MS, showing the high similarity index and peak area, the two major compounds were 1, 2 benzenedicarboxylic acid, mono (2-ethylhexyl) ester. All the tested extracts showed potential anticancer activity by inhibiting the growth of the tested cell line in a dose-dependent manner, except methanol and the mixture of methanol and chloroform. The mixture of solvent extracts exhibited the highest and notable anticancer activity and this extracts possessed some specific compounds, which might be contributing to the activity. Some of the identified compounds are reported for the first time from this plant, including Oxirane, Docosane, Trifluoroacetoxy hexadecane, dl-tocopherol and Gamma-sitosterol. The presence of different bioactive compounds confirms the application of *Clinacanthus nutans* for various diseases by traditional practitioners. However, isolation of individual phytochemical constituents may proceed to find a novel drug. The withdrawn conclusion from the findings is that *Clinacanthus nutans* could be a potential natural alternative for synthetic anticancer drugs.