

UNIVERSITI TEKNOLOGI MARA

**MORPHOLOGICAL CHANGES DURING
PROGRAMMED CELL DEATH (PCD) USING LASER
SCANNING CONFOCAL MICROSCOPY**

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Dissertation submitted in the partial fulfilment of the requirement for the

Bachelor of Pharmacy (Hons.)

Faculty of Pharmacy

2012

ACKNOWLEDGEMENTS

This dissertation is the end of my long journey in obtaining my degree in Pharmacy. This research project would not have been possible without the support of many people.

First, a very special thanks to my supervisor, Dr. Mizaton Hazizul Hasan. Dr. Mizaton had helped a lot and offered invaluable assistance, guidance and support. Thank you does not seem sufficient but it is said with appreciation and respect.

Also, thank you to the member of supervisory committee, Dr. Zolkapli Eshak whom without knowledge and assistance, this study would not have been successful.

To the postgraduates students, especially Puan Masdiana Abdul Samad, thanks for sharing the literature, invaluable assistance and motivation.

To Frances Mallon and the unknown HCT-116 guy, thank you for your cells.

To my beloved family, thank you for your understanding and endless love, through the duration of my studies.

To friends, completing the research project was such a memorable experience - we did it.

And to Allah Subhanahu Wa Ta'ala, thank you for making all things possible.

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ABSTRACT

The purpose of this research is to observe morphological changes on MCF-7 and HCT-116 cell lines treated with aqueous extracts of *M. platytyrea* from Rubiaceae family. The concentrations of *M. platytyrea* used in this research are (0.01, 0.1, 0, 1, 10, 100, and 1000 $\mu\text{g/ml}$). From the result, apoptosis were detected in both cells. For HCT-116, the aqueous extract of *M. platytyrea* induced apoptosis about 10 times higher than the control. Meanwhile, in MCF-7, apoptosis was induced about 47 times higher than the control using the same extract. This further suggested that the aqueous extract of *M. platytyrea* was more selective to induce apoptosis in breast cancer cells compared to colon cancer cells.