

**CYTOGENETIC STUDY OF TISSUE-CULTURED PLANT,
*Tacca integrifolia***

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**Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Biology
In the Faculty of Applied Sciences
Universiti Teknologi MARA**

JULY 2016

ACKNOWLEDGEMENTS

In the name of Allah, the most compassionate and merciful. In making this final year project a reality, I was indebted to so many parties to whom I wish to express my sincere gratitude. Firstly, I would like to express my profound gratitude to my honourable supervisor, Madam Sarina binti Hashim for the valuable guidance and advice. The supervision and support that she gave truly help the progression and smoothness of the final year project. I also would like to extend my appreciation to Biology Lab 2's lab assistant, Madam Zairus for giving me advices and suggestions throughout this project. A million thanks to my family especially to my parents, Aziz bin Adam and Nik Roslena binti Nik Man, and my friends as well for their moral support and inspiration that gave me strength to complete my project. Sincere thanks I bid to people that involve as direct or indirect in helping me completing this final year project.

(Nur Azian binti Aziz)

TABLE OF CONTENTS

| | PAGE |
|---|-------------|
| ACKNOWLEDGEMENTS | iii |
| TABLE OF CONTENTS | iv |
| LIST OF FIGURES | vi |
| LIST OF ABBREVIATIONS | viii |
| ABSTRACT | ix |
| ABSTRAK | x |
| | |
| CHAPTER 1: INTRODUCTION | |
| 1.1 Background Study | 1 |
| 1.2 Problem Statement | 3 |
| 1.3 Significance of the Study | 3 |
| 1.4 Objectives of the Study | 4 |
| | |
| CHAPTER 2: LITERATURE REVIEW | |
| 2.1 Plant Histology | 5 |
| 2.1.1 Basic steps in histotechnique | 6 |
| 2.1.2 Staining technique | 8 |
| 2.1.3 Mitosis and chromosomal study | 9 |
| 2.2 Plant Tissue Culture | 13 |
| 2.2.1 General steps in tissue culture | 14 |
| 2.2.2 Sterilization | 15 |
| 2.2.3 Media ingredients | 16 |
| 2.2.4 Importances of tissue culture | 19 |
| 2.3 <i>Tacca integrifolia</i> | 20 |
| 2.3.1 Ornamental value of <i>Tacca integrifolia</i> | 20 |
| 2.3.2 Importance of <i>Tacca integrifolia</i> | 21 |
| 2.3.3 Genetic study of <i>Tacca integrifolia</i> | 22 |
| | |
| CHAPTER 3: METHODOLOGY | |
| 3.1 Materials | 24 |
| 3.1.1 Raw materials | 24 |
| 3.1.2 Chemicals | 24 |
| 3.1.3 Apparatus and equipments | 24 |
| 3.2 Methods | 25 |
| 3.2.1 Preparation of media | 26 |
| 3.2.2 Inoculation and incubation | 27 |
| 3.2.3 Cytogenetic study | 28 |
| 3.2.4 Observation and result analysis | 30 |

| | |
|---|----|
| CHAPTER 4: RESULTS AND DISCUSSION | |
| 4.1 <i>In- vitro</i> Propagation of <i>Tacca integrifolia</i> | 31 |
| 4.1.1 Cell and tissue formation of <i>Tacca integrifolia</i> | 32 |
| 4.2 Cytogenetic Determination | 42 |
| 4.2.1 Problems in cytogenetic study | 44 |
| | |
| CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS | 49 |
| | |
| CITED REFERENCES | 50 |
| APPENDICES | 54 |
| CURRICULUM VITAE | 55 |

ABSTRACT

CYTOGENETIC STUDY OF TISSUE-CULTURED PLANT, *Tacca integrifolia*

White bat flower, *Tacca integrifolia* that has beautiful foliage and fascinating flowers is one of the most popular ornamental. Despite the medicinal importance of white bat flower, little attention has been given to its cytogenetic study which leads to insufficient information in cytogenetic profile. This study revealed the chromosomal study and behaviour of *Tacca integrifolia*. The protocol of micropropagating of white bat flower through subculturing was investigated as well. The plantlets were cultured with Murashige and Skoog (MS) medium and put under direct light, 16:8 hours-photoperiod for about six weeks. The formation of callus, primordial leaves into a young plant that had overall major organs which were stem, leaf and root indicated that micropropagation of *T. integrifolia* was successfully done. Squeezing out the meristematic cells from the root tip region on to the surface of the slide through squash technique was the main step leading to monolayer cell. In order to observe mitosis of *T. integrifolia* during actively mitotic division cells time, aceto-orcein, acetocarmine, methylene blue and toluidine blue were used as staining reagents. Prophase and anaphase were the only stages that could be observed in the cell as the chromosomes of *T. integrifolia* were too small. Thus, karyotyping analysis could not be performed and indicated that cytogenetic study in *T. integrifolia* was unsuccessful.