

## TABLE OF CONTENTS

COVER TITLE PAGE.....	i
FRONT COVER.....	ii
VALIDATION PAGE .....	iii
PREFACE .....	iv
TABLE OF CONTENTS .....	vi
LIST OF SYMBOL AND ABBREVIATION .....	viii
LIST OF TABLES.....	x
LIST OF FIGURES .....	xi
LIST OF ATTACHMENT.....	xii
ABSTRACT .....	xiii
INTISARI.....	xiv
CHAPTER I .....	1
A. Background.....	1
B. Research Problems .....	3
C. Research Objectives.....	3
D. Research Benefits.....	4
CHAPTER II. LITERATURE REVIEW AND HYPOTHESIS .....	5
A. Literature Review.....	5
1. Arabica Coffee ( <i>Coffea arabica</i> L.) .....	5
2. <i>C. arabica</i> var. <i>caturra</i> .....	7
3. Somatic Embryogenesis.....	8
4. Plant Growth regulators (Auxin and Cytokinin) .....	11
5. <i>RKD4</i> Gene Function and Structure .....	12
6. PCR and PCR-RFLP Analysis .....	14
B. Hypothesis .....	16
CHAPTER III. METHODOLOGY .....	17
A. Time and Place .....	17
B. Materials .....	17
C. Equipment .....	17
D. Method.....	18
1. MS Medium Preparation.....	18
2. <i>C. arabica</i> var. <i>caturra</i> Explant Sterilization .....	18
3. Somatic Embryogenesis Induction .....	19
4. DNA Isolation .....	19
5. PCR Amplification .....	21

6. PCR-RFLP Analysis.....	22
E. Data Analysis .....	23
CHAPTER IV. RESULTS AND DISCUSSION .....	24
A. Somatic Embryogenic Callus Induction .....	24
B. Molecular Characterization of <i>RKD4</i> .....	31
C. PCR-RFLP Analysis.....	37
CHAPTER V. CONCLUSION AND SUGGESTION .....	40
A. Conclusion .....	40
B. Suggestions .....	40
REFERENCES .....	41
ATTACHMENTS.....	45