

THE EFFECT OF EXTRACT FROM FRINGING ANGEBA
ON *GANODERMA BONINENSE*, A
PARASITIC FUNGUS OF PLANT

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**THE EFFECTS OF EXTRACT FROM FREE-LIVING AMOEBEA ON *GANODERMA
BONINENSE*, A PATHOGENIC FUNGUS OF PLANT**

By

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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

**THE EFFECTS OF EXTRACT FROM FREE-LIVING AMOEBAE ON *Ganoderma boninense*,
A PATHOGENIC FUNGUS OF PLANT**

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	ix
LIST OF APPENDICES	x
ABSTRACT	xi
ABSTRAK	xii
CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Importance of Study	2
1.3 Objectives	2
CHAPTER 2 LITERATURE REVIEW	4
2.1 Identification of <i>Acanthamoeba</i> spp	4
2.1.1 Taxonomy and nomenclature of <i>Acanthamoeba</i> spp	5
2.1.2 Morphological features of <i>Acanthamoeba</i>	6
2.1.3 Life cycle	7
2.2 The Roles of <i>Acanthamoeba</i>	8
2.3 Previous studies of Bioactive Compound on Protozoa	8

2.4	Identification of <i>Ganoderma</i> spp	10
2.4.1	Taxonomy and nomenclature of <i>Ganoderma</i> spp	10
2.4.2	Morphological features of <i>Ganoderma boninense</i>	12
2.4.3	Cultural characteristics	13
2.5	<i>Ganoderma boninense</i> and Basal Stem Rot (BSR) disease	14
2.6	Previous study on <i>Ganoderma boninense</i>	15
CHAPTER 3 METHODOLOGY		17
3.1	Source of <i>Ganoderma boninense</i> culture	17
3.1.1	Receiving and maintaining the fungus cultures samples	17
3.1.2	Culture media preparation: Potato-Dextrose-Agar (PDA)	20
3.2	Source of <i>Acanthamoeba</i> (AK) and <i>Acanthamoeba</i> (PI)	20
3.2.1	Culture media preparation	20
3.3	Preparation of Amoeba Extract	21
3.3.1	Determination of protein concentration	22
3.3.2	Determination the volume of amoeba extract with various concentration	23
3.4	Treatment of <i>Ganoderma boninense</i> with amoebae extracts	25
3.4.1	Preparation of PDA media containing amoeba extract	25
3.4.2	Assay of fungal sensitivity to the amoeba extract	25
3.5	Data Analysis	28

CHAPTER 4 RESULTS	29
4.1 Sensitivity of <i>Ganoderma boninense</i> to the two amoeba extract	29
4.1.1 Determination of Radial Growth of <i>Ganoderma boninense</i> by <i>Acanthamoeba</i> extracts; AK and P1	29
4.1.2 Determination of Percentage of Inhibition of Radial Growth (PIRG) of <i>Ganoderma boninense</i> after treatment with <i>Acanthamoeba</i> extracts; AK and P1	35
 CHAPTER 5 DISCUSSION	
5.1 Sensitivity of <i>Ganoderma boninense</i> to the two amoeba extracts	38
5.2 Radial Growth and Percentage Inhibition of Radial Growth (PIRG) of <i>Ganoderma boninense</i> by two <i>Acanthamoeba</i> extracts	39
 CHAPTER 6 CONCLUSION	44
 REFERENCES	45
 APPENDIXES	51
 CURICULUM VITAE	59

LIST OF TABLES

Table		Page
4.1	Mean Radial Growth of <i>Ganoderma boninense</i> by 2 <i>Acanthamoeba</i> extracts; P1 and AK	31
4.2	Percentage Inhibition of Radial Growth (PIRG) of <i>Ganoderma boninense</i> by 2 <i>Acanthamoeba</i> extracts; P1 and AK	36

LIST OF FIGURES

Figure		Page
3.1	Cultures of <i>Ganoderma boninense</i> in a petri dishes	19
3.2	Cultures of <i>Ganoderma boninense</i> in a universal bottle; as source	19
3.3	Trophozoite of <i>Acanthamoeba</i> – Type AK under inverted microscop (Magnification x100)	24
3.4	Trophozoite of <i>Acanthamoeba</i> – Type P1 under inverted microscop (magnification x100)	24
3.5	0.7 cm agar plug from <i>Ganoderma boninense</i> at the center of solidified agar PDA with amoeba extract	27
3.6	<i>Ganoderma boninense</i> at first day after treatment	27
4.1a	The effect of different concentration of AK extracts on radial growth of <i>Ganoderma boninense</i>	32
4.1b	The effect of different concentration of P1 extracts on radial growth of <i>Ganoderma boninense</i> .	32
4.2	The difference in radial growth of <i>Ganoderma boninense</i> treated with AK and P1 extracts	33
4.3a	<i>Ganoderma boninense</i> growth 8 days after treatment. Solidified agar with <i>Acanthamoeba</i> (AK) extract	34
4.3b	<i>Ganoderma boninense</i> growth 8 days after treatment. Solidified agar with <i>Acanthamoeba</i> (P1) extract	34
4.4	Percentage Inhibition of Radial Growth (PIRG) of <i>Ganoderma boninense</i> by 2 <i>Acanthamoeba</i> extracts; AK and P1	37

LIST OF ABBREVIATIONS

%	percentage
°C	Degree Celcius
ANOVA	Analysis of Variance
g	gram
ml	mililiter
mg	milligram
mg/ml	miligram per mililiter
µg/ml	microgram per milliliter
µm	micron meter
L	liter
µL	micron liter
cm	centimeter
MICs	Minimum Inhibition Concentrations
PDA	Potato-Dextrose-Agar

LIST OF APPENDICES

Appendix		Page
A	Preparation of Amoeba Extracts with Various Concentrations	52
B	Table 1: Radial Growth of <i>Ganoderma boninense</i> against 250, 500, 1000 and 2000 µg/ml concentrations of AK extracts.	55
	Table 2: Radial Growth of <i>Ganoderma boninense</i> against 250, 500, 1000 and 2000 µg/ml concentrations of P1 extracts.	55
C	Table 3: Percentage Inhibition of Radial Growth (PIRG) of <i>Ganoderma boninense</i> against 250, 500, 1000 and 2000 µg/ml concentrations of AK extracts.	56
	Table 4: Percentage Inhibition of Radial Growth (PIRG) of <i>Ganoderma boninense</i> against 250, 500, 1000 and 2000 µg/ml concentrations of P1 extracts.	57
D	a) ANOVA single factors: Determination of radial growth on <i>Ganoderma boninense</i> by different concentrations of AK extracts	58
	b) ANOVA single factors: Determination of radial growth on <i>Ganoderma boninense</i> by different concentrations of P1 extracts	58

ABSTRACT

A study has conducted to see the effect of two amoeba extracts on a plant pathogenic fungus; *Ganoderma boninense*. Two amoeba species isolated from marine environment designed as *Acanthamoeba* (P1) and *Acanthamoeba* (AK) were used in this study. The extracts of amoebae were labeled as P1 and AK extracts, accordingly and were obtained by sonication of the amoeba cell's pellets. Antifungal activities of the amoeba extracts were tested against *Ganoderma boninense* by spreading the extracts on PDA which later was used to culture the fungus. The amount of protein in the extracts was measured to inoculate the concentration of extracts exerted in this study. The concentration of extracts used in this studied were 250 µg/ml, 500 µg/ml, 1000 µg/ml and 2000 µg/ml. The growth of *Ganoderma boninense* was observed after eight days. Radial of the mycelial growth (in cm) were taken and recorded. Results of this study show that all the extracts at various concentration were gave a little effects on the growth of *Ganoderma boninense*, suggesting that both amoeba extracts used in this study do not have potential to been used as antifungal agents for *Ganoderma boninense*.

**KESAN EKSTRAK DARIPADA AMOEBA BEBAS-HIDUP KE ATAS
Ganoderma boninense, KULAT PATOGENIK TUMBUHAN**

ABSTRAK

Kajian telah dijalankan untuk melihat kesan dua ekstrak ameba ke atas kulat patogenik tumbuhan; *Ganoderma boninense*. Dua spesis ameba yang digunakan dalam kajian ini adalah diasingkan dari sekitaran marin dikenali sebagai *Acanthamoeba* (P1) dan *Acanthamoeba* (AK). Ekstrak ameba dilabelkan sebagai P1 dan AK dan diperolehi daripada pemecahan pelet sel ameba. Aktiviti antikulat ekstrak ameba diuji ke atas *Ganoderma boninense* dengan meletakkan ekstrak ameba ke atas PDA yang mana kemudian akan digunakan untuk mengkultur kulat tersebut. Jumlah protein dalam ekstrak diukur untuk mendapatkan ekstrak dengan kepekatan yang dikehendaki dalam kajian ini. Kepekatan yang digunakan ialah 250 µg/ml, 500 µg/ml, 1000 µg/ml dan 2000 µg/ml. Perkembangan *Ganoderma boninense* diperhatikan selepas lapan hari. Perkembangan jejari miselia (dalam cm) diambil dan direkodkan. Hasil kajian ini menunjukkan semua ekstrak dengan pelbagai kepekatan memberi sedikit kesan pada perkembangan *Ganoderma boninense*, mencadangkan kedua-dua ekstrak ameba tidak berpotensi untuk digunakan sebagai agen antikulat ke atas *Ganoderma boninense*.