



TABLE OF CONTENTS

VALIDATION PAGE	ii
PLAIGARISM FREE STATEMENT	ivi
PREFACE.....	iv
TABLE OF CONTENTS	v
LIST OF SYMBOLS AND DEFINITION.....	vii
LIST OF PICTURES.....	viii
LIST OF TABLES	ix
LIST OF ATTACHMENTS.....	x
ABSTRACT.....	xi
I. INTRODUCTION.....	1
A. Scientific Background.....	1
B. Research Problem.....	2
C. Research Objective.....	2
D. Research Benefits.....	3
II. LITERATURE REVIEW AND HYPOTHESIS.....	4
A. Literature Review.....	4
1. <i>Aedes aegypti</i> as Vector of Dengue Virus.....	4
2. Entomopathogenic Fungi (EPF).....	5
3. <i>Beauveria bassiana</i> Morphology and Characteristics.....	6
4. <i>Beauveria bassiana</i> Sampling and Isolation	7
5. Infecting <i>Aedes aegypti</i> with <i>Beauveria bassiana</i>	7
B. Hypothesis.....	8
III. RESEARCH METHODS	9
A. Time and Place	9
B. Tools and Materials.....	9
C. Procedure.....	10
1. Soil Sampling Preparation.....	10
2. Fungi Isolation and Identification	11
3. Mosquito Rearing.....	12
4. Bioassay	13



UNIVERSITAS
GADJAH MADA

Isolation of Beauveria from Universitas Gadjah Mada Soils and its Screening Against Aedes aegypti L.

(Diptera: Culicidae)

Muhammad Danang Rachnadhyr, Drs. Hari Purwanto, M.P., Ph.D.

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

D. Data Analysis	13
IV. RESULTS AND DISCUSSION	14
1. Results	14
2. Discussion	24
V. CONCLUSION	28
REFFERECEES	29



UNIVERSITAS
GADJAH MADA

Isolation of Beauveria from Universitas Gadjah Mada Soils and its Screening Against Aedes aegypti L.
(Diptera: Culicidae)
Muhammad Danang Rachnadhyr, Drs. Hari Purwanto, M.P., Ph.D.
Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

LIST OF SYMBOLS AND DEFINITION

No	Symbol	Definition
1	BSC	Biosafety Cabinet
2	EPF	Entomopathogenic Fungus
3	OA+CTAB	Oatmeal Agar Cetyltrimethylammonium Bromide
4	PDA	Potato Dextrose Agar
5	VBD	Vector Borne Disease



UNIVERSITAS
GADJAH MADA

Isolation of Beauveria from Universitas Gadjah Mada Soils and its Screening Against *Aedes aegypti*
L.
(Diptera: Culicidae)
Muhammad Danang Rachnadhyr, Drs. Hari Purwanto, M.P., Ph.D.
Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

LIST OF PICTURES

Figure 1. Life cycle and morphological characteristics of <i>Aedes aegypti</i>	4
Figure 2. Microscopic morphology of <i>Beauveria bassiana</i>	6
Figure 3. Soil Sampling Map	10
Figure 4. Overall Strain Mortality Rate	14
Figure 5. Pathogenic Strains Mortality Rate	15
Figure 6. Pathogenic Strain Group Morphology	16
Figure 7. Microscopic Morphology of Pathogenic Strain Group	18
Figure 8. Pathogenic Group Mortality Rates within 10-day Incubation Period	19
Figure 9. Pathogenic Strain Kaplan-Meier Survivability Curve	20
Figure 10. Infected Mosquito Larvae	22



UNIVERSITAS
GADJAH MADA

Isolation of Beauveria from Universitas Gadjah Mada Soils and its Screening Against *Aedes aegypti*

L.
(Diptera: Culicidae)

Muhammad Danang Rachnadhyr, Drs. Hari Purwanto, M.P., Ph.D.

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

LIST OF TABLES

Table 1. Macroscopic Characters of Pathogenic Strain Group.....	16
Table 2. Soil Sampling Location	33



UNIVERSITAS
GADJAH MADA

**Isolation of Beauveria from Universitas Gadjah Mada Soils and its Screening Against Aedes aegypti L.
(Diptera: Culicidae)**
Muhammad Danang Rachnadhyr, Drs. Hari Purwanto, M.P., Ph.D.

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

LIST OF ATTACHMENTS

Table 2. Soil Sampling Location	33
---------------------------------------	----