

# Faculty of Science Entomology Department

# Antibacterial activity and protein analysis (proteomic approach) of Oriental Hornet Vespa orientalis L. Venom

# **A Thesis**

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# **Submitted by**

#### **Asmaa Ebrahim Mahmoud Ebrahim**

Demonstrator, Entomology Department Facultyof Science ,Ain shams University B.Sc.Entomology (2013)

# **Supervisors**

# Prof. Dr. Magda Hassan Abdul Aziz Rady

Professor of Entomology, Entomology Department, Faculty of Science, Ain Shams University

# Prof. Dr. Adel Kamal El- Sayed

Professor of Entomology, Entomology Department, Faculty of Science, Ain Shams University

# Dr. Dalia Mohamad Mahmoud

Assistant Professor of Entomology, Entomology Department, Faculty of Science, Ain Shams University

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﴿ أَقُراً بِالسِّهِ رَبِّكِ ٱلَّذِى خَلَقَ اللَّهِ خَلَقَ الْأَكْرَمُ الْإِنسَانَ مِنْ عَلَقِ اللَّ اقْراً وَرَبُّكَ ٱلْأَكْرَمُ الْإِنسَانَ مِنْ عَلَقِ اللَّهِ الْقَالِمِ اللَّهُ عَلَمَ الْإِنسَانَ مَا لَذِي عَلَمَ بِٱلْقَلِمِ اللَّهِ عَلَمَ الْإِنسَانَ مَا لَوْ يَعْلَمُ اللَّهِ الْعَلَمُ اللَّهِ الْعَلَمُ اللَّهِ اللَّهُ اللَّهِ الْعَلَمُ اللَّهُ الللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ الللْلِلْ الللْلِلْ اللللْلِلْ الللللْلِي اللللْلِي اللللْلَّهُ اللللْلِلْلِي اللللْلِي اللللْلِي اللللْلِي الللللْلِلْ الللللْلِلْلْلِلْ اللللْلْلِي اللللللْلِي الللللْلْلِي الللللللْلِي اللللللللْلِلْلْلِلْلْلِلْلِلْلِلْلْلِلْلْلْلِلْلْلْلِلْلْلِلْلْلْلِلْلْلْلِلْلْلِلْلِلْلْلِلْلْلْلِلْلِلْلْلِلْلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلْلْلِلْلْلْلْلِلْلِلْلْلِلْلْلْلِلْلْلِلْلْلِلْلِلْلْلْلِلْلِلْلْلْلِلْلْلِلْلْلْلِلْلِلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلْلْلِلْلِلْلْلِلْلِلْلِلْل

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# **BIOGRAPHY**

Name: Asmaa Ebrahim Mahmoud Ebrahim Amer

Degree awarded: B.Sc. (Entomology).

**Department:** (Entomology).

Faculty: Science.

University: Ain Shams University.

**Date of Graduation:** June 2013.

Occupation: Demonstrator, Department of Entomology,

Faculty of Science, Ain Shams University.

**Date of Appointment:** April 2014.

**Date of registration:** May 2015.

# **Supervisors**

# Prof. Dr. Magda Hassan Abdul Al-Aziz Radi

Professor of Entomology (Molecular biology), Entomology Department, Faculty of Science, Ain Shams University.

# Prof. Dr. Adel Kamal El-Sayed

Professor of Entomology, Entomology Department, Faculty of Science, Ain Shams University.

#### Dr. Dalia Mohamad Mahmoud

Assistant professor of Entomology, Entomology Department, Faculty of Science, Ain Shams University.

# **Examination Committee**

#### Prof. Dr. Mostafa Ebrahim Hassan

Professor of Medical Entomology, Zoology Department, Faculty of Science, Al-Azhar University

#### Prof. Dr. Hanaa Ahmed El-sherif

Professor of Biological control- Entomology Department, Faculty of Science, Cairo University.

# Prof. Dr. Magda Hassan Abdul Al-Aziz Radi

Professor of Entomology ( Molecular biology), Entomology Department, Faculty of Science, Ain Shams University.

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# LIST OF ABBREVIATIONS

ABBREVIATION	ITEM
\$	Dollar.
%	Percentage.
ALPase	Alkaline phosphatase.
AMPs	Antimicrobial peptides.
a-PMTX	A-pompilido toxin.
APS	Ammonium per sulphate solution.
B.C.	Before Christ.
B.subtilis	Bacillus subtilis.
b-PMTX	B-pompilido toxin.
$^{\circ}$ C	The degree Celsius.
C.albicans	Candida albicans.
CDC	Centers for Disease Control and Prevention.
Fig.	Figure.
cm	Centimeter.
$CO_2$	Carbon dioxide.
Da	Dalton.
DDSA	Dodecenyl succinic anhydride.
dist.	Distelled.
DMP	Dimethylamin-ethyl phenol.
DMSO	Dimethyl sulfoxide.
E.coli	Escherichia coli.
FDA	Federal Food and Drug Administration.
g/l	Gram per liter.
gm.	Gram.
H <sub>2</sub> O	Water.
Hcl	Hydrochloric acid.
HIV	Human Immunodeficiency Virus.
HPLC	High- performance liquid
	chromatography.
IDSA	Infectious Diseases Society of America.
K.pneumonia	Klebsiella pneumonia.
kDa	kilo Dalton.

#### ☐ LIST OF ABBREVIATIONS ☐

kv.	Kilovolt.
L.	Linnaeus.
LPS	Lipopolysaccharides.
LSD	Least significant difference.
MI	Myocardial infraction.
MIC	Minimum inhibitory concentration.
Min.	Minute.
ml	Milliliter.
MRSA	Methicillin resistant Staphylococcus aureus
$Na_3 [C_2H_5O_7]$	Sodium citrate.
nm	Nanometer.
NMA	Nadic methyl anhydride.
NTDs	Neglected tropical diseases.
0.	Order.
O.D.	Optical density.
PAGE	Poly acrylamide gel electrophoresis.
PMNL	polymorph nucleated leukocytes.
Pb (NO3) <sub>2</sub>	Lead nitrate.
Pb <sub>3</sub> [C6H5O7] <sub>2</sub>	Lead citrate.
RCMB	egional Center for Mycology and Biotechnology.
S. mutans	Streptococcus mutans.
S.typhimurium	Salmonella typhimurium.
SD.	Standard deviation.
SDS	Sodium dodecyl sulphate.
Sec.	Second.
sp.	Species.
TEM	Transmission electron microscopy.
TEMED	Tetramethylethylenediamine.
TR.	Tetracycline.
V.	Volt.
V.	Vespa.
VE.	Venom.
WHO	World Health Organization.
μg	Microgram.

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