

شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو

# بسم الله الرحمن الرحيم





MONA MAGHRABY



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# جامعة عين شمس التوثيق الإلكتروني والميكروفيلم قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



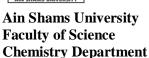
يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



MONA MAGHRABY







### Modified Solid Phase Peptide Synthesis of Polymyxin E<sub>1</sub> Antibiotic Analogues Using Microwave Assisted Irradiation

"A thesis Submitted for the Degree of Master of Science as a partial fulfillment for requirement of the Master of Science"

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الملا رب بردني عالما"

MY PARENTS,
MY FAMILY,
AND MY Collegues.

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### **List of Abbreviations**

Symbol	Description
A.A	Amino Acid
АСОН	Acetic Acid
ACN	Acetic Anhydride
AMPs	Antimicrobial Peptides
Arg	L-Arginine
Asp	L-Aspartic Acid
Boc	Tert-Butyloxycarbonyl
BOP	Benzotriazol-l-yl -oxy-tri(dimethylamino)
	phosphonium hexafluorophosphate
BrOP	Bromotris (N-methyl methan a min ato)-phosphorus
	hexafluorophosphate
Bzl	Benzyl
ClOP	Chlorotris (N-methyl methanaminato)-phosphorus
ClOP	$Chlorotris (N-methylmethanaminato)-phosphorus \\ hexafluorophosphate$
CIOP	
	hexafluorophosphate
DAB	hexafluorophosphate 2,4-Diaminobutyric Acid
DAB DCC	hexafluorophosphate  2,4-Diaminobutyric Acid  Dicyclohexylcarbodiimide
DAB DCC DCM	hexafluorophosphate  2,4-Diaminobutyric Acid  Dicyclohexylcarbodiimide  Dichloromethane
DAB DCC DCM DCHU	hexafluorophosphate  2,4-Diaminobutyric Acid  Dicyclohexylcarbodiimide  Dichloromethane  Dicyclohexylurea

DMF Dimethylformamide

DMSO Dimethylsulfoxide

DVB Divinylbenzene

EDC 1-Ethyl-3-(3-Dimethylaminopropyl)-Carbodiimid

EDT Ethanedithiol

ESI-MS Electron Spray Ionization Mass Spectroscopy

EtOAc Ethylacetate

EtOH Ethanol

Et<sub>2</sub>O Diethylether

Fmoc 9-Fluorenylmethyloxycarbonyl

HATU N-[(dimethylamino)-lH-1,2,3-triazolo[4,5-

6]pyridin-lylmethylene]-N-

methylmethanaminium hexafluorophosphate N-

oxide

HBTU N-[(lH-benzotriazol-l-

yl)(dimethylammo)methylene]-N-

methylmethanaminium hexafluorophosphate N-

oxide

HCTU O-(1H-6-chlorobenzotriazole-1-yl)-1,1,3,3-

tetramethyluronium hexafluorophosphate

HF Hydrofluoric Acid

Hmb 2-Hydroxy-4-methoxybenzyl

HMBA 4-Hydroxymethylbenzoic acid

HMPA 4-Hydroxymethylphenoxyacetyl

HOAt l-hydroxy-7-azabenzotriazole

#### List of Abbreviations

HOBt 1-Hydroxybenzotriazole

HOSu N-Hydroxysuccinimide

HPLC High Performance Liquid Chromatography

IC<sub>50</sub> Half Maximal Inhibitory Concentration

LC-MS Liquid Chromatography-Mass Spectrometry

LD<sub>50</sub> lethal dose

Leu L-Leucine

LPPS Liquid Phase Peptide Synthesis

LPS Lipopolysaccharides

IR Infra Red

MBH 4-Methylbenzhydrylamine

Met Methionine

MHA Methyl Heptanoic Acid

MHPA 4-Hydroxy-3-methoxyphenoxyacetyl

MOC Methyl Octanoic Acid

Mtr 4-Methoxy-2,3,6-trimethylbenzenesulfonyl

NMM N-Methylmorpholine

OBzl Benzyl ester

OBut Tert-Butyl ester

OM Outer Membrane

Pbf 2,2,4,6,7-pentamethyldihydrobenzofuran-5-

sulphonyl

PEG Polyethyleneglycol