



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



شبكة المعلومات الجامعية
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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY



Effect of Some Plant Extracts on The Activity of Some Enzymes Related to Metabolism

A Thesis for Partial Fulfillment for the Requirements of
Master Degree of Science in Biochemistry

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To My Family 

Declaration

This thesis has not been submitted to this or any other University.

Mohamed Hamdi Ahmed

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الملخص العربي
المستخلص

List of abbreviations

List of abbreviations

[I]	: Inhibitor concentration
[S]	: Enzyme substrate concentration
2D	: Two-dimensional
3D	: Three-dimensional
Å	: Ångström
AAE	: Ascorbic acid equivalent
AD	: Anno Domini
ADME	: Absorption, distribution, metabolism, and excretion
AGEs	: Advanced glycation end products
ANOVA	: Analysis of variance
AP-1	: Activator protein-1
AQ	: Aqueous
Arg	: Arginine
Asp	: Aspartic acid
BBB	: Blood-brain barrier
BC	: Before Christ
BMI	: Body mass index
cAMP	: Cyclic adenosine monophosphate
CI	: Control inhibitor
CK2	: Casein kinase 2
CRE	: cAMP response element
Csp ³	: Carbons number with sp ³ hybridization
CYP	: Cytochrome P450
DHI	: 5,6-dihydroxyindole

List of abbreviations

DHICA	: 5,6-dihydroxyindole-2-carboxylic acid
DMSO	: Dimethyl sulfoxide
DNA	: Deoxyribonucleic acid
DOPA	: 3,4-dihydroxyphenylalanine
EA	: Ethyl acetate
EC	: Enzyme Commission number
FDA	: Food and Drug Administration
GAE	: Gallic acid equivalent
GI	: Gastrointestinal
Glu	: Glutamic acid
Gly	: Glycine
HA	: Hyaluronic acid or hyaluronan
H-bond	: Hydrogen bond
HEPES	: 4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
HHQ	: 2-hydroxyhydroquinone
His	: Histidine
HPB	: 2-hydroxy-p-benzoquinone
HQ	: Hydroquinone
HTS	: High throughput screening
HYAL	: Hyaluronidase gene
IC ₅₀	: half maximal inhibitory concentration
IR	: Infrared
K _i	: Inhibition constant
K _m	: Michaelis–Menton constant

List of abbreviations

K_m^{app}	: Michaelis-Menton constant in the presence of inhibitor
MAP	: Mitogen-activated protein
MAPK	: Mitogen-activated protein kinase
MAPKK, MEK	: Mitogen-activated protein kinase kinase
MC	: Methylene chloride
MOE	: Molecular operating environment
MR	: Molar refractivity
MW	: Molecular weight
NAG	: <i>N</i> -acetyl- <i>D</i> -glucosamine
PAINS	: Pan assay interference compounds
PAK 1	: Serine/threonine-protein kinase 1
PDB	: Protein data bank
<i>p</i> DMAB	: <i>Para</i> -dimethyl amino ben-zaldehyde
PE	: Petroleum ether
P-gp	: Plasma-membrane-glycoprotein
<i>p</i> NP	: <i>para</i> -nitrophenol
PRP	: Phosphomolybdenum reduction potential
qPCR	: Quantative-PCR
RMSD	: Root-mean-square deviation
ROS	: Reactive oxygen species
RPE	: Retinal pigment epithelium
SD	: Standard deviation
Ser	: Serine
SP	: Signal peptide