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Comparative Study on the Effect of Nano Curcumin Complexes as Antitumor in Mice

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(MSc in Biochemistry and Nutrition, 2014)

In partial fulfillment for
PhD degree in science
Biochemistry and Nutrition

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(2019)

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٢٢



Acknowledgement



I'd like to sincerely thank almighty **Allah** for all his grants that he bestowed on me.

I truly acknowledge the valuable time, patience, support of my supervisory team. I'm deeply grateful **Prof. Dr. Tahani Elsayed Kholeif**, Professor of Biochemistry, Department of Biochemistry and Nutrition, Women's Faculty, Ain Shams University for her valuable supervision, great help, guidance and continuous encouragement.

I gratefully acknowledge the sincere advice, guidance and great support of **Prof. Dr. Gehan Salah El-Din Moram Aly**, Professor of Nutrition, Department of Biochemistry and Nutrition, Women's Faculty, Ain Shams University.

I acknowledge deeply **Prof. Dr. Abdelfattah Mohamed Mohsen Badawy**, Professor of Applied organic Chemistry, Department of Petrochemicals, Egyptian Petroleum Research Institute for his valuable supervision, great help, guidance and support in nanotechnology part of the study. Also, I'd like to deeply thank **Prof. Dr. Mohamad Fahmy Zaky**, Professor of Applied organic Chemistry, Department of Petrochemicals, Egyptian Petroleum Research Institute for his help and support in nanoparticles synthesis.

I truly acknowledge the great help and advice of **Prof. Dr. Kokab Abd El Aziz Ahmed**, professor of pathology, Department of pathology, faculty of veterinary medicine, Cairo University.

With great pleasure, I would like to express my sincere gratitude to the staff members of Biochemistry and Nutrition Department, Women's Faculty, Ain Shams University.

I'd like to present my sincere thankfulness to my deceased father and my dear mother, for their great role in my life and their numerous sacrifices for me. Many thanks for my brother Ahmed and sister Kholoud for their support.

Last but not least, I'd like to express my deepest gratitude to my husband, Ahmed Gouda, for his patience and tolerance over the study years. Thank you for being with me and for your appreciated sacrifices.



Radwa Wahid Mohamed Elnagar

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List of Abbreviations	
%ILS	The percentage of increased of life span
4-HNE	4-hydroxynonenal
AgNPs	Silver nanoparticles
ALP	Alkaline phosphatase
ALT	Alanine Aminotransferase
AP-1	Activator protein 1
Apaf-1	Apoptosis protease activating factor-1
AST	Aspartate Aminotransferase
ATCC	American Type Culture Collection
ATP	Adenosin triphosphate
BCC	Basal cell carcinoma
CA15-3	Carbohydrate Antigen 15-3
CAT	Catalase
Casp-3	Caspase-3
CML	Chronic myeloid leukemia
CNS	Central nervous system
COX2	cyclooxygenase-2
CRP	C-Reactive Protein
CuO-NCs	Copper oxide nanocomplexes
CuO-NPs	Copper oxide nanoparticles
Cur	Curcumin
Cur-Cu-NCs	Curcumin Capped Copper nanocomplexes
Cur-Cu-NPs	Curcumin capped copper nanoparticles
Cur-NCs	Curcumin Nanocomplex
DTNB	5, 5'-dithio-bis-2-(nitrobenzoic acid)
DEN	Diethyl nitrosamine
DHAA	Dehydroascorbic acid
DHC	Dihydrocurcumin
DLS	Dynamic Light Scattering

List of Abbrev.	
DRs	Death receptors
EAC	Ehrlich Ascites Carcinoma
EDTA	Ethylene Diamine Tetra Acetic acid
EPR	Enhanced permeability and retention
FADD	Fas-associated death domain
FBS	Fetal bovine serum
GAP	Glyceraldehyde 3-phosphate
GAPDH	Glyceraldehyde 3-phosphate dehydrogenase
GLUT	Glucose transporter
GSH	Reduced Glutathione
GSSG	Glutathione disulfide
HC	Healthy Control
HCT	Hematocrit
HepG2	Human liver carcinoma cell line
HHC	Hexahydrocurcumin
HO [•]	Hydroxyl radical
HRP-Streptavidin	Horseradish peroxidase-Streptavidin
HRTEM	High resolution transmission electron microscopy
HR-TEM	High resolution transmission electron microscopy
HS	Hydrazine sulfate
HS-Cu-NCs	Hydrazine sulphate-copper nanocomplexes
HS-Cu-NPs	Hydrazine sulphate-copper nanoparticle
IL-1R	Interleukin-1 receptor
iNOS	Inducible nitric oxide synthase
IOS	International Organization for Standardization
I.M.	Intramuscular
I.P.	Intraperitoneal

List of Abbreviations (Cont.)	
I.V.	Intravenous
IL	Interleukin
IT	Intratumoral
MCF-7	Human breast carcinoma cell line
MCH	Mean corpuscular hemoglobin
MCHC	Mean corpuscular hemoglobin concentration
MCV	Mean corpuscular volume
MDA	Malondialdehyde
MDA-MB 231	breast cancer cells
MES	2-(N-morpholino) ethanesulphonic acid
MMP-9	matrix metalloproteinase-9
MNP	Magnetic nanoparticles
MSN	Mesoporous silica nanoparticles
MST	Mean survival time
MTW	Mean Tumor Weight
NaBH ₄	Sodium Borohydride
NAC	N-acetyl-cysteine
NAD	Nicotinamide adenine dinucleotide
Nano-Cur	Nano curcumin
Nano-Cur-NCs	Nano-Curcumin nanocomplexes
Native-Cur	Native curcumin
Native-Cur-Cs	Native Curcumin complexes
NCI	National Cancer Institute
NCs	Nanocomplexes
NF- κB	Nuclear factor kappa-light-chain-enhancer of activated B cells
NPs	Nanoparticles
O ₂ ⁻	Superoxide anion

List of Abbreviations (Cont.)	
O-native-Cur-Cs	Oral native Curcumin complexes
PARP	Poly ADP-ribose polymerase
PBS	Phosphate buffered saline
PEG	Polyethylene glycol
PKM2	pyruvate kinase M2
PT	Permeability transition
PTI	Post Tumor Inoculation
RNS	Reactive nitrogen species
ROS	Reactive oxygen species
SAC	Streptavidin Conjugate
SPSS	Statistical Package for Social Science
SRB	Sulphorhodamine-B
STAT3	Signal transducer and activator of transcription 3
T/G %:	Tumor growth inhibition ratio
TBM	Tumor bearing mice
TGF- β 1	Transforming growth factor beta 1
THC	Tetrahydrocurcumin
TLR	Toll-like receptors
TBA	Thiobarbituric Acid
TMB	Tetramethylbenzidine
TME	Tumor micro environment
TNB	5-thio-2-nitrobenzoic acid
TNF	Tumor necrosis factor
TR-HIF1 α	Target of rapamycin- hypoxia-inducible factor 1 α

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