بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / مني مغربي أحمد

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: لا يوجد

Effect of Gum Arabic-Encapsulated Gold Nanoparticles on MicroRNA Expression in Oral Squamous Cell Carcinoma Cell Line In Vitro Study

Thesis Submitted to the Faculty of Dentistry
Ain Shams University in Partial Fulfillment for
Degree of Doctor of Philosophy
in Oral Pathology

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Acknowledgment

First, and foremost, my deepest gratitude and thanks should be offered to "**ALLAH**", the most kind and most merciful, for giving me the strength to complete this work.

I would like to express my sincere gratitude to **Dr. Houry Moustafa Baghdadi**, Professor and Head of Oral Pathology Department, Faculty of Dentistry, Ain Shams University, for her continuous support and guidance for me to present this work. I'm really honored to work under her generous supervision.

I am also deeply grateful to **Dr. Amira Mohamad Gamal-Eldeen,** Professor of Biochemistry**,** National Research Center for her patience, kindness and guidance.

I acknowledge with much gratitude **Dr. Nermeen Sami Afifi**, Assistant Professor of Oral Pathology, Faculty of Dentistry, Ain Shams University, for her great supervision and unlimited help to provide all facilities to accomplish this work.

To My Great Mother

Thank you for your constant inspiration and endless faith in me.

It would not have been possible without your help.

I know I will never be able to return all your favors, but I hope you can at least let me try.

To My lovely Daughter Lily

Thank you for being a great friend throughout the journey.

To My Beloved Husband

Thank you for supporting the dream.

Table of Contents

List of Abbreviations

ΔCt: delta Cycle threshold

ADAR: Adenosine Deaminase Acting on RNA

AGO2: Argonaute 2

ANOVA: Analysis of Variance

AO: Acridine Orange

AuNPs: Gold Nanoparticles

BCL2: B-Cell Lymphoma 2

BCL-xL: B-Cell Lymphoma 2-extra Large

BIRC2: Baculoviral IAP Repeat Containing 2

BMP: Bone Morphogenic Protein

BTG2: B-Cell Translocation Gene 2

CAL-27: *Center Antoine*-Lacassagne

CCND1: *Cyclin D1 gene*

CDC25A: Cell Division Cycle 25A

CDKN2A: Cyclin-Dependent Kinase inhibitor 2A

c-Myc: cellular Myelocytomatosis

COVID-19: *Coronavirus* Disease 2019

CT: Computed Tomography

CTAB: Cetrimonium bromide

CXCL1: Chemokine (C-X-C motif) Ligand 1

DAPK1: Death-Associated Protein Kinase 1

DCL1: Dicer Like 1

DEN: Diethylnitrosamine

DGCR8: DiGeorge Critical Region 8

DMEM: Dulbecco's Modified Eagle's High Glucose Medium

DMSO: Dimethyl Sulfoxide

DNA: Deoxyribonucleic Acid

EB: Ethidium Bromide

EDTA: Ethylenediaminetetraacetic Acid

EGFR: Epidermal Growth Factor Receptor

ELISA: Enzyme-Linked Immunosorbent Assay

EPR: Enhanced Permeability and Retention

ERK: Extracellular signal Regulated Kinase

ESCC: Esophageal Squamous Cell Carcinoma

EXPO1: Exportin 1

FBS: Fetal Bovine Serum

FDA: Food and Drug Administration

GA: Gum Arabic

GA-AuNP: Gum Arabic encapsulated Gold Nanoparticles

GHRL3: Grainyhead-like gene 3

GST-P: Placental Glutathione S-Transferase

HIF: Hypoxia Inducible Factor

HNSCC: Head and Neck Squamous Cell Carcinoma

HPV: Human Papillomavirus

HRAS: Harvey Rat Sarcoma virus

HRE: Hypoxia Response Element

HRP: Human Lung Cancer Antigens Recognized by Autologous *Antibodies*

hsa: homosapien

HypoxamiR: Hypoxia-regulated micro-RNA

IC50: half-maximal Inhibitory Concentration

ICAM1: Intercellular Adhesion Molecule 1

ICC: Immunocytochemistry

IFU: Immunofluorescence Focus Unit

KRAS: Kirsten Rat Sarcoma virus

MAPK: Microtubule Associated Protein Kinase

MGMT: Methyl Guanine Methyl Transferase

miRNA: micro-RNA

MMP-9: Matrix metalloproteinase 9

mRNA: messenger RNA

mTOR: mammalian Target of Rapamycin

MTT: 3-(4,5-dimethylthiazole-2-yl)-2,5- diphenyltetrazolium bromide

***MXD1*:** Myc Associated Factor X Dimerization Protein 1

NaAuCl4: Sodium tetrachloroaurate

NF-Kb: Nuclear Factor kappa-light-chain-enhancer of activated B cells

NPs: Nanoparticles

OD: Optical Density

OncomiR: Oncogenic miRNA

OSCC: Oral Squamous Cell Carcinoma

OTSCC: Oral Tongue Squamous Cell Carcinoma

PACT: Protein Activator of PKR (Protein Kinase RNA-activated)

PBM: Photobiomodulation

PBS: Phosphate Buffered Saline

PCR: Polymerase Chain Reaction

PDCD4: Programmed Cell Death 4

PDT: Photodynamic Therapy

PEG: Polyethylene Glycol

PI3K-PKB/*Akt*: Phosphoinositide-3-Kinase–Protein Kinase B/Akt

PIK3CA: Phosphatidylinositol-4,5-bisphosphate 3-Kinase Catalytic subunit Alpha

PNLs: Preneoplastic Lesions

pri-miRNA: primary micro-RNA

PTEN: Phosphatase Tensin homologue

PTT: Photothermal Therapy

qPCR: quantitative Polymerase Chain Reaction

RAS: Rat Sarcoma virus

RASSF7: RAS Association domain-Family member 7

RISC: RNA-Induced Silencing Complex

RLC: RISC Loading Complex

RNA: Ribonucleic Acid

RPE: R-Phycoerythrin

RT Kit: Reverse Transcription Kit

RT: Radiation Therapy

RT-qPCR: Real Time quantitative Polymerase Chain Reaction

RUNX3: Runt-related transcription factor 3

RWT: Rhodamine Water Tracer

SCC: Squamous Cell Carcinoma

SD: Standard Deviation

SMAD4: SMA- and MAD (Mothers against decapentaplegic)-related protein 4

SPRY1/2: Sprouty RTK (Receptor Tyrosine Kinase) signaling antagonist 1 and 2

TC: Technical Committee

TEM: Transmission Electron Microscope

TGF-α: Transforming Growth Factor-alpha

TGF-β: Transforming Growth Factor-beta

TIMP3: Tissue Inhibitor of Metalloproteinase 3

TNF-α: Tumor Necrosis Factor-alpha

TPM1: Tropomyosin 1

TRBP: Tar RNA Binding Protein

tsmiR: tumor-suppressor micro-RNA

UTR: Untranslated Region

UV-Vis: Ultraviolet-Visible

VEGF: Vascular Endothelial Growth Factor

WHO: World Health Organization

wnt: wingless-related integration site

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