Effect of Tumor Suppressor Micro-RNA loaded on Nano-zeolites in Hepatocellular Carcinoma induced mice

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Biochemistry Department- Faculty of Science- Ain Shams University

By

Zeinab Salah Hussein

B.Sc. Chemistry & Biochemistry (2008)

Under supervision of

Prof. Dr. Eman M. Abd El Azeem
Professor of Biochemistry
Biochemistry Department
Faculty of Science
Ain Shams University

Prof. Dr. Mahmoud M. ElHefnawi
Professor of Bioinformatics
Informatics and systems Department
National Research Centre

Dr. Hanan Farouk A. Youssef
Associate Professor, Applied Mineralogy, Ceramic
Department, Inorganic Chemistry and Natural Resources
Division, National Research Centre

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Declarartion

This thesis has not been submitted for a degree at this or any other university, and represents my own work which has been done after registration for M. Sc. Degree at Biochemistry Department, Faculty of Science, Ain Shams University.

Zeinab Salah Hussein

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List of abbreviations

AAV	Adeno-associated virus
AEG-1	Astrocyte elevated gene-1
AFP	Alpha-fetoprotein
AGO	Argonaute protein
ALT	Alanine aminotransferase
APTES	Aminopropyltriethoxysilane
AST	Aspartate aminotransferase
AW	Absolute liver weight
BCLC	Barcelona clinic liver cancer
BWG	Body weight gain
CCL_4	Carbon tetrachloride
CSCs	Cancer stem cells
CTHRC1	Collagen triple helix repeat containing 1
DCP	Des-gamma-carboxy prothrombin
DEN	Diethylnitrosamine
DLS	Dynamic light scattering
DMEM	Dulbecco's modified eagle essential medium
DOX	Doxorubicin hydrochloride
EMT	Epithelial mesenchymal transition
EZH2	Enhancer of zeste homolog 2
FBS	Fetal bovine serum
FBW	Final body weight
5-FU	5-Fluorouracil
GAPDH	Glyceraldehydes 3-phosphate dehydrogenase
GFP	Green fluorescent protein
GGT	Gamma-glutamyl transferase
GOLPH2	Golgi phosphoprotein 2

GPC3	Glypican-3
HCC	Hepatocellular carcinoma
HDAC1	Histone deacetylases class 1
HIV	Human immunodeficiency virus
IBW	Initial body weight
IFITM3	Interferon-induced transmembrane protein 3
IGF	Insulin-like growth factor
IGF2BP1	Insulin-like growth factor 2 mRNA-binding protein 1
IP	Intraperitoneal
IV	Intravenous
LAC-CSCs	Lung adenocarcinoma associated cancer stem cells
MFI	Mordenite framework inverted type
MiRNA	Microribonucleic acid (MicroRNA)
MSN	Mesoporous silica nanoparticles
MTT	(Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide
NAFLD	Non-alcoholic fatty liver disease
PAMAMs	Poly-amidoamine
PBS	Phosphate buffered saline
pDNA	Plasmid DNA
PEG	Polyethylene glycol
PEI	Polyethylenimine
PLGA	Poly lactide-co-glycolide
PNAs	Peptide nucleic acids
Pre-miRNA	Precursor miRNA
Pri-miRNA	Primary miRNA
qRT-PCR	Quantitative real-time PCR
RFA	Radiofrequency ablation
RISC	RNA-induced silencing complex

RLW	Relative liver weight
RNAi	Interfering RNA
ROX	6-Carboxy-X-rhodamine
RPS15A	Ribosomal protein s15a
SALL4	Sal-like protein 4
SDS	Sodium dodecyl sulfate
siRNA	Short interfering RNA
SMAD3	Mothers against decapentaplegic homolog 3
SOX-9	Sex determining region Y related high mobility group box 9
ST3GAL5	ST3 Beta-galactoside alpha-2,3-sialyltransferase 5
TACE	Trans-arterial chemoembolization
TAE	Tris-acetate EDTA
TEM	Transmission electron microscope
TEOS	Tetraethyl orthosilicate
TPAOH	Tetrapropylammonium hydroxide
WHO	World health organization
XRD	X-ray diffraction
ZNP	ZSM-5 zeolite nanoparticles
ZSM-5	Zeolite socony mobil–5

Abstract