

Certain Molecular Biological Studies in Breast Cancer

Thesis Submitted for Partial Fulfillment of MD Degree in
Biochemistry

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Acknowledgement

I would like to express my deep appreciation to Prof. Dr. Ali Khalifa Ali for all valuable things and advices he taught me (God blesses his soul and place him in highest paradise) .

I would also like to express my sincere gratitude to Prof. Dr. Nahed Zaki Swelam , Professor of Biochemistry and molecular biology , Faculty of Medicine , Ain Shams University , for her encouragement , supervision and valuable guidance throughout my research .

Many thanks , gratitude and respect to Prof. Dr. Mahmoud Ismail , Professor of Biochemistry and molecular biology , and Head of Oncology Diagnostic Unit , Faculty of Medicine , Ain Shams University , for his valuable guidance , supervision and assistance.

I am also indebted to Prof. Dr. Gamal Mohamed Mabrouk , Professor of Biochemistry and molecular biology , Faculty of Medicine , Ain Shams University , for optimization of the practical procedures and for modification of the referenced methods .

Sincere thanks are also due to Prof. Dr. Azza Abou Ghalia, Professor of Biochemistry and molecular biology , Faculty of Medicine , Ain Shams University , for her incessant help , guidance and supervision .

I offer my gratitude to Dr. Lobna Rashed Ezz El-Arab , Assistant professor of Radiation Oncology and Nuclear Medicine , Faculty of Medicine , Ain Shams University , for her encouragement and sincere advice .

Finally , I would like to thank the surgery and Pathology Departments , Faculty of Medicine , Ain Shams University, for providing surgical specimens and information regarding surgical and pathological features of the tumors .

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Abbreviations

AJCC : American Joint of Committee on Cancer Staging .

ATM : Ataxia–telangiectasia mutated .

BARD : BRCA–associated ring domain .

BASC: BRCA –Associated Surveillance complex

BBD : Benign breast disease .

BC : Breast cancer .

BRCA₁ , BRCA₂ : Breast-related cancer antigen .

CA₁₅₋₁ : Cancer antigen₁₅₋₁ .

CDK : Cyclin–dependent kinase .

CEA : Carcinoembryonic antigen .

c-erbB-2 : Cellular oncogene of avian erythroblastosis virus .

CHK₁ : Cell cycle checkpoint kinase .

Cip/Kip: Cyclin dependent kinase inhibitor protein/kinase
inhibitor protein .

CKIs : Cyclin–dependent kinase inhibitors .

cm : Centimeter .

c-myc : Cellular oncogene of myelocytoma virus .

CpG: Cytosine phosphoguanine .

CRE: cAMP–responsive element .

CYFRA₂₁₋₁ : Cytokeratin fragment

DCIS : Ductal carcinoma in situ .

DNA : Deoxyribonucleic acid .

DNMT : DNA methyltransferase .

dNTPs : Deoxynucleoside triphosphate .

ECM : Extracellular matrix .

EDTA : Ethylenediaminetetraacetic acid .

EGFR : Epidermal growth factor receptor .

ELISA : Enzyme linked immunosorbent assay .

ER : Estrogen–receptor .

ERE : Estrogen responsive element .

ES : Embryonic stem .

ESR– : Estrogen receptor gene .

g. : Gram .

GST: Glutathione S–transferases

HAT: Histone acetyltransferase.

H&E : Haematoxylin and eosin .

HER– : Human epithelial receptor .

HDACs : Histone deacetylases .

HIC : Hypermethylated in cancer .

hMLH : human mutL homologue .

hMSH : human mutS homologue .

Hp α : Human homologue of the Drosophila chromodomain protein α .

IDC-NOS : Infiltrating duct carcinoma - not otherwise specified .

IHC : Immunohistochemical .

ILC : Infiltrating lobular carcinoma .

INK A : Inhibitor kinase A .

ITC : Isolated tumor cells .

KAI- : Kangai- .

Kb : Kilobase .

kDa : Kilodalton .

ERBF- :Estrogen receptor promoter B associated factor

LCIS : Lobular carcinoma in situ .

M : Molar .

MAB : Monoclonal antibody .

MAM : Mammaglobin .

MAP : Mitogen-activated protein .

MBD : Methyl CpG binding domain containing proteins .

MDGI: Mammary derived growth inhibitor .

MDS: Miller-Dieker syndrome

MECP : Methyl CpG binding protein .

MECP : Methyl CpG binding protein .

mg: Milligram .

ml : Milliliter .

MLH : mutL homologue .

mm : Millimeter .

mM : Millimolar .

MMR : Mismatch repair genes .

mRNA : messenger RNA .

MSP : Methylation specific polymerase chain reaction .

NaB : Sodium butyrate.

NaCl : Sodium chloride .

NAF : Nipple aspirate fluid .

NaOH: Sodium hydroxide .

NF-B : Neurofibromatosis-B .

ng : Nanogram .

nm : Nanometer .

p : kilodalton protein .

p : kilodalton protein .

p : kilodalton protein .

p : kilodalton phosphoprotein .

PCNA : Proliferating cell nuclear antigen .

PCR : Polymerase chain reaction.

PEM : Polymorphic epithelial mucin .

PGR gene : Progesterone receptor gene .

PI 3K/Akt: Inositol triphosphate kinase/protein serine threonine kinase .

PML cells : Promyelocytic leukemia cells .

PML–RAR α : Promyelocytic leukemia–retinoic acid receptor- α

pmol : Picomol .

PR : Progesterone receptor .

pRb : Retinoblastoma protein .

p^{WAF /CIP} : kilodalton protein (wild p associated factor/cyclin dependent kinase inhibitor protein) .

RAR α : Retinoic acid receptor- α .

RAR β : Retinoic acid receptor- β .

Ras : Rat sarcoma .

Rb gene : Retinoblastoma gene .

RNA : Ribonucleic acid .

RT-PCR: Reverse transcriptase polymerase chain reaction .

SAM : S-adenosyl-L-methionine .

SDS : Sodium dodecyl sulfate .

STAT: Signal transducer and activator of transcription .

TDG : Thymine DNA glycosylase .

TIMP : Tissue inhibitor of metalloproteinase .

Tris-HCl : Tris hydrochloric acid .

TSA : Trichostatin A

UDG : Uracil DNA glycosylase .

v/v/v : volume /volume /volume .

µg: Microgram .

µl : Microliter .

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