BIOCHEMICAL STUDIES ON THE SIGNIFICANCE OF DNA PLOIDY AND SYNTHETIC PHASE FRACTION AS PROGNOSTIC FACTORS IN THE URINARY BLADDER CARCINOMA

Thesis

submitted for partial fulfillment of

Master Degree in Biochemistry

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بسم الله الرحمن الرحيم

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" وما أوتيتم من العلم الا قليلا "

صدق الله العظيم

الأسراء (٨٥)

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CONTENTS

LIST OF ABBREVIATIONS

ΔA	:	Mean absorbance change.
$°C$	:	Degree centegrade.
μg	:	Microgram.
μL	:	Micro-litter
μm	:	Micrometer.
$\%$	:	Percent.
AAT	:	Alpha-1-antitrypsin.
ABO	:	Blood grouping system.
$ACTH$	:	Adrenocorticotropic hormone.
ADC	:	Analog to digital converter.
ADH	:	Antidiuretic hormone.
AFP	:	Alpha-feto protein.
ALP	:	Alkaline phosphatase.
ALT	:	Alanine aminotransferase.
AO	:	Acridine orange.
AST	:	Aspartate aminotransferase.
ATP	:	Adenosine triphosphate.
B_2-M	:	β_2-Microglobulins.
BD	:	Bile duct
$BIHAT$	:	Bilharzial indirect hemeagglutination test.
$Brdu$	:	Bromodeoxyuridine.
$Brdu\ LI$	:	Bromodeoxuridine labeling index.

CA125	:	Cancer antigen 125
CA15-3	:	Cancer antigen 15-3
CA19-9	:	Cancer antigen 19-9
CA195	:	Cancer antigen 195
CA50	:	Cancer antigen 50
CA549	:	Cancer antigen 549
CA74-4	:	Cancer antigen 74-4
CEA	:	Carcinoembrionic antigen.
CK	:	Creatinine kinase.
CK-BB	:	Creatinine kinase BB isoenzyme.
CMA	:	Clonic mucoprotein antigen.
CRP	:	C-reactive protein.
CT	:	Calcitonin.
Cu	:	Copper.
CV	:	Coefficient variation.
DAPI	:	4,6-Diamino 2-phenylindole.
DI	:	DNA index.
dL	:	Deciliter.
DMSO	:	Dimethyl sulfoxide.
DNA	:	Deoxyribonucleic acid.
EB	:	Ethidium bromide.
EDTA	:	Ethylene Diamine Tetra Acetate .
EGFR	:	Epidermal growth factor receptors
EIA	:	Enzymeimmunoassay
ER	:	Estrogen receptors.

Esoph	:	Esophagus.
FALS	:	Forward angle light scatter.
FCM	:	Flow cytometry.
Fig	:	Figure
Fl.	:	Florida.
G	:	Tumor grade
g	:	gram.
G_0	:	Quiescent phase.
G_1	:	Gape 1
G_2	:	Gape 2
Gast	:	Gastric.
GCR	:	Glucocorticoid receptors.
GGT	:	Gamma glutamyl transpeptidase.
GH	:	Growth hormone.
HCC	:	Hepatocellualr carcinoma.
HCG	:	Human chronic gonadotropin.
HMFG	:	Human milk fat globule antigen.
HPL	:	Human placental lactogen.
r.	:	Hour.
¡G	:	Immunoglobulin G.
HA	:	Indirect hemeagglutination.
L	:	Liter.
LASER	:	Light amplification by stimulated emission of radiation.
LDH	:	Lactate dehydrogenase.
LH	:	Leutinizing hormone.

LPR	:	Lysing and Permeabilizing reagent.
LS	:	Light scatter.
M	:	Distant metastasis
m	:	Meter.
M phase	:	Mitotic phase .
M. wt.	:	Molecular weight.
MC	:	Mean channel.
MCA	:	Mucinous-like carcinoma antigen.
MEIA	:	Microparticles enzymeimmunoassay
min.	:	Minute.
mL	:	Milliliter.
mmol	:	Milimolecule.
MN	:	Mononuclear blood group system.
MNU	:	Methylnitrosourea
MU	:	4-Methylumbelliferone
MUP	:	4-Methylumbeliferyl phosphate
N	:	lymph node involvement
NCI	:	National Cancer Institute.
ng	:	Nanogram.
NGI	:	Non-gastrointestinal malignancy.
nm	:	Nanometer.
No	:	Number.
NSE	:	Neuron specific enolase.
Oct.	:	October.
OD	:	Optical density.

PAP	:	Prostatic acid phosphatase.
Pg-R	:	Progesterone receptors.
PI	:	Propidium iodide.
PMT	:	photo multiplier tube
POA	:	Pancreatic oncofetal antigen.
PRL	:	Prolactin
PSA	:	Prostatic specific antigen.
PT	:	Pathological staging
PTH	:	Parathyroid hormone.
ras	:	Rat sarcoma gene.
RBCs	:	Red blood cells.
RF-C	:	Replication factor-C
RIA	:	Radioimmunoassay
RNA	:	Ribonucleic acid
RP-A	:	Replication protein-A
SCC	:	Squamous Cell carcinoma
SCCA	:	Squamous cell carcinoma antigen.
SD	:	Standard deviation.
E	:	Standard error.
e	:	Selenium
'ec	:	Second.
iP-1	:	Pregnancy specific B_1-glycoprotein.
SPF	:	Synthetic phase fraction.
ST	:	Sialyl transferase.
T	:	Tumor

t	:	Time.
TA-4	:	Tissue antigen-4
TAG-72	:	Tumor associated glycoprotein-72
TATI	:	Tumor associated trypsin inhibitor.
TCC	:	Transitional cell carcinoma
TK	:	Thymidine kinase.
TLI	:	Thymidine labeling index.
TNM	:	Tumor- Node- Metastasis
TPA	:	Tissue polypeptide antigen.
TSH	:	Thyroid stimulating hormone.
TUR	:	Transuretheral resection
U	:	Unit.
USA	:	United State of America
VMA	:	Valinyl mandilic acid.
WHO	:	World Health Organization
X	:	Mean
Zn	:	Zinc