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شبكة المعلومـــات الجامعية التوثيق الالكتروني والميكروفيا.



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BIIIVA

# THE STUDY OF HUMAN HEPATOCYTE GROWTH FACTOR IN VARIOUS LIVER DISEASES

#### **THESIS**

Submitted in partial fulfilment for MD Degree in Biochemistry

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# ( بسم الله الرحمن الرحيم )

أقرأ باسم ربك الذى خلق ١٠٠ خلق الأنسان من علق ٢٠٠ أقرأ وربك الأكرم ٢٠٠ الذى علم بالقلم ٤٠٠ علم الأنسان ما لم يعلم ٥٠٠

صدق الله العظيم

سورة العلق مكية

## **Contents**

	Page
ACKNOWLEDGEMENT	i
ABBREVIATIONS	iii
INTRODUCTION AND AIM OF THE WORK	1
REVIEW OF LITERATURE:	3
CHRONIC HEPATITIS	3
Chronic Persistent Hepatitis	6
Chronic Active Hepatitis	7
Liver Cirrhosis	7
HEPATOCYTE GROWTH FACTOR	13
Historical Review	13
Physico-chemical properties of HGF-SF	16
Biological activities of HGF-SF	19
Gene Structure of HGF-SF	21
Expression of the human HGF-SF gene	30
Injurin, an inducer of HGF-SF expression	34
Hepatocyte growth factor converting enzyme	35
Cellular origin of HGF-SF expression in normal liver tissue	36

Hepatic HGF-SF expression in acute liver disease	36
Hepatic HGF-SF expression in chronic liver disease	37
Role of HGF-SF in other organs	40
HGF-SF: Effects on motility and morphology of normal and	42
tumour cells	
HEPATOCYTE GROWTH FACTOR / SCATTER FACTOR RECEPTOR	44
The HGF-SF receptor signal transduction pathway	45
Biosynthesis of the p190 <sup>th/T</sup> receptor	48
Overexpression of p190 <sup>1/l/T</sup> in human tumours	52
SUBJECTS AND METHODS	54
RESULTS	95
DISCUSSION	145
SUMMARY & CONCLUSIONS AND	158
RECOMMENDATIONS	
REFERENCES	162

4

ARABIC SUMMARY

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#### **Abbreviations**

A<sup>260</sup> Absorption at 260 nm

aFGF acidic Fibroblast Growth Factor

Alb Albumin

ALT Alanine Transaminase

ANA antibodies to nuclear antigens

AST aspartate transaminase
ATP Adenosine triphosphate
Bam HI Bacillus amyloliquefaiens
bFGF basic Fibroblast Growth Factor

bp base pair
Bq Becquerel

BSA Bovine Serum Albumin
CAH chronic active hepatitis
CCl<sub>4</sub> Carbon tetrachloride

cDNA complementary deoxyribonucleic acid

CE Choline Esterase

Ci Cirrhosis

CLH chronic lobular hepatitis

CLV centrilobular vein

c-met Hepatocyte Growth Factor receptor

CMV Cytomegalovirus

CPH chronic persistent hepatitis

cpm count per minute
CsCl Cesium Chloride
DAB Diaminobenzidine

dATP deoxy-adenosine triphosphate dCTP deoxy-cytosine triphosphate

DEPC Diethylpyrocarbonat

DG diacylglycerol

dGTP deoxy-guanosine triphosphate
dHGF deleted Hepatocyte Growth Factor

Dig Digoxigenin

DNA Deoxyribo-Nucleic Acid

DTT Dithiothreitol

dTTP deoxy-thymidine triphosphate dUTP deoxy-uridine triphosphate

ABBREVIATIONS iv

ECM extracellular matrix
Eco RI Escherischia coli B 55

EDTA Ethylendiamin Tetra-acetic Acid

EGF epidermal growth factor

ELISA enzyme-linked immunosorbant assay
G-CSF granylocyte-colony stimulating factor

GITC Guanidinium Isothiocyanat
HAI Histolgical Activity Index
HBcAg Hepatitis B core antigen
HBeAg Hepatitis B secretory antigen
HBsAg Hepatitis B surface antigen

HBV Hepatitis B virus

HBV DNA hepatitis B viral DNA HCC Hepatocellular Carcinoma

HCV Hepatitis C Virus

HGF Hepatocyte Growth Factor

HGFL Hepatocyte Growth Factor-like protein HGF-NK2 Hepatocyte Growth Factor variant

hHGF-SF Human Hepatocyte Growth Factor - Scatter

Factor

Hind III Haemophilus influenzae Rd com-10

Hin fl Haemophilus influenzae Rf Hpal Haemophilus parainfluenzae

HPTA Hepatopoietin-A

HRPO Horseradish peroxidase
ICCs Islet-like Cell Clusters
IGF-I Insulin-like growth Factor I
IGF-II Insulin-like growth Factor II

IFN-γILInterferon-γIL

IL6-RE Interleukin 6 response element inositol 1,4,5-triphosphate

ISH In situ Hybridisation

kb kilo base

K<sub>d</sub> Dissociation Constant

kDa kilo Dalton

KpnI Klehsiella pneumoniae OK8

1 Litter

LC Liver Cirrhosis

LKM Liver and Kidney Microsomes antibodies

LM Liver cell membrane antibody
LP Liver-Pancreas antigen antibody

M Mole

MDCK Madin-Darby canine kidney

μCi
 mg
 milli-gram
 μg
 milli-gram
 millilitter
 μl
 μicrogram
 millilitter
 μμ
 μicrometer
 milli-Mole

MOPS Morpholinopropansulfonic acid mRNA messenger ribonucleic acid MSP macrophage stimulating protein nat-HGF Native Hepatocyte Growth Factor

nanometer nm **NP-40** Nonidet P-40 NS number of septa  $^{32}$ p **Isotopic Phosphorus** PAP preactivation peptide **PBS** phosphate-buffered saline **PCR** Polymerase Chain Reaction **PDGF** Platelet-derived Growth Factor

PFA paraformaldehyde PI phosphatidylinositol

PI 3-kinase phosphatidylinositol 3-kinase

PIP<sub>2</sub> phosphatidylinositol 4,5-bisphosphate

PKC protein kinase C PLCγ Phospholipase C-γ

PMSF phenylmethylsulfonyl fluoride

PS perisinusoidal space Pst 1 *Providencia stuartii* 

PT portal tract

RNA Ribo-Nucleic Acid RNAase Ribo-Nuclease rpm round per minute

rRNA ribosomal Ribo-Nucleic Acid

RT Room Temperature