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New approach of treatment of Hepatitis C virus in Egyptian patient

Thesis

Submitted in Partial Fulfillment of the Requirements for the Master
Degree in Science (Biochemistry)

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(B. Sc. in Biochemistry, 2003)

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DEDICATION

*My dear family, I dedicate this work to you for
your great support, help and continuous
encouragement to perfect my work.*

*With all my love to my Father, Mother and
Brothers (Mahmoud and Ibrahim) for their
support and prayers to fulfill my hopes.*

Yours Sincerely,

Hanan Moustafa Zeidan

Acknowledgment

I offer my thanks always to ALLAH, for giving me the ability to complete this work.

*It was a great pleasure for me to be supervised by **prof. Dr.***

***Hala Mahdi Aldesouki**, Professor of Biochemistry, Faculty of Science; Ain Shams University, for her endless help, Motherly attitude, valuable suggestions, and accurate supervision, I am very much honored to have her as my supervisor. No words could express my Sincere and deepest thanks to **prof. Dr. Hala** for accurate revision for every detail and support during completing this work.*

*I am greatly indebted and grateful to **Dr. Eman Mohamed Elashry**, Fellow Ship in Clinical Pathology, General Laboratory Manager in Elmnshawy Genral hospital, Garbia. For her supervision, her constant support and encouragement are very appreciated.*

Thanks to the patients for their great cooperation and I deeply hope better health for them.

Last but not least I wish to express my sincere appreciation to my professors, dear colleagues and all Staff members of the Health Insurance Organization, for their help and support throughout this work.

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List of Abbreviations

ALT	:	Alanine aminotransferase
AST	:	Aspartate amino transferase
CHC	:	Chronic Hepatitis C
C Protein	:	Core protein
CD4	:	Cluster of Differentiation 4
CD81	:	Cluster of Differentiation 81
cDNA	:	Complementary DNA
CT	:	Cycle Threshold
CTL	:	Cytotoxic T cell
DAA	:	Direct acting antiviral
DCs	:	Dendritic cell
DC-SIGN	:	Dendritic cell-specific ICAM-3-grabbing non-integrin
DEPC	:	Diethylpyrocarbonate
DNA	:	Deoxyribonucleic acid
E1	:	Envelope protein 1
E2	:	Envelope protein2
EBV	:	Epstein-Barr virus
EU	:	European Union
GATA-3	:	Transcription factor GATA-3
GS-461203	:	2'-deoxy-2'- α -fluoro- β -C-methyluridine-5'- triphosphate
GTC	:	Guanidinium thiocyanate
H₂O₂	:	Hydrogen peroxidase
HCC	:	Hepatocellular carcinoma
HCV	:	Hepatitis C virus
HCV-1	:	Hepatitis C genotype – 1
HCV-1b	:	Hepatitis C genotype – 1b
HCV-2	:	Hepatitis C genotype – 2

HCV-3	: Hepatitis C genotype – 3
HCV-4	: Hepatitis C genotype – 4
HCV-5	: Hepatitis C genotype – 5
HCV-6	: Hepatitis C genotype – 6
IFN- α	: Interferon Alfa
IFN- β	: Interferon Beta
IFNγ	: Interferon Gamma
IRF-9	: IFN-regulatory factor 9
IL -2	: Interleukin-2
IL-4	: Interleukin-4
IL-5	: Interleukin-5
IL-10	: Interleukin-10
IL-12	: Interleukin-12
IL-12 R	: Interleukin -12 Receptor
IL-23	: Interleukin-23
IL-27	: Interleukin-27
IL-35	: Interleukin-35
IL-12R β2	: Interleukin 12 receptor, beta 2 subunit
IRAKs	: Interleukin- receptor–associated kinase
IMPDH	: Inosine-5'-monophosphate dehydrogenase
INF α2a	: Interferon Alfa 2 a
INF α2b	: Interferon Alfa 2 b
INF- β	: Interferon Beta
IRAKs	: Interleukin- receptor-associated kinase
IRES	: Internal ribosomal entry site
IRF7	: IFN regulatory factor 7
ISGs	: IFN-stimulated genes
Jak Kinases	: Janus kinase
JAK2	: Janus kinase 2
KD	: Kilo Dalton
LDL-R	: Low-density lipoprotein Receptor

L-SIGN	:	liver/lymph node-specific intracellular adhesion molecules-3 grabbing non-integrin
MHC	:	Major histocompatibility complex
MYD88	:	Myeloid differentiation primary response gene 88
MΦs	:	Microphage
NF-κB	:	Transcription factors, nuclear factor kappa B
NK cells	:	Natural killer cells
NKSF	:	Natural killer cell stimulatory factor
NNPI	:	Non-nucleoside inhibitors of NS5B
NPI	:	Nucleoside inhibitors of NS5B
NS2	:	Non structural Protein 2
NS3	:	Non structural Protein 3
NS4A	:	Non structural Protein 4 A
NS4B	:	Non structural Protein 4B
NS5A	:	Non structural Protein 5A
NS5B	:	Non structural Protein 5
NTR	:	Non translated region
O₂⁻	:	Superoxide
OFR	:	Open-reading frame
PAMPs	:	Pathogen-associated molecular patterns
PBMC	:	Peripheral blood mononuclear cell
PCR	:	Polymerase Chain Reaction
PDCs	:	plasmacytoid dendritic cells
PEG	:	Poly Ethylene Glycol
P-gp	:	P-glycoprotein
PIs	:	protease inhibitors
PRRs	:	pattern recognition receptors
RBV	:	Ribavirin