Cairo University

Faculty of Veterinary Medicine

Dept. of Biochemistry and Chemistry of Nutrition

MicroRNAs and Liver Fibrosis in Hepatitis C Patients

Thesis presented by

Asmaa M. Abd Elwahab Mohamed

B.V.Sc. Fac. Vet. Med., Cairo Univ., 1999

Microbiology Diploma Fac. Vet. Med. Cairo Univ., 2001

Clinical pathology Diploma in Fac. Vet. Med. Cairo Univ., 2010

For

M. V. Sc. Degree

Biochemistry and Chemistry of Nutrition

Under the supervision of

Prof. Dr. Eman M. Gouda

Professor of Biochemistry and Chemistry of Nutrition.
Faculty of Vet. Medicine
Cairo University

Dr. Hanan A. Mohamed

Lecturer of Biochemistry and
Chemistry of Nut.
Faculty of Vet. Medicine
Cairo University

Prof. Dr. Samy Zaky Elsayed

Professor of Tropical Medicine
Faculty of Medicine
Al-Azhar University

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Name	**:**	Asmaa Mohammed Abd Elwahab
Nationality	**:**	Egyptian
Date of birth	**:**	24 / 5 /1976
Place of birth	**:**	Cairo
Specification	**:**	Biochemistry and Chemistry of Nutrition
Thesis title	**:"**	MicroRNAs and Liver Fibrosis in Hepatitis C Patients"
Supervisors	**:**	Prof. Dr. Eman M. Gouda
		Prof. Dr. Samy Zaky Elsayed
		Dr. Hanan A. Mohamed

Abstract

Egypt has the highest prevalence of hepatitis C virus (HCV) in the world. HCV chronic infection leads to progressive liver damage that ends finally with fibrosis. Predictive biomarkers for liver fibrosis progression are a must for treatment strategies development. Circulating microRNA levels have become a rapidly growing area of clinical research. Circulating miR-29 as a potential new hepatic stellate cell (HSC) activation marker and miR-155 as a positive regulator of inflammation were evaluated in the serum of chronic HCV patients, attended to AL-Azhar University Hospitals, relative to normal individuals and correlated these with clinical patient data. Our results reveal that, the level of miR-29b is decreased while miR-155 is increased in correlation to the fibrotic grade and fibrotic index in male and female chronic HCV patients.

In conclusion, down-regulation of miR-29b and up-regulation of miR-155 are associated with the advance in fibrotic grade; making them a potential non-invasive biomarker for assessment of liver fibrosis in chronic HCV.

Keywords: Biomarker, miR-29b, miR-155, fibrotic grade, HCV, Egypt

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Supervision Sheet

Supervisors

Prof. Dr. Eman M. Gouda
Professor of Biochemistry and Chemistry of Nutrition.
Faculty of Vet. Medicine
Cairo University

Dr. Hanan A. Mohamed
Lecturer of Biochemistry and Chemistry of Nut.
Faculty of Vet. Medicine
Cairo University

Prof. Dr. Samy Zaky Elsayed
Professor of Tropical Medicine
Faculty of Medicine
Al-Azhar University

Dedication

To the source of love and happiness in my life. To my husband "Mohamed Soliman", who has been a constant source of support and encouragement throughout this work. I am truly thankful for having you in my life.

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