بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY

Effect of Natural Products' Combination on MicroRNAs Expression Level in Patients with Hepatocellular Carcinoma

Submitted By

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بسم الله الرحمن الرحيم

(قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ العَلِيمُ الحَكِيمُ)

صدق الله العظيم
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I declare that this thesis has been composed by myself and the work herein has not been submitted for a degree at this or any other university.

Hala Mohamed Hatab

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Abstract

Background: Investigating and evaluating possible alternative therapeutic strategies to control hepatocellular carcinoma (HCC) is a critical need because of its high prevalence and being one of the most lethal cancers. Curcumin and taurine showed potent anti-tumor activities in pre-clinical and clinical studies by targeting multiple pathways. Thus, this study was designed to assess the effect of a combined treatment consisted of curcumin, piperine, and taurine on circulating levels of interleukin-10 (IL-10), and microRNAs miR-141 and miR-21.

Methods: Twenty eligible HCC patients administrated an oral dose of 4 g curcumin, 40 mg piperine, and 500 mg taurine daily for 3 successive treatment cycles, each was a 30-day. The level of IL-10 along with the expression levels of miR-141, and miR-21 were monitored in serum before starting the treatment and after each cycle. Patients were followed-up for a period of 24 months.

Results: The combined treatment was able to produce a significant decrease in the levels of serum IL-10, and miR-21 while it resulted in a non-significant up-regulation of serum miR-141 expression level. At the end of the follow-up period, the median overall survival (OS) rate was found to be 17.00 months with a worse OS in patients with high baseline levels of circulating IL-10 and miR-21 compared to those with low levels. In contrast, a low baseline level of circulating miR-141 was associated with poor prognosis.

Conclusion: The combined treatment may be able to increase the OS rate by altering the circulating level of IL-10 and miR-21.

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AFP:	Alfa fetoprotiens
AFU:	Alfa-L-fucosidase
AGO2:	Argonaute family protein 2
ALP:	Alkaline phosphatase
ALT:	Alanine aminotransferase
AST:	Aspartate aminotransferase
ATF6:	Activating transcription factor6.
Bax:	Bcl2-associated X protein
BCG:	Bromocresol green
BCLC:	Barcelona Clinic Liver Cancer
b-FGF	Basic fibroblast growth factor
CAT:	Catalase
CD-44:	Cluster of differentiation-44
CDKN2A:	Cyclin-dependent kinase inhibitor 2A
CEUS	Contrast-enhanced ultrasound
Chol:	Cholesterol
CNS:	Central nervous system
CT:	Computed tomography
CTNNBI:	β-Catenin
DCP:	Des-gamma-carboxy prothromin
DGCR8:	DiGeorge syndrome chromosomal (or critical) region 8
DKK1:	Dickkopf WNT signaling pathway inhibitor 1
ECM:	Extracellular matrix
ECOG:	Eastern Cooperative Oncology Group
EMT:	Epithelial-mesenchymal transition
ERK:	Extracellular signal-regulated kinases
FDA:	Food and drug administration
FWA:	Federalwide Assurance
FXS:	Fragile X syndrome
GABA:	gamma-Aminobutyric acid
GPC-3:	Glypican-3
GPx	Glutathione peroxidase
GR:	Glutathione reductase