

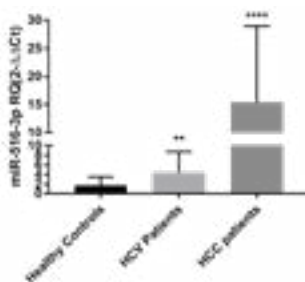
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miRNCDH- microRNA-516-3p, a novel circulating miRNA differentially expressed in HCV and HCV related HCC Egyptian patients

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Liver disorders arising from Hepatitis C virus (HCV) infection are considered a key challenge in the field of translational medicine. HCV and HCV related hepatocellular carcinoma (HCC) poses a heavy burden globally; pivoting on the geographical region, Egypt showed the highest prevalence of HCV worldwide. MicroRNAs (miRNAs) were found to regulate or be regulated by HCV infection. Recently, circulating miRNAs detected in human serum are proposed as novel class of biomarkers for different pathological conditions. miR-516-3p is a novel miRNA that was not widely investigated in terms of infectious diseases rather than oncology. It was recently reported as anti-metastamiR through activation of Wnt/B-catenin pathway in gastric cancer. However, among studies efforts has been employed to investigate the alteration in the circulating miRNA pattern that is related with HCV infection and associated HCC, miR-516-3p is scarcely discussed. Moreover, this has not been investigated in case of Egyptian HCV patients or HCC patients. Therefore, the aim of this study is to investigate the expression profile of the novel liver-associated miRNA, miR-516-3p, in the serum of HCV and HCC Egyptian patients. Serum samples were collected from 50 HCV, 20 HCC Egyptian patients and 30 age-matched healthy controls. Total RNA was extracted using Geneaid total RNA mini-kit. Reverse transcription was performed using TaqMan[®] MicroRNA Reverse Transcription Kit. Finally, miR-516 expression was quantified using qRT-PCR. Data was statistically analyzed using GraphPad Prism 5.00 software. miR-516-3p was found to be significantly up-regulated in HCV patients compared to age-matched healthy controls ($p=0.002$). Also miR-516-3p showed statistically significant upregulation in HCC versus HCV patients ($p=0.0001$). This study identifies miR-516-3p as a novel circulating MicroRNA. miR-516-3p was found to be overexpressed in the serum of HCV patients. Moreover miR-516-3p showed escalated up regulation in HCC patients. Thus shedding the light on the pivotal role of miR-516-3p in HCV and HCV induced HCC.



Biography

Samar Samir Youssef has been working in National Research Centre, Egypt since 1991. She has completed her PhD at Ain Shams University and Postdoctoral studies in France. She has published more than 25 papers in reputed journals and has been serving as a Reviewer Board Member of reputed journals.

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