

# Study finds molecules present possible biomarkers of HCV-related liver damage progression

October 25 2017

---

Hepatitis C virus infection leads to a wide spectrum of liver diseases ranging from mild chronic hepatitis to end-stage cirrhosis and hepatocellular carcinoma. An intriguing aspect of the HCV infection is its close connection with lipid metabolism playing an important role in the HCV life cycle and in its pathogenesis. HCV is known to be a hepatotropic virus; however, it can also infect peripheral blood mononuclear cells (PBMCs).

The goal of the current investigation is to compare the adipogenesis profile of liver tissues to lymphocytes of HCV infected patients, in order to understand if PBMCs may reflect the alterations of intracellular pathways occurring during HCV-related liver steatosis. Using the Human Adipogenesis PCR Array, gene expression was analyzed in liver samples and PBMCs of chronic HCV+, HBV+ and Healthy Donors (HDs) patients. We observed a similar modulation of lipid metabolism in HCV+ and HBV+liver tissues and lymphoid, cells suggesting that PBMCs reflect the liver adipogenesis deregulation related to infection, even if the two viruses have a different impact in the regulation of the adipogenesis mechanisms.

In particular, some genes involved in [lipid](#) metabolism and inflammation, as well as in cell transformation, were up-regulated, in a similar way, in both HCV models analyzed. Interestingly, these genes were positively correlated to virological and hepatic functional

parameters of HCV+ patients. On the contrary, HBV+ patients displayed a completely different profile. PBMCs of HCV+ patients seem to be useful model to study how HCV-related [lipid metabolism](#) deregulation occurs in liver. The obtained data suggest some molecules as new possible biomarkers of HCV-related liver damage progression.

Provided by CORDIS

Citation: Study finds molecules present possible biomarkers of HCV-related liver damage progression (2017, October 25) retrieved 26 June 2024 from <https://medicalxpress.com/news/2017-10-molecules-biomarkers-hcv-related-liver.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.