Reduced IFNλ4 activity is associated with improved HCV clearance and reduced expression of interferon-stimulated genes

TERCZYŃSKA-DYLA, Ewa, et al.

Abstract
Hepatitis C virus (HCV) infections are the major cause of chronic liver disease, cirrhosis and hepatocellular carcinoma worldwide. Both spontaneous and treatment-induced clearance of HCV depend on genetic variation within the interferon-lambda locus, but until now no clear causal relationship has been established. Here we demonstrate that an amino-acid substitution in the IFNλ4 protein changing a proline at position 70 to a serine (P70S) substantially alters its antiviral activity. Patients harbouring the impaired IFNλ4-S70 variant display lower interferon-stimulated gene (ISG) expression levels, better treatment response rates and better spontaneous clearance rates, compared with patients coding for the fully active IFNλ4-P70 variant. Altogether, these data provide evidence supporting a role for the active IFNλ4 protein as the driver of high hepatic ISG expression as well as the cause of poor HCV clearance.

Reference

DOI : 10.1038/ncomms6699
PMID : 25534433
Corrigendum: Reduced IFNλ4 activity is associated with improved HCV clearance and reduced expression of interferon-stimulated genes

Ewa Terczyńska-Dyla, Stephanie Bibert, Francois H. T. Duong, Ilona Krol, Sanne Jørgensen, Emilie Collinet, Zoltán Kutalik, Vincent Aubert, Andreas Cerny, Laurent Kaiser, Raffaele Malinverni, Alessandra Mangia, Darius Moradpour, Beat Müllhaupt, Francesco Negro, Rosanna Santoro, David Semela, Nasser Semmo, Swiss Hepatitis C Cohort Study Group, Markus H. Heim, Pierre-Yves Bochud & Rune Hartmann

Nature Communications 5:5699 doi: 10.1038/ncomms6699 (2014); Published 23 Dec 2014; Updated 29 Jun 2015

In this Article, Rune Hartman was omitted as joint supervisor of this work. The correct list of joint supervisors is: Markus H. Heim, Pierre-Yves Bochud and Rune Hartmann.