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Chronic hepatitis C, fibrogenesis and heparan sulfate proteoglycans of the hepatic extracellular matrix

Chronic infection by the hepatitis C virus (HCV) is a major cause of liver diseases, predisposing to liver fibrosis and end-stage liver complications, the most serious being hepatocellular carcinoma. Fibrotic tissue remodeling can exert a pronounced effect on cancer initiation and growth. Liver fibrosis is characterized by an overly abundant accumulation of components of the hepatic extracellular matrix (ECM), such as collagen and elastin fibers, with consequences on the biomechanical and biochemical properties of this microenvironment. However, the molecular mechanisms linking infection to fibrogenesis still remain unclear. Here I will focus on the pericellular matrix or glycocalyx, the transition zone between the cell membrane and the ECM. In this zone, I will more specifically focus on heparan sulfate proteoglycans (HSPG), key molecules which bind cytokines and growth factors and modulate their bioavailability in the ECM. Our data suggest that HCV induces major alterations of HSPG metabolism, and a reshuffle of the pericellular matrix to provide a microenvironment favorable for viral replication and persistence. These key events of HCV pathogenesis could contribute to fibrogenesis.

Speaker Biography

Eve-Isabelle Pecheur has completed her PhD in 1997 from University Paris XI and Post-doctoral studies from Groningen University of Medical Sciences, Netherlands. She leads a research group at the Cancer Research Center of Lyon. She has published more than 50 papers in reputed journals. She is serving as an Editorial Board Member of *Antiviral Research*, and as an Academic Editor of *PLoS One.*

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