Expression levels from left to right:

pNRM – public normal liver
nNRM – in-house normal liver
HHC – HH-related cirrhotic liver
HBVc – HBV-related cirrhotic liver
HVCc – HVC-related cirrhotic liver
HHT – HH-related HCC liver
HBVt – HBV-related HCC liver
HVCt – HVC-related HCC liver

Abstract P41 Figure 2 Expression level of SPP1 and CD109 in normal liver and HCV, HBV and HH related cirrhosis and HCC.

U133Plus2.0 gene expression arrays. Public microarray databases ArrayExpress and Gene Expression Omnibus were mined for liver U133Plus2.0 gene expression arrays. Public microarray databases liver and HCV, HBV and HH related cirrhosis and HCC.

cantly significant genes were further filtered for twofold expression change. Disease specific gene lists were created. Genes identified as highly expressed in HH-related HCC were validated using quantitative RT-PCR.

Results Public databases yielded gene expression data on normal liver (n=51), HCV/cirrhosis (n=59), HCV-related HCC (n=126), HBV/cirrhosis (n=4), and HBV-related HCC (n=5). Principal component analysis showed clustering of normal, cirrhosis and HCC samples. Using a twofold cut-off, 16 genes were differentially expressed in HH-related HCC compared to normal liver, 502 genes in HBV-related HCC and 29 genes in HVC-related HCC (Abstract P41 figure 1). No differentially-expressed genes were common to all three groups. Genes CD109 and SPP1 were identified as highly expressed in HH-related HCC compared to all other groups (Abstract P41 figure 2) and their expression in normal and HH samples were confirmed with quantitative RT-PCR.

Conclusion Comparison of global gene expression profiles yielded sets of differentially expressed genes specific to liver disease aetiology in HCC related to HCV, HBV and haemochromatosis. Two genes highly expressed in haemochromatosis-related HCC were identified that might be useful as disease-specific markers.

Viral hepatitis

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CELLULAR PROTEIN CYCLOPHILIN A IS INVOLVED IN HEPATITIS B VIRUS REPLICATION AND ITS INHIBITION WITH DEB025 (ALISPORIVIR) OR NIM811 DEMONSTRATES ANTIVIRAL ACTIVITY IN VITRO

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Introduction Cyclophilins are ubiquitously expressed intracellular proteins that have enzymatic activity—peptidyl-prolyl cis-trans isomerase, and are involved in regulation of mitochondrial/cytosolic transport in the cells. DEB025 (Alisporivir) and NIM811 are non-immunosuppressive cyclophilin inhibitors that efficiently block hepatitis C virus replication by targeting host rather than viral proteins, however the potential impact of cyclophilin inhibition on hepatitis B virus (HBV) life cycle is poorly understood.

Aim In the present study we employed a panel of liver cell lines to investigate the ability of cyclophilin inhibitors DEB025 (Alisporivir)