

# Scientists Find a New Target of Chronic Hepatitis B Infection-induced Hepatocellular Carcinoma Transformation

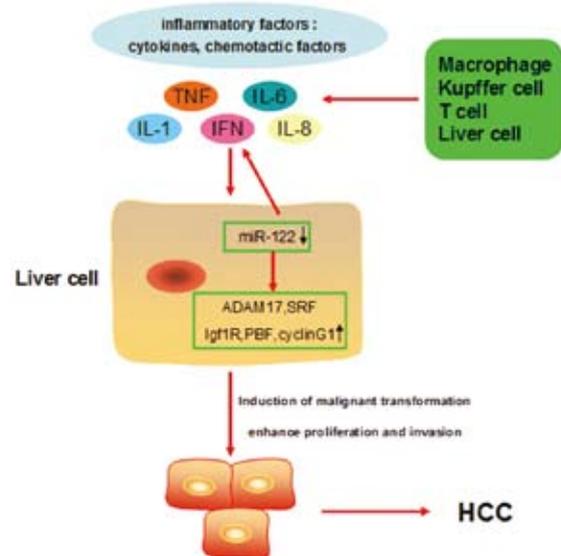
Chronic hepatitis B virus infection plays a central role in the development of hepatocellular carcinoma (HCC). It is of great scientific significance and application value to prevent HCC transforming from chronic hepatitis B.

Prof. MENG Songdong's research group at the Institute of Microbiology, Chinese Academy of Sciences found that the major inflammatory cytokines in chronic hepatitis, IL-6 and TNF- $\alpha$ , induced a marked decrease in microRNA-122 (miR-122), a liver specific microRNA. MiR-122 expression, they observed, was also down-regulated in the livers of chronic hepatitis B patients.

Further studies showed that IL-6 and TNF- $\alpha$  down-regulated and inhibited a miR-122 transcription factor C/EBP $\alpha$ , hence led to decreased miR-122. In mouse and rat models of diethylnitrosamine (DEN)-induced HCC, adding miR-122 via delivery of agomir-122 could suppress DEN-induced hepatocarcinogenesis.

Their findings suggest that miR-122 may serve as an important target for chronic hepatitis B infection-induced HCC transformation.

The results were published in *Oncotarget* (<http://www.impactjournals.com/oncotarget/index.php?journal=oncotarget&page=article&op=view&path%5B%5D=7740&path%5B%5D=22518>), with Dr. LI Changfei as first author and Prof. MENG corresponding author.



The positive feedback pathway consisting of inflammatory factors- miR-122-target genes (are involved in the process of chronic hepatitis induced HCC. (Image by Prof. MENG's group)

This marked the seventh paper published by Prof. MENG's group on the mechanism underlying miR-122 action in chronic hepatitis B infection. Pursuing this mechanism, they have published papers in *Hepatology*, *Journal of Virology*, *Scientific Reports*, etc.