中文題目：在肝細胞中 C 型肝炎病毒感染的持續存在模式 pro-inflammatory CXCL8 表達促進肝細胞癌進展之角色

英文題目：The role of the pro-inflammatory CXCL8 expression in HCC progression in persistence of HCV infection model

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Background: A large amount of epidemiological evidence indicates that persistent HCV infection is the main risk of HCC. Limited research studies focus on the long-term viral infection in infected cells and HCV-related to HCC. We aimed to study the effects of persistent HCV infection on virus and host cell interaction to identify cancer gene profiles.

Method: Next-generation sequencing (NGS) was used to identify differentially expressed genes between uninfected Huh7.5.1 as control cells, short-term HCV (S-HCV), early long-term HCV (eL-HCV), and long-term HCV (L-HCV) infection which were analyzed using different dynamic bioinformatics and analytic tools. mRNA expression was validated and quantified by q-PCR. 196 serum samples of HCV patients with and without HCC with peginterferon alpha-2a / alpha-2b plus ribavirin (IFN/RBV) treatment were collected to study chemokine level quantified using ELISA (eBioscience) by 1:50 sample dilution.

Result: S-HCV activates inflammatory response and drives cell death and apoptosis through cell cycle arrest via MAPK signaling. L-HCV promotes cell growth and alters cell adhesion and chemokine signaling via CXCL8-mediated-SRC regulation. A total of 196 serum samples from HCV and HCV-HCC cohorts study demonstrated significantly upregulated pro-inflammatory CXCL8 in non-SVR (persistent HCV infection) in the HCV-HCC group.

Conclusion: Persistent infection with HCV induced pro-inflammatory CXCL8 and oncogene SRC trigger and promote hepatocarcinogenesis. CXCL8 may be a potential biomarker for monitoring HCV related-HCC progression.