A diagnostic marker in hepatocellular carcinoma

January 31 2011

A research team from South Korea investigated the expression profile of E2F5 in primary hepatocellular carcinomas (HCCs) and explored the biological implications of E2F5 overexpression. They found that E2F5 is commonly overexpressed in primary HCC and that E2F5 knockdown significantly repressed the growth of HCC cells.

E2F5 is a member of the E2F transcription factor family, and plays a key role in cell growth and proliferation. Overexpression of E2F5 has been reported in various human cancers, but not in liver cancer, and its biological implication is largely unknown. It is not known whether E2F5 plays a tumor suppressor role or an oncogenic role. Furthermore, there has been no report on the expression profile of E2F5 in HCC and its biological implications on hepatocarcinogenesis.

A research article published on January 28, 2011 in the World Journal of Gastroenterology addresses this question. In this study, the authors investigated the expression profile of E2F5 in primary HCCs and explored the biological effects of E2F5 overexpression by knockdown of the gene.

This is the first evidence that E2F5 is commonly overexpressed in primary human HCC and that E2F5 knockdown profoundly repressed the growth of HCC cells. The overexpression of E2F5 may induce uncontrollable cell cycle progression in liver cells and eventually contribute to cancer transformation by working together with other carcinogenic factors. This study will help to understand

hepatocarcinogenesis mechanisms and to define therapeutic targets of early HCC.

More information: Jiang Y, Yim SH, Xu HD, Jung SH, Yang SY, Hu HJ, Jung CK, Chung YJ. A potential oncogenic role of the commonly observed E2F5 overexpression in hepatocellular carcinoma. World J Gastroenterol 2011; 17(4): 470-477. www.wjgnet.com/1007-9327/full/v17/i4/470.htm

Provided by World Journal of Gastroenterology