

Hepatitis B virus promotes oncogenesis through microRNA modulation

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Viruses prompt oncogenic transformation by genetically altering infected cells. Several recent studies have demonstrated that viruses alter the expression of microRNAs, non-coding RNA molecules that can block the expression of target genes.

In this issue of the *Journal of Clinical Investigation*, Xiaoje Xu and colleagues at the Beijing Institute of Biotechnology report that miR-148a is repressed by hepatitis B virus (HBV) X protein (HBx) to promote growth and metastasis of liver cancer.

In normal liver cells, miR-148a represses the expression of the oncogenic protein HPIP, but the [hepatitis B virus](#) prevents expression of miR-148a, leading to increased levels of HPIP and subsequent oncogenic transformation.

This study demonstrates that a cancer-associated virus promotes carcinogenesis through direct manipulation of a microRNA.

More information: Hepatitis B virus X protein represses miRNA-148a to enhance tumorigenesis, *Journal of Clinical Investigation*, 2013.

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