FBXL6-HSP90AA1-c-MYC axis facilitates hepatocellular carcinoma

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Video Byte

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Abstract

Hepatocellular carcinoma, or HCC, is the second deadliest form of cancer. One protein that helps HCC cells grow and proliferate is c-Myc. But exactly how has remained unclear. Now, researchers have identified a separate protein that, with c-Myc, forms a positive feedback loop to keep HCC cells thriving. The protein is called FBXL6 and was identified by transcriptome RNA sequencing. Experiments showed that FBXL6 was significantly increased in HCC compared with normal tissues and correlated positively with c-Myc expression. Further tests revealed that FBXL6 stabilizes the heat shock protein HSP90AA1, which activates c-Myc. In turn, c-Myc binds to the promoter region of FBXL6 and activates its expression. This newly discovered FBXL6-HSP90AA1-c-MYC axis could play a critical role in sustaining HCC. Drugs designed to suppress this feedforward loop could help patients living with hepatocellular carcinoma.