SFA Therapeutics Publishes Research on its New Approach to Treating Hepatitis B and Chronic Liver Disease

A new approach to treating Hepatitis B and Chronic Liver Disease, with the the goal of developing a functional cure

JENKINTOWN, PA, UNITED STATES, September 23, 2022 / EINPresswire.com/ -- SFA Therapeutics, Inc. is pleased to announce a new publication of our research in hepatitis B, where we are developing a drug that has the potential to become a functional cure.

According to Mark Feitelson, PhD, Professor of Biology at Temple University in Philadelphia, PA, "there are more than 250 million carriers of hepatitis B worldwide who are at risk for the development of chronic liver disease and its progression to hepatocellular carcinoma. Although there are many drugs that suppress hepatitis B virus replication, none are curative. Research from SFA Therapeutics has now highlighted that targeting the virus encoded protein, HBx, will diminish both virus replication and chronic liver disease. In combination with other treatment modalities, it is likely that this addition will bring us closer to a functional cure for hepatitis B."

Patients who are carriers of the hepatitis B virus (HBV) are at high risk of chronic liver disease (CLD) which proceeds from hepatitis, to fibrosis, cirrhosis and to hepatocellular carcinoma (HCC). The hepatitis B-encoded X antigen, HBx, promotes virus gene expression and replication, protects infected hepatocytes from immunological destruction, and promotes the development of CLD and HCC. For virus replication, HBx regulates covalently closed circular (ccc) HBV DNA transcription, while for CLD, HBx triggers cellular oxidative stress, in part, by triggering mitochondrial damage that stimulates innate immunity. Constitutive activation of NF-κB by HBx transcriptionally activates pro-inflammatory genes, resulting in hepatocellular destruction, regeneration, and increased integration of the HBx gene into the host genome. NF-κB is also hepatoprotective, which sustains the survival of infected cells. Multiple therapeutic approaches include direct-acting anti-viral compounds and immune-stimulating drugs, but functional cures were not achieved, in part, because none were yet devised to target HBx. In addition, many

> None of the drugs that suppress hepatitis B virus are curative. SFA Therapeutics' research shows that targeting virus encoded protein HBx diminishes both virus replication and chronic liver disease."
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> *Dr. Mark Feitelson*

patients with cirrhosis or HCC have little or no virus replication, but continue to express HBx from integrated templates, suggesting that HBx contributes to the pathogenesis of CLD. Blocking HBx activity will, therefore, impact multiple aspects of the host–virus relationship that are relevant to achieving a functional cure.

Therapeutic inhibition of HBx expression and function could contribute to a functional cure prior to the development of cirrhosis and HCC. SFA Therapeutics, Inc. has helped sponsor this research, and is working to help develop therapeutics based on these findings. Two US patents have been granted based upon this research.

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