April 22, 2024

Excision BioTherapeutics Announces Oral Presentation Highlighting Positive Data from its HBV Program, EBT-107, at the Upcoming ASGCT 2024 Annual Meeting

- Oral presentation to highlight proof-of-concept efficacy in reducing HBV biomarkers in serum and intrahepatic HBV in vivo

SAN FRANCISCO, April 22, 2024 (GLOBE NEWSWIRE) -- Excision BioTherapeutics, Inc. (“Excision”, the “Company”), a clinical-stage biotechnology company developing CRISPR-based therapies to cure serious latent viral infectious diseases, today announced that it will present positive data from its program for Hepatitis B virus (HBV) at the American Society of Gene & Cell Therapy (ASGCT) 2024 Annual Meeting taking place May 7-11, 2024 in Baltimore, Maryland.

HBV is one of the most prevalent infectious diseases worldwide that lacks curative therapies. While existing antiviral and immunomodulator treatments slow liver damage by reducing viral load, they fail to eliminate covalently closed circular DNA (cccDNA) that enables persistent viral infection. Excision’s lead product candidate for the treatment of HBV infection, EBT-107, uses dual guide RNAs to effectively deactivate the virus and prevent the emergence of escape variants.

“Our proof-of-concept study demonstrates the efficacy of our dual guide-RNA-mediated editing strategy in significantly reducing viral HBV biomarkers in serum and intrahepatic HBV levels, indicating that HBV DNA cutting facilitates its degradation *in vivo*,” said Daniel Dornbusch, Chief Executive Officer of Excision. “We believe that these data further validate our HBV program and will help progress our EBT-107 program toward an anticipated IND.”

The details of the presentations are below:

Title: Non-Viral Gene Editing with Dual Guide RNAs for Chronic Hepatitis B Infection
Excision Program: HBV
Session Type: Oral presentation
Session Title: Gene Disruption and Excision
Abstract: 153
Presenter: Ryo Takeuchi, Excision BioTherapeutics
Location: Ballroom 3
Date/Time: May 09, 2024, 2:21 to 2:38 pm (EST)

Leveraging our proprietary computational approach, we identified multiple nucleases and guide pairs targeting conserved sites within the HBV genome, prioritizing those with minimal sequence identity to human genetic sequences, to mitigate off-target editing. Through

screening reporter cell lines with integrated partial HBV genome, we identified pairs of guide RNAs that efficiently deleted sequences between target sites found in a wide range of HBV isolates. Testing a selected combination of editing nucleases and paired guide RNAs in HBV-infected cells, we observed decreased copies of total HBV DNA. Upon intravenous administration of a lipid nanoparticle (LNP) encapsulating an editing nuclease-encoding mRNA and a pair of guide RNAs in the HBV mouse model established with AAV-HBV, we observed a significant reduction of HBV biomarkers in serum and intrahepatic HBV.

About Excision BioTherapeutics, Inc.
Excision BioTherapeutics, Inc. develops CRISPR-based medicines as potential cures for serious viral latent infectious diseases. The Company's proprietary, multiplexed gene editing platform unites CRISPR technologies with a novel gene editing approach which demonstrated the ability to stop viral replication. Excision's pipeline targets large, underserved markets including herpes simplex virus (HSV-1 keratitis), hepatitis B virus (HBV), and human immunodeficiency virus-1 (HIV-1). Excision's foundational technologies were developed in the laboratories of Dr. Kamel Khalili at Temple University and Dr. Jennifer Doudna at the University of California, Berkeley. For more information, please visit www.excision.bio.

Contact:
John Fraunces
LifeSci Advisors
917-355-2395
jfraunces@lifesciadvisors.com

EXCISION

Source: Excision BioTherapeutics