



## PRESS RELEASE

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### Wistar Institute Scientists Identify New Strategy to Fight Cancer Caused by Epstein-Barr Virus

**PHILADELPHIA — (March 10, 2025)** — The Wistar Institute’s [Paul M. Lieberman, Ph.D.](#) and lab identified and tested a new method for targeting certain cancers caused by Epstein-Barr Virus (EBV), in the paper, “USP7 inhibitors destabilize EBNA1 and suppress EBV tumorigenesis,” from [Journal of Medical Virology](#).

“This work sheds valuable new light on how we can potentially treat cancer caused by EBV,” said Dr. Lieberman, the Ellen and Ronald Caplan Cancer Center’s Hilary Koprowski, M.D., Endowed Professor. “Our research shows that targeting USP7 effectively stops EBV-positive cell growth in preclinical models. Considering that several USP7 inhibitors not only exist but are also approved by the FDA, there is a clear path forward for further translational research that aims to get USP7 inhibitors ready for use in patients as part of a strategy to fight EBV-positive cancers.”

EBV is a herpesvirus that infects more than 90% of people throughout the world. Usually, people experience no symptoms from this virus, although one notable exception is mononucleosis, a disease with flu-like symptoms caused by EBV infection. Latent EBV infection has been shown to cause certain conditions like multiple sclerosis and cancers like gastric cancer and some lymphomas.

EBNA1 is one of the most important genes in EBV cancers. Present in every EBV-positive tumor, EBNA1 is critical to the virus’ ability to sustain prolonged, latent infection, and in EBV-positive cancers, the gene facilitates tumor growth.

By showing that USP7 inhibition is effective against EBV-positive cancers in preclinical testing, the Lieberman lab has paved the way for more research on this strategy for both EBV-positive cancers and beyond. Because USP7’s relationship with EBV is similar to its relationship with other herpesviruses that





can cause cancers of their own, USP7 inhibition may have comparable efficacy against non-EBV herpesvirus cancers.

“Our work on USP7 inhibitors has exciting implications for disrupting the harmful effects of Epstein-Barr Virus,” said the paper’s first author, Christopher Chen. “We look forward to seeing how this research can be taken further with more investigation.”

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