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Mitra Biotech, Brigham and Women's Hospital team up for Cancer Immunotherapies

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Mitra Biotech is a global leader in advancing personalized oncology treatment and supporting more effective and efficient cancer drug development. Mitra is headquartered in Greater Boston and maintains a significant research and laboratory presence in Bengaluru, India.

The company has announced a collaborative research partnership with Brigham and Women's Hospital and the Department of Neurosurgery to further transform personalized immuno-oncology drug development.

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These novel engineered versions of the Herpes Simplex Virus 1 (HSV-1), which have been extensively characterized preclinically, are capable of selective infection and replication within tumor cells, and can stimulate the immune system. Clinical trials are now underway at the Brigham to investigate oncolytic viruses in patients with the aggressive and incurable brain tumor glioblastoma multiforme (GBM).

To better understand how oncolytic viruses work in human GBM patients, Dr Lawler is leveraging Mitra's CANscript platform to study their biological mechanisms of action, with the goal of identifying key features involved in response to oncolytic virus therapy.

"Currently, there is a lack of reliable methods to study oncolytic viruses in the laboratory that directly translate to in vivo human activity," says Dr Lawler. He continues, "CANscript allows us to have insight into what type of patients produce response. For the first time, we may be able to predict how these oncolytic viruses might work in actual human patients, which helps us

better determine trial populations."

Mitra's CANscript platform is a human, immune-relevant ex vivo model that allows researchers and drug developers to understand the performance of novel agents, such as oncolytic viruses, in human tissue, providing an informed approach to clinical development and patient response. CANscript is a uniquely effective platform in which to test such an immune response because it recreates the in vivo tumor microenvironment, maintaining the heterogeneity of the tumor while preserving its immune compartment.