

# Oncorus: Viral RNA Platform video transcript

## **Narrator:**

Synthetic Viral RNA Immunotherapy: Creating the Next Pillar of Therapy for cancer patients. The era of RNA medicines is here.

Many RNA based therapeutics and vaccines are currently in development and several have already been approved to treat rare and infectious diseases, including COVID-19.

However, there are no approved RNA-based medicines yet to fight cancer. This is primarily due to two main challenges: getting enough RNA drug into tumors, and ensuring that the drug only targets tumors and not healthy tissue.

At Oncorus, we aim to overcome both of these challenges by harnessing the natural ability of viruses to selectively self-amplify their genomes within immuno-suppressed tumor micro-environments, a concept we refer to as synthetic viral RNA immunotherapy.

We encapsulate a synthetic version of the genome of a known cancer-fighting RNA virus within a lipid nanoparticle, or LNP, for IV administration. This is the same basic principle used by today's approved RNA therapeutics and vaccines.

The LNP creates a barrier that protects the viral RNA, or vRNA, and transports it into cells.

Preclinical data demonstrates that our vRNA selectively self-amplifies within tumor versus healthy cells. The virus encoded by the vRNA is a living drug and stimulates the immune system. The viral infection then spreads to other cancer cells, leading to further viral replication, more cancer cell killing, and the recruitment of immune cells into the tumor microenvironment.

As demonstrated preclinically, a key advantage of our synthetic vRNA approach is that it avoids the challenge of neutralizing antibodies seen in previous approaches using IV-administered natural viruses.

We plan to investigate our synthetic vRNA immunotherapies in cancers that are difficult or unsafe to reach with direct injections, and multiple tumor types, including those of the lung.

With their unique potential to kill cancer cells and ignite a powerful immune response, we believe our synthetic vRNA immunotherapies hold a promise of creating the next pillar of therapy for cancer patients.