Docket #: S24-460

Therapeutic Rewiring of Cancer Signaling with Oncolytic Viral Therapy and B-Cell Ablation

Stanford scientists in Dr. Michael Lin's lab have established the use of B-cell reducing agents to improve an oncolytic virus (OV) therapy to rewire cancer signaling while limiting the production of antibodies against the virus in mouse studies.

Killing cancer cells using OVs has shown promise in the clinic and as well as being evident through an FDA approved therapy, however there are certain limitations. Oncolytic viruses still induce an antiviral immune response and thus antibodies against the virus are generated. This greatly dampens the effectiveness of the oncolytic viral therapy. Stanford researchers developed a treatment method that inhibits the development of neutralizing antibodies against the OV to maximize its therapeutic potential. This method resulted in higher OV levels after repeated injections compared to OV alone, and thus has widespread utility in improving the effectiveness of OVs in the treatment of cancer.

Stage of Development
Proof of concept - verified in vivo

Applications

- Oncolytic viral therapy
- Antibody based cancer therapies

Advantages

- First in class OV combination therapy

- Readily available B-cell reducing agents

Patents

- Published Application: WO2026148353

Innovators

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