



### Applications

- Cancer Immunotherapy
- Treatment for established tumors
- Prevention of tumor establishment

### Advantages

- Localized and systemic effects
- Cancer cell specific, no harm to normal cells
- Induces cancer cell death
- Establishes antitumor immune memory
- Decreased potential for side effects

### Inventors

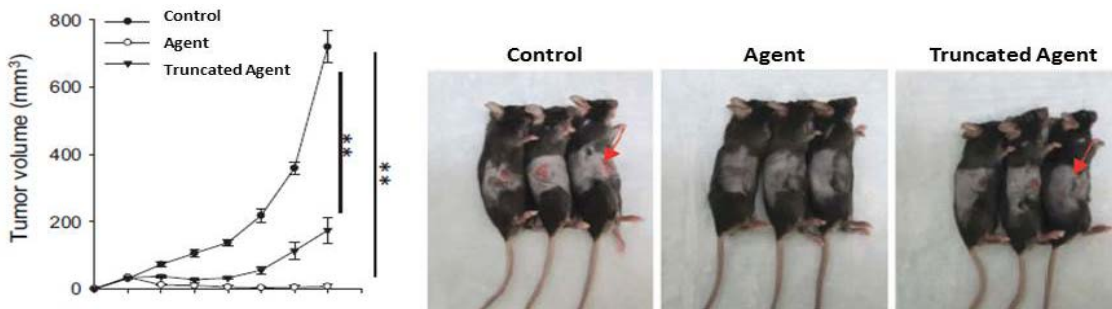
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### Technology Summary

Common treatments for cancer include surgery, chemotherapy, radiation therapy, targeted therapy, and immunotherapy. The majority of these procedures lead to the patient becoming weak and extremely ill due to the toxicity caused to the non-cancerous tissues. Additionally, none of these treatments establishes immune memory, which would allow the body to protect itself from cancer recurrence due to metastasis. Our technology is an agent that, when introduced, allows the immune system to recognize cancer cells and the immune cells to initiate apoptosis cascade in the cancer cells. It can treat patients with established tumors by making the cancer cells recognizable to the innate and adaptive immune system. Concurrently, this treatment can establish T cell memory allowing for the adaptive immune response to prevent recurrence. The figure below shows the capability of the agent to prevent tumor growth. The red arrows indicate the locations of still existing tumors in the mice treated with the control and truncated agent.



This treatment causes cell death only in cancer cells and not in normal cells. Therefore there would be decreased risk of adverse effects to patients. Because of this feature, the treatment could be used for both metastasized cancer and tumors.

### Technology Status

*In vitro* and *in vivo* data available

Patent Pending: U.S. and foreign rights available

Activation of the MDA-5 IPS-1 Viral Sensing Pathway Induces Cancer Cell Death and Type I IFN-Dependent Antitumor Immunity. Yu X, Wang H, LiX, Guo C, Yuan F, Fisher PB

This technology is available for licensing to industry for further development and commercialization.