



POTENT ANTICANCER AGENT IN CLINICAL DEVELOPMENT

An Oncolytic Virotherapeutic Product Candidate

CRAd (Ad Δ 24-RGD) FACTS SHEET AT A GLANCE

- ▶ Breakthrough product concept for treating cancer
- ▶ Compelling efficacy and toxicological data in relevant animal models
- ▶ Proven, potent anticancer agent with built in genetic safety features
- ▶ Safety and tumor response Phase I clinical data available
- ▶ Potential for fast-track clinical development
- ▶ Extensive intellectual property
- ▶ Significant commercial opportunity

Product Profile

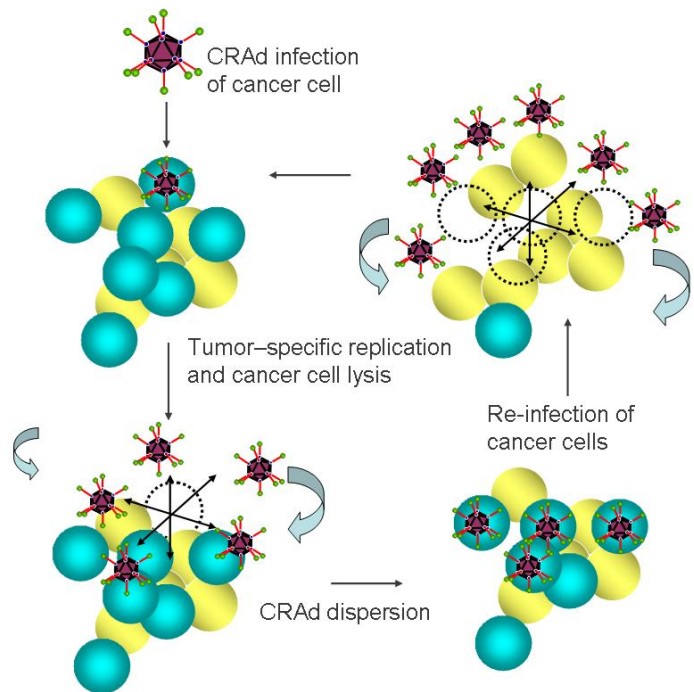
VectorLogics is developing Ad Δ 24-RGD, a proprietary oncolytic virotherapeutic product candidate, for the treatment of local and regional cancers. Ad Δ 24-RGD is a conditionally replicating adenovector (CRAd) with

enhanced tumor infectivity and built in safety features for the management of difficult to treat cancers. Ad Δ 24-RGD is comprised of a recombinant adenoviral vector with an engineered outer coat that greatly increases efficiency for the transduction of tumor cells.

Safety features incorporated into the genome of the vector restrict replication to rapidly growing cancerous tissue providing protection of normal cells. These vector modifications enable increased efficiency and maximum safety.

Cancer Virotherapeutics

Virotherapy is a new strategy to treat cancer by selectively transducing and killing tumor cells with viral vectors. In virotherapy, after entry, the vector replicates primarily in the infected malignant target cells and kills the cells by cytolysis. Then, the released vector progeny spread to the surrounding target cells. Achieving this lateral spread is a key event for the effectiveness of this virotherapy approach. Discrimination between malignant and healthy tissue is achieved through the deletion of a functional region within an essential adenoviral gene. This allows the vector to be independent of normal cell regulation checkpoints and therefore, it can replicate effectively in rapidly dividing and cycling cancer cells while sparing the more slowly dividing normal cells from damage. VectorLogics' virotherapy lead product candidate, Ad Δ 24-RGD, in addition has a coat protein modification allowing the vector to transduce a large number of clinically relevant tumor cell types that include ovarian, brain and pancreatic cells. These infectivity-enhanced CRAds exhibit dramatic augmentations in oncolytic potency through more efficient tumor cell infection. VectorLogics' transduction enhanced conditionally replicative vector is the first such adenovector to enter human clinical trials.



CRAd: Tumor-specific cell killing via a Conditionally Replicative Adenovirus

Vectorlogics' Infectivity-enhanced CRAds exhibit dramatic augmentations in oncolytic potency through more efficient tumor cell infection.

Preclinical Data

In a well established murine model of ovarian cancer, mice were treated intraperitoneally daily for three days with AdΔ24-RGD. There was a significant difference in median survival in drug treated animals when compared to controls. Mice treated with the drug candidate had no evidence of intraperitoneal disease. Similar experiments indicated that this drug candidate was highly efficacious in an intracranial human glioma model. The enhanced infectivity provided by the addition of the RGD motif resulted in a significant improvement in outcome compared with unmodified vector. Of note, oncolytic virotherapy has shown promising results in combination with chemotherapy in preclinical models. Animals treated in combination with AdΔ24-RGD and chemotherapy enhanced anti-tumor effect and increased long-term survival rates in both ovarian cancer model and of glioma-bearing ani-

Cancers Which May be Suitable for Virotherapy

Indication	New Cases Per Year (U.S.)
Lung	219,400
Breast	194,300
Prostate	193,200
Bladder	71,000
Rectal	40,900
Head & Neck	30,200
Pancreas	42,500
Brain	22,000
Ovarian	21,500
Esophageal	16,500

mals. Collectively, these preclinical studies validate the potential of our lead product candidate in the context of ovarian and brain cancers.

Clinical Studies

Initial efforts are focused on intraperitoneally and intratumorally-administered virotherapeutics for ovarian and brain cancers. VectorLogics has completed a Phase I trial evaluating the maximum tolerated dose, spectrum of toxicities and potential clinical activity of the in-

fectivity enhanced virotherapeutic agent via intraperitoneal administration to 21 patients with recurrent gynecologic cancer. This is the first study to evaluate an infectivity enhanced adenovector in the context of human cancer. Importantly, no dose limiting toxicity was encountered. Most significantly, thirty percent of patients had a clinically significant decrease in CA125 and/or stable disease by radiologic criteria indicating clinical activity. Final data will be presented at the meeting of the American Society of Clinical Oncology, scheduled for June, 2010. Preliminary results from two brain cancer studies are expected next year. Furthermore, VectorLogics will initiate a Phase I/II ovarian cancer clinical trial whereby the lead agent will be delivered in conjunction with chemotherapy. This would allow treatment of patients at a significantly earlier disease stage, thereby fostering the possibility of fuller clinical response.

Proprietary Position

VectorLogics has established a broad portfolio of intellectual property pertaining to virotherapy and related technologies based on its extensive internal research and licensing activities.

Summary

VectorLogics' CRAd virotherapy program provides a unique, proprietary approach to enhancing the effects of traditional chemotherapy in treating cancer patients. In animal models of several different cancer types, the combination of AdΔ24-RGD and chemotherapy showed significant synergistic effects without increasing the toxicity. This combination therapy has great potential in the treatment of different cancer types.

References

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Company Overview

VectorLogics, Inc. is a privately-held biotechnology company focused on the development of novel cancer therapeutics, and therapeutic vaccines for viral liver diseases. The Company is using its patented gene transfer technologies to create product candidates that address major unmet medical needs. Additional information on Vectorlogics is available at its web site, located at www.vectorlogics.com.

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