

TVAX

BIOMEDICAL

COMPANY PROFILE

TVAX Biomedical is a clinical stage development company advancing its targeted cell-based immunotherapy for the treatment of cancer. The company's novel therapeutic approach offers the promise of improved clinical outcomes, low toxicity and the potential for fundamentally changing the way cancer is treated.

TVAX Immunotherapy is a unique personalized "killer" T cell treatment that employs the natural ability of T cells to kill cancer cells. Activated "killer" T cells have demonstrated the ability to effectively treat numerous cancers without many of the undesirable side effects associated with radiation and chemotherapy.

The key distinction between TVAX and other cancer immunotherapy companies is that TVAX Immunotherapy uses **BOTH** cancer vaccine pretreatment to generate cancer-specific T cells **AND** activated "killer" T cell treatment – this proprietary combination has demonstrated significant efficacy.

TVAX's lead therapy, TVI-Brain-1, is currently being evaluated for the treatment of brain cancer. The company has been authorized by the United States Food and Drug Administration (FDA) to conduct a pivotal Phase 3 trial to support TVI-Brain-1's potential FDA approval.

TVAX PLATFORM

TVAX is working to strengthen the natural ability of the human immune system to strategically attack and eradicate cancer. The TVAX platform is dependent on two essential steps:

1. Pretreat the patient with a vaccine of their own cancer cells combined with a powerful immunological adjuvant to generate an immune response against their own cancer.
2. Harvest the cancer-specific T cells generated by vaccination from patient's blood to produce high numbers of activated killer T cells - which can recognize and kill cancer cells - and deliver those cells back into the patient by IV infusion.

TVAX'S COMPETITIVE ADVANTAGE

PRETREATMENT VACCINE



T CELL TREATMENT



This combination of vaccination and killer T cells has demonstrated significant efficacy.

To date, TVAX's approach has generated extensive preclinical and clinical data demonstrating efficacy against a wide variety of cancer types. The TVAX treatment produces very little toxicity compared to other cancer treatment strategies.

CORPORATE FACTSHEET

CORPORATE HIGHLIGHTS

- Proprietary combination of cancer cell vaccination and "killer" T cell treatment with extensive preclinical and clinical proof of concept
- Positive Phase 2 clinical results to date for lead oncology candidate
 - The median survival of patients treated with TVAX Immunotherapy was 50% greater than historical controls
 - Favorable safety profile relative to radiation and chemotherapy
 - Tested and well tolerated in approximately 200 patients
- Phase 2b trial for newly-diagnosed glioblastoma planned for initiation in 2014
 - Significant unmet medical need
 - Orphan Product designation obtained for central nervous system cancer
 - >\$1.5 billion market opportunity for lead program alone
- Pivotal Phase 3 trial authorized for newly-diagnosed glioblastoma
- Platform technology with the ability to address multiple cancers
- Broad intellectual property portfolio
- cGMP compliant in-house manufacturing – highly portable and expandable

ANTICIPATED MILESTONES

- Initiate Phase 2b trial in newly-diagnosed glioblastoma patients (2014)
- Generate Phase 2b trial data for newly-diagnosed glioblastoma patients (2015 and 2016)

U.S. MARKET OPPORTUNITY

- Potential annual markets in U.S.
 - Brain cancers: > \$1.5 billion
 - Kidney cancers: > \$5.4 billion
- Anticipate TVAX treatment price to be in line with current treatments
- Potential use in multiple cancer indications to follow TVI-Brain-1

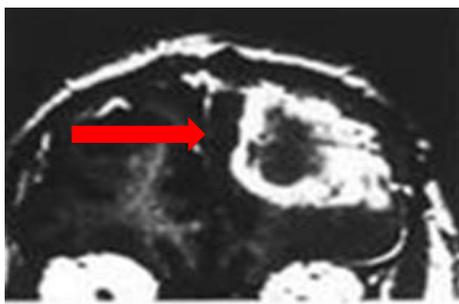
TVI-BRAIN-1

TVI-Brain-1 is being evaluated for the treatment of brain cancer and targets glioblastomas. TVI-Brain-1 has received orphan product designation for the treatment of central nervous system cancer.

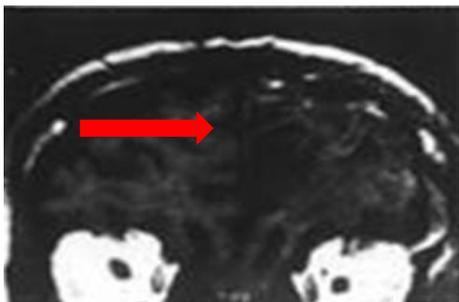
Phase 1/2 clinical trials examining earlier versions of the TVAX treatment approach in patients with recurrent grade 3 (anaplastic astrocytoma) and 4 (glioblastoma multiforme) astrocytomas demonstrated a 50% greater median survival for 43 treated patients as compared to published historical controls.

In addition to the survival benefit produced by the TVAX treatment, a high proportion of treated patients exhibited objective evidence of a direct effect of the TVAX treatment on the cancer, including objective complete and partial cancer regressions and long periods of stable disease when the cancer stopped growing.

A new and improved version of the TVAX treatment, TVI-Brain-1, was tested in a recently completed Phase 1/2 study and similar outcomes were observed.



AT LEFT: A recurrent glioma patient who experienced a complete response 8 months after TVAX treatment; patient experienced > 5 year survival



TVI-KIDNEY-1

TVI-Kidney-1 is being evaluated for the treatment of kidney cancer and targets stage 4 renal cell carcinoma. FDA has authorized TVAX to conduct pivotal Phase 3 trials of the product.

Multiple independent clinical studies have validated the potential of TVI-Kidney-1, demonstrating a significant number of clinical responses and statistically significant overall survival.

TVAX's two most advanced programs, TVI-Brain-1 and TVI-Kidney-1, are supported by positive Phase 2 clinical data and have FDA authorization to advance into pivotal Phase 3 clinical trials to support their potential commercial approval.

TVAX PIPELINE

TVAX BIOMEDICAL	Phase of Clinical Study			
	Preclinical	Phase 1	Phase 2	Phase 3
Phase 3 Ready				
TVI-Brain-1	→			
TVI-Kidney-1	→			
Phase 2 Ready				
TVI-Lung-1				
TVI-Breast-1				
TVI-Colon-1				
TVI-Melanoma-1	→			
TVI-Ovary-1				
TVI-Prostate-1				
TVI-Leukemia-1				
TVI-Pancreas-1				
Preclinical				
TVI-HIV-1				
TVI-Hepatitis-1	→			
TVI-Tuberculosis-1				
Animal Indications				
Marketing authorization received from USDA for treatment of all cancers in dogs, cats, and horses				

In addition to TVI-Brain-1 and TVI-Kidney-1, TVAX has created a high-value pipeline of therapeutic candidates targeting a broad range of cancers, as well as non-cancer indications. These pipeline programs are supported by extensive proof-of-concept and safety data highlighting the therapeutic potential of TVAX Immunotherapy in these indications.

MANAGEMENT

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