Technology Ventures Office

Beth Israel Deaconess Medical Center

Harvard Medical School Teaching Affiliate

Novel Prostate Cancer Immunotherapies

BIDMC #1187

Effective tumor specific immunotherapies for the treatment and prevention of prostate cancer using:

- Vaccines composed of novel peptides
- Immune activated T cells

Background:

Prostate cancer immunotherapies (cell-based treatments, vaccines, antibodies) have been unsuccessful largely due to a lack of a causative oncogene antigen target and to an inability to overcome immune tolerance to the targeted tumor antigen.

BIDMC investigators have potentially overcome these obstacles to an effective immunotherapy with their discovery of immunodominant peptides from two prostate tumor-associated proteins: transcription factors ERG and SIM2. These new targets are ideal candidates for immunotherapy because these proteins are not significantly present in normal human adult cells, but are over-expressed in 90-100% (for SIM2) 40-60% (for ERG) of human prostatectomy specimens.

Publications:

- NCI Translates Meeting, November 2008
- Clinical Cancer Res 2009; 15(18): 5794

Contact: Catherine Lenich, PhD
Senior Associate, TVO
Tel: 617.667.0568
Fax: 617.667.0646
clenich@bidmc.harvard.edu

Commercialization:

Development of vaccines and cellular immunotherapies alone or in combination with existing treatments such as androgen deprivation.

Stage of Development:

In vivo studies demonstrate that both ERG and SIM2 peptides produce immunogenicity.

Next step: Validation in prostate cancer animal models and clinical trials

Patent / Licensing Status:

- US Provisional Patent Filed
- Opportunities for Licensing Available

Lead Investigators:

Martin Sanda, MD
Mohamed S. Arredouani, PhD

Competitive Advantages:

- ✓ **Prostate Tumor Specificity**
- ✓ **Ability to Overcome Immune Tolerance to a Tumor Antigen**