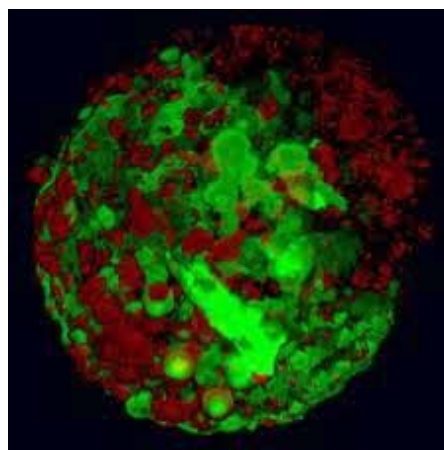


**West Virginia State University Faculty Lecture Series,
American Chemical Society Speaker Series and
College of Natural Sciences and Mathematics Fall Convocation**

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“A Brave New World: Vaccines for Therapy of Cancer”



This year has seen the historic approval of the first therapeutic cancer vaccine for cancer. Tumor-associated antigens (antigens present on tumors versus normal tissue; TAA) are by definition weakly immunogenic. Therefore, efforts have concentrated on the development of vaccine strategies in which the presentation of TAAs to the immune system results in far greater activation of T cells than that occurring naturally in the host.

Our laboratory has focused on the improved design and development of widely applicable novel vaccines and vaccine strategies to enhance the immune response to these tumor-associated antigens. Some of these strategies include a) the use of a diversified prime and boost regimen where patients are primed with recombinant TAA encoding genetically engineered smallpox vaccine (vaccinia virus) and boosted multiple times with a similar recombinant fowlpox virus, and b) the concurrent use of multiple T-cell costimulatory molecules to enhance the generation of tumor specific T-cell responses and antitumor activity. These studies have resulted in a randomized, placebo controlled trial in patients with metastatic prostate cancer, which showed that patients receiving this vaccine had a significantly longer overall survival as compared to the control group. This vaccine regimen will begin Phase III trials in 2010. These studies have formed the scientific basis for clinical trials for further evaluation of these vaccines alone, or in combination with conventional therapies for the treatment of a range of human cancers.

Thursday September 23, 12:30 PM
Hamblin Science Building Auditorium (007)