

Triggering the Immune System with Oncolytic Viruses

Figure 1



Howard Kaufman

Professor, Surgery, Chief Surgical Officer, Associate Director for Clinical Science



CURRENT RESEARCH

Novel immunotherapy approaches to kill cancer cells and stimulate immune responses

One of the most important developments in cancer research in the last several years has been understanding that the immune system can in fact eradicate cancer cells. An oncolytic virus, a virus that preferentially infects and kills cancer cells, is an example of a new and effective strategy to directly target cancer cells while unleashing the immune system against them. Dr. Howard Kaufman, Professor of Surgery at Rutgers University, develops immunotherapy for melanoma using a particular oncolytic virus, or the herpes virus called T-VEC to render cancers "more appealing" to the immune system. Genetically engineered to prevent herpes infection, the herpes virus can not only attack and kill tumor cells directly, but also attract lymphocytes to the tumor lesion and thus help promote an immune response that can protect the entire body against the recurrence of cancer.

This approach becomes ever more powerful when combined with another form of immunotherapy, as early results from combination studies are demonstrating dramatic responses with over 50% of patients achieving objective responses with minor and short-lived side effects. An internationally recognized leader in the field of oncolytic virus immunotherapy, Dr. Kaufman developed the first recombinant virus for the treatment of melanoma, and now hopes to evaluate the virus in other types of cancer and in visceral lesions, study the combination with other agents and try to validate potential biomarkers that can predict which patients will respond to treatment. In order to deliver important findings to patients as quickly as possible, Dr. Kaufman and his team also collaborate with industries such as AMGEN and Viralytics in Australia, and maintain connections...

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AFFILIATION



Rutgers University

EDUCATION

- M.D. in 1986, Loyola University

AWARDS

- Wings of Hope Humanitarian Award, 2008
- Honorary Member, 2000
- Lalezari Award for Research Excellence, 1998
- Fannie E. Rippel Foundation Award, 1997
- Clinical LRP Award, 1995
- and 2 more...

RESEARCH AREAS

Life Science, Immunology / Inflammatory, Oncology / Cancer, Oncology / Cancer

FUNDING REQUEST

Your contributions will help support two major areas of Dr. Kaufman's research: clinical trials in which he is directly testing new viruses and combinations in patients with cancer, and animal models in which he is exploring exactly how the viruses kill tumor cells and promote immune responses. Donations will help fund the \$1M/year required to recruit and support personnel and develop more sophisticated analyses. Help study the viruses that can potentially eradicate cancer cells; fund Dr. Kaufman.