

Chemokine-Tumor Antigen Fusion Proteins as Cancer Vaccines

Reference No.: E-107-1998

Keywords: Cancer, therapeutic, immunotherapy, vaccine

Background:

The majority of tumor antigens are believed to be poorly immunogenic because they represent oncogene gene products or other cellular genes which are normally present in the host. As a result, poor immunogenicity has been a major obstacle to successful immunotherapy with tumor vaccines. The National Institute on Aging, Laboratory of Immunology, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize cancer vaccines that target skin antigen-presenting cells.

Description of Technology:

Researchers at the National Institute on Aging have discovered a tumor vaccine construct comprising a chemoattractant (such as human chemokines CCL7 and CCL20) fused to a tumor antigen (including human mucin-1, a transmembrane protein that is aberrantly expressed in cancer; or single chain antibody expressed by B cell malignancy, or melanoma antigen gp100 expressed in human melanomas). Administration of this fusion chemokine and tumor antigen protein, or a nucleic acid encoding this fusion protein, elicits a tumor specific cellular and humoral immune response thereby providing a potent cancer vaccine.

Development Status: Pre-clinical proof of concept

Patent Status: U.S. 6,562,347 (05/13/2003)

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