

SCIENTIFIC ABSTRACT OF PROTOCOL

This protocol is a study of patients with recurrent malignant gliomas who have failed standard therapy. In an attempt to increase the patient's immune response to the tumor, the interleukin-4 (IL-4) gene will be introduced into a glioma cell line established from the patient. These gene modified tumor cells will then be injected into the thigh of the patient. This injection will augment the immune responses of the patient because a subcutaneous location will be utilized and because of the immune stimulatory effects of the IL-4 secreted by the gene modified tumor cells. To further evaluate the immune system of the patient to fight their tumor, stimulated lymphocytes will be cultured from the injected tumor itself and from the regional draining lymph nodes. These lymphocytes will be expanded *in vitro* and studied in a number of ways. Animal models have shown the injection of gene modified tumor cells to have important antitumor effects. A second series of injections will be carried out two weeks later. Multiple biopsies of injected sites will be obtained after each immunization.

The patients will be evaluated for antitumor effects promoted by the injection of the gene modified glioma cells. The injection of gene modified tumor cells may serve to "immunize" the patient to their tumor and may be amenable for use in a wide variety of brain tumor types.