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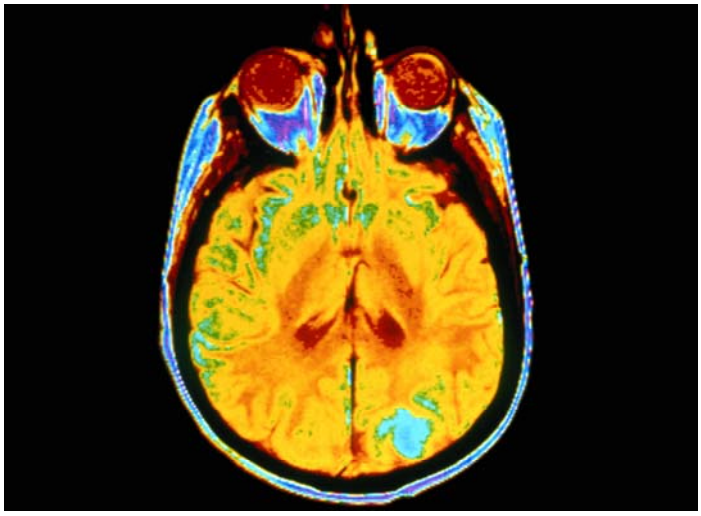
City of Hope

NATIONAL MEDICAL CENTER AND
BECKMAN RESEARCH INSTITUTE

Treatment for Metastatic Melanoma Utilizing a Targeted Killer Gene



DESCRIPTION

This technology is an effective in metastatic Melanoma treatment because it targets pigment producing cells in abnormal locations (e.g. brain metastasis of Melanoma). This is clinically relevant because there will be approximately 68,000 new case of Melanoma diagnosed in the United States in 2010. The challenge with Melanoma is that it metastasizes fairly quickly and metastatic melanoma is associated with a very poor prognosis. Conventional therapies such as surgery, radiation, and chemotherapy are largely ineffective. Among primary tumors, melanomas have one of the highest propensities to metastasize to the brain. Brain metastasis is very resistant to treatments, and accounts for approximately 20-54% of deaths in patients with melanoma. This technology is a novel tissue-specific promoter triggered gene therapy approach for treating metastatic melanoma. The Saporin gene is locally introduced using a gene therapy vector into Melanoma cells causing only cells producing melanin (skin pigment) to create a cytotoxic compound (Saporin) and destroy themselves, whilst not affecting the surrounding healthy tissue.

KEY ASPECTS

- The tissue specific promoter is a tyrosinase promoter
- The cytotoxic substance is Saporin
- Targeted tissue specific therapy for metastatic Melanoma

INTELLECTUAL PROPERTY

Title	US Patent Application	Filed
Compositions and Methods for Treatment of Melanomas	12/780,831	5/15/2009

CONTACT

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