American Brain Tumor Association-Funded Research Showing Improved Survival for GBM Patients

*Nature to publish findings of tetanus shot booster with immunotherapy*

Chicago, Ill. (PRWEB) March 11, 2015 -- Research published today showing a significant increase in survival for glioblastoma (GBM) brain tumor patients treated with a tetanus booster in combination with immunotherapy was aided by early funding from the American Brain Tumor Association (ABTA).

The research titled, “Tetanus toxoid and CCL3 improve dendritic cell vaccines in mice and glioblastoma patients” appears in the March 11 online edition of the journal Nature.

GBM brain tumors are highly malignant, aggressive tumors that are most prevalent in adults ages 45-65 and affect more men than women. Long-term survival of this type of tumor is rare — with a median survival of about 14.6 months.

“The American Brain Tumor Association recognizes the critical importance of early investment in discovery science with the potential to change the way brain tumors are treated,” said Elizabeth M. Wilson, MNA, president and CEO, American Brain Tumor Association. “The research published today moves us closer to the day when long-term survival of GBM brain tumor patients is the norm, not the exception.”

The findings published in Nature are from a small study of 12 brain tumor patients led by researchers at Duke Cancer Institute. Half of the patients were randomized to receive a tetanus booster and the other half an injection of their own pulsed cells. The next day, patients in both groups were then given dendritic cell immunotherapy. Researchers did not know which therapies the patients received.

Half the patients who received the tetanus shot with the dendritic cell therapy were alive at the time of survival analysis and showed an increase in survival from initial diagnosis compared to patients who received the dendritic cell therapy alone, with these patients living from 57 to 106 months compared to a median of 18.5 months for the group that did not receive the tetanus shot. One patient from the tetanus group continues to have no tumor growth and is still alive at eight years from the time of treatment.

“While dendritic cell vaccines have shown some promise in the treatment of patients with advanced cancers, including glioblastoma, the dynamics of this process have not been well understood,” said senior author John Sampson, MD, PhD, chief of the Division of Neurosurgery at Duke University Medical Center and an ABTA research grant recipient. “Our work identifies an immunologic interaction whereby recall responses to one antigen—tetanus—can influence the migratory capacity of dendritic cells loaded with different antigens—cytomegalovirus (CMV).”

Previous research has shown that GBM tumors harbor a strain of CMV that is not present in the surrounding brain tissue, thus creating a natural target for an immune therapy.

“Research supported by the ABTA has given us further insights into mechanisms of anti-tumor immunity in patients with GBM receiving immunotherapy,” said co-corresponding author Duane A. Mitchell, MD, PhD, director of the University of Florida brain tumor immunotherapy program, and an ABTA research grant recipient. “Funding in the early stages of research is highly competitive; and without organizations like the
ABTA investing in young investigators and discovery science, promising concepts like dendritic cell immunotherapy often wouldn’t make it to the clinical testing phase.”

Since 1973, the American Brain Tumor Association has funded more than $26 million in research.

To learn more about the American Brain Tumor Association’s research funding, visit www.abta.org/brain-tumor-research/.

ABOUT THE AMERICAN BRAIN TUMOR ASSOCIATION
Founded in 1973, the American Brain Tumor Association was first and is now the only national organization committed to funding brain tumor research and providing information and education on all tumor types and all age groups. For more information, visit http://www.abta.org or call 800-886-ABTA (2282).

###
Contact Information
Julie Landmesser
ABTA
http://www.abta.org
+1 219-201-4228

Online Web 2.0 Version
You can read the online version of this press release here.