



NEW YORK UNIVERSITY SCHOOL OF MEDICINE

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March 7, 2008

Evelyn Rose
Vice President
Long Island League to Abolish Cancer (LILAC)
Alice Gaynes Memorial Chapter Inc.
24 Bucknell Drive
Plainview, NY 11803

Dear Evelyn,

The Long Island League to Abolish Cancer (LILAC) has supported our work, developing different treatments for brain tumors, from June 2006 - March 2008. At this time I would like to share with you some of our accomplishments that have been made possible by the generous pre-clinical research award from LILAC. The monies were used towards the purchase of a microcentrifuge, animals, tissue culture supplies, disposable laboratory plasticware, and publication costs.

To date, our research efforts have resulted in three manuscripts, in which we have acknowledged LILAC's funding support. All will be published in peer reviewed scientific journals and freely available to the scientific research community.

In the first manuscript, we have characterized 31 tumor associated antigens on brain tumors from 26 pediatric patients and compared them with similar antigens present on 11 adult brain tumors. As a result of this research, we have identified potential tumor antigen targets that could be used to develop vaccine immunotherapy approaches against brain tumors.

Mspt#1:Zhang JG, Kruse CA, Driggers L, Hoa N, Wisoff J, Allen JC, Zagzag D, **Newcomb EW***, Jadus MR*. Tumor antigen precursor protein profiles of adult and pediatric brain tumors identify potential targets for immunotherapy. J Neuro-oncol; accepted for publication December 28, 2007. *co-equal senior authors.

In the second manuscript, we have characterized the novel drug noscapine as a potent anticancer agent for human brain tumor derived cell lines. Based on its potent antitumor activity, we suggested that it should be considered for use in human patients with brain tumors.

Mspt#2:Newcomb EW, Lukyanov Y, Smirnova I, Schnee T, Zagzag D. Noscapine induces apoptosis in human glioma cells by an AIF-dependent pathway. *Anti-cancer Drugs*; accepted for publication March 6, 2008.

In the third manuscript, we have gone on to use the drug noscapine in our mouse GL261 brain tumor model. We have shown that the combination of the drug with radiotherapy significantly reduced the growth of GL261 tumors. Because this drug has been used for decades in cough medicine with no known side effects, we suggest that it could be used in the clinic on cancer patients due to its low toxicity compared with other drugs, such as Taxol that has shown very deleterious side effects. Noscapine could have a broad use in the clinic to increase the efficacy of radiotherapy that is used routinely in the treatment of many cancers including brain, breast, and metastatic cancers to the brain, such as melanoma and non-small cell lung cancers.

Mspt#3:Newcomb EW, Lukyanov Y, Alonso-Basanta M, Esencay M, Schnee T, Shao Y, Devitt M, Zagzag D, McBride W, Formenti SC. Antiangiogenic effects of noscapine enhance radioresponse for GL261 tumors. *Int J Radiat Biol Phys*; accepted December 18, 2007, revision submitted February 26, 2008.

In summary, we believe our research program has discovered and is developing several different approaches for the treatment of brain tumors, which are unfortunately almost always fatal with few to no treatment options.

We would like to thank the LILAC organization for supporting our research endeavors in finding a cure for brain cancers.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth W. Newcomb". The signature is written in black ink and is positioned below the word "Sincerely,".

Elizabeth W. Newcomb, Ph.D.
Associate Professor of Pathology