Department of Medicine
Section of Metabolic and Endocrine Disease

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To The Editor:

The recent special communication by Green (1) challenges the scientific validity of the claims of Stanislaw T Burzynski MD concerning the use of "antineoplastons" for cancer chemotherapy. I write out of concern that some of the statements in the article might discourage readers from becoming involved in a fascinating and promising area of cancer research.

I have not personally been involved in work on antineoplastons. I became interested when I was clinical director of the gas chromatography-mass spectrometry (GC/MS) laboratory at the Medical College of Georgia (MCG) in the late 1970s. We frequently identified phenylacetylglutamine or phenylacetylamine-2,6-piperidinediones (the GC/MS data are the same) in urine undergoing routine drug screens. Since then, I have followed the work of my MCG colleagues L B Hendry, the late T G Muldoon, and V B Mahesh with interest and have recently served on the advisory committees of two students whose PhD theses involved experiments with antineoplastons and related compounds (2-3).

The work at MCG has not involved human use but it has demonstrated inhibition of the growth of MCF-7 breast cancer and Nb-2 rat lymphoma cells in vitro (4-7). In addition antineoplaston A-10 in the diet inhibited the appearance of tumors in rats injected with MCF-7 cells with minimal evidence of drug toxicity (6-7). Therefore the author's conclusion that "None of the independent tests carried out with antineoplastons in experimental tumor systems have shown anticancer activity." is incorrect.

Because of the relatively high quantities of A10 needed to achieve a biological response, a search for new analogs has begun at MCG. Molecular modeling based upon improving fit into DNA resulted in the design, synthesis and biological testing of a more potent analog para-hydroxy-A10 [2,3,7] and the submission of a US patent application on this and related compounds [8]. This work raises the possibility that para hydroxylation of A-10 may be important in its action. Para hydroxylation of phenol rings is known to occur in vivo and can result in increased biological activity (eg tamoxifen, an estrogen antagonist used in the treatment of breast cancer).

Notwithstanding the author's pessimism, the decision of the NCI to carry out independent phase 2 clinical trials [1] seems plausible and the pursuit of further basic research on analogs of A-10 with enhanced antitumor activity and minimal systemic toxicity seems justified.

Sincerely yours,

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