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Antineoplaston Therapy

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http://en.wikipedia.org/wiki/Antineoplaston

Antineoplastons

Antineoplaston (ANP) is a name coined by Stanislaw Burzynski for a group of peptides, derivatives, and mixtures for which he claims anti-cancer activity. These compounds have been administered by Burzynski to cancer patients since 1976. The clinical efficacy of antineoplastons combinations for various diseases are the current subject of numerous FDA Phase II trials by Burzynski and his associates. Antineoplastons are manufactured at a facility in Stafford, Texas for investigational use by the Burzynski Clinic, a public company that trades as a penny stock on the OTC Bulletin Board (BZYR)

Background

In 1967 Stanislaw Burzynski began investigating the use of antineoplastons after noting significant peptide deficiencies in the blood of cancer patients as compared with a control group[1][1]. Burzynski first identified antineoplastons from human blood. Since similar peptides had been isolated from urine, in 1970 Burzynski initially purified urine as a bulk source of antinoeplastons. Since 1980 he has been reproducing his compounds synthetically.[2] Since his initial discovery, Burzynski has isolated dozens of peptide and derivatives, some of which have been reportedly found to be active against cancer with low toxicity.

The first active peptide fraction identified was called antineoplaston A-10 (3-phenylacetylamino-2,6-piperidinedione). From A-10, antineoplaston AS2-1, a 4:1 mixture of phenylacetic acid and phenylacetylglutamine, was derived [3]. The active ingredient of antineoplaston A10-I is phenylacetylglutamine [4].

Phenylacetic acid is a toxic compound that the body produces during normal metabolism. It is detoxified in the liver to phenylacetyl glutamine. The "antineoplaston A-10" compound is an isolation artifact resulting from heating the urine under acidic conditions. The "antineoplaston AS2-1" mixture is the result of an alkaline hydrolysis of "antineoplaston A-10". All compounds are widely available cheap chemicals.

Treatment

For legal reasons Burzynski currently sells his treatments only in the context of clinical trials. Patients receiving cancer treatment with antineoplastons must first qualify for one of the currently available clinical trials. In order to qualify for most of the trials, a patient must have first failed standard treatment for the condition being treated, or it must be a condition that is unlikely to respond to currently available therapy and for which no curative therapy exists. Antineoplastons may be administered intravenously or orally. Patients who respond positively to initial treatment with intravenous antineoplastons sometimes transition to the oral form. Intravenous antineoplastons are administered continuously with a portable programmable pump that the patient carries on a shoulder strap in a canvas bag.

Treatment with antineoplastons can be very costly to patients without insurance coverage, exceeding $100,000 for the first year of intravenous treatment. Many insurance companies consider antineoplaston therapy to be investigational and unproven and do not cover the cost.[5][6]

The "antineoplastons," natural peptides and metabolites, are not generally cytotoxic like many historical (and current) antineoplastic agents; rather the highest usage levels carry a very high sodium load that require careful attention to fluid and electrolyte balance.

Proposed mechanisms

Antineoplastons, being investigational drugs, have never been FDA approved as "safe and effective" in treating human cancer. Independent tests at at the National Cancer Institute have never been positive.[7] The Japanese National Cancer Institute has reported that antineoplastons did not work in their studies. [citation needed]

Burzynski suggests that antineoplastons A10 and AS2-1 both work by inhibiting oncogenes, promoting apoptosis, and activating tumor suppressor genes [4]. Several other mechanism of action have been proposed.

One of the factors that allows some cancers to grow out of control is the presence of abnormal enzymes, a byproduct of DNA methylation. In the presence of these enzymes, the normal life cycle of the cells is disrupted and they replicate continuously. Antineoplastons have been shown in the laboratory to inhibit these enzymes [8].

Recent studies have shown that inhibiting histone deacetylase (HDAC) promotes the activation of tumor suppressor genes p21 and p53. Phenylacetic acid contained in the AS2-1 mixture has been shown to be a weak HDAC inhibitor[9].

References

1. ^ Burzynski SR (1986). "Antineoplastons: history of the research (I)". Drugs under experimental and clinical research 12 Suppl 1: 1–9. PMID 3527634.
2. ^ Ralph Moss (1996), The Cancer Industry ISBN 1881025098
3. ^ NCI Drug Dictionary, Definitions of antineoplastons A10 and AS2-1
4. ^ a b S.R. Burzynski, The Proposed Mechanism of Antitumor Activity of Antineoplastons (ANPs) in High Grade Glioma Pathology (HBSG) Integrative Cancer Therapies 2006; 40-47
5. ^ Aetna Clinical Policy Bulletin, Antineoplaston Therapy and Sodium Phenylbutyrate
6.^ Blue Cross/Blue Shield Medical Policy, Antineoplaston Therapy
7.^ Burzynski SR (1999). "Efficacy of antineoplastons A10 and AS2-1". Mayo Clin. Proc. 74 (6): 641–2. PMID 10377942.
8.^ Liau MC, Burzynski SR (1986). "Altered methylation complex isozymes as selective targets for cancer chemotherapy". Drugs under experimental and clinical research 12 Suppl 1: 77–86. PMID 3743383.
9.^ Jung M (2001). "Inhibitors of histone deacetylase as new anticancer agents". Curr. Med. Chem. 8 (12): 1505–11. PMID 11562279.

Patents

FORMULATION OF AMINO ACIDS AND RIBOFLAVIN USEFUL TO REDUCE TOXIC EFFECTS OF CYTOTOXIC CHEMOTHERAPY
US2003105104
Also published as: WO03045372 (A1) // EP1450781 (A1) // US2005182064 (A1) // (A1) // SI21542 (A) // DE60212693T
Abstract -- Pharmaceutical compositions effective in alleviating or reducing the effects of fatigue and weakness associated with cancer and cytotoxic cancer chemotherapy are disclosed. The pharmaceutical compositions of the present invention comprise riboflavin, effectors of the urea cycle in free form or pharmacologically acceptable salts thereof, and amino acids selected from the gorups of essential and non-essential amino acids, in free form or pharmaceutically acceptable salts thereof, suitably combined with appropriate carriers, diluents, or excipients. Also disclosed are methods of alleviating or reducing the effects of fatigue and weakness associated with cancer and cytotoxic cancer chemotherapy by administration of pharmaceutical compositions of the present invention.

Toothpaste containing anticancer agents
US7087219 (B2)
Abstract -- A novel dentifrice composition is provided for prevention or treatment of carcinoma of the oral cavity, caries and periodontal diseases of the oral cavity. The dentifrice composition contains a silica abrasive and medicinal agents useful in the treatment of human neoplastic disease. The medicinal agent is selected from the group consisting of 3-N-phenylacetylamino-2,6-piperidinedione, phenylacetylglutamine, phenylacetylisoglutamine, phenylbutyrate, phenylacetate, combinations thereof and pharmaceutically acceptable salts thereof. The components of the dentifrice composition act advantageously to allow the composition to remove plaque, tartar, and oral disease-causing bacteria.

METHOD FOR PREPARING 3-(N-PHENYL-ACETYLAMINOPIPERIDINE)-2,6-DION
US4918193
Also published as: SU1809830 (A3) // PH26099 (A) // FI900129 (A) // PL163552B (B1) // KR0139204B
Abstract --- Disclosed is a process for synthesizing 3-[N-phenylacetylaminopiperidine]-2,6-dion, which process comprises the steps of providing a quantity of L-glutamine, providing a quantity of phenylacetyl halide, mixing together the L-glutamine and phenylacetyl halide in a weakly alkaline aqueous solution to provide an aqueous reaction mixture, adjusting the reaction mixture to a pH ranging from about 2 to about 3, and recovering from the reaction mixture the product 3-[N-phenylacetylamino-piperidine]-2,6-dion, and when desired preparing the pharmaceutically acceptable salts thereof.

Method for the treatment of von Hippel-Lindau (VHL) disease with phenylacetyl-derivatives
US2006205818
Abstract -- Provided are methods of treating von Hippel-Lindau disease (VHL). Specifically embodiments of the invention provide methods for the treatment of a patient afflicted with VHL using phenylacetyl-derivatives. Preferred embodiments of the invention provide for the use of phenylacetic acid (or its sodium salt), phenylacetylglutamine (or its sodium salt) and/or phenylacetylisoglutamine (or its sodium salt) to treat VHL. Other embodiments of the invention provide for the use of phenylacetyl-derivatives for the manufacture of a medicament for the treatment of VHL.

Phenylacetic acid compositions for treating or preventing hypercholesterolemia
US6987131 (B1)
Also published as: EP1206936 (A2) // DE60112872T
Abstract -- Pharmaceutical compositions are disclosed comprising one or more compounds selected from the group consisting of phenylacetylglutamine, phenylacetylisoglutamine, and phenylacetic acid, in addition to pharmaceutically-acceptable salts, analogs, and precursors thereof, and optionally also isoglutamine, with a pharmaceutically-acceptable carrier, diluent, or excipient, useful in the treatment or prevention of hypercholesterolemia and hypertriglyceridemia. Also disclosed are methods for treating or preventing hypercholesterolemia and hypertriglyceridemia using the pharmaceutical compositions.

LIPOSOMAL ANTINEOPLASTON THERAPIES WITH MARKEDLY IMPROVED ANTINEOPLASTIC ACTIVITY
US6013278
Also published as: WO9742939 (A1) // EP0906088 (A1) // AT310505T // EP0906088 (A0) // EP0906088 (B1
Abstract -- A second generation of antineoplaston therapies with markedly improved antineoplastic activity is disclosed. Among others, members of the antineoplaston family include phenylacetate (PN), 3-phenylacetyl-amino-2,6, piperidinedione (CN), and hydrolysis derivatives of CN: phenylacetylglutamine (PG) and iso-phenylacetylglutamine (Iso-PG). In part, these increases in antineoplastic activity result from large increases in the transport of antineoplaston compositions into cells. Importantly and unexpectedly these increases in antineoplastic activity also result from the capacity of

the drug delivery system to direct antineoplaston compounds intracellular trafficking to intracellular binding sites influencing cell viability and proliferation. Liposomal formulations of antineoplaston compositions increase in vitro antineoplastic activity by a factor of 750 to 1500 as compared to administration of antineoplaston compounds given without liposomal formulations. In addition, these liposomal formulations enhanced cellular uptake of antineoplaston compounds form 30 to more that 80 fold. Liposomal formulations were also found to increase intracellular levels of the antineoplaston CN(3-phenylacetyl-amino-2,6, piperidinedione) by directing CN to intracellular binding sites that influence cell viability and proliferation and block its hydrolysis. Under conditions where free CN has no antineoplastic activity, liposomally formulated CN can produce essentially complete and relatively long-lasting blockade of cell growth. Cell growth was found to be restored as intracellular levels of bound CN decrease to undetectable levels.

PHENYLACETIC ACID COMPOSITIONS FOR TREATING OR PREVENTING ATHEROSCLEROSIS AND RESTENOSIS
US6127419
Also published as: WO0030627 (A3) // WO0030627 (A2) // EP1171110 (A3) // EP1171110 (A2) HK1045253
Abstract --- Pharmaceutical compositions effective in treating or preventing atherosclerosis and restenosis are disclosed. The pharmaceutical compositions of the present invention comprise one or more compounds selected from the group consisting of phenylacetic acid, pharmaceutically-acceptable salts thereof, pharmaceutically-acceptable precursors thereof, and pharmaceutically-acceptable analogs thereof (e.g., phenylacetylglutamine and iso-phenylacetylglutamine), suitably combined with appropriate carriers, diluents, or excipients. The compositions also optionally contain isoglutamine. Also disclosed are methods for treating or preventing atherosclerosis and restenosis by the administration of pharmaceutical compositions of the present invention.

SYNTHESIS OF 4-PHENYLBUTYRIC ACID
US6372938
Also published as: EP1404638 (A1) // WO02094756 // RU2003136765 (A) // EP1404638 (A0) // CN1511133 (A)
Abstract -- A method of synthesizing compounds of Formula (I): formula (I) by reacting aromatic compounds with butyrolactone, followed by neutralization with base. The reaction can be conducted in the presence of a catalyst. Preferred catalysts are Lewis acids. A preferred product of Formula I is 4-phenylbutyric acid, which is obtained by the reaction of benzene with butyrolactone in the presence of aluminum chloride, followed by neutralization with base.

PHARMACEUTICAL COMPOSITIONS FOR USE IN TREATING PARKINSON'S DISEASE // METHODS FOR TREATING AIDS
US5089508
Also published as: WO9204027 (A1) // EP0500905 (A1) // EP0500905 (A0) // EP0500905 (B1) // ES2084181T (T3)
Abstract --- The present invention provides methods for treating AIDS-related diseases by administering to an afflicted host pharmaceutical compositions containing a therapeutically effective amount of substituted piperidinedione of the formula or or mixtues thereof, wherein R is OH, NH2, OW, or H; X is H, F. Cl, Bri, I, OH, OW, NO2, or NH2; Y is H, F. Cl, Bri, or I; W is or a C1 to C12 aliphatic group; Z is an aliphatic or aromatic group of C1 to C12; X and Y can both vary within the compound; and pharmaceutically acceptable salts thereof. The pharmaceutical compositions further may include R,X,Y substituted phenylacetic acid.

PHENYLACETYLGLUTAMINE, PHENYLACETYLISOGLUTAMINE, AND/OR PHENYLACETATE FOR THE TREATMENT OF NEOPLASTIC DISEASES
US6943192
Also published as: WO0004894 (A3) // WO0004894 (A2) // EP1098643 (A3) // EP1098643 (A2) // HK1037142
Abstract --- Herein is disclosed a method of treating neoplastic disease, including cancer, comprising administering a pharmaceutical composition, the pharmaceutical composition comprising a highly concentrated aqueous solution of phenylacetylglutamine and phenylacetylisoglutamine in a 4:1 ratio, at an infusion rate of from 100 mL/hr to 400 mL/hr. In a further embodiment, herein is also disclosed a method of treating neoplastic disease, including cancer, comprising administering a pharmaceutical composition, the pharmaceutical composition comprising a highly concentrated aqueous solution of phenylacetate and (phenylacetylglutamine or phenylacetylisoglutamine) in a 4:1 ratio, at an infusion rate of from 100 mL/hr to 400 mL/hr. Herein are also disclosed the pharmaceutical compositions used in the above methods.

Use of a combination of antineoplastons for the manufacture of a medicament for the treatment of neurofibromatosis
US5391575 (A1)
Also published as: EP0680756 (A1) // HK1016408 // EP0680756 (B1) // ES2139774T (T3) // AU683145B (B2)
Abstract --- The present invention provides methods for treating neurofibromatosis in humans by administering to an afflicted host pharmaceutical compositions containing a therapeutically effective amount of a combination of (A) and (B) in a weight ratio ranging from about 1:1 to about 1:10 (A:B); wherein R is OH, NH2, OW, or H; X is H, F, Cl, Br, I, OH, OW, NO2 or NH2; Y is H, F, Cl, Br, or I; W is or a C1 to C2 aliphatic group; Z is an aliphatic or aromatic group of C1 to C12; X and Y can both vary within the compound; or pharmaceutically acceptable salts thereof. Particularly disclosed herein is a composition comprising a 1:4 ratio of the sodium salts of phenylacetylglutamine and phenylacetic acid, formulated in both oral and parenteral forms. Typically, the patient is given the combination composition from 1 to 20 g/day in divided doses. After several months of treatment patients exhibit significant decrease in number and size of nodules.

Methods for treating viral infections
WO9324123 (A1)
Also published as: // EP0601164 (A1) // EP0601164 (A4) // EP0601164 (A0) // EP0601164 (B1) // HK1014499
Abstract --- The present invention provides methods for treating viral diseases in humans by administering to an afflicted host pharmaceutical compositions containing a therapeutically effective amount of a combination of (A) and (B) in a weight ratio ranging from about 1:1 to about 1:10 (A:B); wherein R is OH, NH2, OW, or H; X is H, F, Cl, Br, I, OH, OW, NO2, or NH2; Y is H, F, Cl, Br, or 1; W is (alpha) or a C1 to C12 aliphatic group; Z is an aliphatic or aromatic group of C1 to C12; X and Y can both vary within the compound; or pharmaceutically acceptable salts thereof. Particularly disclosed herein is a composition comprising a 1 to 4 ratio of the sodium salts of phenylacetylglutamine and phenylacetic acid, formulated in both oral and parenteral forms clinically useful in the treatment of herpes virus, HIV, human papilloma virus, rhinovirus, coronavirus, orthomyxovirus, and paramyxovirus.

COMPOSITIONS AND METHODS FOR TREATING AUTOIMMUNE DISEASES
US5646182
Also published as: WO9325201 (A1) GR3026681T // EP0603383 (A1) // EP0603383 (A4) // EP0603383 (A0)
Abstract --- The present invention provides methods for treating autoimmune disease in humans by administering to an afflicted host pharmaceutical compositions containing a therapeutically effective amount of a combination of (A) and (B) in a weight ratio ranging from about 1:1 to about 1:10 (A:B); wherein R is OH, NH2, OW, or H; X is H, F, C1, Br, I, OH, OW, NO2, or NH2; Y is H, F, C1, Br, or I; W is (1) or a C1 to C12 aliphatic group; Z is an aliphatic or aromatic group of C1 to C12; X and Y can both vary within the compound; or pharmaceutically acceptable salts thereof. Particularly disclosed herein is a composition comprising a 1 to 4 ratio of the sodium salts of phenylacetylglutamine and phenylacetic acid, formulated in both oral and parenteral forms clinically useful in the treatment of rheumatoid arthritis, lupus erythematosus, vasculitis, insulin dependent diabetes mellitus and multiple sclerosis.

Methods for treating viral infections
US5244922
Abstract --- The present invention provides methods for treating viral diseases in humans by administering to an afflicted host pharmaceutical compositions containing a therapeutically effective amount of a combination of (A) and (B) in a weight ratio ranging from about 1:1 to about 1:10 (A:B); wherein R is OH, NH2, OW, or H; X is H, F, Cl, Br, I, OH, OW, NO2, or NH2; Y is H, F, Cl, Br, or I; W is or a C1 to C12 aliphatic group; Z is an aliphatic or aromatic group of C1 to C12; X and Y can both vary within the compound; or pharmaceutically acceptable salts thereof. Particularly disclosed herein is a composition comprising a 1 to 4 ratio of the sodium salts of phenylacetylglutamine and phenylacetic acid, formulated in both oral and parenteral forms clinically useful in the treatment of herpes virus, HIV, human papilloma virus, rhinovirus, coronavirus, orthomyxovirus and paramyxovirus.

Methods for treating AIDS
US5254587
Abstract --- The present invention provides methods for treating AIDS-related diseases by administering to an afflicted host pharmaceutical compositions containing a therapeutically effective amount of substituted piperidinedione of the formula or mixtures thereof, wherein R is OH, NH2, OW, or H; X is H, F, Cl, Br, I, OH, OW, NO2, or NH2; Y is H, F, Cl, Br, or I; W is or a C1 to C12 aliphatic group; Z is an aliphatic or aromatic group of C1 to C12; X and Y can both vary within the compound; and pharmaceutically acceptable salts thereof. The pharmaceutical compositions further may include R,X,Y substituted phenylacetic acid.

Pharmaceutical composition comprising phenyl acetyl glutamine,a combination of this compound with phenylacetic acid or 3-(phenylacetylamino)piperidine-2,6-dione,a process for isolating the latter from urine and a process for the synthesis of 3-(pheny...
US4470970 (A1)
Also published as: EP0069232 (A2) // DK143491 // JP58010521 (A) // JP5058886 (A) // JP5032548 (A)
Abstract --- Highly purified fractions from human urine exhibiting antineoplastic activity and processes for their preparation are described. The fractions comprise biologically active, small sized, low molecular weight peptides which exert cytostatic and cytotoxic activity toward neoplastic cell cultures and human neoplastic diseases. The fractions have been termed antineoplaston fractions. An antineoplastic active peptide common to each of the various antineoplaston fractions has been isolated and identified as 3-[N-phenylacetylaminopiperidine]-2, 6-dion. A synthetic mechanism for the preparation of 3-[N-phenylacetylaminopiperdine]-2, 6-dion is also disclosed, involving a combination reaction between L-glutamine and phenylacetyl chloride. Also disclosed are the hydrolysis degradation products of 3-[N-phenylacetylaminopiperidine]-2, 6-dion which also exhibit antineoplastic activity when administered according to the general teachings presented in this disclosure.

Topical use of 3-phenylacetylamino-2,6-piperidinedione for treatment of skin wrinkles and hyperpigmentation
US4593038 (A1)
Also published as: EP0197358 // JP61229811 (A) // EP0197358 (A3) // CA1262866 (A1) // EP0197358 (B1)
Abstract ---A cosmetic composition is provided which comprises 3-phenylacetylamino-2,6-piperidinedione dispersed in a cosmetically suitable vehicle. This cosmetic composition is useful in the topical cosmetic treatment of skin areas affected with wrinkles or hyperpigmentation.

Purified antineoplaston fractions and methods of treating neoplastic disease
US4559325
Abstract --- Highly purified fractions from human urine exhibiting antineoplastic activity and processes for their preparation are described. The fractions comprise biologically active, small sized, low molecular weight peptides which exert cytostatic and cytotoxic activity toward neoplastic cell cultures and human neoplastic diseases. The fractions have been termed antineoplaston fractions. An antineoplastic active peptide common to each of the various antineoplaston fractions has been isolated and identified as 3-[N-phenylacetylaminopiperidine]-2, 6-dion. A synthetic mechanism for the preparation of 3-[N-phenylacetylaminopiperdine]-2,6-dion is also disclosed, involving a combination reaction between L-glutamine and phenylacetyl chloride. Also disclosed are the hydrolysis degradation products of 3-[N-phenylacetylaminopiperidine]-2, 6-dion which also exhibit antineoplastic activity when administered according to the general teachings presented in this disclosure.

Purified antineoplaston fractions and methods of treating neoplastic disease
US4558057
Abstract --- Highly purified fractions from human urine exhibiting antineoplastic activity and processes for their preparation are described. The fractions comprise biologically active, small sized, low molecular weight peptides which exert cytostatic and cytotoxic activity toward neoplastic cell cultures and human neoplastic diseases. The fractions have been termed antineoplaston fractions. An antineoplastic active peptide common to each of the various antineoplaston fractions has been isolated and identified as 3-[N-phenylacetylaminopiperidine]-2, 6-dion. A synthetic mechanism for the preparation of 3-[N-phenylacetylaminopiperdine]-2, 6-dion is also disclosed, involving a combination reaction between L-glutamine and phenylacetyl chloride. Also disclosed are the hydrolysis degradation products of 3-[N-phenylacetylaminopiperidine]-2, 6-dion which also exhibit antineoplastic activity when administered according to the general teachings presented in this disclosure.

Testing procedure to aid diagnosis of cancer and evaluate the progress of cancer therapy
US4444890
Abstract --- Antineoplastons are termed a group of plasma, tissue and urinary peptides and amino acid derivatives capable of modulating abnormal tissue growth, such as neoplastic disease. Antineoplastons, when administered to persons with neoplastic disease, have been shown to be effective against several forms of cancer and tumors. A procedure is provided herein for the determination of antineoplaston levels in physiological tissues or fluids, especially plasma and urine. The procedure involves purification of antineoplastons by high performance liquid chromatography on silica gel followed by resolution of antineoplastons by high performance liquid chromatography on sulfonated polystyrene. A quantitative determination of antineoplaston tissue or fluid levels provides valuable data to aid clinical diagnosis of cancer. In addition, the quantitative determination also provides a means for monitoring the efficacy of antineoplastic therapy.

No title available
PL226778

NOVEL (E) -N-ALKYL-3'-HYDROXY-GAMMA-CHALCONYLIC BROMIDES AND METHOD OF OBTAINING THEM
PL344930

URZADZENIE DO CIAGLEGO SELEKTYWNEGO ROZDRABNIANIA SKAL ZWIEZLYCH
PL195585

URZADZENIE DO POBIERANIA PROB GRUNTU O NIENARUSZONEJ STRUKTURZE I BADANIA WYTRZYMALOSCI GRUNTU W OTWORACH WIERTNICZYCH
PL192917

PURIFIED ANTINEOPLASTON FRACTIONS AND METHODS OF TREATING NEOPLASTIC DISEASE
ZA8204178

PHARMAZEUTISCHE ZUSAMMENSETZUNG ENTHALTEND PHENYLACETYLGLUTAMIN, DESSEN KOMBINATION MIT PHENYLESSIGSAEURE ODER 3(PHENYLACETYLAMINO)PIPERIDIN-2,6-DION,EIN VERFAHREN ZUR GEWINNUNG DIESER STOFFE AUS URIN SOWIE EIN VERFAHREN ZUR HERSTELLUNG VON 3(PHENYLA...
AT23113T

TOPISCHE ANWENDUNG DES 3-PHENYLACETYLAMINO-2,6-PIPERIDINDIONSZUR BEHANDLUNG VON HAUTFALTEN UND HYPERPIGMENTIERUNG
AT52911T

Hreinsathar antineoplaston hlutar og athferth til methferthar neoplastic-veiki
IS2729

USE OF PHENYLACETYL-DERIVATIVES FOR THE MANUFACTURE OF A MEDICAMENT TO TREAT VON HIPPEL-LINDAU (VHL) DISEASE
EP1855665
Also published as: WO2006096481 (A1) // EP1855665 (A0)

Publications

http://www.burzynskiclinic.com/ph/media-corner-publications.html

http://www.burzynskiclinic.com/assets/images/Pub%20SRB_2007_Brainstem%20Glioma_%20Cancer%20Therapy.pdf
Recent clinical trials in diffuse intrinsic brainstem glioma.
Burzynski, S.R. Cancer Therapy 2007; 5, 379-390

http://www.burzynskiclinic.com/assets/images/Pub%20SRB_2007_A%20case%20report_Neuro-Oncology-issue4_Oct2007.pdf
A case report of a complete response and 20-year survival of a patient with a recurrent diffuse intrinsic brainstem anaplastic astrocytoma.
Burzynski, S.R., Weaver, R., Szymkowski, B. Neuro-Oncology 2007; 9:536

http://www.burzynskiclinic.com/assets/images/Pub%20SRB_2007_PB%20and%20PN_SNO.pdf
Phenylacetylglutamine (PG) and phenylacetate (PN) interact additively to produce detachment-induced apoptosis/anoikis in glioblastoma cells.
Patil, S., Burzynski, S.R., Mrowczynski, E., Grela, K. Neuro-Oncology 2007; 9:482

http://www.burzynskiclinic.com/assets/images/Pub%20SRB_2007_Phase%20II%20ANP%20Brainstem%20Glioms_Neuro-Oncol-issue2-April2007.pdf
Phase II studies of Antineoplastons A10 and AS 2-1 (ANP) in children with newly diagnosed diffuse, intrinsic brainstem gliomas.
Burzynski, S.R., Weaver, R.A., Janicki, T.J., Jurida, G.F., Szymkowski, B.G., Kubove, E. Neuro-Oncology 2007; 9:206

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2006_Targeted_Therapy_for_Brain_Tumor.pdf
Targeted Therapy for Brain Tumors.
Burzynski, S.R., In: Yang A.V.: Brain Cancer: Therapy and Surgical Interventions. New York (NY); Nova Science Publishers, Inc. 2006

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2006_Treatment_for_Astrocytic_Tumors_in_Children_Ped%20Drugs.pdf
Treatments for Astrocytoma in Children: Current and Emerging Strategies
Burzynski, S.R. Pediatric Drugs, 2006; 8:167-178

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2006_Treatment_of_multicentric_brainstem_gliomas.pdf
Treatment of multicentric brainstem gliomas with Antineoplastons (ANP) A10 and AS2-1.
Burzynski, S.R., Janicki, T.J., Weaver, R.A., Szymkowski, B.J., Khan, M.I., Dolgopolov, V.; Neurooncol. 2006; 10:466

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2006_Complete_response_of_a_diffuse_intrinsic_brainstem.pdf
Complete response of a diffuse intrinsic brainstem tumor and von Hippel Lindau (VHL) disease to antineoplastons A10 and AS2-1 (ANP): a case report.
Burzynski, S.R., Weaver, R.A., Szymkowski, B., Janicki, T.J., Khan, M.I., Dolgopolov, V. Neurooncol. 2006; 10:439

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2006_Targeted_Therapy_with_ANP_of_high_grade_brainstem_glioma.pdf
Targeted Therapy with Antineoplastons A10 and AS2-1 of High-Grade, Recurrent and Progressive Brainstem Glioma.
Burzynski, S.R., Janicki, T.J., Weaver, R.A., Burzynski, B.; Integrative Cancer Therapies, 2006; 40-47

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2005_Targeted_therapy_with_ANP_in_children_less_than4.pdf
Targeted therapy with ANP in children less than 4 years old with inoperable brain stem gliomas.
Burzynski, S.R., Weaver, R.A., Janicki, T.J., Burzynski, B., Jurida, G; Neurooncol. 2005; 7:300

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2005_Long_term_survival_in_patients_with_glioblastoma_multiforme.pdf
Long-term survival in patients with glioblastoma multiforme treated in phase II studies with ANP.
Weaver, R.A., Burzynski, S.R., Janicki, T.J., Burzynski, B., Jurida, G., Szymkowski, B. Neurooncol. 2005; 7:299

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2005_Long_term_survival_of_high_risk_pediatric_patients.pdf
Long-term survival of high-risk pediatric patients with primitive neuroectodermal tumors treated with Antineoplastons A10 AS2-1.
Burzynski, S.R., Weaver, R.A., Janicki, T., Szymkowski, B., Jurida, G., Khan, M., Dolgopolov, V. Integrative Cancer Therapies, 2005; 4(2): 168-177

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2004_ANP_in_Dairy_Products.pdf
Antineoplastons In Dairy Products.
Burzynski, S.R., Ilkowska-Musial, E., Klimczak M.W., Musial, L.; Journal of Applied Nutrition, 2004; 54; 1-8

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2004_Phase_II_studies_ofANP_A10_and_AS2_1_in_children_with_a_typical.pdf
Phase II studies of antineoplastons A10 and AS2-1 (ANP) in children with atypical teratoid/rhabdoid tumors (AT/RT) of the central nervous system. A preliminary report.
Burzynski, S.R., Weaver, R. Bestak. M., Janicki, T., Jurida, G., Szymkowski, B., Khan, M., Dolgopolov, V.; Neurooncol., 2004; 6: 427

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2004_Long_term_survivals_in_phase_II_studies_in_patients_with_brainstem_glioma.pdf
Long-term survivals in phase II studies of Antineoplastons A10 and AS2-1 (ANP) in patients with diffuse intrinsic brain stem glioma.
Burzynski, S.R., Weaver, R. Bestak. M., Lewy, R.I., Janicki, T., Jurida, G., Szymkowski, B., Khan, M., Dolgopolov, V.; Neurooncol., 2004; 6: 387

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2004_Phase_II_study_of_ANP_A10_and_As2_1_in_children_with_multicentric_glioma.pdf
Phase II study of antineoplaston A10 and AS2-1 in children with recurrent and progressive multicentric glioma. A Preliminary Report.
Burzynski, S.R., Weaver, R., Lewy, R., Janicki, T. Jurida, G., Szymkowski, B., Khan, M., Bestak, M.; Drugs R&D, 2004; 5 (6): 315-326

http://www.burzynskiclinic.com/assets/documents/Pub_SRB_2004_Present_State_of_ANP_Research.pdf
The Present State of Antineoplaston Research.
Burzynski, S.R.; Integrative Cancer Therapies, 2004; 3: 47-58.

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http://ralphmoss.com/burzynski.html

THE BURZYNSKI SAGA

by Ralph Moss

Articles from seven years' worth of The Cancer Chronicles on the trials and tribulations of Dr. Stanislaw R. Burzynski, M.D., Ph.D., a Houston physician and researcher:

1. Early Victory (1989)... // 2. Dr. B. Faces U.S. Probe (1990) // 3. Trials and Tribulations (1992) // 4. A Letter to Morales (1992) // 5. A Patient's Son Speaks Out (1993) // 6. Interview with an Orthodox Nurse (1993) // Rep. Porter Speaks Out (1993) // 7. Grand Jury on the Move (1994) // 8. NCI Director Fails to Credit Dr. B. (1994) // 9. Texas Raiders (1995) // 10. Judge Restores License (1995) // 11. Lesson from the Past (1995) // 12. A Visit to Houston (1996)

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http://www.canceractive.com/page.php?n=1268

Antineoplastons, missing Peptides and Burzynski

[*icon* # 4 (2006)]

The work of Dr. Stanislaw Burzynski.

AntineoFor almost 30 years one man has pioneered an alternative therapy, originally for brain tumours but which now seems as widely applicable to any cancer. After threats, lawsuits and raids on his premises he is finally being accepted into the mainstream, with the FDA closely monitoring his work in clinical trials and approval expected shortly. Chris Woollams reports.
The case of the missing peptides

In 1970 a young Polish research scientist, Stanislaw Burzynski MD, PhD, arrived as an Assistant Professor at Baylor College of Medicine in Houston, Texas.

His prime interest - an interest that he had cultivated since his time as a graduate student - were urinary peptides in blood and urine (short chains of amino acids) and their anti-cancer activities.

He had originally noticed a difference in peptide content between the blood and urine of healthy people and that of cancer patients. The fact that fascinated him was that normal healthy individuals had much higher levels of certain peptides and that these peptides not only helped in the process of communication between cells (and thus identification of rogue cells), but were also known to possess the ability to stop cancer growth in vitro. Similar studies at Leeds University had shown the presence of these peptides, but no follow-up analytical work was done with them.

In case you don't know, peptides are short chains of amino acids, whilst proteins are long chains of more than 50.

Quite early on in his work, he concluded that these peptides somehow affect the unique biochemistry of the cancer cell. He managed to isolate about 120 peptide fractions, amino acid derivatives and organic acids for his studies. These he termed antineoplastons, and he prepared four formulations (produced synthetically), which were active against cancer cells.

It is now clearly understood that, in cancer, the ras gene can cause a cancer signal to be made (genes that cause cancer are called oncogenes). It is also known that another gene (p53) normally suppresses tumours (and turns off the cancer process), but somehow fails in cancer patients.

Burzynski showed that antineoplastons both turn off the ras gene andrestimulate the p53 suppressor. He thinks of antineoplastons as 'switches' turning some things off and others back on. Antineoplastons provide the messages which tell the genes to act. Without enough of these crucial peptides the risk of cancer is higher.

Antineoplaston peptides are made in various parts of the body, but primarily in the liver and the kidneys. Two types exist: ones with a very specific activity for specific tissues, and others that have broad scale activity for a wide variety of tissues.

A cancer patient has a double problem. They make far less of certain peptides than are needed (probably because the genes that control them are switched off by modern toxins or poor diet); and also the cancer cell sends out messages to tell the kidneys to excrete them, thus protecting itself.

The FDA acts

And then it all went pear-shaped. Burzynski's discoveries were at first applauded and he was offered a higher post but in Baylor's Department of Pharmacology—a job he turned down.

Almost immediately his research grant was not extended and he was left outside of 'the system'.

In 1983 he applied to the FDA for new drug permits for antineoplastons, but was turned down. A lengthy legal battle then took place which included the FDA raiding his offices.

Since there was no statute in Texas preventing him from 'treating' patients with this essentially non-toxic solution, he set up shop for himself. However the US District Court then banned him from shipping his product across state borders. Since he couldn't stop patients from taking the product back to their homes in other states, he was subjected to Grand Jury investigation, and eventually tried on over 70 charges. One by one he beat all of these and, 14 years later, the FDA and the District Court gave in. An important part of the defence was that these antineoplastons work!

Brain tumours

In 1991 a group of investigators from the National Cancer Institute went to the Burzynski Research Institute in Houston and reviewed his 'best 7 cases', where patients - mainly with astrocytomas and glioblastomas - had experienced complete responses to the 'drugs'. The NCI recommended a Phase II clinical trial, which began in 1993 and was overseen by such eminent institutions as the Mayo Clinic and Sloan-Kettering Cancer Center. However, only nine patients were assessed, and the final report concluded that the results were insufficient to recommend antineoplastons for wider use.

Burzynski was extremely unhappy, especially when he discovered that the doses used had been far lower than those he was giving his own patients. Indeed, he published a letter stating that the levels used during the clinical trial were previously established by him to be ineffective!

Meanwhile Burzynski undertook his own studies. In a study of 36 patients (all with brain tumours — some of highly malignant glioblastoma multiforme) he produced the following results:

- 9 (25%) had a complete response, i.e., disappearance of the tumour on an MRI scan.

- 7 (19.5%) had a partial response i.e. more than 50% reduction on MRI scan.

- 12 (33.3%) were stabilized.

In his report Burzynski noted "the general consensus in the medical community is that these brain tumours cannot be cured by chemotherapy, and the response rate is only modest." However he, himself, achieved a complete tumour resolution, or over 50 percent tumour reduction, in 16 of his 36 patients.

Burzynski continues his efforts. Currently he has over 2000 patients in full clinical trials now supervised by a more agreeable FDA. He has also recently won FDA approval for a supplement for home use, but he stresses that this is not, by any means, a replacement for formal therapy.

Burzynski is now highly confident that the FDA will fully approve one of his oral formulations containing antineoplastons by the end of 2007, with approval for an intravenous formulation by the end of 2008.

All's well that ends well

Currently researchers in Kurume University in Japan are also exploring the effects of antineoplastons, not only with all types of brain tumours, but also with colon and liver cancers.

Numerous genes have been identified and linked to a number of cancers; others are specific to a certain type of cancer. Burzynski and the Japanese are studying which genes are blocked, and which are over active with which cancers. It is early days but the full picture may be less than ten years away and it could have wonderful results. The highly prestigious MD Anderson Cancer Center in Houston, confirm Burzynski's initial antineoplaston theories, and have made it clear that there are exciting developments in cancer cures outside of chemotherapy nowadays.

Recently, Burzynski has developed new formulations, and believes that far more active packages will be developed in the future. Indeed he believes antineoplastons will eventually become a mainstream treatment for all cancers.

At the end of the day, notwithstanding Professor Pilkington's work on Clomipramine, there is currently no totally effective brain tumour chemotherapy drug, largely because the blood-brain barrier is primarily there to prevent just such a chemical from entering the brain. Nor is there adequate research on non-toxic, natural therapies, but clearly these will have far better potential to address problems within the brain. It is increasingly felt likely by some experts that the only successful treatment for brain tumours will be 'natural!

With regard to other cancers, the potential is enormous, because generally cancer patients are deficient in certain peptides. The only problem would be that if peptide production cannot be restimulated (and this probably means finding a cause for the lowered production in the first place) the peptide mixes have to be taken by the patient for an extended period of time with significant implications. (Although probably far less than, say, Herceptin and some of the other new drugs coming in).

The likelihood that Dr. Burzynski could be just another brick in a wall of failure is very doubtful; far more possibly, he could be on his way to a Nobel Prize with his pioneering, non-toxic treatments and we are encouraged that the FDA is now monitoring and reporting on his work.

We wish him well in his efforts.

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http://www.jbs.org/tna.htm

Dr. Ivy & Krebiozen, Dr. Burzynski & Antineoplastons

by Robert W. Lee

For more than a quarter century, Washington has waged a high-profile "war" on cancer at a cost to taxpayers of some $30 billion. Figures recently reported in The New England Journal of Medicine indicate how the battle is progressing: Between 1970 and 1994 (the latest available figures), the cancer rate increased by six percent. Similarly, in 1995 the National Cancer Institute (NCI) reported that when frequency of the disease during the period 1975-79 was compared with that for 1987-91, the incidence among males was up 18.6 percent, and that for females increased by 12.4 percent.

This apparent lack of progress in coping with the dread disease is especially disturbing when one considers the amount of time, effort, and resources expended by the orthodox medical community - including the American Medical Association (AMA), the American Cancer Society (ACS), and the Food

and Drag Administration (FDA) - on frenetic efforts to delay or derail promising alternatives to the entrenched regimen of surgery, chemotherapy, and radiation.

Assaults on such non-traditional remedies as laetrile (the science and politics of which were analyzed by G. Edward Griffin in World Without Cancer) and krebiozen come readily to mind. The most notable advocate of krebiozen, which at one time had nearly 20,000 case-history endorsements, was Dr. Andrew C. Ivy, onetime chairman of the University of Illinois clinical sciences department. Dr. Ivy's "establishment" medical credentials were impeccable. He had authored more than 1,000 articles published in scientific and medical journals, had served as a U.S. representative at the post-World War II Nuremberg trials, and had received bronze, silver, and gold medals from the AMA for his achievements. Even the FDA had sought his medical testimony on occasion for judicial proceedings.

But once Dr. Ivy began advocating an unorthodox cancer therapy, he was promptly derided as a "quack." At the behest of the FDA, he and three associates were indicted in 1964 on 49 criminal counts for violations of the Food, Drug, and Cosmetic Act, mail fraud, mislabeling, making false statements to the government, and conspiracy related to the production and distribution of krebiozen (which the agency had outlawed the year before). FDA chemists claimed that krebiozen was simply a common amino acid found in man and animals.

The subsequent trial, which lasted from April 19, 1965 to the end of January 1966, cost taxpayers an estimated $3 to $5 million. During the trial a letter was read into the court record by a doctor who claimed that while treating a cancer patient he had obtained krebiozen from Dr. Ivy's laboratories, and had administered it to a patient, but that the substance had done absolutely no good whatsoever. Under cross-examination, however, he eventually admitted that he had never treated such a patient and had never used krebiozen. Asked why he had lied, he replied that an FDA agent had written the letter and asked him to sign it, which he did because he wanted to help the agency put an end to "quackery." Lies and deception, needless to say, are the very essence of authentic "quackery."

When the jury rendered its verdicts, Dr. Ivy and the others were acquitted on all counts. Indeed, the jury added that it believed krebiozen had merit. Yet as journalist and author Michael L. Culbert notes in Freedom From Cancer, "the propaganda campaign paid off, and krebiozen was left in the public mind as another unproven cancer remedy and Dr. Ivy was character-assassinated into the limbo reserved for pioneers who dare operate outside of the medical-governmental axis."

Which leads us to the contemporary case of Dr. Stanislaw R. Burzynski, founder of the Houston-based Burzynski Institute that treats cancer patients with substances called antineoplastons. On May 27th, after less than three hours of deliberation, a federal jury in Houston acquitted Burzynski on the single remaining count of the 75 for which he and his clinic had been indicted by a grand jury in 1995. It was Burzynski's second trial this year. The first, which began in early January, entailed 20 days of testimony by more than 80 witnesses regarding 34 counts of mail fraud, 40 counts of introducing antineoplastons illegally into interstate commerce, and a single contempt-of-court count alleging that Burzynski and his clinic violated a 1983 federal court order precluding such interstate dispersion of the drugs.

U.S. District Court Judge Simeon T. Lake III, who also presided at the second trial, declared a mistrial after an evenly divided jury deadlocked on all 75 counts. Lake then issued a directed verdict of acquittal on the 34 mail-fraud counts, asserting that the evidence presented by the government did not come close to justifying a conviction. Federal prosecutors announced that they would retry Burzynski and the clinic on the remaining 41 counts, but on May 19th (the day before the second trial began) they tossed in the towel on all 40 of the counts related to interstate commerce. Since the clinic was also dropped from the case, Dr. Burzynski alone was retried on the remaining contempt charge. Following Dr. Burzynski's acquittal, juror Stephenie Shapiro told reporters, "I just don't think that the state proved their case .... It was very unanimous from the beginning. It's not like anybody had to be talked into it."

Weeks earlier, on April 18th, L. Darlene Phillips, a juror in the first trial, wrote to Attorney General Janet Reno to express her disgust at "how my time and tax dollars were wasted on this trial." She noted, "On two separate occasions the FDA had confiscated a total of 300,000 documents (i.e., patient records, MRI scans, progress charts, etc.) and for Dr. Burzynski to be able to continue to treat his patients, he had to purchase a Xerox machine, install it at the FDA office, hire someone to make copies, and to make it even more difficult, he was required to call a day in advance to make an appointment for copies to be made. To this day these documents have not been returned." Phillips also reminded Reno that Amy Lecocq, lead prosecutor for the first trial, "violated at least six federal laws governing subpoenas of journalists when she subpoenaed Dr. Ralph Moss, PhD [who had written favorably of Dr. Burzynski]. When he pointed this out to her, she withdrew the subpoena." The blatantly illegal, broad-brush subpoena had sought to compel Dr. Moss to produce every document in his possession - electronic, magnetic, printed, or otherwise - relating to Dr. Burzynski.

Ms. Phillips further pointed out that "the prosecution failed to introduce even one witness who could say anything defamatory about Dr. Burzynski's character." She added: "One would think after four years of preparing for this trial they would have found at least one disgruntled patient, former employee, business associate, or colleague who had something negative to say about him." Phillips wondered if "our government has real 'criminals' to prosecute," and implored the Attorney General to "put a halt to the nonsense of a retrial by our federal government (namely the FDA) of Dr. Burzynski."

Phillips' plea fell on deaf ears: Reno refused to intervene.

Had Dr. Burzynski been convicted of all 75 counts in the original indictment, he could have received up to 290 years in prison and been fined in excess of $18 million. Today, for the first time since the grand jury issued its indictment, he is a fully free man. No longer is he under the cloud of a $100,000 bail bond, nor does he have to report to the federal courthouse every two weeks, nor seek permission to travel out of state.

Born in Poland in 1943, Dr. Stanislaw Burzynski received his medical degree in 1967 from the Medical Academy of Lublin, ranking first in a class of 250. He earned a doctorate in biochemistry the following year. It was while working on his dissertation project that he identified certain naturally occurring peptides (protein fragments comprised of two or more amino acids) which he concluded might have something to do with controlling cancer. Persons afflicted with the disease, he noticed, typically had lower blood levels of the peptides - which he later termed "antineoplastons" - than did healthy individuals.

When he refused to join the Communist Party (virtually a prerequisite for academic advancement at the time), Burzynski was drafted into the Polish army for an indefinite period which precluded the opportunity to conduct meaningful research on his discovery. In 1970, with the help of influential fellow scientists, he emigrated to the United States, where he would eventually encounter more harassment and persecution at the hands of the FDA and the Justice Department than he had under Poland's Red regime.

From 1970 to 1977 he was a researcher and assistant professor at Baylor College of Medicine in Houston, where his research was sponsored and partially funded by the National Cancer Institute (NCI). It was during this time that he fleshed out his theory that the peptides he had stumbled across in human blood and urine (he now produces them synthetically) could correct and normalize certain types of malignant neoplastic (tumor) cells. Thus the term "antineoplastons." "We are no longer concerned with killing cells," he asserts, "but with changing the program inside the defective cell so that it will begin to function normally."

Most experts agree that we all probably develop cancer millions of times during our lifetime. With trillions of maturing cells, millions of errors can and likely do occur, a problem further aggravated by exposure to thousands of chemical carcinogens, and such physical factors as radiation, bacteria, viruses, and unhealthy stress, that have plagued mankind throughout time. Normal cells, Burzynski explains, specialize to serve particular purposes. Once that specialization occurs, they no longer divide to form new cells. They do what they have been programmed to do, then fade and die, to be replaced by new cells.

Some cells, however, are affected by carcinogens and other disrupting influences that cause them to become, in a sense, both destructive and "immortal." They neither specialize nor die, but continue dividing until they overwhelm normal cells. The result is cancer, which Dr. Burzynski contends is essentially a

disease of cell differentiation. "It is obvious," he points out, "that everybody would develop cancer if we didn't have a certain protective system in the body. This is the biochemical protection system .... Antineoplastons correct the program inside the cell and force it toward normal development" by serving as "biochemical micro-switches" that turn off oncogenes (the genes, found in all cells, that are responsible for cell malignancy) and turn on tumor-suppressor genes that stop them.

The concept that cells can be reprogrammed from abnormal to normal, precluding the need to eliminate them, may explain much of the opposition that Dr. Burzynski has encountered from orthodox medicine and its FDA enforcement arm. The theory offers an alternative to the surgery-chemo-therapy-radiation approach which holds that cancer cells must be either destroyed on-site or excised. As Dr. Julian Whittaker, MD, editor of the newsletter Health & Healing, wrote in March of this year, "Though the FDA is the obvious 'point-man' in the persecution of Dr. Burzynski, the real force is coming from the cancer treatment establishment. Just imagine all the physicians, technology, and medical facilities that feed off chemotherapy, radiation therapy, and surgery. They are now threatened by a more effective and less dangerous therapy that can be administered in a doctor's office or by patients at home."

THE NEW AMERICAN is not qualified to reach conclusions regarding the scientific validity of Dr. Burzynski' s antineoplaston theory. However, since opening his private clinic in Houston in 1977, he has treated some 3,000 advanced cancer patients, most of whom turned to him after exhausting conventional treatments. Hundreds are convinced that antineoplastons literally saved, or have significantly extended, their lives, without the debilitating side effects characteristic of such conventional therapies as radiation and chemotherapy.

Consider, as one example, the case of Dustin Kunnari. In February 1994, when he was two and one-half years old, Dustin was diagnosed with an aggressive type of brain tumor called medulloblastoma. It is the second most common brain tumor found in children, and whether treated with conventional therapy or left untreated entails a life expectancy of only one to four years. Three-fourths of Dustin's tumor was removed surgically, after which his parents, Jack and Mariann of Aurora, Minnesota, were encouraged to enroll him in a study at the University of Minnesota that would initially treat his cancer with chemotherapy, then radiation. The possible side effects, they were informed, included hearing loss, stunted growth, hair loss, learning disabilities, sterility, and leukemia. They were, however, assured that the success rate of such therapy reached as high as 40 percent. But when they requested a few names of those parents whose children had been successfully treated, so they could confirm the results firsthand, their request was denied.

The Kunnaris opted not to enter Dustin in the program, electing instead to give Dr. Burzynski's treatment a try. It is called freedom of choice, but it goes down hard with establishment medicrats. Jack Kunnari told THE NEW AMERICAN that when they sought to retrieve Dustin's medical records from the University of Minnesota, they were told that in medical cases the opinions of doctors take precedent over those of parents, and that they could be taken to court unless they agreed to enroll Dustin in the study. "Until the day we left for Houston, there were still threats coming," Mr. Kunnari recalled.

Dustin's antineoplaston treatment began in April 1994. Within six weeks an MRI (Magnetic Resonance Imaging) scan showed complete remission of the tumor. Following another year of treatment, another MRI indicated that the tumor was recurring. The dosage of antineoplastons was increased, and the tumor once again receded. According to Dustin's latest MRI on May 1 st of this year, the tumor remains in remission. Indeed, he was recently taken off intravenous administration of the drug and is presently receiving only a maintenance dosage via capsules. His parents describe him as a robust and basically healthy six-year-old. The side effects of the therapy have been nil.

The government's prosecution of Dr. Burzynski, which raised the specter of losing their only source for a drug they are convinced has been of enormous benefit to their son, intensified the Kunnaris' anguish - and their anger. "I guess we were always aware," Jack Kunnari told THE NEW AMERICAN, "that if you go with an alternative [therapy] there would be some opposition. But we never dreamed it would be as intense as it has been. From the time the first MRI showed that Dustin's tumor was gone, there was the feeling that we had accomplished something. We stood up for what was best for our son. We stood up to the University of Minnesota despite the legal threats and such. It was a feeling of such joy and appreciation. Then you get hit with these indictments and court rulings against Dr. Burzynski." Mr. Kunnari recalls that "we had just gone through an emotional fight to get our son to the point where the tumor was gone, restore him to a measure of health, and now our government was stepping in and we had to fight it. I don't know how you can explain the range of emotions, but I guess the best way to describe it is a roller-coaster ride. Initially, your son has a brain tumor, so you're down and feeling pretty bad about things. Then you find out about this doctor and you get a feeling of hope, the MRI looks good, and your hope increases. And then the government steps in and says you can't have the treatment."

In a February 19, 1997 letter to Judge Lake, Dr. Robert E. Burdick, MD, summarized his review of 17 Burzynski patients (among 40 of his patients with brain tumors who were included in an FDA-approved trial one year earlier) who had responded to treatment with antineoplastons. Dr. Burdick has practiced medical oncology for nearly three decades and is on the faculty of the University of Washington Medical School. After noting the "frustrations that neuro-surgeons, radiotherapists, and we medical oncologists have regarding our ineffective treatment of malignant brain tumors," and presenting a brief overview of the sundry types of malignant tumors, Dr. Burdick noted that it "is very rare, currently, to ever get a complete remission or cure in a patient who has a malignant brain tumor using our standard modalities of surgery, radiation, and chemotherapy. By the time a tumor is large enough to be clinically detected, it has involved such critical structures that to remove it surgically would result in a patient who is left in a vegetative state or is markedly more disabled than he was prior to the surgery."

Dr. Burdick noted that, "as a rough estimate, neurosurgeons do well to cure 1 in every 1,000 brain cancer patients they operate on. Radiation therapy slows the growth of adult tumors, gaining perhaps one month of life and again may result in a cure of only 1 in 500-1,000 patients, those cures being in the pediatric age group. Similarly, chemotherapy research, despite 30 years of clinical trials, has not resulted in the development of a single drug or drug combination that elicits more than an occasional transient response in primary brain tumors .... In fact, chemotherapy in brain tumors is so discouraging that in many parts of the country patients with brain tumors are not even offered the option of chemotherapy."

Based on his careful analysis of each of the 17 patients in the study who responded to treatment with antineoplastons, Dr. Burdick found that "there were 7 complete remissions, one patient having had a second complete remission after he discontinued antineoplaston therapy which resulted in his tumor regrowing. There were nine partial remissions, two cases of stable disease, and no disqualifications. The average duration of therapy with antineoplastons necessary to obtain a complete remission was 10 months with a range of 2 to 20 months. The average duration of antineoplaston therapy necessary to obtain a partial response was 8 months with a range of 1 to 14 months. The average duration of complete remissions is 16+ months with all six complete remissions continuing to remain in remission to the best of my knowledge through January 1, 1997. The duration of complete remissions ranged from 3+ months to 40+ months with the duration of partial remissions averaging 18+ months and ranging from 5 to 78+ months."

Summing up, Dr. Burdick told Judge Lake that he was "very impressed with the number of complete and partial responses that I have seen here, compared with the number of such responses that I have seen in my own personal experience. The responses here are also far in excess of any prior series of patients published in the medical literature." Even after two patients were subsequently downgraded from "partial remission" to "stable disease," the response rate (partial or complete remissions) was "an astounding 33% with a complete remission rate of 15%. Such remission rates are far in excess of anything that I or anyone else has seen since research work on brain tumors began." Dr. Burdick asserted that it "is very clear that the responses here are due to antineoplaston therapy and are not due to surgery, radiation or standard chemotherapy." He concluded that research "needs to continue on these very promising agents," to determine such things as "the optimal dose of these agents, the optimal route of administration, the optimal duration of treatment and many other details too numerous to mention."

Dr. Burzynski opened his clinic in 1977. Prior to 1985, FDA drug-approval procedures were not incorporated into Texas law, so he was advised by his attorney that he could treat patients with innovative medicine as long as he did not engage in interstate commerce. In The Cancer Industry, Dr. Ralph Moss recalls that Burzynski would have preferred to obtain FDA approval, but the roadblocks inherent in the agency's process were virtually insurmountable. The normal process, Moss writes, "is for a new substance to be discovered at a major medical center and then turned over to a drug company for development. If the company decides it is economically feasible, it will then battle its IND [Investigational New Drug] application through the FDA." But even then "it is often unsuccessful."

Since none of the drug companies expressed an interest in Burzynski's compounds, he opted to develop them himself. But Moss writes that with virtually no capital with which to finance a run through the FDA maze, Dr. Burzynski "was caught in a classic catch-22 situation. If he tested antineoplastons in humans, the FDA was sure to come down on him eventually. But if he didn't so test them, he could never win FDA approval, since antineoplastons, being species-specific, are not generally effective in animal treatment experiments." The Declaration of Helsinki, adopted in 1964 by the World Medical Assembly and subsequently endorsed by Congress, states: "In the treatment of the sick person, the doctor must be free to use a new therapeutic measure, if in his judgment it offers hope of saving life, reestablishing health, or alleviating suffering." Burzynski decided to treat patients, compile thorough records, finance future development of the drugs with patient fees, and take his chances with the FDA.

The FDA first visited Burzynski's facilities in 1978. The event was, in sharp contrast to the harassment and legal turmoil that would follow, quite congenial. Burzynski is first to admit that his manufacturing process at the time was rather amateurish, and that the FDA's constructive criticisms enabled him to make needed improvements.

At the time, most of his problems were emanating from the local medical establishment. Moss writes: "In 1978 Burzynski became the focus of an investigation by the Board of Ethics of the Harris County Medical Society. The charge was using unapproved medications of his own devising. They repeatedly called him in for interviews and instructed him not to give any interviews to the press." Burzynski complied with the press blackout, but in 1979 Penthouse magazine ran an article entitled "The Suppression of Cancer Cures," which described his plight, and in 1981 ABC' s 20/20 featured a segment entitled "The War on Cancer: Cure, Profit or Politics?" during which commentator Geraldo Rivera asserted: "The deeper we looked into the story, the more we realized that Stanislaw Burzynski is really not a maverick at all. His work is very much in the scientific mainstream, that burgeoning field of cancer research that's pin-pointing the body's own natural materials, its own proteins, to control irregular cell growth...."

In the wake of such national publicity, hundreds of cancer patients began visiting the Houston clinic for treatment, and no more was heard from the local Board of Ethics. Trouble at the national level, however, was beginning to metastasize.

In 1983, the American Cancer Society placed Dr. Burzynski on its "unproven methods" blacklist of practitioners with which it disagrees. Later in the year, the FDA filed civil suit in federal court to stop him from manufacturing, or treating patients with, antineoplastons. An indication of the FDA's arrogant attitude was reflected in a motion dated May 2, 1983, in which its chief counsel for enforcement warned, "If this court declines to grant the injunctive relief sought by the government, thus permitting continued manufacture and distribution of antineoplastons by defendants ... the government would then be obliged to pursue other less efficient remedies, such as actions for seizure and condemnation of the drugs or criminal prosecution of individuals...." U.S. District Court Judge Gabrielle McDonald barred Burzynski from shipping the drug outside the state, or otherwise introducing it into interstate commerce, but authorized him to treat patients within the state of Texas. "Nothing contained heroin shall be construed as restraining, enjoining or in any way prohibiting the manufacture, processing, packing, holding, promotion, labeling, sale or distribution of antineoplastons ... when it is undertaken strictly and wholly intrastate," her order stated. This partial victory for Dr. Burzynski infuriated the FDA, which promptly moved to circumvent the court order and, it hoped, close down the clinic. When Dr. Burzynski and some of his patients filed suit against the agency in the hope of ending the harassment, Judge McDonald rejected their request to allow a jury to hear their case, but did find that the FDA had disseminated false and misleading information about Burzynski to prospective patients, insurance companies, and public officials. Her October 24, 1985 ruling demanded that it stop doing so.

It was earlier that year that FDA agents raided Dr. Burzynski's clinic and seized more that 200,000 pages of documents, including patient records. Without the records, Burzynski was seriously hamstrung in treating his patients. As noted earlier, he was required to install a copier at FDA headquarters, at his expense, and make appointments in advance to photocopy the needed records.

In 1986, an additional 100,000 documents were subpoenaed for the first grand jury investigation of his activities. After scrutinizing the evidence, the grand jury declined to indict.

Judge McDonald's 1983 partial injunction stated that "the jurisdiction of this court is retained for the purpose of enforcing or modifying this injunction and for the purpose of granting such additional relief that hereafter may appear necessary or appropriate." Which meant that government prosecutors had a civil-remedy alternative to criminal prosecution regarding the key question (on which the other charges were based) of whether or not Dr. Burzynski had violated Judge McDonald's directive. As interpreted by Burzynski, the order did not bar his clinic from providing antineoplastons to patients from out of state who traveled to Houston to pick them up, then returned home. He was treating such patients within Texas, and neither he nor the clinic were shipping the drugs elsewhere. Nor, he contended, did the court order apply in instances where patients themselves could not, for health or economic reasons, make trips to Houston, so had representatives (friends, relatives, etc.) secure supplies of the drug from the clinic on their behalf.

Judge McDonald's order did not specifically preclude such activity, but the government argued that it was illegal for Burzynski or his clinic to provide antineoplastons to persons whom they knew would then travel with or ship the drugs beyond state borders.

Federal law required that Judge McDonald's order be "of reasonable specificity," but on this key point it was imprecise. The government could have asked her to clarify the matter by restating her intent, but it did not. As Gary Anderson, a juror in the second trial, explained, "What we felt was that the order was ambiguous. And it was our feeling that he [Burzynski] made an attempt to do what he thought he should be doing." Indeed, Burzynski had never tried to hide the fact that he was treating persons from other states at his clinic. Their home addresses were listed on the paperwork he had been submitting to the FDA for years.

In 1990, a second grand jury was convened in yet another attempt by the FDA to garner an indictment, but it, too, cleared Burzynski.

In 1994, a third grand jury was convened. Again, there was no indictment, but an Assistant U.S. Attorney assigned to the case was dismissed after local reporters discovered that he had subpoenaed the campaign contribution records of a local politician who was a fervent Burzynski supporter, then leaked to the press a false story indicating that misuse of campaign funds was part of the ongoing investigation of Burzynski.

Up to that point, then, three separate grand juries had scrutinized the Burzynski record and had refused to indict him on so much as a single count. It was a remarkable series of victories for the beleaguered physician, since, as Representative Joe Barton (R-TX), chairman of the Subcommittee on Oversight and Investigations of the House Committee on Commerce, noted in a September 7, 1995, letter to Attorney General Reno, "It is extraordinarily rare for a grand jury to fail to indict at the request of the U.S. Attorney. As far as I know, a grand jury failing to indict some three to four times on essentially the same base of facts is virtually unprecedented. It would appear that the FDA and the Justice Department are abusing the grand jury process to harass and punish Dr. Burzynski for persuading a federal judge that he is not violating the law by practicing medicine within the State of Texas."

In 1994, the FDA's oncology division granted Dr. Burzynski permission to conduct four Phase II (efficacy) clinical trials on antineoplastons. FDA inspectors scrutinized and approved his manufacturing facility. It appeared that a truce between the two sides may have been reached. Then, on March 24, 1995, Dr. Burzynski appeared on the CBS program This Morning with three patients whose cancers had been diagnosed as terminal years earlier, but who now claimed to be free of the malignancies following treatment with antineoplastons. That afternoon the FDA again raided the Burzynski clinic, spending some seven hours rummaging through file cabinets, drawers, and computers, and eventually hauling off numerous boxes crammed with documents. It was the first step on the road to a fourth (this time successful) attempt by the FDA to secure a grand jury indictment.

For eight months, subpoenas were issued to Dr. Burzynski, many of his present and former employees, and other persons with whom he had been associated or who had spoken or written favorably about his work. It was after publishing a letter vigorously condemning the March raid that author Ralph Moss was served with the bogus subpoena covering every document in his possession relating to Dr. Burzynski.

On November 15, 1995, FDA Commissioner David Kessler testified before the Barton subcommittee. Questioned about the Burzynski case, Kessler vigorously denied that there was a pattern of retaliation against the physician. Five days later, the U.S. Attorney's office in Houston announced the 75-count

indictment by the fourth grand jury.

There is no need to reprise the testimony from the enormously expensive trial. Judge Lake's directed verdict of acquittal on the mail fraud counts, the prosecution's decision to drop the interstate commerce charges, and Burzynski's swift acquittal on the contempt charge speak for themselves. It should be noted, however, that since late 1996 the FDA, perhaps prodded by pressure generated by the Barton hearings, has allowed the Burzynski clinic to register patients, including those from out of state, under dozens of study protocols qualifying them to receive antineoplastons by mail. Which means that at the time he was twice standing trial for contempt of an ambiguous, ancient court order that supposedly barred him from introducing antineoplastons into interstate commerce, he was legally authorized to ship the drugs to patients anywhere in the country. Jurors, at least those in the first trial, were not told about it.

Constitutional authority Dan Smoot once observed, "A nation which values anything - even good health - more than it values freedom will lose its freedom." Needless to say, the best prescription for good health is freedom - freedom to choose the type of medical care one prefers, from the practitioners one prefers, who provide medications and other services one prefers. A truly free market in health care would enable innovators such as Dr. Burzynski to make a case for their discoveries in competition with others both within and without the "orthodox" medical establishment, unhindered by a dictatorial government bureaucracy that, in the name of protecting our health, often undermines it.

Testing Antineoplastons

In 1991, results of an FDA-approved Phase II (efficacy) trial involving 20 patients with varying stages of astrocytoma (the most common brain tumor in children) were published by Dr. Burzynski in Recent Advances in Chemotherapy. Nineteen had received one or more prior standard therapies to which their tumors did not respond. There was complete remission of the tumors in four patients, partial remission in two others, while ten others were diagnosed with "objective stabilization" (less than 50 percent decrease in tumor size). Later, two of the ten patients in that latter category improved to the point that one was reclassified "partial remission" and the other "complete remission." All told, 16 of the 20 patients stabilized or improved, a startling result considering the severity of their conditions when the trial began.

In September of last year, Dr. Burzynski submitted brain scans of 29 of his clinical trial patients for review by a neuroradiologist at the Barrows Neurological Institute in Phoenix, Arizona. All 29 had been diagnosed as terminal when their treatment with antineoplastons began. A subsequent report noted complete remissions in 13 patients, partial or initial responses in eight others, and no response to the treatment in the remaining eight.

There are also some indications, though at present based solely on animal studies, that in addition to treating some types of cancer, antineoplastons may also be helpful in preventing them from developing in the first place. Researchers at the Burzynski Clinic and at Japan's University of Kurume Medical School both found indications that low doses of a synthetic form of one type of antineoplaston administered orally prevented lung, breast, and liver cancers in the test animals. - R.W.L.

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http://scienceblogs.com/insolence/2014/01/21/stanislaw-burzynskis-counteroffensive-against-the-fda-and-texas-medical-board-continues/
January 21, 2014

Stanislaw Burzynski's counteroffensive against the FDA and Texas Medical Board continues

The year 2013 finished with serious setbacks for Stanislaw Burzynski and his unproven cancer treatment that he dubbed "antineoplastons" (ANPs) way back in the early 1970s. As you might recall, in November, two things happened. First, the FDA released its initial reports on its inspection of the Burzynski Clinic and Burzynski Research Institute (BRI) carried out from January to March 2013. They were damning in the extreme, pointing out the shoddy operating methods of the institutional review board (IRB) used by the BRI to approve and oversee Burzynski's "clinical trials" (and I use the term loosely) of ANPs. Violations included using expedited approvals to review single patient protocols, something so far outside the purview of what the expedited approval process was intended for, namely approving minor tweaks to human subjects research protocols without requiring a full meeting of the IRB, that the FDA called Burzynski out for it. Other violations included failure to report serious adverse events (SAEs) and adverse events (AEs) to the FDA and/or the IRB, failure to follow proper informed consent procedures, failure to determine that risks to subjects were minimized and that risks to subjects were reasonable in relation to anticipated benefits, if any, and a lot of other violations listed in my post on the subject.

Later in November, Liz Szabo of USA TODAY published a fantastic expose of Burzynski entitled Doctor accused of selling false hope to families, in which, in addition to many of the violations revealed by the FDA, it was further reported that the child whose death in the summer of 2012 triggered the FDA investigation was Josia Cotto, and that the child died of hypernatremia (elevated sodium levels in the blood) caused by ANP therapy. In response to the reports of shoddy record keeping, lack of ethics, and contributing to the death of a child, Burzynski was his characteristically cuddly self, referring to his critics as "hooligans" and "hired assassins," while claiming that they "pretend they got sick and would like to extort money from us." When last I wrote about Burzynski in November, his empire was struggling to strike back. Eric Merola, the film maker responsible for two pro-Burzynski propaganda movies Burzynski: Cancer Is A Serious Business and Burzynski: Cancer Is A Serious Business, Part 2, likened USA TODAY to everything from Nazi propaganda under Joseph Goebbels, to slave masters, and to the Westboro Baptist Church protesting at the funerals of gay soldiers killed in the line of duty. Meanwhile Burzynski himself tried to answer the FDA findings and failed miserably, nor did his poster presentation of singularly unimpressive results at the Society of Neuro-Oncology Meeting right before Thanksgiving help. The year ended with the Texas Medical Board using the FDA's findings as part of the basis of charging Burzynski with false advertising, meaning that Burzynski will be spending a lot of time defending himself against the TMB in 2014.

Unfortunately, beginning in December, Burzynski and his allies decided to go back to the future, so to speak (or maybe just back to the 1990s) and resurrect the campaign that worked so well for them the last time Burzynski's back was against the wall. Unfortunately, this strategy, rooted as it is in using cancer patients to lobby Congress to force the FDA to allow Burzynski to use antineoplastons, could work. Pro-Burzynski forces, in a nod to the past, have even hired the same lobbyist who, or so it is claimed by the pro-Burzynski forces, so brilliantly in the mid-1990s in persuading Rep. Joe Barton (R-TX), then the chair of the House Subcommittee on Oversight and Investigations, to "investigate" the FDA's "harassment" of Burzynski.

If you want to understand Burzynski's new strategy to keep using ANPs, you have but to go back and examine his previous strategy, which was to milk dying cancer patients for every bit of human sympathy they can evoke from lawmakers and the public. Everything old is new again, as Burzynski replays the same strategy with patients such as McKenzie Lowe, Liza Cozad, and Elisha Cohen.

Meanwhile those of us who stand up and say no, who try to point out that Burzynski can't save these patients, that they are being used by him so that he can re-open his ANP clinical trials, are pummeled with arguments like the one by Randy Barnes that we should "respect the parents' choice." After pointing out that he is "not a fan" of the Burzynski Clinic, and "agrees with many of the criticisms leveled at Stanislaw Burzynski and his treatments," he asserts that "Raphael Elisha's parents are the only ones with the right and responsibility to make the best decisions they can in a horrible situation that no one who has not faced the loss of a child can possibly understand." He then concludes:

> If you choose not to sign the petition that is fine, but please, allow the Cohens the dignity they deserve by respecting their right to make the choices they deem fit for their child. Publicly fighting the Burzynski Clinic in Raphael Elisha's name will only bring more pain to an already suffering family.

This is the argument we're up against as well, an argument that is every bit as invalid as when it is used to defend, for example, the family of Sarah Hershberger for relying on quackery instead of chemotherapy to treat a deadly lymphoma. We can respect the parents' decision, to the extent that they are the parents. We can try to understand the desperation that led them to it, even though they are aware of all the criticisms of Burzynski. Most parents can only imagine how they would react under similar circumstances. Even I couldn't guarantee that I wouldn't be tempted by the blandishments of Burzynski

and his followers if I were in the same position as the Cohens. However, sympathy and respect do not equal agreement, nor do they require us to acquiesce and just “shut up” when the Cohen’s grief and desperation lead them to do something profoundly harmful to public health, to use the power of their story to persuade lawmakers to call off the FDA.

It’s not just sympathetic families being used by Burzynski to further his cause, however. Right after the holidays, one of the most prominent pro-quackery advocacy groups in the world, the Alliance for Natural Health USA, launched a series of attacks and posts urging its supporters to write to their legislators to put pressure on the FDA to allow compassionate use exemptions for antineoplastons (ANPs). Also included is a smear campaign against Liz Szabo, Burzynski “skeptics,” and, of course, USA TODAY, all of whom are portrayed as being in the thrall of big pharma. I do note, with some mild amusement, that here was one article posted on the ANH-USA website claiming that the FDA violated patient privacy by providing Szabo with medical records of a patient without the parents’ permission. If you click on the link now, there’s nothing there. The article has apparently been taken down. there are, however, multiple links to it elsewhere, for example, here, here, here (our old friend Merola) and here. The article still shows up on the ANH sitemap, but there’s nothing there. Apparently, the ANH took it down, which is probably because it was full of misinformation and lies. I only wish I had saved a screenshot or web archive of the article. My mistake.

Bringing it all together: The ANP Coalition

It’s taken nine months since Burzynski supporters revealed in a video of the panel discussion after a screening of Eric Merola’s movie that various Burzynski patient groups were planning to form an organization to lobby Congress for fast track approval of ANPs. Indeed, Merola and his merry band of Burzynski sycophants were quite open about wanting fast track approval for ANPs so that Burzynski could then prescribe them off label for virtually any cancer and presumably could also sell them to any doctor who wanted to use them for whatever purpose. Of course, advertising a drug for off label uses is against the law, which is why the FDA takes such a dim view of it, but “word of mouth” and ANP-friendly groups like the ANH would make sure that word got around fast. Unfortunately for Stash, with the deficiencies of the procedures of the Burzynski Clinic and BRI with respect to running clinical trials having been laid bare in Liz Szabo’s article in USA TODAY, fast track approval for ANPs for glioblastoma is, at best, highly unlikely. So Burzynski’s allies have fallen back on lobbying Congress to lean on the FDA to allow single patient protocols, sometimes called “compassionate use” protocols, to allow Burzynski to treat patients with ANPs even though his clinical trials are shut down. To do this, they have formed a group called the ANP Coalition:

> It is our fundamental belief that the discovery of Antineoplastons (ANP) can and will herald a new age of medical science and subsequent advancements in the treatment of previously incurable diseases. This benign yet effective drug contradicts the paradigm that cancer treatments have to be harmful to be effective, and redirects modern medicine back to its salient principal Primum non nocere, “first, do no harm”.
>
> How does the ANP Coalition intend to accomplish our mission?
>
> We will accomplish our mission by focusing on four main goals:
>
> To educate the public as to the importance and benefits of ANP.
> To advocate for patients who need access to ANP for medical conditions.
> To expedite regulatory approval for ANP thereby making it available to all.
> To further research and development of ANP.

Consistent with a lot of the rhetoric used by Eric Merola and the Burzynski Patient Group, the rhetoric on the ANP Coalition site is apocalyptic, painting the battle as nothing less than one of good versus evil:

> This is not a time for all good men to act; it is a time when all good people must act. We live in an age of awareness, where technology has become the great equalizer. With technology comes communication, and through communication we can educate! Once armed with education, propaganda withers and dies!
>
> This website is designed with the sole purpose of educating the public and exposing the truth. The battle starts here in cyber space, but the war is won in the real world, by real people who participate in real ways. It will be won by you!
>
> We are no longer an organization of patients connected by a cure; we are the collective who will not allow evil to triumph.

I can provide a hint of why the rhetoric is so amped up. One has only to look at who owns the ANPcoalition.org. The domain is registered through Domains By Proxy, which makes one wonder why the ANP Coalition would want to hide who owns the domain. First of all, the pictures on the Contact page reveal several old friends, including Ric Schiff, whose wife Laura, not coincidentally, owns a related domain, theotheranpcoalition.org, and registered it under her real name and also appears on the Contact page. (A screenshot has been saved, of course.) Also there is Mary Jo Siegel and her husband Steve. These are the people behind ANP Coalition, just as they are heavily involved in the Burzynski Patient Group. In fact, in July 2013, Ric Schiff was elected to the board of directors of the BRI, which makes his involvement in this effort a massive conflict of interest.

Predictably, Elisha Cohen, Liza Cozad, and Mackenzie Lowe are featured as the stories used to drive petitions to lawmakers and the FDA to allow compassionate use of ANPs. In addition, there are two new patients, of whom I haven’t heard before, Laura Nowosad, a 7 year old girl from Canada with a DIPG whose story is sadly familiar to anyone who covers Burzynski:

> Her parents, Janusz and Mira, are an amazing couple whose lives got shattered in an instant. Laura is their only child and their whole world. They couldn’t believe that this is happening to their little girl; they were hopeful that the doctors made a wrong diagnosis and went for a second opinion. Unfortunately, this diagnosis was confirmed. Words cannot explain the feelings of hopelessness, frustration, and terror they felt when they had to be faced with the truth.
>
> Janusz and Mira are not giving up hope! They have taken Laura to The Burzynski Clinic in Houston, Texas. This clinic has seen significant improvement in patients facing similar diagnosis as Laura, using alternative therapies not available in Canada. However, the treatment is very expensive. The initial visit costs $25,000 and each month after is $30,000.

On the same page is yet another desperate family being used by Burzynski’s minions as well, that of Isaac DeHerrera, a five year old boy whose tale is presumably so new that there isn’t yet a fundraising website that I could find or a petition to let Burzynski treat Isaac with ANPs on a compassionate use protocol. I’m sure there will be more families added as soon as Burzynski and his minions can find them. Clearly Ric and Laura Schiff and Steve and Mary Jo Siegel believe that they can duplicate the success Burzynski patients had in the 1990s, which was the last time Burzynski was in a comparable amount of trouble, with demonstrations featuring patients chanting, “FDA go away! Let me live another day!” and the intense political pressure brought to bear by a compliant Senator or Representative, the way they persuaded Joe Barton to drag then-FDA director David Kessler in front of his committee four times over two years to explain why the FDA was “harassing” Burzynski. Only this time, they have the Internet, which was only in its infancy as an organizing tool back in 1995, which allows them to produce a “Meet the Miracles” section, which, presumably, will be full of glowing testimonials of Burzynski Patient Group patients. So far, there is only Jessica Ressel, who was featured in the first Burzynski movie and whose testimonial is not convincing, as I described in detail in my review. No doubt she believes Burzynski saved her, but it is almost certainly the case that he did not, which is the only reason I can forgive her regurgitating Burzynski Clinic talking points.

Perhaps the most concerning aspect of the ANP Coalition is that it’s hired a lobbyist named Antonio C. Martinez II:

> His experience with ANP extends more than 18 years back when he represented the Burzynski Patient Group in 1995 and 1996, organizing numerous

patient demonstrations and a Congressional Hearing on February 29, 1996 before the U.S. House of Representatives Energy & Commerce Subcommittee on Oversight & Investigations. These efforts helped Burzynski patients obtain access to ANP through Phase II clinical studies.

This isn't cheap. Unless Martinez is serving pro bono, his hourly rates are $250 to $400. I have no reason to doubt the claim that he worked on organizing the Congressional Hearing in 1996 at which Burzynski patients vented at the FDA, but I wonder. I've read both Richard Jaffe's Galileo's Lawyer: Courtroom Battles in Alternative Health, Complementary Medicine and Experimental Treatments and Thomas D. Elias' The Burzynski Breakthrough: The Most Promising Cancer Treatment and the Government's Campaign to Squelch It. Both books describe the Congressional hearings in which Burzynski patients testified from a very pro-Burzynski standpoint. I don't recall seeing Mr. Martinez's name being mentioned even once, and a quick flip through the indices and relevant sections of these books did not change that assessment for me. If Martinez were so important to the 1996 hearings, one would think that Jaffe and/or Elias would mention him and at least briefly describe his role in their books. They didn't, as far as I can tell.

So what does the ANP Coalition want to accomplish? Its list of demands is long and some are completely unrealistic. For example, on its page where it tells people how they can help, it asks people to write to Wikipedia to:

> …demand removal of the "Burzynski Clinic" webpage, since it has been high jacked by a paid group who identify themselves as "The Skeptics", and is no longer open for public contribution. The Wikipedia page on "Burzynski Clinic" is filled with untrue statements, statements taken entirely out of context, cherry-picked information, sources that do not qualify as sources under Wikipedia rules, fake sources—you name it.

The Wikipedia team has already noticed the ANP Coalition's attempts to astroturf its article on the Burzynski Clinic.

Others, however, are not unachievable. Certainly organizing petitions and getting people to write to their lawmakers are achievable aims, and that's what concerns me: How do we respond? In the absence of sound scientific information showing that ANPs almost certainly don't work and are very toxic, Burzynski's claims notwithstanding, legislators and politicians are going to go with the sympathetic story; i.e., the stories told by Burzynski supporters of children with deadly brain tumors who will die soon if they aren't allowed to have ANP therapy. That's why it infuriates me to see how Burzynski so cynically uses patients with deadly cancers in his battle with the FDA. Make no mistake, that is exactly what he is doing here. He dangles false hope in front of patients like Eliza Cozad, Raphael Elisha Cohen, and McKenzie Lowe, and their families do the rest for him Even in the case that a legislator understands the lack of evidence, he might well go with a "What's the harm?" attitude, not appreciating that the harm can be appreciable given how toxic ANPs are, not to mention the financial harm done to the family raising tens or hundreds of thousands of dollars for an ineffective treatment. That's why information to show why, as much as we sympathize with the plight of these patients and their families, legislators should not overrule the FDA's decision regarding antineoplastons. Indeed, the real investigation should be into why the FDA has allowed Burzynski to get away with what he's gotten away with all these years.

I also appeal to you, our readers, for help and ideas. Visit Bob Blaskiewicz's appeal and take action. In the meantime, let's hear ideas for how to counter this latest initiative.

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http://www.sciencebasedmedicine.org/stanislaw-burzynski-the-early-years-part-1/
July 22, 2013

Stanislaw Burzynski: The Early Years, part 1
by David Gorski

It's been a week now since I got back from TAM, where Bob Blaskiewicz and I tag-teamed a talk about a man who has become a frequent topic of this blog, namely Stanislaw Burzynski. I've been meaning to come back to the topic of Burzynski, but from a different angle. There hasn't been much in the way of news lately other than the release of Eric Merola's most recent propaganda "documentary," Burzynski: Cancer Is A Serious Business, Part 2, but, believe it or not, there remain lots of loose ends that I haven't covered. This time around, the angle is this: How did Burzynski get his start? His is a story that goes back over 46 years, and in the beginning he seemed to be a promising young academic physician and a perfectly respectable researcher. So what happened? How did he evolve from a seemingly idealistic young Polish physician to what he has been for many years now?

I started to think about this when I was writing my post about "alternative cancer cures" circa 1979, because one of the three articles written by Gary Null and various coauthors that appeared in Penthouse magazine in the fall that year, The Suppression of Cancer Cures, was dedicated primarily to Stanislaw Burzynski and his "antineoplastons," which at the time were new news, so to speak. However, Null's article, even though it was contemporaneous with Burzynski's having recently struck out on his own and started his own clinic, didn't reveal everything that I was interested in learning. Actually, the more I read, the more I realize that no source really reveals everything that I want to know about that time period in the 1970s and early 1980s that produced the Stanislaw Burzynski that we know and don't love today. Available sources all tend to be either pro-Burzynski, Burzynski himself, or vague in the extreme about what happened. Fortunately, my research for my TAM talk will serve multiple purposes. Since the talk was so brief and required me to cover 40+ years of history in a mere 20 minutes, there was a lot left out. I hate to let all that research go to waste; so I'm going to use it for an intermittent series of blog posts.

While preparing for my TAM talk, I read two books from sources friendly to Burzynski. The first was Galileo's Lawyer: Courtroom Battles in Alternative Health, Complementary Medicine and Experimental Treatments by Richard A. Jaffe. Jaffe was Burzynski's lawyer for a long time, and in particular he helped Burzynski beat multiple raps in 1997, when it looked as though Burzynski might well be convicted of insurance fraud, violations of the Food, Drug, and Cosmetic Act, and other charges related to his antineoplaston therapy. Of the two, this book was the most revealing, because Burzynski wasn't the focus of the book (although his story does take up roughly half of it). Rather, self-aggrandizement on the part of the author clearly is, which perhaps explains why Jaffe would say some things that he says that are particularly unflattering to Burzynski. True, Jaffe clearly thinks they are flattering (to him) and evidence of how clever he was in defending the misunderstood genius that he viewed Burzynski to be and beating the system in the mid- to late-1990s, but what they reveal to me about Burzynski's current crop of phase 2 clinical trials is appalling. The second book is The Burzynski Breakthrough: The Most Promising Cancer Treatment and the Government's Campaign to Squelch It by Thomas D. Elias. This book is more pure hagiography, a book designed to portray Burzynski as a Brave Maverick Doctor who can cure cancers that conventional medicine cannot. Amusingly, the latest edition boasts that there are now "clinical trial data" in it, which led me to wonder why Burzynski would provide such data to a columnist writing a hagiography about him rather than, oh, you know, publish it in the peer-reviewed scientific literature. However, Elias provides a bit more detail on certain aspects of Burzynski's early years, and his account is interesting in that it doesn't always agree with Jaffe's account. Elias also provides testimonials from several of Burzynski's patients who were treated before the Internet era whose stories are hard to find in detail online, for example, Tori Moreno. (For example, nothing in the chapter on Tori Moreno leads me to change my conclusions about how she survived.)

Obviously, given that both of these books are clearly pro-Burzynski, one has to take their claims and accounts with a grain of salt. (Actually, the salt mines under Detroit probably don't contain enough salt for this purpose.) Even so and even noting that these are pro-Burzynski sources, I was shocked at the sorts of information in the books, there for all to see. To someone who knows cancer research, they contain some pretty damning information. Obviously, the authors didn't see it that way when writing them, but I do.

The early years: Childhood

In many ways, Stanislaw Burzynski's story is a prototypical immigrant rags-to-riches story. Stanislaw Burzynski was born in Nazi-occupied Poland in the city of Lublin on January 23, 1943, right as the Holocaust in Poland was gearing up in earnest. The previous year, mass killings had begun at Auschwitz-Birkenau, and mere months before Burzynski's birth, the Sobibor and Treblinka camps had opened. So had the Belzen camp, to which the Jews of Lublin

were deported soon after its opening. Other notable events in the year before Burzynski was born include the beginning of Operation Reinhard (the mass deportation of Polish Jews to concentration camps), the beginning of the liquidation of the Warsaw Ghetto, and many other atrocities. In 1943, the Jews of the Warsaw Ghetto mounted their uprising, and later Himmler ordered the liquidation of the remaining Jews in Poland.

Little is known about Burzynski's early childhood and youth aside from what Burzynski himself has told sympathetic sources like Thomas Elias, from whose book I gleaned most of this account. Despite the devastation going on all over Poland, Stanislaw Burzynski was largely sheltered from the grim reality of Nazi-occupied Poland in his early years. His mother's family was well-off and owned an ornate family house in the old part of Lublin built around three inner courtyards that had served as the local Roman Catholic bishop's palace in the 1800s. It was designed in a Baroque Renaissance style, and its three-story facade bore elaborate sculptures around all the windows. Before the war, Elias reports, Burzynski's grandmother used its large spaces to operate a private high school for girls. In the early 1940s, she gave her daughter and her husband an apartment in the building.

There was also a country house at the edge of the great Stary Las Forest outside of Lublin where the Burzynskis spent a lot of their time as well. Burzynski's father, a teacher who was the son of a blacksmith, was apparently not well-regarded by his mother's side of the family because he came from poverty and Poland was a very class-conscious society at that time. His father was also imprisoned by the Nazis because he kept teaching Jewish children, and the local Nazis did not like that. Interestingly, after the war, the Communists imprisoned Burzynski's father for giving underground lessons that were apparently not politically acceptable. His father sounds as though he were quite the man. The son, on the other hand, was pugnacious and described himself as getting into fights almost every day, a situation that persisted until the fourth grade.

After the war, the Communist government confiscated the Burzynski house in Lublin and turned it into apartments, which were distributed to whoever needed them, although the Burzynskis got to keep their apartment. Elias also informs us that Burzynski's brother Zygmunt was an anti-Communist fighter who was shot fighting the government in 1948 and died of meningitis as a result of his wound. In Elias' book, Burzynski recounts these stories and uses his childhood pugnaciousness and belief that one should never duck a fight as a rationalization for not having moved his clinic to Tijuana years ago, saying:

> So, the idea of fighting a government was nothing new to me when I began having troubles with the Food & Drug Administration.

And, based on the death of Zygmunt:

> The idea of fighting people in authority became natural to me. I learned that you must never let them defeat you in your own core.

In some ways, these can be most admirable traits. Virtually all highly successful people who make a difference in the world possess some measure of this sort of determination and willingness to fight for what one believes. If only Burzynski had found a good cause to which he could yoke such them. Unfortunately, he found antineoplastons.

The early years: The dawn of antineoplastons

Despite his tendency to fight, Stanislaw Burzynski was, unlike his brother, academically inclined. He did very well in secondary school and entered medical school straight from there, which was how it was done in Poland at that time. Somehow, he became intensely interested in amino acids and peptides. Working for chemistry professor Irana Krzeczkowski and biochemist Janina Blaut, the young Burzynski studied peptides in wild mushrooms that grew in the Stary Las Forest because his mentor wanted to find uses for them in agriculture. By the time he graduated from medical school in 1967, he had published fourteen scientific papers, which, as we say, ain't too shabby.

In 1967, Burzynski was ready to work on his doctoral thesis. He had become interested in differences in the amount and types of peptides found in the blood and urine of renal failure patients and cancer patients. He reported that some of these chemicals were found at high levels in the blood of renal failure patients. He also found that cancer patients had a low level of some of these substances, which were not, it turned out, peptides. Ultimately, his work in this area resulted in a thesis entitled "Investigations on amino acids and peptides in blood serum of healthy people and patients with chronic renal insufficiency." Of note, according to Elias, Burzynski finished his thesis in 1968, which makes one wonder how he could have possibly gotten a PhD based on it in such a short period of time. However, my purpose here is not to worry about whether his PhD is legitimate, as Saul Green has done. I don't really care if Burzynski's PhD is legitimate or not. What I care about is what Burzynski has done with his medical education over the last 46 years.

Ultimately, in 1970, Burzynski decided that he couldn't stay in Poland anymore. What hadn't been clear to me from all the reports and retellings of his decision to come to the US is why he chose to leave Poland in 1970. Whatever happened between 1968 and 1970, Elias reports that in 1970 Burzynski was being recruited to join the Communist Party but refused to join. This was perhaps the first case, but definitely not the only case, where his stubbornness caused him serious problems. Burzynski learned he was going to be drafted into the Polish Army, where he would be sent to wherever the Soviet Union needed him, but, thanks to the intervention of a prominent scientist, managed to get a passport and get out of Poland before his draft notice was delivered in early September. He arrived, as he has said so many times, at JFK Airport with only $20 in his pocket. Later he learned that his position at the university had been terminated.

Burzynski stayed with an uncle in The Bronx but soon managed to get a job at the Baylor College of Medicine in the Department of Anesthesia, then headed by Georges Ungar, a Hungarian refugee with whom he hit it off. Ungar was famous for proposing that memory resided in peptides made by the brain, and he tried to "transfer" memory by transferring those peptides from one mouse brain to another. It's a hypothesis that seemed to be supported by his experiments at the time but faded from favor as more research failed to support it. Burzynski split his time between working on Ungar's project and working on his own peptides, which he had finally dubbed "antineoplastons. He even managed, with the help of an investigator at M.D. Anderson, to secure an NIH grant in 1974. These years were productive for Burzynski, and he and Ungar published a lot of papers. Burzynski apparently killed a lot of rats in his time at Baylor doing Ungar's research, which is something I can totally relate to, having dispatched hundreds of mice myself while doing angiogenesis research in the 1990s. Basically, rats were trained at tasks by the hundreds, after which they were killed and the peptides from their brains isolated. These peptides were then injected into the brains of other rats in order to see if the "knowledge" could be transferred with the peptides. Fun times!

The long, slow ethical slide

It was in Stanislaw Burzynski's later years at Baylor that, arguably, the seeds of what he has become today were planted. In 1973, after three years of study, Burzynski had managed to pass the medical board examinations and obtain his Texas medical license. However, as I've pointed out before multiple times, he had no U.S. specialty training in oncology. In fact, he doesn't appear to have had any specialty training even in internal medicine, and an internal medicine residency is a prerequisite to doing an oncology fellowship and becoming a fully-trained oncologist. One thing I couldn't figure out from either book or any of my other reading is how Burzynski got a license to practice medicine in Texas. Usually, getting such a license requires at least a year of postgraduate medical training (usually an internship) in addition to medical school and passing the national medical board examinations. I can only speculate that whatever postgraduate clinical training Burzynski might have done in Poland must have counted, because I can't find any reference to him doing any clinical training after arriving at Baylor. That's not really the most important issue here, but it is a curiosity to me as a physician.

It's also indicative of the extreme arrogance that Burzynski exhibited at the time. Elias recounts how in 1976 Burzynski thought that because he had obtained his medical license in 1973 he was then qualified to be the principal investigator for the first clinical trial of antineoplastons. He didn't want to let anyone else be in charge of such a trial, even though it is obvious to me that at the time Burzynski was completely unqualified to run even a small phase I oncology trial. It's rather instructive to look at what happened here from three different perspectives, the narrative in Elias' book, the narrative in Jaffe's book, and the description in Gary Null's Penthouse article. Oddly enough, for being nearly contemporaneous, Null's article mentions very little about Burzynski's time at Baylor and why he ultimately left, at least nothing more than I discussed when I originally considered this article.

So what did happen? From what I can gather from Elias and Jaffe, a confluence of events conspired to push Burzynski towards his fate. Yes, I'm exaggerating a little, but not much. As I discussed before, Burzynski successfully got an NIH grant in 1974, but was unable to renew it in 1976; it expired in

1977. In 1976, apparently internal politics led to Ungar's ouster from the Department of Anesthesia. According to Elias, the new "boss of anesthesiology" (as Burzynski was quoted as putting it) was Lawrence Schumacher, who wasn't interested in peptide research and didn't think much of Burzynski. He also, arguably quite appropriately, didn't think that Burzynski's research was the sort of research that was appropriate to a department of anesthesia. So Ungar ended up taking a job at the University of Tennessee, and Burzynski had trouble renewing his grant. Apparently, if Burzynski is to be believed, the new cancer research center at Baylor wanted to hire him and even offered him a $30,000 start-up package (respectable at the time), but it also imposed two conditions that were unacceptable to him. First, it wanted the rights to his antineoplaston discovery. This has been common practice at universities for a long time. If an investigator discovers something patentable while working for a university, usually the university will patent it and share a significant cut with the inventor. Burzynski, however, didn't want to share. Similarly, although Ungar offered Burzynski a position in Tennessee, Burzynski did not want to follow his friend there because he was afraid that the University of Tennessee would want his antineoplastons, too.

There was another condition, too, and it's a problem that tells me that from a very early time in Burzynski's career he didn't "play by the rules." However, it was more than that. Not only did he not "play by the rules," but he didn't much care for those pesky regulations and ethical codes designed to protect human subjects. Here's where Elias and Jaffe diverge. According to Jaffe, shortly after he got his medical license Burzynski started a private practice on the side, and that practice became fairly lucrative. According to Jaffe, Burzynski joined someone else's practice part time. Actually, Elias is inconsistent on this issue, at one point implying that it was Burzynski's private practice and at another point saying that Burzynski worked for someone named Dr. Walker. Whatever the case was, both agree that before he even tried to undertake clinical trials of antineoplastons at Baylor, Burzynski had been giving ANPs to patients at his private practice. Just how long he had been doing that was not clear from either account, but it was clear that he did it before undertaking clinical trials. Indeed, that was why Baylor's requirement as a precondition for his taking a position at the cancer research center that Burzynski give up his private practice that was such a sticking point to Burzynski, as Elias describes:

> Despite the enhanced prestige, secure salary and tenure that could have been his had he gone along with the proposed changes, Burzynski hesitated. He didn't like the idea of subjecting himself to the authority of an institution. As long as he had a private practice, he believed he could use whatever medications he thought most effective, subject only to the consent of his patients.

In any case, in late 1976, Burzynski applied to the Baylor Institutional Review Board to be able to begin a clinical trial of antineoplastons but was turned down. Both Elias and Jaffe claim (no doubt because Burzynski told them this) that the reason Baylor's IRB turned Burzynski down is because he didn't have an IND. An IND is an "investigational new drug" application, which the FDA requires before it will approve a clinical trial of an experimental drug. In both accounts, Burzynski laments that Baylor turned him down and that he couldn't get an IND because, according to him, IRB approval was required to get an IND, leading to what he referred to as a circular process that dogged him for several years. Reading these accounts, I can't help but think that there must have been more going on. For example, I'm not sure how much different it was in 1976, but in general the FDA requires the following information for an IND:

> The IND application must contain information in three broad areas:
>
> Animal Pharmacology and Toxicology Studies – Preclinical data to permit an assessment as to whether the product is reasonably safe for initial testing in humans. Also included are any previous experience with the drug in humans (often foreign use).
> Manufacturing Information – Information pertaining to the composition, manufacturer, stability, and controls used for manufacturing the drug substance and the drug product. This information is assessed to ensure that the company can adequately produce and supply consistent batches of the drug.
> Clinical Protocols and Investigator Information – Detailed protocols for proposed clinical studies to assess whether the initial-phase trials will expose subjects to unnecessary risks. Also, information on the qualifications of clinical investigators–professionals (generally physicians) who oversee the administration of the experimental compound–to assess whether they are qualified to fulfill their clinical trial duties. Finally, commitments to obtain informed consent from the research subjects, to obtain review of the study by an institutional review board (IRB), and to adhere to the investigational new drug regulations.

In other words, an investigator doesn't need to get IRB approval before applying for an IND. The investigator has to promise he will have the study that ultimately derives from an IND will be reviewed by an IRB, obtain informed consent from patients, and adhere to the FDA's IND regulations. I can, however, see many reasons why an IRB might be reluctant to give its approval for a study using a treatment like ANPs. For one thing, in 1976 Burzynski had no animal data to speak of. In fact, the question of animal studies is an interesting one. Both Elias and Jaffe recount a story in which ANPs didn't work in animal tumors, and Burzynski has been quoted in multiple places as claiming that ANPs are species-specific and that ANPs derived from human blood and urine don't work in animal tumor models. This is in contrast to what Null reports in his near-contemporaneous account, in which he stated that in tissue culture and animal models Burzynski's ANPs worked "specifically against certain types of cancer," all with "no toxic side effects." It makes one wonder whether the "species specificity" was an excuse developed later to explain the lack of animal data.

Whatever the case, it's not surprising that an IRB would balk. From what I can tell from every account I've read, in 1977 there just wasn't enough preclinical data to justify a clinical trial, nor was it even clear yet exactly what ANPs were, as Burzynski hadn't yet identified all the constituent chemical compounds were that made them up. Worse, ANPs were derived from urine, which opened up the possibility of infectious agents being transmitted from ANP preparations made from human urine. Moreover, in 1977, as far as I can tell, Burzynski didn't have the capability to isolate sufficient quantities of ANPs to treat patients, having told Elias that he required 30 L of urine per day per patient. It wasn't until the early 1980s that Burzynski learned how to synthesize ANPs, and that was after he had left Baylor.

After Baylor's IRB rejected his application, Burzynski tried the Park Plaza Hospital, which was affiliated with Baylor. Park Plaza turned him down. Ultimately, the IRB at Twelve Oaks Hospital, which is where he treated his first patients with ANPs, approved his application. At this stage, Jaffe's account is more illuminating, because it demonstrates just how scheming Burzynski was at the time. He had lawyers investigate whether he could give ANPs to patients at his clinic and how he could avoid getting into trouble. Their advice to him was that, because Texas at the time didn't have a "mini-FDA" act, in which only FDA-approved drugs could be given to patients, the only way he might get in trouble with the law administering ANPs was if he were to ship them across state lines and thereby fall under the federal Food, Drug, and Cosmetic Act and the FDA's authority. Basically he was told that, as long as he was making ANPs in his own laboratory and giving them only to his own patients, it should be legal under Texas law.

Jaffe also recounts some amusing anecdotes of Burzynski's early years after leaving Baylor. Back then, he really did isolate ANPs from blood and urine. Apparently before he left Baylor, he got ANPs mainly from blood:

> For the previous few years, he had been obtaining antineoplastons from human blood in an unusual way. He got his raw material from the blood of his friends and acquaintances. He would go to parties and public gatherings with IV lines and bottles and beg and cajole his friends and colleagues to donate blood for his research.
>
> After a while, he noticed he was getting fewer and fewer invitations to parties, and, when his friends would see him on campus or the street, they would turn and walk away quickly, pretending they didn't see him.

This sounds a lot like Andrew Wakefield and his "experiments," doesn't it?

After he went into practice for himself, Burzynski's need for raw materials skyrocketed, and the only feasible way to get them was from urine. To get it, Burzynski arranged to install urine collectors in public parks and the state penitentiary system. Most amusingly of all, apparently Burzynski collected urine from Gilley's Bar, where Urban Cowboy was filmed. One wonders whether John Travolta contributed to some of those early antineoplaston batches.
Back to the future

In my next installment in this series (which probably won't be next week), I'll discuss some of Burzynski's legal battles, up to and including his epic battle in the 1990s that led to his indictment in late 1995 on insurance fraud and violation of the Food, Drug, and Cosmetic Act and his ultimate acquittal based on a hung jury in early 1997, as well as how the Burzynski Patient Group was formed and used to bring pressure on the FDA and Texas Medical Board to rule in Burzynski's favor, all with the help of some very powerful politicians, such as Representative Joe Barton of Texas. At some point, I'll also look at the "clinical trial statistics" that Elias promised on the cover of his book. However, I will conclude by pointing out exactly what it is that Jaffe said that he really shouldn't have. It's of a piece with Burzynski's history in that shows how, 20 years later, Burzynski wasn't really interested in doing clinical trials. They are and always have been a means to an end: To let him give ANPs to patients unmolested by the authorities.

Jaffe in essence boasts about this in his book. Because Rep. Joe Barton had put such enormous pressure on the FDA through his Congressional hearings and bad publicity replete with crying cancer patients lamenting how they would die if Burzynski were shut down, in 1997-1998 the FDA was going to relent and let Burzynski apply to undertake clinical trials. In response, Burzynski put together a clinical trial known as CAN-1, which was basically a retrospective study of all the patients Burzynski had treated with ANPs up to that point in 1997. Listen to how Jaffe described it:

> So we decided to hit the FDA with everything at the same time. All of his current patients would be covered in a single clinical trial which Burzynski called "CAN-1." As far as clinical trials go, it was a joke. Clinical trials are supposed to be designed to test the safety or efficacy of a drug for a disease. It is almost always the case that clinical trials treat one disease.
>
> The CAN-1 protocol had almost two hundred patients in it and there were at least a dozen different types of cancers being treated. And since all the patients were already on treatment, there could not be any possibility of meaningful data coming out of the so-called clinical trial. It was all an artifice, a vehicle we and the FDA created to legally give the patients Burzynski's treatment. The FDA wanted all of Burzynski's patients to be on an IND, so that's what we did.

This is Burzynski's lawyer writing here. I thank him for his candor, particularly since he describes how the dozens of other clinical trials, 61 of which still show up on the ClinicalTrials.gov website, came into existence. According to Jaffe, it was not because Burzynski was so interested in knowledge and finding out whether ANPs work. It was because he already believed they worked and wanted to keep treating patients without interference:

> CAN-1 allowed Burzynski to treat all his existing patients. That solved the patients' problems, but not the clinic's. A cancer clinic cannot survive on existing patients. It needs a constant flow of new patients. So in addition to getting the CAN-1 trial approved, we had to make sure Burzynski could treat new patients. Mindful that he would likely only get one chance to get them approved, Burzynski personally put together seventy-two protocols to treat every type of cancer the clinic had treated and everything Burzynski wanted to treat in the future…Miracle of miracles, all of Burzynski's patients were now on FDA-approved clinical trials, and he would be able to treat almost any patient he would want to treat!

And for patients who didn't fit into one of these seventy-three clinical trial protocols (CAN-1 plus the other seventy-two), there were always single-patient INDs, otherwise known as compassionate use protocols. I also can't help but wonder what the alt-med believers who support Burzynski would say if I were to say about my cancer center something like, "A cancer center cannot survive on existing patients. It needs a constant flow of new patients."

Yes, from a very early time in the late 1970s to twenty years later in the 1990s to this very day, for Stanislaw Burzynski, clinical trials are but a means to an end, and that end is not scientific knowledge or to determine whether or not they work against cancer. The end is to allow Burzynski to treat cancer patients with ANPs. He is, after all, the Brave Maverick Doctor fighting the system, as he thought of himself as fighting the system in Communist Poland. From what I've been able to discern, to him government laws and regulations are not designed to protect patients but to keep him from curing them. So getting around them by any means necessary is not only justified but mandatory. The question becomes: Does Burzynski still believe himself to be the man who has cured several forms of cancer, or does he now know that ANPs almost certainly don't work and are definitely not some sort of "miracle cure"?

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http://www.sciencebasedmedicine.org/revealed-by-the-fda-the-results-of-the-most-recent-inspection-of-the-burzynski-clinic/
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Revealed by the FDA: The results of the most recent inspection of the Burzynski Clinic
by David Gorski

After posting the talks that Bob Blaskiewicz and I gave at TAM this year, I realized that it's been a while since I've written about the topic of those talks, namely Stanislaw Burzynski, the Houston cancer doctor who inexplicably has been permitted to continue to administer an unproven cancer treatment to children with deadly brain cancers for nearly 37 years now. Beginning in 1977, when he left Baylor College of Medicine and opened up the Burzynski Clinic, Burzynski has administered a cancer therapy that he calls antineoplastons to patients. After nearly four decades and several dozen phase II clinical trials started, he has never published a completed phase II trial. The only evidence he's published consists mainly of cell culture studies, case reports, and couple of preliminary reports of his phase II clinical trials. Of course, Burzynski's lawyer, Richard Jaffe, even dismissively admitted that these clinical trials are designed solely to allow Burzynski to keep giving antineoplastons.

So Burzynski operated from the late 1990s until summer 2012, charging exorbitant "case management" fees to enroll patients in his clinical trials, working with a credulous filmmaker who wanted to make a movie about him—twice—and flouting regulations designed to protect human subjects involved in clinical trials. Meanwhile, he branched out to "personalized gene-targeted cancer therapy," which he promoted through Suzanne Somers; to AminoCare, which is basically antineoplastons sold as an antiaging nostrum (or, as Burzynski puts it, a "genetic solution to aging"); and to selling an orphan drug as a "prodrug" for antineoplastons.

So what happened in the summer of 2012? Apparently, there was a treatment-related death of a child, which led the FDA to issue a partial clinical hold on the Burzynski Clinic that prevented him from enrolling any new children on his clinical trials, although he could keep treating existing patients and enroll new adult patients. That partial clinical hold was extended to adults in January 2013, at which time the FDA arrived at the Burzynski Clinic to investigate. It was an event that was included at the tail end of Eric Merola's second propaganda film about Stanislaw Burzynski and represented as, in essence, jackbooted fascists trying to keep the cure for cancer from The People. None of this stops credulous reporters from writing misleading articles with titles like Young mother with brain cancer given just a year to live BEATS the disease and gets married after having controversial treatment in the US, which is a story about Laura Hymas, a woman whose good fortune is most likely not due to Burzynski. Not long before that, there was another credulous article featuring another Burzynski patient, Hannah Bradley, as one of four patients treated for cancer with alternative therapies who are allegedly doing well. Again, Hannah Bradley's good fortune is highly unlikely to be due to Burzynski's nostrums.

All of this is why those of us who follow Burzynski have been waiting with the proverbial bated breath to find out what the FDA concluded. Just before the government shutdown the first shoe dropped, when the FDA released a warning letter to the Burzynski Research Institute (BRI). Then last week, the second shoe dropped, when the FDA released the original forms describing its findings regarding the inspection. The findings are, to put it mildly, damning in the extreme. In fact, now, more than ever, I wonder how on earth Burzynski has been allowed to continue to run clinical trials—or even practice—for so long. The findings include massive deficiencies in the Burzynski institutional review board (IRB), the committee responsible for making sure that regulations designed to protect human subjects in research are adhered to.

Stanislaw Burzynski versus human subjects protections: Human subjects protections lose

Before looking at the new FDA findings, let's recap what is known about Burzynski's IRB. First, we know that the IRB is headed by Carlton F. Hazlewood, PhD, who just so happens to be on the board of directors of the Burzynski Research Institute. As I noted before, given that the Burzynski Clinic has been

trying for decades to commercialize antineoplastons, this is a profound conflict of interest. I also ask you to think of it this way again: What would Burzynski's defenders say if they found out that a sitting member of the board of directors of Merck, for example, was serving on the IRB that oversees Merck's clinical trials? Having Hazlewood serve on the BRI IRB is the same thing. True, it's not quite as bad as having the principal investigator of a study chair the IRB overseeing his studies, as Mark Geier has done, but it's pretty bad. Again, one wonders how Burzynski supporters would react if pharmaceutical companies or even research institutes trying to commercialize a discovery made by their investigators allowed high ranking leadership sit on their IRBs.

Last year, a certain "friend" of mine had discussed the problems with Burzynski's IRB before, and these notes simply amplify and add detail to the problems that were already known. These notes suggest how Burzynski uses his IRB to get around some of the restrictions that were placed on him using antineoplastons. As you might recall, the Common Rule demands that all clinical trials by investigators whose institutions receive federal funding or that are being done in order to win FDA approval for a drug or device must be overseen by an IRB, whose purpose is to protect the human subjects who take place in the trials. This is an absolutely essential purpose of the IRB, its key reason for existence. It is not there to evaluate the science, except to the extent that badly designed clinical trials based on bad science endanger human subjects. Its purpose is to make sure that the risks and benefits of clinical trials are reasonably balanced, make sure that patients entering clinical trials receive adequate informed consent, and to keep an eye on the trial as it is being carried out, evaluating adverse event reports and, if necessary, shutting the trial down if there are too many or if one group starts doing too poorly relative to the other.

These are duties and functions that the Burzynski Clinic's IRB utterly failed to carry out over the years. Before I take a look at the FDA warning letter and its accompanying notes, let's go on a stroll down memory lane and recap some of the violations that the FDA has found in the past, gleaned from a a letter to the Burzynski Clinic Institutional Review Board from 2001; a report of a site visit to the Burzynski Clinic by the FDA Southwest Regional/District Office, Dallas District; and a warning letter from the FDA's Human Subjects Protection Team, Division of Scientific Investigations, Office of Compliance, dated 2009:

Enrollment of subjects into antineoplaston study protocols prior to the protocol-specified interval following prior chemotherapy and/or radiation therapy.
Failure to report all serious adverse events (SAEs) and adverse events (AEs) to the agency and/or IRB.
Failure to follow proper informed consent procedures.
Failure to maintain adequate drug accountability records.
Discrepancies between case report forms and source documents.
Failure to keep a copy of the study protocol and informed consent form.
Failure to receive and/or require progress reports from the principal investigator for the study.
Failure to receive and/or require a final report from the principal investigator for the study prior to removal from the IRB's active list of studies.
Failure to assure that FDA approval was obtained by the principal investigator for the study prior to the treatment of a patient under a special exception.
Approval of special exceptions via expedited review.
The IRB approved research without determining that the following criteria were met: That risks to subjects were minimized and that risks to subjects were reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may be expected to result.
The IRB failed to prepare, maintain, and follow written procedures for conducting its initial and continuing review of research.
The IRB failed to ensure that informed consent would be sought from each prospective subject or the subject's legally authorized representative.
The IRB failed to ensure that no member participated in the initial or continuing review of a project in which the member had a conflicting interest.
The IRB failed to conduct continuing reviews.

The latest round of findings from the FDA's most recent investigation eight months ago reads like an acid flashback of investigations past. According to the FDA warning letter based on this FDA Form 483, covering the inspection dates from January 22 to February 7, 2013, here's what the FDA dinged Burzynski for this time. The CliffsNotes version is this:

The IRB failed to follow FDA regulations regarding expedited review procedures [21 CFR 56.110(b)].
The IRB approved research without determining that the following criteria were met: risks to subjects were minimized [21 CFR 56.111(a)(1)]; risks to subjects were reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may be expected to result [21 CFR 56.111(a)(2)].
The IRB failed to determine at the time of initial review that studies involving children are in compliance with 21 CFR part 50, subpart D, Additional Safeguards for Children in Clinical Investigations [21 CFR 56.109(h)]. This is a repeat violation from our 2010 inspection.
The IRB failed to prepare, maintain, and follow written procedures and maintain adequate documentation governing the functions and operations of the IRB [21 CFR 56.108(a), 21 CFR 56.108(b), and 21 CFR 56.115(a)(6)].

More detailed observations can be found in the Form 483. Basically, the Burzynski Clinic and BRI ran roughshod over human subjects protection. Most of the violations are fairly simple, even for lay people, to understand. For example, not making sure that patients enrolled on clinical trials meet the inclusion criteria, not reporting adverse events in a timely fashion, and not removing patients with adverse events from the study quickly are all fairly self-evident violations and not difficult to explain. It's fairly easy to understand why failing to remove a patient who suffers an adverse event that the protocol says should be a reason to remove the patient from the protocol is a violation. One violation, however, is not as easy to understand for those not involved in clinical trials and therefore deserves a bit more discussion. I'm referring to Burzynski's apparent abuse of the expedited approval process through his IRB. This seems to be the "theme" that ties together much of what is reported in this warning letter to the BRI; so I feel the need to explain a bit, in order to put it all into some context.

Quite reasonably, the Office for Human Research Protections (OHRP), the office in the Department of Health and Human Services that oversees IRBs, does not require the same sort of approval process for every sort of human subjects research. Not every study that involves human subjects research is a randomized clinical trial. For instance, in the case of human subjects research that involves pre-existing samples that have been de-identified can be exempted from full IRB review and oversight because, well, there are no human subjects to be endangered, even through linking of their identities to a specimen demonstrating a disease. Lots of research gets done this way, for example analyzing or staining pre-existing samples looking for a biomarker or a change in expression of a protein. I've done projects like this. This is commonly known as Exemption 4, and there are several other exempt categories.

However, Burzynski doesn't abuse the exemption process, which, let's face it, would be very hard to abuse for the most part. What he appears to have abused is the expedited approval process. The expedited review process generally involves approving things like minor revisions to research protocols and informed consent forms. "Expedited" generally means just that: Expedited. A full IRB review is not done, and a streamlined, faster process is used. Expedited approval can also be used for protocols that fall under categories that the Department of Health and Human Services (HHS) deems to be "minimal risk," described thusly on the University of Kentucky website:

Expedited procedures can only be used to review a study if the only involvement of human subjects fits one or more of the categories specified in the federal regulations and if all of the procedures present no greater than "minimal risk."

The IRB reviewer confirms that all of the research activities fit in one or more of the expedited categories. If the research includes activities that do not fit in the categories, the study is not eligible for expedited review even if the research involves "minimal risk."

The Department of Health and Human Services defines minimal risk to mean "the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests" [45 CFR 46.102(2)(i)].

Investigators are asked to provide a risk assessment, but it is the IRB reviewer's responsibility to determine whether the research meets the federal definition.

The IRB reviewer must consider two questions:

Is the probability of the harm or discomfort anticipated in the proposed research greater than that encountered ordinarily in daily life or during the performance of routine physical or psychological examinations or tests?

Is the magnitude of the harm or discomfort greater than that encountered ordinarily in the daily life or during the performance of routine physical or psychological examinations or tests?

If the answer is "yes" to either of these questions, then the research does not meet the definition of minimal risk.

A list of the types of research that can be approved through expedited review can be found on the OHRP website. These include things like blood draws, prospective collection of biological specimens by noninvasive means (one could collect urine specimens, for instance, under a protocol approved through the expedited review process), and research involving data that has already been collected. Here's a hint: Approving "single patient protocols" for an investigational drug that is not FDA-approved does not fall into any of the categories for which expedited review is appropriate, particularly when so many of the patients involved are children and particularly when the drug being tested can cause severe hypernatremia. Basically, from my reading, Burzynski seems to be using the expedited review process to treat patients with antineoplastons who do not qualify for any of his numerous phase II trials, and until last year he was getting away with it. Again, one of the great mysteries is: How?

But that's not all. The second Form 483 answers a question that many of us interested in Burzynski have wondered about for a very long time.
One mystery solved: What happened to all those complete responses?

There are two central mysteries about Stanislaw Burzynski that I would really, really like to see answered, and, hopefully, I will see them answered soon. The first is, of course: How has he gotten away with it for so many years? The second is: What are his real results? I'm not referring to the results Burzynski and his sycophants claim, but the real results? People like Paul Goldberg and others have been reporting for years that Burzynski's results don't seem to match his claims, with cancer experts who have seen some of his actual data reporting that Burzynski's data "can never be useful to show true merit or lack of merit of his drug" because of an absence of rigorously reported results and independent verification" and "what we have here are bad trials that could never get past peer review of any clinical trials cooperative group." Indeed, even back in the 1990s, serious adverse reactions were reported, mostly due to the hypernatremia. Now, thanks to these additional two FDA reports (here and here), we finally see a glimmering of light through the shroud of secrecy overlying the Burzynski Clinic.

Much of what is contained in these additional reports overlaps what I discussed before, but there is one kind of violation that does not. It's a truly egregious violation that I find very difficult to comprehend, given how much it goes against every tenet of clinical research and clinical trials that I've been taught and learned over the years. It appears on this Form 483, where it's discussed under "Observation 1," and this other Form 483, where it's discussed under "Observation 1? and "Observation 2." The brief versions are stated either as "Failure to monitor the progress of an investigation under your IND"; "an investigation was not conducted in accordance with the signed statement of investigator and investigational plan"; or "failure to prepare or maintain adequate case histories with respect to observations and data pertinent to the investigation." What does this mean? Basically, it means that the BRI misclassified tumor responses to therapy and adverse reactions. Worse, records that would allow the validation of responses to therapy are missing.

Before I get more specific, let me just briefly review what I mean by tumor response. Whenever a drug is given to treat a tumor, the response is the degree of tumor shrinkage that occurs in response to the treatment. In general, there are four categories of results defined and reported in clinical trials of new chemotherapeutic agent:

Complete response (CR): The tumors shrink away to the point that they are no longer detectable by physical examination, imaging studies (MRI, CT scan, etc.), or tumor markers. Obviously, this is the best possible result. This is further divided into a pathological complete response, which means that there are no detectable tumor cells in the resected tumor specimen. Obviously, when this happens, it is a very good thing and a very good prognostic sign. Sadly, it is not seen that often in clinical trials.

Partial response (PR): This is usually defined to mean that the tumors shrink by more than 50% (or, in the case where tumor volume cannot be measured easily, tumor markers fall by more than 50%) in response to therapy but remain detectable. More recent definitions have at times loosened this criterion to include tumors that shrink by 30% or more. Whatever the specific criteria used, a certain degree of tumor shrinkage, or evidence of tumor regression, defined before the clinical trial, must be observed.

Stable disease (SD): The tumors either shrink by less than the criteria for a PR or remain the same size. In some trials, this definition may be broadened to include tumors that increase in size slightly during therapy by less than, depending on the trial, 0-25%, although I've personally always been suspicious of calling any detectable growth above random variation in imaging measurements "stable."

Progressive disease (PD): Tumors increase in size on therapy and/or new metastatic tumors appear. This is obviously strong evidence that in that patient the therapy did not work.

How tumor response is measured varies according to the tumor. Most commonly RECIST criteria are used. For brain tumors, there are criteria other than RECIST that are often used, such as the Macdonald criteria or its update, the RANO criteria. Other methods are being developed, as well. Obviously, there are pros and cons associated with each method. However, when you write a clinical trial, you have to pick one, stick with it, and use it appropriately to classify clinical trial subjects as either having CR, PR, SD, or PD. If these FDA reports are to be believed, Burzynski failed to do that. Worse, he either destroyed, or allowed to be destroyed, the original primary records used to make these determinations.

For example, the FDA notes that:

a. …For 18 of 27 (67%) of subjects, the investigator did not comply with the protocol requirements for assessing the efficacy endpoint of tumor response and recorded inaccurate assessments for tumor response in study records. For example:

Study [REDACTED]: Subjects 005297 and 007197 were inaccurately classified as Complete Response (CR). Subjects 004721 and 008765 were inaccurately classified as Partial Response (PR). Subjects 005974, 011373, 012184, 012206, and 12252 were inaccurately classified as Stable Disease (SD).

Study [REDACTED]: Subjects 06389, 11819, and 13660 were inaccurately classified as CR. Subjects 21428 and 23399 were inaccurately classified as PR.

Study [REDACTED]: Subject 009990 was inaccurately classified as CR. Subject 004881 was inaccurately classified as PR.

Study [REDACTED]: Subject 006239 was inaccurately classified as PR. Subject 004240 was inaccurately classified as SD.

b. You did not have a QA monitor properly monitor CRFs [case report forms] and subject records. The investigator destroyed critical subject case history records (target tumor measurement worksheets) or misplaced case history records (original subject CRFs) for all subjects.

Elsewhere, the FDA investigators note:

Your MRI tumor measurements initially recorded at baseline and on-treatment MRI studies for all study subjects were destroyed and are not available for FDA inspectional review.

The other Form 483 goes into a little more detail. Unfortunately, much of what I'd really, really like to know is redacted, specifically how each of these

patients didn't meet one or more of the criteria for the given response level to which Burzynski assigned them. Be that as it may, there's plenty of damning information in these reports. For example, there are more examples of Burzynski's failure to report adverse events (i.e., complications or bad things that happened to subjects being treated according to his protocols) in a timely fashion as required by the OHRP and the FDA. For example:

> You failed to monitor as required by Section 16 of your Monitoring Plan. The investigator did not report adverse events (AEs) experienced by study subjects, including 18 cases of hypernatremia.

Now let's look at what I mean when I said that Burzynski misclassified AEs. AEs are graded according to a system known as the Common Terminology Criteria for Adverse Events (CTCAE). The CTCAE is nothing more than a list of AEs and SAEs (serious adverse events) commonly encountered in oncology. Each AE term is defined in the CTCAE and accompanied by a grading scale for severity. The AE terms are also organized by System Organ Classes defined by the Medical Dictionary for Regulatory Activities. The CTCAE is a long list, which can be downloaded as a Microsoft Excel spreadsheet, and it's been updated several times. The most recent update is v.4.0, released in May 2009. Most of the AEs discussed by the FDA were from before that, so that CTCAE v.3.0 was being used to classify them. AE grades generally range from grade 1 (minor), grade 2 (moderate), grade 3 (severe), grade 4 (potentially life-threatening), to grade 5 (death).

Hypernatremia as I have discussed many times before, is a sodium concentration in the blood that is too high. If the hypernatremia is bad enough, it can be life-threatening. These reports document at least two subjects whose hypernatremia was graded a 2 when it should have been graded a 4. Of course, these two subjects pale in comparison to the number of patients whose hypernatremia either wasn't reported or wasn't reported for a long time. For example:

> You failed to protect the rights, safety, and welfare of subjects under your care.
>
> Forty-eight (48) subjects experienced 102 investigational overdoses between January 1, 2005 and February 22, 2013, according to the Weekly List of Hospitalizations/SAE [REDACTED] Overdose [redacted]/Catheter Infection report. Overdose incidents have been reported to you on a weekly basis during your Monday, Wednesday, and Friday staff meetings. There is no documentation to show that you have implemented corrective actions during this time period to ensure the safety and welfare of subjects.

This last sentence bears repeating: "There is no documentation to show that you have implemented corrective actions during this time period to ensure the safety and welfare of subjects." So what we have here is a report finding that not only did Burzynski fail to report in a timely fashion a lot of SAEs, but that he tended to downplay the severity of the ones that he did report. Some AEs weren't reported until as much as seven years later. Subjects also weren't removed in a timely fashion for toxicity. For instance, one protocol stated that subjects would be removed after a third episode of Grade 3 or 4 toxicity or any single Grade 4 toxic effect that is "truly life-threatening or is not easily and rapidly reversible." Of course, one wonders how the IRB could have approved such wording, as there is no distinction between "truly" life threatening and "life threatening" in the definition of Grade 4 toxicity. One patient had seven instances of Grade 3 or 4 toxicity but was not terminated from the trial until over a month after the seventh.

Other violations, although not as egregious, were nonetheless still quite bad. For instance, the informed consent didn't include a statement of any additional costs to the subject that might result from the research. Several examples of patients who signed the informed consent days to weeks before they signed the billing agreement were presented. In addition, the Burzynski Clinic didn't keep adequate records of its stocks of antineoplastons and could not account for how much was used by subjects. The number of bags of antineoplastons unaccounted for are truly staggering. One subject had 159 bags unaccounted for. Others ranged from one to 23 bags unaccounted for. Record keeping this sloppy would shut down nearly any clinical trial in and of itself.

The most serious violations of regulations designed to protect human subjects are clearly: (1) the BRI IRB's misuse of the expedited approval process as an excuse to treat any patient Burzynski wanted to treat; (2) failure to keep original records to document baseline tumor measurements and tumor response; and (3) failure to report AEs and SAEs properly. However, there are a whole bunch of other lesser, but still serious, violations, so many that I find it hard to fathom.

The central mystery of the Stanislaw Burzynski saga

As a translational researcher who frequently works with clinical investigators, I just can't figure out how Burzynski keeps getting away with it. Either the FDA is more impotent than I had thought, or Burzynski has some serious pull with some powerful people. If my university received even one report like one of the previous FDA reports about Burzynski, it would be quite possible that all federal research funding to the university for biomedical research would be suspended until the university fixed the problems to the satisfaction of the OHRP and FDA. Yet the FDA has found Burzynski to be deficient in numerous areas of human subjects protection multiple times over the last decade. These latest FDA Form 483 reports tell us nothing new, really, other than that Burzynski's claims of complete responses are very likely nonsense.

If there's one thing I've learned over the years about Brave Maverick Doctors, it's that they often come to believe that the rules don't apply to them. They crave the respectability of science, of course, but they are too impatient or too arrogant to play by the rules of science. Unfortunately, that often includes the rules designed to protect human subjects in clinical trials. We've seen it before with Mark and David Geier, who formed their own IRB stacked with their cronies. We've now seen it with Stanislaw Burzynski, who formed his own IRB. In the world of these Brave Maverick Doctors, the IRB apparently exists not to protect human subjects, but is instead viewed as a formality to funnel patients into whatever they want to do to treat them.

I've said it before, and I'll say it again, though: The central mystery behind Burzynski is how he's gotten away with what he's gotten away with for nearly 37 years. It is the single question about Burzynski whose answer I want to know more than the answer to any other question about him before I shuffle off this mortal coil. Why does the FDA keep investigating him, finding serious violations, and giving him, in essence, a slap on the wrist? Since 2000, he's been investigated multiple times, and he's received FDA warnings for his violation of human subjects regulations. True, this is the first time since the 1990s that the FDA has taken substantive action against him, issuing a partial clinical hold that appears unlikely to be lifted any time soon, if ever. Still, I'm worried. If Burzynski comes up with a response that satisfies the FDA, he could conceivably have his same old bogus trials resurrected yet again. Why doesn't the FDA shut down any clinical trials done by the BRI and Burzynski Clinic permanently? Why doesn't it at least shut down the BRI IRB, which would have the effect of shutting down the Burzynski Clinic because no reputable IRB would ever approve the clinical trials that Burzynski proposes? To get its scientifically dubious clinical trials approved, Burzynski needs an IRB run by an old crony of his from Baylor (Carleton Hazelwood) who just so happens to be the chairman of the board of the BRI, a massive conflict of interest. Any other IRB with so many repeated violations and such a massively obvious conflict of interest would be shut down. Any other research institute with so many violations of FDA regulations would not be allowed to do clinical trials of any kind.

Yet the BRI persists. No matter how many times the FDA investigates it, no matter how many warning letters the FDA sends it, the BRI continues. In the 1990s, a powerful Congressman, Rep. Joe Barton, put serious pressure on the FDA through public hearings, the public dressing down of then-FDA director David Kessler, and who knows what behind-the-scenes pressure tactics to let Burzynski open clinical trials of antineoplastons. As Burzynski's own lawyer put it, those trials were "all an artifice, a vehicle we and the FDA created to legally give the patients Burzynski's treatment." Since the FDA folded in response to Barton's pressure in the 1990s, I haven't heard news of Barton applying pressure to the FDA again over its investigations of Burzynski. True, the Republicans were in the minority during four years of the period since then, but even after they won the House back in 2010 I haven't heard of any political pressure being brought to bear on the FDA. So I wonder: Is the FDA still so cowed from its previous experience that it can't just pull the plug and shut Burzynski down completely?

It boggles the mind.

http://www.usatoday.com/story/news/nation/2013/11/15/stanislaw-burzynski-cancer-controversy/2994561/

Doctor accused of selling false hope to families
A questionable cancer cure
Liz Szabo, Rene Alston, Keith Carter, Karl Gelles, Tory Hargro and Jerry Mosemak, USA TODAY

USA TODAY investigates Houston doctor Stanislaw Burzynski, who has been treating the terminally ill with unconventional treatments for 36 years. While supporters see him as a hero, critics say he exploits the vulnerable.

Liz Szabo, Rene Alston, Keith Carter, Karl Gelles, Tory Hargro and Jerry Mosemak, USA TODAY

USA TODAY investigation finds experts questioning why Houston doctor is allowed to continue to offer his alternative cancer treatment with antineoplastons.

LINDEN, N.J. — On the last day of his life, Josia Cotto's parents gave him a choice.

The 6-year-old boy had been fighting an inoperable brain tumor for 10 months. When his mother, Niasia Cotto, found him in his bed, unresponsive and unable to open his eyes, "we knew there was nothing else that we could do," she said.

An ambulance took Josia to a hospice room at a local hospital. His parents covered him in a soft, blue-and-white blanket, hugged him and held his small hand for the last time.

"We told him the choice was his, whether to keep fighting or be in peace with God," said his mother. "He chose."

Josia's parents would have paid any price to save him.

A Texas doctor, two months, earlier, had given them one: $25,000 upfront, by cash or check.

Clinging to hope, the Linden, N.J., couple took Josia to see Stanislaw Burzynski, a Houston doctor claiming to be able to do what no one else can: cure inoperable pediatric brainstem tumors.

Virtually any other doctor might have recited the same sad statistics: Although doctors can now cure 83% of pediatric cancers in the U.S., there is usually no hope for kids with Josia's tumor. Perhaps 5% survive five years.

A look at a doctor's cancer claims.(Photo: Jerry Mosemak, USA TODAY)

Burzynski — an internist with no board certification or formal training in oncology — has said publicly that he can cure half of the estimated 200 children a year diagnosed with brainstem tumors. The Cottos were told that treatment could cost over $100,000, mostly out of pocket, because insurance plans often refuse to cover Burzynski Clinic treatments.

Burzynski, 70, calls his drugs "antineoplastons" and says he has given them to more than 8,000 patients since 1977.

He originally synthesized these sodium-rich drugs from blood and urine — the urine collected from public parks, bars and penitentiaries. Although they've been made in a lab since 1980, they still carry a distinctive and unpleasant odor. And while the experimental drugs have not been approved by the Food and Drug Administration, Burzynski has described them like the holy grail of cancer therapy: safe, natural and highly effective. He has also prescribed them as a treatment for AIDS, lupus and other conditions.

Some patients are convinced that he saved their lives.

Mary Jo Siegel of Ventura, Calif., says she believes Burzynski cured her lymphoma. James Treadwell from Coronado, Calif., credits Burzynski with curing his brain tumor. Jenny Gettino of Syracuse, N.Y., says Burzynski cured her daughter of an infant brain tumor.
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James Treadwell, of Coronado, Calif., is a proponent of alternative cancer treatments by doctor Stanislaw Burzynski. He was treated for a brain tumor. (Photo: Robert Hanashiro, USA TODAY)

Yet the National Cancer Institute says there is no evidence that Burzynski has cured a single patient, or even helped one live longer. He has not backed up his claims by publishing results from a randomized, controlled trial — considered the gold standard of medical evidence — in a respected, peer-reviewed journal.

And Burzynski's drugs pose a risk of serious harm, including coma, swelling near the brain and death, according to the NCI and informed consent documents that patients sign before beginning treatment. While Burzynski has touted his treatments as an alternative to chemotherapy, a 1999 NCI study found that antineoplastons can cause many of the same side effects as conventional chemo: nausea, vomiting, headaches, muscle pain, confusion and seizures.

Many blame the system for failing to protect patients.

"He's a snake oil salesman," says pediatric oncologist Peter Adamson, a professor of pediatrics and pharmacology at Children's Hospital of Philadelphia. "This has gone on for so many years, it's really unbelievable."

For 36 years, critics say, Burzynski has been selling false hope to desperate families at the most vulnerable time of their lives.

"When you want so hard to believe something, you end up listening to your heart and not your head," says Lisa Merritt of Armuchee, Ga., whose husband, Wayne, was treated briefly by Burzynski in 2009. The couple say that Burzynski misled them about the type of treatment that would be offered, as well as the cost. Burzynski, she says, is "the worst kind of predator."

There are many reasons why Burzynski has been able to stay in business so long. He has benefited from state laws that limit the Texas Medical Board's authority to remove his license, as well as the ability of terminally ill patients to collect damages. His devoted followers are willing to fight for him. He also has exploited the public's growing fascination with alternative medicine and suspicion of the medical establishment.

At times, Burzynski also has had an especially influential ally: the Food and Drug Administration.

FDA CHANGES COURSE

Although "there were some stormy relations with the FDA" in the past, Burzynski said in an interview, "now, we have a productive relationship."

For years, the FDA tried to prevent Burzynski from prescribing unapproved drugs.

In 1995, a federal grand jury indicted Burzynski on 75 felony charges, including criminal contempt, mail fraud and violations of the Food, Drug and Cosmetic Act. As a condition of his bail, a judge ordered him to stop prescribing antineoplastons. For a time, it looked as if Burzynski might never treat another patient.

Dozens of Burzynski's patients flocked to Washington to defend him, arguing that taking away antineoplastons was akin to a death sentence. Siegel, who credits Burzynski with curing her lymphoma 22 years ago, has testified on his behalf five times — once at his criminal trial and four times at hearings on Capitol Hill.

Facing both a political and public relations firestorm, the FDA in 1996 abruptly changed course. It offered to allow Burzynski to continue treating patients, but only through an official trial.

"With one stroke of the pen, the FDA made legal what it had previously said was illegal," says Burzynski's attorney, Richard Jaffe.

Yet even Jaffe has acknowledged that the trial — now in its 17th year — was more about politics than science. In his 2008 memoirs, Galileo's Lawyer, Jaffe called it "a joke."

"It was all an artifice, a vehicle we and the FDA created to legally give the patients Burzynski's treatment," Jaffe said.

"With political help, you can get the FDA to say yes," says Siegel, 63.

The indictments led to two trials. In 1997, one of Burzynski's criminal trials ended in a hung jury; the other, an acquittal.

Today, the FDA refuses to comment on Burzynski.

NO NEW DRUG APPLICATION

Even his staunchest supporters wonder why Burzynski's drugs are nowhere close to receiving FDA approval.

"He's curing cancer," says Siegel, who co-founded the Burzynski Patient Group to spread the word about his therapies. "So why, why won't the FDA approve it?"

Like many of Burzynski's supporters, Siegel suspects that the medical community and drug industry are aligned against him.

"Why does a doctor who can produce such extraordinary results continue to be attacked today?" Siegel asks. "The reason is because Dr. Burzynski and his patented discovery pose the greatest threat to an entrenched medical monopoly."

In fact, the FDA hasn't had a chance to approve Burzynski's drugs. He has never officially asked.

Although Burzynski said he has completed 14 intermediate-phase studies, he has yet to file a new drug application, the final step toward getting a drug approved.

That hasn't stopped Burzynski from using his relationship with the FDA to recruit patients.

Stacey Huntington says she took her daughter to see Burzynski last year partly because the FDA's oversight made his therapies seem safer and more promising. "My fear took us to Houston, and the hope he gave us made us proceed," says Huntington, of Chehalis, Wash.

In an interview, Burzynski said developing new drugs is complex and takes time.

Yet the FDA has approved 108 cancer drugs since Burzynski began his trial.

Cure rates for one type of pediatric brain tumor — medulloblastoma — are now 85%, according to St. Jude Children's Research Hospital in Memphis. Doctors can cure 95% of kids with Hodgkin lymphoma (a cancer of the lymph system), acute lymphoblastic leukemia (a blood cancer) and retinoblastoma (an eye tumor).

Fran Visco, president of the National Breast Cancer Coalition, describes the FDA's tolerance of Burzynski as "outrageous."

"They have put people at risk for a long time," says Visco, an attorney and breast cancer survivor. "That's completely unacceptable. How can anyone look at these facts and believe that there is a real clinical trial going on ... rather than just using the FDA and the clinical trial system to make money?"

Burzynski dismisses criticism of his work, referring to his detractors as "hooligans" and "hired assassins."

As for criticism from former patients, Burzynski says, "We see patients from various walks of life. We see great people. We see crooks. We have prostitutes. We have thieves. We have mafia bosses. We have Secret Service agents. Many people are coming to us, OK? Not all of them are the greatest people in the world. And many of them would like to get money from us. They pretend they got sick and they would like to extort money from us."

History will vindicate him, Burzynski says, just as it has vindicated other persecuted medical "pioneers," such as Louis Pasteur. In the future, Burzynski says, everyone will use his therapies, and the cancer treatments used today — such as surgery, chemotherapy and radiation — will be regarded as barbaric. "There will be a time when people will see the light," he says, "and our treatments will be used by everyone."

FDA IMPOSES NEW RESTRICTIONS

The FDA's patience with Burzynski apparently wore out after Josia died.

In a report sent to the FDA after the boy's death, Burzynski's staff acknowledged that his last blood sample, taken the day he passed away,showed a blood sodium level of 205 millimoles per liter, a level that is typically fatal. Burzynski's staff blamed that reading on a "false laboratory report based on a contaminated sample."

Yet hypernatremia is one of antineoplastons' most common side effects, known to doctors for two decades.

One of Burzynski's own informed consent documents — the form that patients sign before they begin treatment — put the risk at 21%.

On July 30, 2012 — six weeks after Josia's death — the FDA forbade Burzynski from giving antineoplastons to any new children.

Six months later, the FDA expanded its "partial clinical hold," forbidding Burzynski from giving the drugs to new adult patients, according to the Burzynski Research Institute's 2013 filing to the Securities and Exchange Commission. About 10 patients who were already receiving antineoplastons were allowed to continue, to avoid interruption of care.

According to FDA inspections performed after Josia's death, Burzynski has failed to report at least 18 hypernatremia cases.

The FDA publicly announced the restrictions on Burzynski's clinical trial for the first time in September.

According to the FDA, the Burzynski institutional review board — an outside body charged with protecting patients — failed that most basic duty. In a letter announcing the restrictions, the agency said it has "no assurance" that the board was "adequately protecting the rights and welfare of the human subjects."

The FDA based its decision on "objectionable conditions" and a "continuing pattern of deficiencies found during the last three inspections," the letter said.

FDA inspectors also faulted Burzynski personally, as principal investigator of the study, according to inspections conducted from January to March. Copies of these reports were obtained through a Freedom of Information Act request. Addressing Burzynski, the inspectors wrote, "you failed to protect the rights, safety and welfare of subjects under your care."

Inspectors charged Burzynski, as principal investigator, with a variety of other serious offenses, some dating to 2001. Among them:

• Inflating success rates in 67% of cases, by inaccurately reporting how tumors responded to treatment.

• Destroying patients' original records.

• Failing to report "unanticipated problems" to the institutional review board — sometimes for six or seven years.

In the inspections conducted this spring, officials noted four cases from 1998 or 1999 in which patients were hospitalized for serious issues — such as pneumonia, lack of consciousness or bleeding in the skull — that Burzynski researchers failed to report until 2005. The FDA found similar problems in a 2001 inspection, when officials noted that Burzynski failed to report problems such as pneumonia, blood infections and pancreatitis, a life-threatening inflammation of the pancreas.

• Failing to protect patients from overdosing.

Forty-eight patients suffered a total of 102 drug overdoses from 2005 to 2013.

While the overdoses made some of these patients excessively sleepy, one had a seizure and another was hospitalized in intensive care with a breathing tube.

This represents a continuing problem, dating to reports of overdoses in inspections as early as 2001.

Burzynski's review board also repeatedly rubber-stamped his requests to give patients antineoplastons outside of a clinical trial, the FDA's September letter suggests. In some cases, those decisions were made without consulting patients' medical records, or were made not by oncologists, but by a single member of the board, a "water rehabilitation" specialist with no medical training.

Although researchers do sometimes provide experimental drugs outside of clinical trials, exceptions should be rare, with perhaps one or two cases per trial, Adamson says. In Burzynski's case, these "compassionate use" exceptions were common, FDA records show.

Enrolling patients for compassionate use can be lucrative. Although researchers cannot charge for experimental drugs, Burzynski does bill patients for related supplies and services.

In Burzynski's defense, Jaffe notes that inspection reports represent preliminary findings. The FDA has not yet issued final conclusions.

And Burzynski has taken issue with many of the FDA's findings.

In his written response about the FDA's claims that he inflated his success rates, Burzynski said that he "complied with all criteria for evaluation of response and made accurate assessments for tumor response."

As for overdoses, Burzynski said in an interview that his staff works hard to train patients and their families to administer antineoplastons correctly.

None of the overdoses was fatal, he said.

"The amount of medication that these patients receive is not dangerous," Burzynski said. "At worst, they would sleep for a few hours."

Visco, the breast cancer advocate, says she's encouraged to hear that the FDA has put Burzynski's trial on hold.

"It is about time that the FDA stepped in to stop Burzynski from subjecting more patients to harm," she says. "I do not know why it took so long."

BURZYNSKI STILL HAS OPTIONS

The FDA can't put Burzynski out of business. No matter what happens to his trial, Burzynski holds a license to practice medicine in Texas.

So does his son, Gregory Burzynski, a doctor who's helping to carry on his father's business. As vice president of the Burzynski Clinic, his son, 34, works closely with his father and "oversees many operations" of the clinic, according to its website.

These days, doctors at the Burzynski Clinic are looking beyond antineoplastons. They mostly prescribe chemotherapy.

That's a huge shift. During Burzynski's criminal trial in the 1990s, patients who rallied to his defense carried signs reading, "Say No to Chemo."

But the Texas Medical Board, which has repeatedly tried and failed to put Burzynski out of business over the years, still questions Burzynski's care.

The board charged Burzynski in 2010 with violating state medical standards by prescribing legal cancer drugs in "random" and unapproved combinations, with no known benefits but clear harms.

Burzynski got those charges dropped in 2012, by successfully arguing that he didn't sign any of the prescriptions in question.

Burzynski is scheduled to go before the medical board again in January, based on a complaint filed by Stacey Huntington, whose daughter was treated with antineoplastons for a brain tumor. At the meeting, a board panel "will hear the case and make recommendation to the full board about what disciplinary action, if any, is appropriate."

Huntington, who paid Burzynski nearly $34,000 for about six weeks of care, says she's concerned about both billing irregularities and the quality of her daughter's treatment. Her daughter, Abra Hall, 27, developed a life-threatening blood infection called sepsis after leaving the clinic to continue treatment at home. The infection developed in a catheter in Hall's chest, which was used to administer the antineoplastons, Huntington says. One month after developing sepsis, Hall was hospitalized again with a lung infection. Hall also developed serious complications from high doses of steroids, Huntington says.

Huntington says she decided to speak out to prevent other families from being taken advantage of.

"When you get a diagnosis of cancer, you are pretty vulnerable," she says. "I think they take advantage of that."

COTTOS NOT SURE WHAT TO THINK

Niasia and Jose Cotto hold a photo of son Josia in their Linden, N.J., home on Oct. 12. The boy died of a brain tumor.(Photo: Todd Plitt, USA TODAY)

No one told Josia's parents about any of this.

Not Burzynski. Not the FDA.

Jose and Niasia Cotto had no idea that their son's death prompted an investigation by the FDA, until they were contacted by USA TODAY.

The Cottos had long believed that Burzynski could have cured their son if only they had taken Josia to see him first, before giving him radiation and chemotherapy. They had even hoped to launch a non-profit, A Life for Josia Foundation, to help other children with cancer gain access to Burzynski's treatment.

Now, they don't know what to think.

Although more than a year has passed since they lost their son, the Cottos say they see reminders of him everywhere. Niasia, 32, says she feels his presence in simple things, such as the light of a bright star on a dark night.

"He's still with us," says Jose, 33. "I know God had his plan and his purpose for Josia."

Doctor Stanislaw Burzynski makes his way to the federal courthouse for jury selection in his 1997 criminal trial, as supporters demonstrate outside the courthouse Jan. 6, 1997, in Houston. Burzynski pleaded innocent to a 75-count federal indictment that charged him with mail fraud and violating Food and Drug Administration regulations in the use of antineoplastons, experimental substances he created to treat cancer. One of his criminal trials ended in a hung jury. In the other, he was acquitted. David J. Phillip, AP
