

moting flying saucer reality. Even Moseley himself falls into this category! Once in an evening of drunken horseplay, he and friend Gray Barker concocted what has become known as the “Straith Letter”. Using blank letterhead from the U.S. State Department, they created a false official, R. E. Straith, who more or less endorsed the activities of notorious flying saucer contactee George Adamski. The hoax letter made its way to Adamski, who wasted no time in using it to promote himself. The FBI and State Department took a dim view of this and lightly pursued Barker and Moseley as the perpetrators, only to drop the investigation.

The mildly UFO-interested, middle-of-the-road citizen will find the book a very entertaining collection of odd tales from UFO history, a virtual carnival romp through the subject’s weirder side.

The serious UFO researcher and believers in exotic answers to UFOs might find the book an irritant as it engages in exposing the darker side of flying saucer politics. As with any field of endeavor, the activists in UFO research would prefer not having any dirty laundry aired. Unfortunately, because of the problems endemic to pro-flying saucer/alien promotion, the small pile of dirty laundry has become a monumental landfill that threatens to push the relevancy of any UFO research aside altogether. It would be a mistake for ufologists to ignore *Shockingly Close to the Truth*, in that much like a game of chess, one learns more from the mistakes made than from the successes.

A small correction: In the photo section, Moseley describes a photo of a rocket-shaped alleged UFO seen by a Peruvian customs inspector in 1952. It should actually be 1951. This reviewer had found the photo in a Lima newspaper for August 15 of that year.

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The Burzynski Breakthrough, Rev. Ed. (40% New Content with Clinical Trial Statistics), by Thomas D. Elias. Nevada City, California: Lexikos, 2001. 358 pp., \$27.95. ISBN 0-938530-66-6.

Subtitled “The Most Promising Cancer Treatment . . . and the Government’s Attempt to Squelch It”, this book is intended for cancer victims rather than medical scientists. It is well-edited and beautifully written in a tone that is unrelentingly even-tempered despite revelations of the most unimaginable behavior by the United States Food & Drug Administration (FDA) and the National Cancer Institute (NCI) of the National Institutes of Health. To scientists, its most serious flaw is the lack of specific citations for facts. This lack is balanced by the inclusion of a complete list of the clinical trial results for

over 400 patients treated with the antineoplastons discovered and developed by Stanislaw R. Burzynski, MD, PhD, in his clinic in Houston, Texas (pp. 340–345). More than half of the patients benefited from this treatment, which is not startling in itself, until the reader comprehends that nearly all the patients had been considered terminal by mainstream oncologists, and had been damaged by conventional treatments.

Antineoplastons are simple peptides normally found in the human body that signal cells to quit dividing and when to self-destruct. In people with cancer they are not present in a high enough concentrations. Dr. Burzynski identified and synthesized a number of them, and manufactured the best ones as supplements, rather than drugs, since they are identical with the naturally occurring ones. They are usually administered by catheter into a major blood vessel in the chest. A recent development is that some beneficial effects may be obtained from taking capsules of certain antineoplastons or precursors by mouth.

The structure of the book is peculiar, but effective, with 13 individual case studies interspersed within each chapter with the history of antineoplastons and the biography of Stanislaw R. Burzynski.

The case studies are used to provide background on the utter inadequacy and toxicity of conventional cancer treatment. Selection bias may have been inevitable, based on expected reader interest, but the case studies did include a number of patients who died. The case studies are used to contrast conventional and toxic treatments with the non-toxic antineoplastons.

For example, Elias lists the following side-effects of chemotherapy among the 13 case studies: sepsis, pneumonia, impaired vision, vertigo, muscle weakness, constipation, hoarseness, lowered red and white blood cell counts, impaired immune system function, sterility, nausea, kidney damage, hearing loss, diarrhea, headaches, lassitude, hair loss, liver damage, later development of leukemia, stomach cramps, infections, loss of bowel control, as well as nerve, heart and lung damage. Breastfeeding is forbidden because of the toxicity of the drugs. Elias describes the little known effect of chemotherapy on IQ, which can be reduced by 30–40 IQ points in children (p. 199), and is usually not revealed or is dismissed by oncologists. The actual effects of such an IQ drop on the quality of life are well-documented and devastating (Heernstein et al., 1994).

Some of the primary care physicians or oncologists involved in the case studies had the following reactions, according to Elias: (1) In the case of Tori Moreno, Dr. Ramesh Patel of Long Beach Memorial Hospital was alleged to have said that he had never seen a remission in such a case, that the improvement could not have resulted from antineoplaston treatment, and that he was not interested in learning about it (pp. 52–53); (2) In the case of Theresa Kennet, Dr. Paul Volberding (not an oncologist primarily), who founded the world's first AIDS clinic at San Francisco General Hospital, inspected her before and after antineoplaston treatment by means of CT scans and said, "I don't know why it's happening, but I think it's great!" (p. 116); (3)

Crystin Schiff, whose tumors were suppressed by antineoplaston treatment, returned, months after the treatment was stopped, to Dr. Michael Prados of UCSF Medical Center. He said (allegedly “with a little smile,” p. 141), “You’ve obviously got a recurrence”; (4) In the case of Randy Goss, who had recurrent renal-cell carcinoma after surgery and interferon treatment and then underwent antineoplaston treatment, Dr. Satish R. C. Velagapudi, an oncologist with the world-famous Roswell Park Cancer center in Buffalo, NY, is alleged to have said: “You went to Houston, didn’t you?” “I had no choice”, Randy replied. “Well, you have no cancer anymore . . .” Then Dr. Velagapudi turned abruptly on his heel and walked from the examining room, not waiting to hear any details, according to Elias (p. 161); (5) In the case of Mary Jo Siegel, who had widespread lymphoma, Dr. Peter Rosen of the USC Norris Cancer Center in East Los Angeles was alleged to have told her that Burzynski was a fraud and a charlatan, a scoundrel with a credit card machine who overcharged and shared no information. While Dr. Rosen seemed happy when Siegel went into remission after antineoplaston treatment, he would not admit even the possibility that such treatment could have been responsible (pp. 247–248).

Routine recommendations for chemotherapy are also made by oncologists outside the USA. Here is an example corroborating the ones given by Elias in the case studies above to show that Elias’s case-studies were representative: Michael Gearin-Tosh, a tutor at St. Catherine’s College, Oxford, UK, was diagnosed with multiple myeloma (cancer of the bone marrow) and told that if he did not begin chemotherapy immediately, he would be dead in less than a year. The recommended treatment, four months of chemotherapy, was at odds with the opinion he was given that there was no cure for his cancer. Refuse our treatment, he was warned, and you will be dead in less than a year. “With treatment, how much longer?” he asked. “Nobody knows, but, um, longer.” A second specialist confirmed the original prognosis, but Gearin-Tosh rejected the proposed treatment after a former Oxford pupil consulted a cancer statistician who warned, “If your friend touches chemotherapy, he’s a goner.” After an alternative treatment of Gearin-Tosh’s own choosing, he was still alive eight years later (Gearin-Tosh, 2002).

So far as the side-effects of radiation go, Elias presented a number of them in the case studies, as well as a comparison of radiation doses: A typical radiation treatment is 6,000 rads, as much as people received who were less than one mile from the atomic bomb explosion in Hiroshima (p. 137). In fact, both cancer and non-cancer deaths in humans skyrocket above a dose of 155 rads (Shimizu et al., 1992). The typical treatment is followed by any number of additional ones. The justification for such treatments escapes this reviewer, and author Elias does not give one.

Elias actually wrote the case studies with great compassion, and used them to show the contrast between the effects of conventional and antineoplaston treatments. All of the mainstream physicians involved in the cases were con-

tacted for confirmation of what their patients said; very few would respond to Elias in any manner, in contrast to Burzynski, who spent days with him. Nevertheless, the lack of general overview and the absence of “cure” rates from either conventional or antineoplaston treatments is bothersome. Here is some background from other sources, whose inclusion, in my opinion, might have improved the book:

The emotional toll of cancer is incalculable. Most cancer victims suffer the agony of a painful, disabling, and socially stigmatized disease . . . They live in fear of the disease—an unknown terror—and death. They live in fear of the orthodox treatments: surgery, irradiation, and poisonous chemotherapy. Men fear castration, physical or chemical. Women fear the loss of their sexuality, their breasts, and their womb . . . Claims of increased “cure” (actually 5-year survival) rates have been exaggerated by a change in the manner of data manipulation by the National Cancer Institute—the use of *relative* survival rates. There has been no significant change in 5-year survival rates in whites for most types of internal cancers in 40 years after age-adjustment and elimination of lead-time bias (Moss, 1999).

The facts are that between 1974–6 and 1981–7, the 5-year survival rates [of patients treated conventionally with surgery, radiation and chemotherapy] rose only 2%, from 49% to 51%, and for cancers of the liver, lung, pancreas, bone and breast, 5-year survival rates are about the same as they were in 1965. Claims of improved 5-year survival rates are flawed by “lead-time bias”; that is confounded by the reality of earlier detection combined with essentially worthless treatments (Diamond et al., 1997).

The war against cancer is far from over. Observed changes in age-adjusted mortality due to cancer, 6% higher in 1994 than in 1970, and down 1% from 1991–1994, reflect changing incidence (i.e. lung cancer) or earlier detection. The effect of new conventional treatments on cancer has been disappointing. (Bailar et al., 1997).

The biographical and historical data in the book have support for accuracy (Carter, 1992; Diamond et al., 1997; Haley, 2000; Kauffman, 2002), and Elias included developments into the year 2000. For the period before 1995, the most complete and technical description of antineoplaston treatment and the concomitant attacks on Burzynski this reviewer has found are those of Ralph W. Moss (Moss, 1999).

Elias began the biographical part of the book with a description of Burzynski’s criminal trial in Houston in January, 1997, on 75 charges of contempt of court, interstate commerce in drugs not approved by the FDA, and insurance fraud. This resulted in a hung jury (6–6). A second trial resulted in complete acquittal after just 3 hours of jury deliberation. Patients campaigned in every possible manner for their hero, and not even a single relative of deceased patients gave a negative word of testimony about Dr. Burzynski.

Then, after describing the trials, Elias presents Burzynski’s entire career in a long flashback, including his education, his escape from Communist Poland’s Army to the USA, his association with Baylor College of Medicine in Houston, his decision, after non-renewal of an NCI Grant at Baylor, to set up his own clinic in Houston, and his lawful treatment of the first patients in 1977. The process of branding Burzynski an outcast began in 1978 when the Harris County Medical Society’s Board of Ethics summoned Burzynski for

questioning on dispensing an unapproved medication. After the Board ordered Burzynski not to give any more interviews to the press, with which Burzynski complied for two years, this matter was dropped.

A first and constructive FDA visit led to better conditions in the antineoplaston factory. Identification of individual components of antineoplastons led Burzynski to synthesize the most effective ones, a great improvement over isolating them from urine. A visit by representatives of the Canadian FDA led to improvements that led to high marks on later US FDA inspections. But then a visit by two hostile Canadian MDs in 1982 led to a negative report. Nevertheless, responding to another Canadian MD, Burzynski applied for an Investigational New Drug (IND) permit in Canada. Samples of antineoplastons were sent from Canada to the NCI in the US, which put them into the usual test routine with mouse P388 leukemia, despite the fact that Burzynski advised the NCI that antineoplastons are species-specific; naturally there was no positive effect, so this resulted in condemnation of antineoplastons by the NCI. A visit from the US FDA to the plant resulted in helpful hints confirmed by another satisfactory visit. The first surprise blow from the FDA fell in 1983—a temporary restraining order to desist making antineoplastons. This was not granted by the judge in the case, who ordered Burzynski, as a condition of continued operation, to apply for an IND in the US, which he did. Of course, this was not granted for years. The FDA continued to harass Burzynski for the next 13 years, spending over \$15 million on surprise raids, confiscation of private patient records, and indictments, leading eventually to the criminal trials described above. Burzynski's patients deluged their political representatives, the FDA and the NCI with letters, held demonstrations, and helped other patients obtain antineoplastons outside of Texas so Burzynski could avoid an even worse provocation of the FDA. Burzynski had also, over the years, received favorable publicity on TV shows and in some print media.

Aetna Insurance Co. sued Burzynski for insurance fraud, with Saul Green, PhD, as an expert witness, and lost. During this period (1992–4) Green wrote a negative review on antineoplastons in the *Journal of the American Medical Association*, which was refuted by both Burzynski and the medical writer Robert Houston. Ever since, the paper, without the refutations, has been among the favorite arguments of the American Medical Association and the FDA to discourage patients from using antineoplastons. This is covered in detail in a later chapter by Elias. Also in the early 1990s, the NCI, with Dvorit Samid and Elan PLC, obtained the patent rights to the least effective antineoplaston, phenylacetic acid, and in US 5,635,533, the NCI unequivocally stated that antineoplastons can reverse development of certain severe brain tumors, according to Elias.

Attempts to have the NCI direct trials in humans on antineoplastons dragged on for years. According to the book, major cancer centers such as the Mayo Clinic and Sloan-Kettering would renege on the conditions originally

agreed upon, by enrolling patients in far worse condition than initially agreed, by using other than the best antineoplastons, and by using these antineoplastons or others in much lower than agreed-upon dosages. All the trials were seemingly designed to fail, in this reviewer's opinion.

In 1998, three MDs wrote a scathing report on antineoplastons in *The Cancer Letter*, which was answered effectively by Burzynski; again the FDA disseminated copies of the paper without the response as discouraging propaganda. As a condition of bail for his 1997 trial (see above) Burzynski was ordered to back-fit all existing patients into an IND known as the CAN-1 trial; no new patients could be taken unless they had failed two courses each of radiation and chemotherapy; this was to minimize the chance that healing by antineoplastons would take place, in this reviewer's opinion. The IND trial did allow interstate shipping of antineoplastons at last. Dr. Robert J. DeLap, Director of the FDA's Division of Oncology Drug Products, put Burzynski on notice that it did not and would not matter what results were obtained even with patients in an FDA-approved trial—there would be no approval ever for a New Drug Application! This was consistent with a 1982 statement of FDA official Robert Crout: "I never have and never will approve a drug to an individual, but only to a large pharmaceutical firm with unlimited resources" (p. 296). Almost alone among medical pioneers in the USA, Burzynski never caved in to the implied demand to sell out, and Elias wrote that this might have been the major cause of all his legal troubles.

Confirmation of positive effects from antineoplastons from the Netherlands and Japan meant nothing to the FDA. Thanks to Joe Barton, R-Texas, who ran the House Commerce Committee's Subcommittee on Oversight and Investigations, FDA Commissioner David Kessler was called on the carpet four times in the 1990s for questioning, with antineoplastons being the major topic (p. 306), and with predictable results.

However, an orphan drug called Buterate, made by the Ucyclid Pharma Co. of New Jersey, was approved by the FDA in the 1990s for an unrelated disease. Burzynski realized that Buterate was metabolized to certain antineoplastons, and that it could be prescribed for lawful "off-label" use to treat cancer, and this has been done since 2000, providing a capsule form to be taken by mouth; however, this is not as effective as the best of the antineoplastons are when they are administered intravenously.

The Texas Board of Medical Examiners attacked again, ordering Burzynski's medical license suspended; but they struck a deal for \$50,000. Free at last from legal proceedings for the first time in at least 20 years, Burzynski continues to treat patients, now totaling more than 3000 who have been at his clinic.

Elias, among other writers (Carter, 1992; Diamond et al., 1997; Haley, 2000), has made a persuasive case that antineoplastons are both safe and effective. He did this without a single accusation of conspiracy, a single supposed motive, or a single *ad hominem* attack. Elias could have made a stronger case by trying to estimate the increase in lifespan among the small

number of cancer patients who took antineoplastons before they were damaged by conventional treatments. If Elias's conclusions are correct, we may begin to think about the number of person-years of quality life lost to medical intransigence. Supposing that even if only two years of quality life can be gained, on average, by using antineoplastons on the 1,000,000 new annual cancer patients before they are damaged by conventional treatments, then 2,000,000 patient-years of quality life could be gained; over the last 20 years, this could have been 40,000,000 patient years, all at a cost of 5–10% of conventional treatments.

Despite the caveats, this book is highly recommended.

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Disclaimer: Any recommendations herein are based on studies published in peer-reviewed scientific journals. I am not an M.D. and cannot engage in the practice of medicine. My degrees are as follows: B.S. in Chemistry from the Philadelphia College of Pharmacy and Science and a Ph.D. in Organic Chemistry from the Massachusetts Institute of Technology. My experience includes about 10 years of exploratory drug development at the former, now called the University of the Sciences in Philadelphia, and 4 years at the Massachusetts

College of Pharmacy, where the major effort was on synthesis of potential anti-cancer drugs under contract with the National Cancer Institute (NCI). I also wrote the chapter on Cancer Chemotherapy in the 2nd and 3rd editions of W. O. Foye, Ed., *Principles of Medicinal Chemistry*; this also appeared as Kauffman, J. M., & Foye, W. O. (1979). The nature and treatment of cancer. *The Apothecary*, 91, May/June 7; and Kauffman, J. M., & Foye, W. O. (1979). Antineoplastic drugs. *The Apothecary*, 91, July/August 7. Later I served as consultant to the Franklin Research Center in Philadelphia, PA, partially in connection with their contract with the NCI to develop anticancer drugs.

Science and Human Transformation by William A. Tiller, PhD. Walnut Creek, California: Pavior Publishing, 1997. 299 pp.

Science and Human Transformation is largely a compilation of the last 30 years of research of Dr. Tiller. It contains an enormous variety of interesting material touching on aspects of subtle energy from qigong to homeopathy to auras. He not only provides a great number of theoretical descriptions of how these phenomena fit together in the conventional scientific framework, but also includes a significant amount of experimental results to support his theories. His book aims to take a leap forward in defining a new paradigm of how these phenomena operate, and it appears to have done just that.

He starts out discussing the inadequacy of the current scientific paradigm in explaining subtle energy phenomena, discussing electromagnetic radiation as a mechanism for the interaction of the human body with subtle energies. He then goes on to describe a device to measure human intention using a gas discharge system, providing both a great amount of detail regarding how the device is constructed as well as experimental results. Dr. Tiller goes on to develop a theoretical model for how subtle energies interact with electromagnetic fields through the magnetic vector potential. If this sounds complicated, it's because it is. As is characteristic of the book, about 80% of the material can be consumed by a reader with a small or intermediate amount of physics background, but the other 20% requires a fair amount of graduate study to fully understand.

The author goes on to give an introduction to conventional Grand Unified Theory, a section that is more easily understood if the reader has a good base in physics. He then derives and explains his own version of such a theory—what he calls his “Level One” theory. This theory describes a 10-dimensional reality that contains our 3-dimensional world and describes how the different N-dimensional planes interact with each other, using the notion of a hologram as a basis. Dr. Tiller includes the etheric, mental and astral planes, as discussed in many different philosophies, and posits the existence of magnetic monopoles and a new particle, the deltron, as the particle that interacts with the physical plane and the other dimensions. The author goes on to show how