

the watchword in Abraham Lincoln's time, as laid out by his economic advisor Henry C. Carey and others, and it built the greatest industrial economy the world had ever seen. The basic idea is that the brainpower of its citizens is a country's greatest resource, and so the nation must have adequate wages, housing, health care, and education to ensure that it makes the most of this resource. Given the opportunity, man's mind, advancing science and technology, can make *infinite* progress.

This American System was founded and developed in direct opposition to the British System of Adam Smith and Thomas Malthus, which treated human beings as cattle, and colonies as places to loot.

In the 20th Century, President Franklin D. Roosevelt renewed the spirit of the American System. Roosevelt's Tennessee Valley Authority for example, took the most backward and poverty-stricken area of the nation, and pulled it into the 20th Century, in a model for development admired around the world. FDR's New Deal programs put people to work, gave them hope and sustenance, and built the United States into an industrial giant—in just a few years, not decades. We are still liv-

ing off the shards of that infrastructure, 70 years later.

We can become a great nation once again, by removing the "cost-benefit" straitjacket of the small-minded accountant and thinking big; thinking not of overnight "profit," but of the immense benefits to society 25 and 50 years forward of investment today in infrastructure. Given low interest credit, the state and local governments, utilities, and other productive companies can begin with confidence to build the power and transportation projects that the nation (and the world) needs.

The Science Driver

The driver of a healthy economy has to be science and technology, mission-oriented projects that will capture the imagination of the nation and develop the talents of the younger generations:

- We need a robust space program, looking to colonization of the Moon, Mars, and beyond.
- We need a crash program to develop fusion power and other forms of advanced energy, including the anomalous nuclear effects implied by the phenomenon of cold fusion. We desperately need the fusion torch, to replace the current labor-

intensive nature-destroying form of mining, and to turn ordinary garbage into its constituent elements as new resources.

- We need to create the isotope economy of the future, which will enrich us by opening up the entire Periodic Table of the Elements for mankind's use.

- Overall, we need to push forward the frontiers of biology, medicine, and other disciplines, by returning to the principles of classical science and classical education, abandoning Newtonianism, and creating a nation of thinking beings capable of making full use of their creativity.

Nuclear advocates don't need to be convinced of the need to go nuclear, but they do need to change their way of thinking about the economy. Nuclear won't happen unless we get out of the accountant's balanced-budget approach, and go with the New Bretton Woods as LaRouche has proposed it. Wall Street's "bottom line" prescriptions and high interest rates, after all, are what killed nuclear power in the United States in the 1970s. Why follow the same failed charlatans today, when it is all too evident that these Wall Street geniuses succeeded only in driving our economy into collapse?



Wind Power: 'Whump, Whump, Whump'

To the Editor:

A few years back, I commuted from Oakland, California, thru Altamont Pass on my way to work at Lawrence Livermore Laboratory. Windmills were set up in the hills near the pass. My God, were they noisy. Whump, Whump, Whump, day and night. People nearby had to leave their homes. It was terrible to be stuck hearing that sound. I appreciate your article ["Windmills for Suckers: Pickens' Genocidal Plan," by Gregory Murphy, www.21stcenturysciencetech.com/Articles%202008/Windmills.pdf], but I think you should add this fact to your arsenal.

Also I remember the \$5,000.00 cost of the bearings for each site.

Using 200,000 acres, 2,000 windmills, and a square site matrix, I came up with over 2,000 feet between sites. This seems like an incredibly high spacing distance. Maybe land-grab spacing distance.

Pickens can shove his wind power program you know where.

Tom Pickett



We Need the Benefits of Medical Radioisotopes!

To the Editor:

In recent weeks, I've read several articles which have been published in *21st Century Science & Technology* magazine concerning the benefits of radioisotopes, especially in the areas of preventive medicine and disease treatment.

While radioisotopes may be able to treat various degenerative diseases, particularly those diseases which afflict the now-aging "Baby Boomers," there are a couple of questions which have been on my mind for some time...

Even if the Boomers were able to overcome their knee-jerk reaction against anything which has to do with nuclear energy and demand that they be treated with radioisotopes, there are few medical professionals who are qualified to use radio-isotope based nuclear medicine, so my first question is how would medical professionals be adequately trained to use radioisotopes in treating various dis-

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had about 10 times more ionizing radiation when life began, about 3.9 billion years ago¹⁶ than it has now.¹⁷ Activated electrons would migrate to form more stable (lower energy) compounds. About 3.7 billion years ago, low-energy radiation (light) became a source of activated electrons to utilize water in photosynthesis. As shown by stromatolite fossils, which are dated at 3.6 billion years ago,¹⁶ photosynthesis evolved to utilize low-energy photons. These reactions continue on the Earth's surface while ionizing radiation fuels metabolism underground.

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T.D. Luckey. The author became an honorary Samurai in 2003, for bringing knowledge of radiation health to Japan.

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Letters

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eases, especially in those Boomers and others whose medical conditions are "too far advanced" for them to be treated successfully?

Also, when it comes to treatment with radioisotopes, there are many insurance companies which claim that this treatment is "experimental" and refuse to cover it as part of a health insurance plan, which may lead to a "rationing" of care with this type of treatment, where only the young who have a better possibility of survival will be treated with radioisotopes, while aging Boomers are denied this type of medical care because the insurance companies believe that treating an aging Boomer is "too risky," possesses no real "cost-benefit," and is not worth the extra expense.

In light of this, my second question is what would have to be done in order to convince medical professionals and the insurance companies—including Medicare and Medicaid—that nuclear medicine is a valuable resource and that using isotopes as part of medical treatment is actually more cost-effective and safer than feeding patients massive amounts of drugs which can compromise their immune system or do serious harm to their bodies?

I'm eagerly looking forward to the answers to these questions, because they've been on my mind for quite some time.

Stephanie Fryar

The Editor Replies

Your questions are good, and should be answered! We'll attempt a brief response here, and will pursue fuller answers from some of the scientists working in the field.

We have an article in preparation on medical isotopes, and in particular on the fact that despite several government studies saying that the United States should produce medical isotopes domestically, the government has shut down existing programs and has not funded new ones. So, we still must import 90 percent of the medical isotopes used.

There are some areas where treatment of medical isotopes has made it into the mainstream here: breast cancer and prostate cancer. But you are right: The



Pacific Northwest National Laboratory

Tiny radioactive seeds of cesium-131, which are used in treating prostate cancer. The X-ray emitting seeds are implanted near or in a tumor, where the seeds kill the cancer cells without serious side effects.

United States does not routinely use targeted radiotherapies. These new treatments are used much more widely in Europe.

Also, although it is known (from research in Japan) that for lymphoma patients, low-level whole-body irradiation prior to targeted higher-level radiation to the tumor site greatly enhances successful recovery and lifespan, there is nowhere in the United States that you can have this treatment. When I convinced a leading oncologist who heads a cancer treatment center at a major hospital to try this for one of my family members, the doctor pulled out at the last moment, under peer pressure.

Diagnostic procedures with radioisotopes are routine, and there are many technologists and doctors qualified to use them. So, there already exists a group of people who could be "trained" to use isotopes with treatment. The issue here with diagnostic procedures is that the more advanced scans that use radioisotopes, like PET, are expensive. Insurance companies don't want to pay for them, and there is already debate in the medical community about whether it's "worth" it to detect a cancer early and treat it.

The problem has to be approached both from above and below. There has to be a cultural shift in the medical profession to look at these life-saving technologies as better alternatives to blasting people with chemotherapy. There have to be many more protocols and trials of these technologies, and learning from cancer treatment in other countries where it is clear that some isotopic thera-

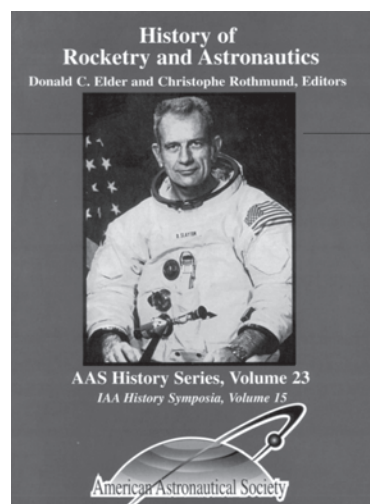
pies work and further trials are not necessary.

And from "below," patients have to start demanding better treatment. In many cases, the targeted radioisotope treatments are less expensive or no more expensive than the more traditional treatments, which should help with the insurance issue. The expense is in procuring the isotopes, which are often short-lived, so of course if we produce them domestically this will lessen the cost of transportation. And new methods of isotope production are being demonstrated, which can be located in facilities near hospitals and medical centers.

Overall, the attitude toward radiation has to change. Not an easy task when you have an anti-scientific population. The group Radiation, Science & Health, headed by Jim Muckerheide, has been working on changing the linear no-threshold lie within the nuclear community and all the relevant government agencies. But the idea that the only good radiation is zero radiation is very entrenched. One of the medical professionals, an oncologist, who was working at the Nuclear Regulatory Commission as an emeritus professor, was forced out because his views on the benefits of low-level radiation angered a couple of the commissioners, who toed the LNT (Linear No-Threshold) line.

"Alternative medicine" now is a big business, especially with the Boomer population concerned with aging. But radiation now plays no part in this field. Yet, the research conducted in Japan showed that low-level radiation was beneficial against many diseases of aging, including diabetes. And the treatment is definitely cost-effective.

Some of the *21st Century* articles on this subject include: "Interview with Sadao Hattori: Cancer Suppression and Rejuvenation Using Low-dose Radiation," Summer 1997; "It's Time to Tell the Truth About the Health Benefits of Low-Dose Radiation," by James Muckerheide, Summer 2000; "How Radiation Saves Lives," by Jim Muckerheide, Winter 2004-2005; "The Significant Health Benefits Of Nuclear Radiation," by Jerry M. Cuttler, D. Sc., Fall 2000; "Low Dose Radiation Cures Gangrene Infections," by Jerry M. Cuttler, Spring-Summer 2007; and "Medical Isotopes in the 21st Century," by Dr. Robert E. Schenter, Winter 2007-2008.



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