



Arthur Furst, Ph.D., Sc.D., D.A.T.S.

Dr. Arthur Furst, Toxicologist and Distinguished University Professor Emeritus at the University of San Francisco, is the Senior Member of the Neo-Life/Golden Products Scientific Advisory Board.

Dr. Furst received his A.B. and M.A. in Chemistry and Math from the University of California, Los Angeles, his Ph.D. in Chemistry from Stanford University and his Doctor of Science (Sc.D.) from the University of San Francisco, a degree awarded for his pioneering work in toxicology. Having served in several different professional capacities at Stanford, the University of San Francisco, and the University of California, Berkeley, Dr. Furst retired from academia in 1980. Dr. Furst was recently reconfirmed as a Diplomat of the Academy of Toxicological Sciences (D.A.T.S.), a distinction held by fewer than 100 scientists nationwide.

Dr. Furst is internationally recognized in academic circles for his scientific achievements in the fields of toxicology and cancer research. Early in his career, Dr. Furst made two discoveries that have been applied and practiced so extensively that today they are considered standard procedure by nearly all physicians who treat cancer. In 1952, Dr. Furst, then an Associate Professor in the Medical School Pharmacology Department at Stanford University, developed the first oral chemotherapy treatment. His second achievement was the discovery that cancer cells become resistant to cancer chemotherapy agents, much like bacteria becomes resistant to antibiotics, which led to the practice of treating cancer patients with multiple anticancer agents.

SAB PROFILE

His extensive research with cancer and cancer treatments led him to the study of heavy metal carcinogenesis and toxicology. His notable discoveries in this field firmly established him as the world's foremost authority on toxicology. Among his most recent contributions are revolutionary alternatives to animal testing; including the determination that the common earthworm is a viable substitute for traditional laboratory animals many in toxicity studies, which translates into sizable savings of research funds — thereby inviting further research — and provides a more humane testing approach. Dr. Furst is also studying the use of yeasts as experimental models for animal toxicology testing.

Of the many honors Dr. Furst has accumulated, the most recent is the 1992 UCLA Alumni Award for Excellence in Professional Achievement. He is a member of 15 scientific societies and Fellow of five societies. He has authored over 250 publications in the fields of cancer research, organic synthesis, psychopharmacology, and toxicology. His biography is listed in *Who's Who in the West*, *Who's Who in America*, and *Who's Who in the World*.

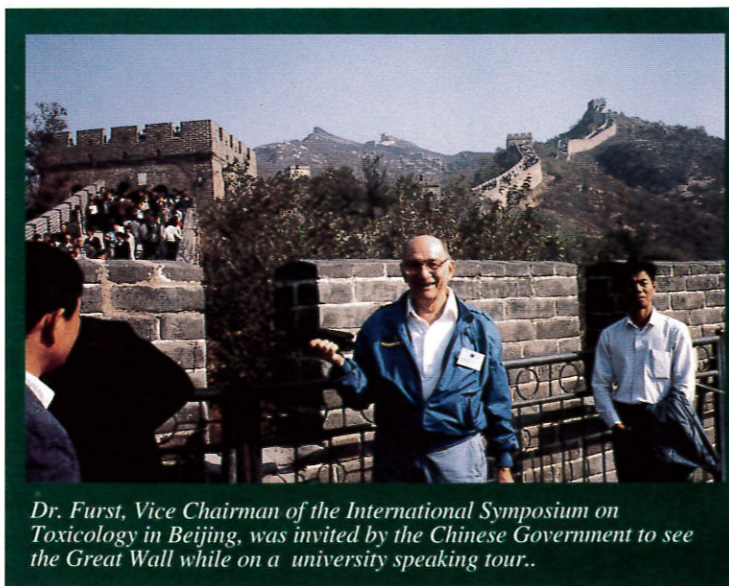
Since 1981, he has been a full time consultant in toxicology and chemistry to various industries and government agencies. He lectures at a number of universities throughout the world, and speaks at many worldwide health conferences.

For many years, Dr. Furst's research had shown that carcinogens in the diet could cause cancer, and that certain nutrients could protect individuals from dietary and environmental carcinogens. This cancer-nutrition link prompted him to join the Neo-Life Company in 1978. He was attracted to Neo-Life because of the company's product philosophy, commitment to quality, and

the desire he saw in both the company and distributors to genuinely help people. Dr. Furst has played a key role in the advancement of the Neo-Life/Golden Products Scientific Advisory Board to its current position as leader of the worldwide science and technology arena. Of particular note were his contributions to:

- Neo-Life's exclusive *chelation technology* which bonds natural "free form" amino acids to minerals to help assure maximum absorption and utilization by the body.
- The synergistic protector and detoxifier *Betagard*®, providing nutrients to support the body's defenses against environmental toxins in our air, water, and food.
- The revolutionary *Carotenoid Complex*®, the first and only supplement of its kind to provide the full carotenoid profile of an optimal serving of fruits and vegetables.

As the senior member of the Neo-Life/Golden Products Scientific Advisory Board (SAB), Dr. Furst works with the other members of the SAB to guide the Company's ongoing research projects and keep us all well informed of the latest scientific developments throughout the world. Dr. Furst and the other SAB members keep Neo-Life out in front as a driving force in the supplement industry today!



Dr. Furst, Vice Chairman of the International Symposium on Toxicology in Beijing, was invited by the Chinese Government to see the Great Wall while on a university speaking tour.

What is current research revealing about causes of cancer?

"Scientists now agree that one way cancer is initiated is through repeated or long-term contact with one or more cancer-causing agents called carcinogens. Carcinogens are chemical or physical compounds in our air, water, and food which can cause changes within the structure of a cell and set the stage for cancer. A high fat, low fiber diet is also associated with higher cancer risk. Another area of investigation is exposure to free radical oxygen. This highly unstable, "toxic" form of oxygen can alter cell membranes, attack organs, and destroy vital enzymes, proteins, and fats in body tissues. These changes can also initiate the development of cancer. And most recently, science has identified a possible link between our genetic makeup and increased cancer risk."



How does cancer begin? What is the process?

"There are three stages. First, *initiators*, chemical or physical agents we're exposed to daily in our air, water, and food, initiate an irreversible process that damages the genetic code (DNA). The damaged cells lie dormant unless combined with a *promoter*, which spurs cell replication (stage two). But because the cells have now sustained damage, they replicate with the wrong genetic information, which may lead to cancer formation. Scientists have identified at least two promoters in our diet, the primary promoter is excessive intake of fat, and another is alcohol, although to a lesser degree. The third stage involves *progressors*, non-dietary agents (such as pollutants) we're exposed to that cause cells to replicate more rapidly, and eventually out of control."

What are oncogenes and how do they play a role in cancer risk?

"Scientists have discovered specific genes called *oncogenes* that seem to increase a

person's risk of developing cancer. Each oncogene is paired with a suppressor gene. Promoters appear to deactivate or destroy the suppressor gene, allowing the damaged cell to replicate."

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"Prevention is only now beginning to receive the research attention it deserves."
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What led to the development of Neo-Life Betagard?

"Through my cancer research, I found that chemicals in smog can induce lung cancer, and I realized the tremendous damage that occurs daily in our bodies. I asked myself, 'What am I doing to protect myself against lung cancer? I'm constantly exposed to smog, chemicals, and pesticides!' This is how the Betagard concept originated. Betagard is a synergistic blend of antioxidants and detoxifying nutrients designed to help the body metabolize toxic materials. The formula contains certain members of the B-complex family that participate in detoxification, vitamins C and E, carotenoids, and selenium to strengthen the body's natural defense system and help prevent disease. Because we can't completely avoid dangerous substances, we need to give our bodies a strategy to guard against

the accumulation of harmful toxic substances in the system — the answer is Betagard."

How can people protect themselves from cancer today?

"Prevention is only now beginning to receive the research recognition it deserves. I believe one of the most important ways we can protect our bodies is to eat the right kinds of foods. Unfortunately, the diets consumed by most people don't seem to offer much protection. The latest research indicates that an optimal intake of certain nutrients provides real, measurable protective benefits which reduce our level of risk. This data shows that by supplementing the diet with vital nutrients, the carcinogenic action of various chemicals can be diminished or arrested. Antioxidants, such as vitamins A, C, E, the carotenoid family, and a new group being studied, the polyphenols (also the B family of vitamins, selenium, zinc, magnesium, and calcium), are now known to reduce or neutralize the effects of cancer-causing chemicals."



What role do B vitamins play in detoxifying our bodies?

"The liver is a factory full of enzymes that metabolize food we eat into energy, that rebuild cells, keep body temperature constant, and other regulatory functions. These same enzymes detoxify (chemically modify) pollutants so the body can excrete them. To operate efficiently, enzymes need cofactors, B-vitamins and certain minerals. The ingredients in Betagard are formulated to support the detoxification process in the liver."

"Even though we try to eat right, research is showing that it's next to impossible to achieve the diversity and density of nutrients we need from the foods we're eating. That's why I feel so strongly that we need to supplement our diets. Neo-Life supplements mimic whole foods, keeping nutrient families intact for maximum benefit. I believe that through a healthy diet and Neo-Life supplements, we can achieve optimal nutrition." —ccc—

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"Scientists are now better equipped to offer advice as to what people can do to support their body's daily fight against cancer, which is expected to strike 1 out of 4 people alive today. The answer, of course, includes optimal nutrition."
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