

## Unlock The Science of Anti-Aging

TrueScience Anti-Aging Cream targets the causes of aging, not just the signs of it. Its expert serum, containing the ingredients of Protandim's patented antioxidant therapy, is formulated to deliver extraordinary results.



**Santalum Album Extract, Phellodendron Amurense Bark Extract, Hordeum Distichon Extract:** Provides a high-end moisturizing effect without an oily build up.



**Aloe Barbadensis Leaf Extract:** Improves the ability of the skin to retain moisture.



**Proprietary Blend Glycolipids, Soybean Phtosterols, Sodium Hyaluronate:** Restores a healthy barrier better able to regulate water, decrease trans epidermal water loss and monitor healthy cell functions.



**Camellia Sinensis Extract:** Creates an excellent antioxidant defense against external and internally-induced free radicals.



**Panax Ginseng Root:** Fortifies tissue and provides antioxidant protection.



**Whey Protein, Milk-derived Cytokines:** Reduces the cycle of inflammatory effects that lead to premature aging.



**Tumeric Longa Root:** Protects against environmental free radicals and reduces the cycle of inflammatory effects that lead to premature aging.



**Leucojum Aestivum Bulb:** Slows down aging via dormancy and antioxidation.

## Oxidative Stress And Its Aging Effect

There's nothing like the smell of a new car. You never forget the day you drive your first one off the lot—the engine smoothly purring because the catalytic converter is cleaning up the toxic byproducts, or exhaust, produced by the engine. But eventually your new car ages, the catalytic converter becomes less effective, the exhaust isn't very clean anymore, things begin to rust and the engine suffers wear and tear.

Our cells are like car engines. They have the same combustion process, produce some of the same byproducts and clean up with similar catalytic converters. When we're young our enzymes, our cells' catalytic converters, function well and do a good job cleaning the toxic byproducts our bodies generate living life. But unfortunately, like cars, our bodies don't always function like new. As we age our bodies produce more free radicals and less of the special enzymes that fight free radicals. This leads to oxidative stress.

Oxidative stress represents an imbalance between the production and manifestation of reactive oxygen species and a biological systems' ability to readily detoxify the reactive intermediates and to repair the damage they cause at the cellular level. In other words, although we need oxygen to live, high concentrations of it are actually corrosive and toxic.

We obtain energy by burning fuel with oxygen; that is, by combining digested food with oxygen from the air we breathe. This is a controlled metabolic process that, unfortunately, also generates dangerous byproducts. These include free radicals, electronically unstable atoms or molecules capable of stripping electrons from any other molecules they meet in an effort to achieve stability. In their wake, they create even more unstable molecules that then attack their neighbors in domino-like chain reactions. This causes toxic effects through the production of secondary free radicals that damage all components of the cell, including proteins, lipids and DNA.

While one antioxidant molecule can fight only one or two free radicals before it is depleted, the body's free radical-fighting enzymes can each eliminate up to one million molecules per second, every second, without being used up in the process. The most effective way to fight free radicals is to trigger the body to produce its own free radical-fighting enzymes.

Traditional antioxidant supplements eliminate one free radical for every one antioxidant molecule consumed, however, Protandim, the most potent commercially-available Nrf2 Synergizer™ supplement on the market, acts by a completely different mechanism. It induces cells to produce more of the genetically encoded catalytic defense systems. Every enzyme molecule produced by this approach can eliminate up to one million free radicals per second, every second. Protandim achieves this feat by activating a signaling molecule called Nrf2, the master regulator of the antioxidant response in the molecule that controls the set of genes sometimes referred to as survival genes.

Our bodies already contain the information for how to effectively combat stressful situations, such as oxidative stress and chronic inflammation. That information is stored in our genes. The secret lies in being able to instruct cells regarding the implementation of that information, allowing you to keep your primary vehicle, your body, running well—able to withstand the “rusting” of aging and taking you where you want to go for many years to come.

## A Scientist's Perspective



“My personal ‘take’ on Protandim, and I take it every day so I do think about it every day, is that I like to think of Protandim as playing a key role in cellular fitness,” said Dr. Brooks Hybertson, Ph.D., LifeVantage Scientific Advisory Board. “I jog, and similar to the way exercise contributes to physical fitness, Protandim contributes to overall cellular fitness. For me, that means that when I’m approached by oxidative stress insults, I’m doing what I can to make myself and my body as

prepared as it can be to withstand those insults.”

Dr. Hybertson has an extensive background in scientific research and development and has been the principal investigator on a variety of research pertaining to nutrition, oxidant/antioxidant balance, inflammation, cancer, materials science and drug delivery with support from the National Institutes of Health, the American Lung Association, the Cystic Fibrosis Foundation, the Cancer Research and Prevention Foundation, the American Heart Association and the Department of Energy. He has extensive experience in laboratory research, product development and customer support and has authored or co-authored over 50 scientific publications.

“Thoughtful consumers are drawn to Protandim,” Dr. Hybertson explained. “People should have the right tools in hand to meet their health and wellness objectives and Protandim is one of those tools.”

## The Benefits of Protandim



The biochemical markers of your body’s aging begin to decrease after a few days on Protandim. But just as you can’t sense, or feel, if your cholesterol level is high or low, you may not be able to sense what is immediately happening inside your body with Protandim. However, the benefits Protandim provides begin within days of taking it.

The anti-aging protection Protandim provides accumulates over time. The longer you take Protandim, the more anti-aging protection you sustain. During the time you take Protandim, whether it is months or years, your body is protected from the ravages of free radical damage and oxidative stress. In this way, the problems associated with aging are slowed.

How long does the anti-aging protection Protandim provides last? It only takes missing your Protandim dose for TWO WEEKS, and you’re right back to where you started; your body’s oxidative stress levels will have returned to its pre-Protandim levels.



## The Most Potent Commercially-Available Nrf2 Synergizer™ Supplement On the Market.

Clinically-Proven To Reduce The Markers  
Of Oxidative Stress 40% In 30 Days!

### New Peer-Reviewed Article Involving Protandim Published In *Enzyme Research*

A peer-reviewed review article involving Protandim was recently published in the scientific journal *Enzyme Research*.

Conducted by researchers at Louisiana State University, the review examined the biochemical mechanisms that underlie the ability of Protandim, when ingested, to suppress tumors in mice. (The ability was previously demonstrated by the authors in a study involving a mouse two-stage model of chemically-induced skin cancer.) The review compared Protandim's believed mechanism of action with information derived from similar complementary studies also aimed at the reduction of oxidative stress, linked to many diseases including cancer. Though results of certain animal testing do not translate into similar results for human subjects, this data is very promising in greatly reducing oxidative stress and may provide the same results in humans.

The authors concluded that oxidative stress forms a mechanistic linkage between cell proliferation, inflammation, and apoptosis, suggesting that potent multimodal antioxidant inducers may potentially be utilized with conventional chemotherapeutics. They noted that efforts are currently underway to discover and develop compounds that effectively induce manganese superoxide dismutase (MnSOD) in the hope of incorporating antioxidant-based therapies into current clinical practices. They suggested that the development of various MnSOD inducers to be used during the early-onset of tumorigenesis may represent a plausible approach to suppressing the underlying mechanisms involved in carcinogenesis.

The review, authored by Delira Robbins and Dr. Yunfeng Zhao of the Department of Pharmacology, Louisiana State University at Shreveport, is titled "The Role of Manganese Superoxide Dismutase in Skin Cancer," and is published in the open access online journal *Enzyme Research*. (vol. 2011, Article ID 409295, 7 pages, 2011.)