**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

# FORM 8-K

## CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **January 17, 2006**

**Lifeline Therapeutics, Inc.**
(Exact name of registrant as specified in its charter)

| **Colorado** | **000-30489** | **84-1097796** |
|---|---|---|
| (State or other jurisdiction of incorporation) | (Commission File Number) | (IRS Employer Identification No.) |

6400 South Fiddler's Green Circle, Suite 1970, Englewood, CO 80111
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (720) 488-1711

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

[ ] Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

[ ] Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

[ ] Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

[ ] Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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**Item 7.01 Regulation FD Disclosure**

On January 17, 2006, the Company issued a press release entitled " Human Study Shows Protandim® Provides a Fundamentally New Approach to Antioxidant Therapy." The press release is attached as Exhibit 99.1 hereto.

On January 17, 2006, the Company provided a link on its website to an article in the scientific journal *Free Radical Biology & Medicine* (Jan. 15, 2006) entitled "The induction of human superoxide dismutase and catalase in vivo: A fundamentally new approach to antioxidant therapy." The abstract of the article is attached as Exhibit 99.2 hereto and is reprinted from Free Radical Biology & Medicine, Vol. 40, Nelson et al., "The induction of human superoxide dismutase and catalase in vivo: A fundamentally new approach to antioxidant therapy", pp 341-347, Copyright 2005, with permission from Elsevier.

The Company intends to provide to investors and other third parties from time to time the information provided in Exhibit 99.3 hereto, entitled "Up-regulation of the antioxidant enzymes SOD and catalase in vivo: A new approach to antioxidant therapy."

**Item 9.01 Exhibits**

99.1 Press Release, dated January 17, 2006, entitled "Human Study Shows Protandim® Provides a Fundamentally New Approach to Antioxidant Therapy."

99.2 Abstract, entitled "The induction of human superoxide dismutase and catalase in vivo: A fundamentally new approach to antioxidant therapy."

99.3 Presentation Materials, entitled "Up-regulation of the antioxidant enzymes SOD and catalase in vivo: A new approach to antioxidant therapy."

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: January 17, 2006

LIFELINE THERAPEUTICS, INC.

By: /s/ Gerald J. Houston
Gerald J. Houston
Chief Financial Officer

**LIFELINE THERAPEUTICS**

**Committed to health and wellness... for life℠**

Contact: Mistie Stevens
Fleishman-Hillard Inc.
816-512-2388

# Human Study Shows Protandim® Provides a Fundamentally New Approach to Antioxidant Therapy

*New scientific data demonstrate Protandim® improves the body's natural ability to reduce oxidative stress by increasing activity of antioxidant enzymes*

**DENVER, Colo. (Jan. 17, 2006)** — Lifeline Therapeutics, Inc. (OTCBB: LFLT) announced data from a human study just published in the scientific journal, *Free Radical Biology & Medicine* (Jan. 15, 2006), demonstrated Protandim® was able to reduce oxidative stress in men and women. Oxidative stress results when the balance between oxidants and antioxidant enzymes is upset. Oxidative stress, which many authorities believe is central to the cellular aging process, increases as we age. Furthermore, there are over a thousand scientific research studies indicating that high oxidative stress is associated with various diseases.

Protandim®, a patent-pending dietary supplement product consisting of five naturally occurring plant ingredients, significantly reduced harmful oxidants by inducing the body to produce more of its own antioxidant enzymes. The study measured the levels of TBARS (thiobarbituric acid-reactive substances), harmful substances created when cells are damaged by oxidation, in 29 subjects. People taking Protandim® experienced reduced oxidative stress, as demonstrated by reducing the amount of TBARS circulating in the blood by an average of 40 percent. This reduced oxidative stress occurred as a result of significantly increasing the activity of antioxidant enzymes that naturally help regulate healthy oxidative balance.

"These results represent a whole new approach to antioxidant therapy," said senior study author Joe M. McCord, Ph.D., professor of medicine at the University of Colorado Denver Health Sciences Center. "Our review of the literature has found that studies with traditional antioxidant compounds have failed to eliminate the age-related increase in oxidative stress that we have seen in this study, suggesting that Protandim® may offer a much more efficient way to reduce oxidative stress."

- more -

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**Oxidative stress and its effects in the body**

Oxidants, which include free radicals, are toxic by-products of human cells as they produce energy to perform their specific metabolic functions. Oxidants are neutralized or detoxified by naturally occurring antioxidant enzymes within cells, including superoxide dismutase and catalase (SOD and CAT). Oxidative stress results when there is a disruption in the balance between oxidants and antioxidant enzymes.

One specific measure of oxidative stress is TBARS, harmful products of lipid (fat) oxidation found in the blood. Lower levels of TBARS are seen in healthy and younger individuals. As people age, and in certain diseases, the amount of TBARS circulating in the blood increases, indicating elevated oxidative stress levels.

**Protandim® study results**

In this study, before starting Protandim®, study participants, who ranged in age from 20 to 78, showed a strong age-related increase in TBARS. After 30 days of taking Protandim®, a 40 percent average decrease in TBARS was seen, and the age-related increase was eliminated. By 120 days of supplementation, Protandim® also significantly increased activity of SOD and CAT antioxidant enzymes by 30 percent and 54 percent, respectively.

"These results show not only that specific harmful substances can be decreased by Protandim®, but that oxidative stress can be reduced by a natural process, increasing the body's ability to get rid of the harmful substances by increasing the activity of antioxidant enzymes," said Dr. McCord.

Much more is being learned about the relationship of oxidative stress with the cellular aging process and with certain diseases. A recent review of multiple studies concluded oxidative stress is strongly associated with the cellular aging process.[1] Furthermore, a recent study concluded that TBARS may be a predictor of cardiovascular events in patients with stable coronary artery disease.[2] "As we learn more about the effects of oxidative stress on cellular aging and certain diseases, we can begin to think about new approaches to maintaining low levels of oxidative stress for long-term health," said Rajindar Sohal, Ph.D., professor of molecular pharmacology and toxicology at the University of Southern California, and a researcher in oxidative stress.

- more -

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Stephen Onody, chief executive officer of Lifeline Therapeutics, makers of Protandim®, commented on Lifeline Therapeutics' corporate approach to the science of oxidative stress. "We believe today's consumers of dietary supplements are asking for more scientific data to demonstrate the value of the products they choose. It is our goal to continue supporting research not only to help differentiate Protandim® as a unique approach to antioxidant therapy, but also further define the science behind oxidative stress."

The paper in its entirety will be posted to *www.protandim.com* upon availability.

**References**

[1] Junqueira, V. B.; Barros, S. B.; Chan, S. S.; Rodrigues, L.; Giavarotti, L.; Abud, R. L.; Deucher, G. P. Aging and oxidative stress. Mol. Aspects Med. **25:**5-16; 2004.

[2] Walter, M. F.; Jacob, R. F.; Jeffers, B.; Ghadanfar, M. M.; Preston, G. M.; Buch, J.; Mason, R. P. Serum levels of thiobarbituric acid reactive substances predict cardiovascular events in patients with stable coronary artery disease: a longitudinal analysis of the PREVENT study. J. Am. Coll. Cardiol. **44:**1996-2002; 2004.

**About Joe M. McCord, Ph.D.**

Dr. McCord currently serves as professor of medicine at the University of Colorado Denver Health Sciences Center and also is director of science for Lifeline Therapeutics. In 1969, Dr. McCord, together with Irwin Fridovich, discovered superoxide dismutase (SOD), spawning an avalanche of research. For this work, he and Fridovich were awarded the Elliot Cresson Medal. In 1997, Dr. McCord received a lifetime achievement award from the Oxygen Society for outstanding contributions to the field of free radical biology and medicine. Dr. McCord is president of the International Society of Antioxidants in Nutrition and Health (ISANH), and he serves on the editorial board of the journal *Free Radical Biology & Medicine*. Dr. McCord beneficially owns 1.6 million shares of Lifeline Therapeutics common stock.

**About the Free Radical Biology & Medicine Journal**

*Free Radical Biology & Medicine* is the official journal of the Society for Free Radical Biology and Medicine, and is an affiliate journal of the International Society for Free Radical Research. The peer-reviewed journal is one of the highest impact factor journals in the field and is listed by all the major indexing services, including *Current Contents*, *Index Medicus*, *Science Citation*, *Chemical Abstracts*, and *Current Awareness in Biological Sciences and Toxicology Abstracts*. The journal encompasses chemical, biochemical, genetic, molecular biology, cell biology, cell signaling, physiological, pharmacological, pathological, toxicological, and medical approaches to oxygen and free radical research.

**About Lifeline Therapeutics**

Lifeline Therapeutics, Inc., is a publicly traded company (OTCBB: LFLT) based in Denver, Colo., that markets Protandim®, a patent-pending dietary supplement that increases the body's natural antioxidant protection. Lifeline Therapeutics is committed to helping people achieve health and wellness... for life.

Oxidative stress (cell damage caused by free radicals) occurs as a person ages or is subjected to stresses such as certain illnesses. TBARS are harmful, reactive substances that indicate the level of oxidative stress in the body. New data from a scientific study in men and women show that after 30 days of taking Protandim®, the level of circulating TBARS decreased an average of 40 percent, and the age-related increase in TBARS was eliminated. Protandim® strengthens a person’s defenses against oxidative stress by increasing the body’s natural activity of antioxidant enzymes.

For more information, please visit the Protandim® product Web site at *www.protandim.com*.

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Free Radical Biology & Medicine 40 (2006) 341 - 347

# The induction of human superoxide dismutase and catalase in vivo: A fundamentally new approach to antioxidant therapy

Sally K. Nelson [a,b], Swapan K. Bose [a], Gary K. Grunwald [c], Paul Myhill [d], Joe M. McCord [a,b,d]

[a] *Webb-Waring Institute for Cancer, Aging and Antioxidant Research, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*

[b] *Department of Medicine, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*

[c] *Department of Preventative Medicine and Biometrics, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*

[d] *Lifeline Therapeutics, Denver, CO USA*

Abstract

A composition consisting of extracts of five widely studied medicinal plants (Protandim) was administered to healthy subjects ranging in age from 20 to 78 years. Individual ingredients were selected on the basis of published findings of induction of superoxide dismutase (SOD) and/or catalase in rodents in vivo, combined with evidence of decreasing lipid peroxidation. Each ingredient was present at a dosage sufficiently low as to avoid any accompanying unwanted pharmacological effects. Blood was analyzed before supplementation and after 30 and 120 days of supplementation (675 mg/day). Erythrocytes were assayed for SOD and catalase, and plasma was assayed for lipid peroxidation products as thiobarbituric acid-reacting substances (TBARS), as well as uric acid, C-reactive protein, and cholesterol (total, LDL, and HDL). Before supplementation, TBARS showed a strong age-dependent increase. After 30 days of supplementation, TBARS declined by an average of 40% ($p = 0.0001$) and the age-dependent increase was eliminated. By 120 days, erythrocyte SOD increased by 30% ($p < 0.01$) and catalase by 54% ($p < 0.002$). We conclude that modest induction of the catalytic antioxidants SOD and catalase may be a much more effective approach than supplementation with antioxidants (such as vitamins C and E) that can, at best, stoichiometrically scavenge a very small fraction of total oxidant production.


***Keywords:*** Superoxide dismutase; Catalase; Lipid peroxidation; TBARS; Antioxidant; Protandim; Free radicals

# Up-regulation of the antioxidant enzymes SOD and catalase *in vivo*:

## A new approach to antioxidant therapy

Joe M. McCord, Ph.D.
Lifeline Therapeutics

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## What is *Oxidative Stress*?

Oxidative stress occurs when oxidative balance is upset by increased production of oxidants ($O_2^{\cdot -}$, $H_2O_2$), or by decreased availability of antioxidants.

We normally make about 0.3 mole of $O_2^{\cdot -}$/day, and nearly all is scavenged by our own antioxidant enzymes, the SODs.

"Consumable" antioxidants (e.g., vitamins C and E) neutralize oxidants on a mole-for-mole basis. 1 g of vitamin C per day can neutralize about 0.01 mole of superoxide per day, assuming full absorption and complete reaction prior to excretion.

"Catalytic" antioxidants are the antioxidant enzymes superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPx).

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# Excess oxidants can attack lipids, proteins and nucleic acids

Lipids are the most readily oxidizable class of biomolecules, so oxidative stress is most often monitored by measuring the products of lipid peroxidation (TBARS, isoprostanes).

DNA damage may be measured as 8-OHdG; protein damage may be measured as carbonyl proteins.

Oxidative stress increases with normal aging.

Increased levels of oxidative stress have been found to occur with approximately 200 diseases.

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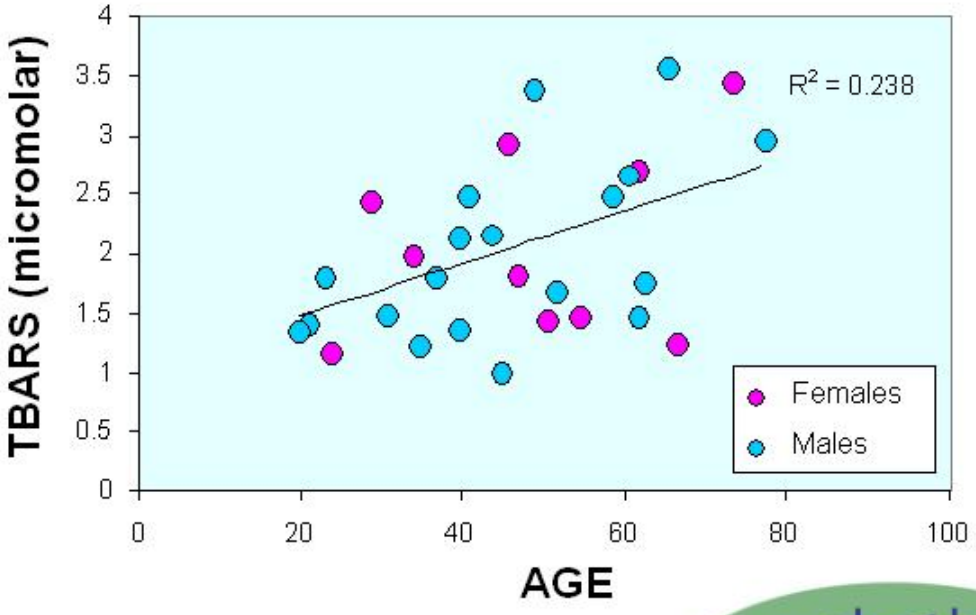
# Plasma TBARS increase with age in normal healthy humans

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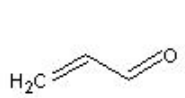
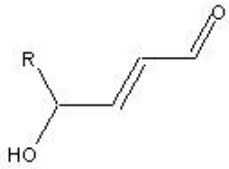
## TBARS generated by elevated oxidative stress




Acrolein

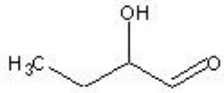

Glyoxal



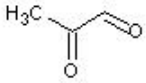

4-Hydroxy-2-alkenals

Lipid derived

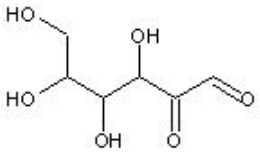

Malondialdehyde



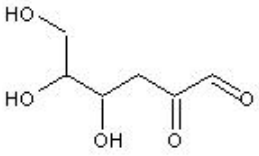

2-Hydroxypropanal




Methylglyoxal




Glucosone

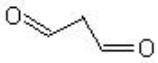



3-Deoxyglucosone

Carbohydrate derived

## Modification of LDL to form oxidized LDL

malondialdehyde




\+ Apolipoprotein B or LDL

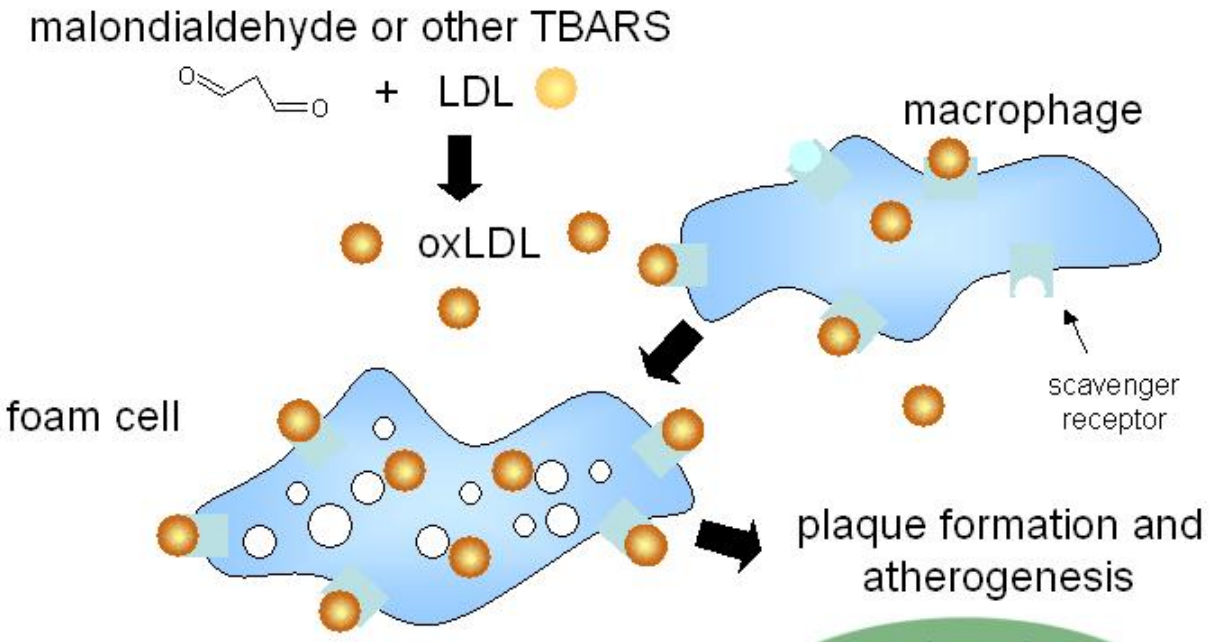
⬇

oxidized LDL (oxLDL)

When >15% of lysine residues of LDL are modified by MDA adducts, the protein is no longer recognized by the LDL receptors in hepatic and peripheral cells, but it is recognized by the scavenger receptor on macrophages

# The Oxidative Modification Hypothesis

## Foam cell formation and atherogenesis

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# The Oxidative Modification Hypothesis of Atherosclerosis: Does It Hold for Humans?

Joseph L. Witztum* and Daniel Steinberg

*This review suggests that oxidation of LDL is an important, if not obligatory, event in atherogenesis. The important clinical corollary is that inhibition of oxidation can inhibit atherosclerosis independent of lowering plasma cholesterol levels.*

(***Trends Cardiovasc Med*** 2001; 11:93–102).



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• Why Haven't the [Antioxidant-Based] Clinical Trials Been More Effective in Humans?

"First, *the antioxidants used in these clinical trials may not be sufficiently potent* or the doses used may be too low.

…These data suggest that in otherwise healthy people *even megadoses of vitamin E are insufficient to decrease basal levels of lipid peroxidation.*"

(***Trends Cardiovasc Med*** 2001; 11:93–102).


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*Journal of the American College of Cardiology.*
2004 Nov 16;44(10):1996-2002.

**Serum levels of thiobarbituric acid reactive substances (TBARS) predict cardiovascular events in patients with stable coronary artery disease: a longitudinal analysis of the PREVENT study.**

**Walter MF, Jacob RF, Jeffers B, Ghadanfar MM, Preston GM, Buch J, Mason RP; PREVENT study.**

Elucida Research, Beverly, Massachusetts, USA.

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# Moderate Antioxidant Supplementation* Has No Effect on Biomarkers of Oxidant Damage in Healthy Men with Low Fruit and Vegetable Intakes

**Robert A. Jacob, Giovanna M. Aiello, Charles B. Stephensen, Jeffrey B. Blumberg,‡ Paul E. Milbury, ‡ Lynn M. Wallock† and Bruce N. Ames†**

*U.S. Department of Agriculture/ARS Western Human Nutrition Research Center, University of California at Davis, Davis, CA 95616-8683, ‡Jean Mayer U.S. Department of Agriculture Human Nutrition Research Center on Aging at Tufts University, Boston, MA 02111 and †Children's Hospital Oakland Research Institute, Oakland, CA 94609*

*J. Nutr.* **133**: 740–743, 2003.

*272 mg ascorbic acid, 31 mg α-tocopherol acetate and 400 μg folic acid



CLINICAL INVESTIGATION

*JAMA (Journal of the American Medical Association).*
*2001;285:1178-1182*

# Effects of Vitamin E on Lipid Peroxidation in Healthy Persons

Emma A. Meagher, MD
Orla P. Barry, PhD
John A. Lawson, BS
Joshua Rokach, PhD
Garret A. FitzGerald, MD

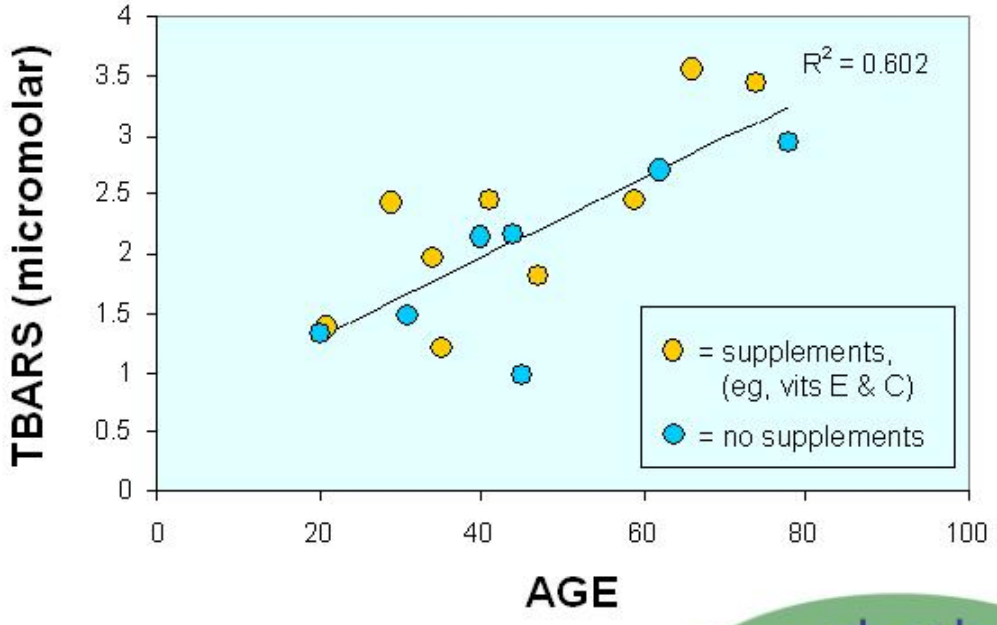
**Context** Oxidative stress may play a role in the development or exacerbation of many common diseases. However, results of prospective controlled trials of the effects of antioxidants such as vitamin E are contradictory.

**Objective** To assess the effects of supplemental vitamin E on lipid peroxidation in vivo in healthy adults.

**Design** Randomized, double-blind, placebo-controlled trial conducted March 1999 to June 2000.

**Results:** No significant effect of vitamin E on levels of either urinary 4-HNE or isoprostane was observed.
**Study Conclusions:** *Our results question the rationale for vitamin E supplementation in healthy individuals.*

## Self-supplementation with vitamins E & C does not affect TBARS in normal healthy humans

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*1016*
*Vol. 12, 1016–1022, October 2003* **Cancer Epidemiology, Biomarkers & Prevention**

# No Effect of 600 Grams Fruit and Vegetables Per Day on Oxidative DNA Damage and Repair in Healthy Nonsmokers[1]

**Peter Møller,[2] Ulla Vogel, Anette Pedersen, Lars O. Dragsted, Brittmarie Sandström,[3] and Steffen Loft**

Institute of Public Health, University of Copenhagen, DK-2200 Copenhagen N, Denmark [P. M., S. L.]; National Institute of Occupational Health, Denmark [U. V.]; Research Department of Human Nutrition, Royal Veterinary and Agricultural University, Frederiksberg, Denmark [A. P., B. S.]; and Institute of Food Safety and Nutrition, Danish Veterinary and Food Administration, Søborg, Denmark [L. O. D.]

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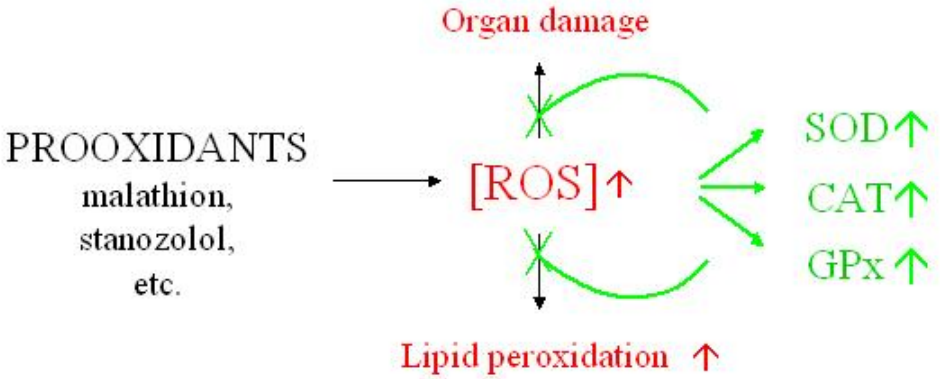
Some compounds induce antioxidant enzymes by producing oxidants




Problem: Even though the antioxidant enzymes are induced, they don't fully compensate and net injury results.

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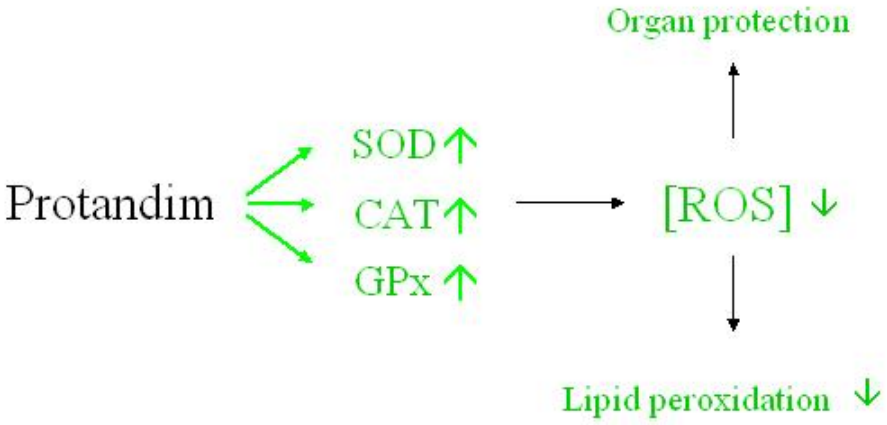
Can the ingredients in Protandim® induce the enzymes without paying the price of toxicity and damage?




The net result would be protection, and oxidative stress would be lowered

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Original Contribution

# The induction of human superoxide dismutase and catalase in vivo: A fundamentally new approach to antioxidant therapy

Sally K. Nelson [a,b], Swapan K. Bose [a], Gary K. Grunwald [c], Paul Myhill [d], Joe M. McCord [a,b,d,*]

[a] *Webb-Waring Institute for Cancer, Aging and Antioxidant Research, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*
[b] *Department of Medicine, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*
[c] *Department of Preventive Medicine and Biometrics, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*
[d] *Lifeline Therapeutics, Denver, CO, USA*

Received 22 June 2005; revised 24 August 2005; accepted 28 August 2005

**Abstract**

A composition consisting of extracts of five widely studied medicinal plants (Protandim) was administered to healthy human subjects ranging in age from 20 to 78 years. Individual ingredients were selected on the basis of published findings of induction of superoxide dismutase (SOD) and/or catalase in rodents in vivo, combined with evidence of decreasing lipid peroxidation. Each ingredient was present at a dosage sufficiently low to avoid any accompanying unwanted pharmacological effects. Blood was analyzed before supplementation and after 30 and 120 days of supplementation (675 mg/day). Erythrocytes were assayed for SOD and catalase, and plasma was assayed for lipid peroxidation products as thiobarbituric acid-reacting substances (TBARS), as well as uric acid, C-reactive protein, and cholesterol (total, LDL, and HDL). Before supplementation, TBARS showed a strong age-dependent increase. After 30 days of supplementation, TBARS declined by an average of 40% ($p = 0.0001$) and the age-dependent increase was eliminated. By 120 days, erythrocyte SOD increased by 30% ($p < 0.01$) and catalase by 54% ($p < 0.002$). We conclude that modest induction of the catalytic antioxidants SOD and catalase may be a much more effective approach than supplementation with antioxidants (such as vitamins C and E) that can, at best, stoichiometrically scavenge a very small fraction of total oxidant production.


***Free Radical Biology and Medicine***, vol 40, No. 2, (2006)

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## Composition of Protandim®

| | |
|---|---|
| Bacopa moniera extract, 45% bacosides | 150 mg |
| Milk Thistle extract, 70-80% Silymarin | 225 mg |
| Ashwagandha powder | 150 mg |
| Green tea, 98% polyphenols, 45% EGCG | 75 mg |
| Turmeric extract, 95% Curcumin | 75 mg |
| Total | 675 mg |

Daily dosage for a 70 kg (154 lbs.) human

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## Human Study Design

29 healthy control subjects were enrolled ranging in age from 20 to 78 years old.

The following parameters were measured at days 0, 30, and 120:

- TBARS as a measure of lipid peroxidation
- Superoxide dismutase (SOD)
- Catalase (CAT)
- C-reactive protein, an inflammatory marker
- Uric acid, an endogenous consumable antioxidant
- Lipid profile (cholesterol, LDL, HDL, TG)

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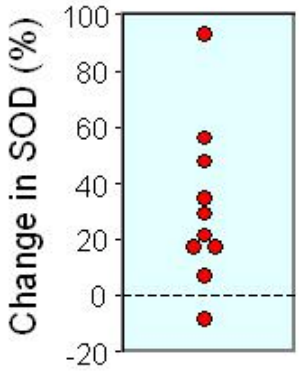
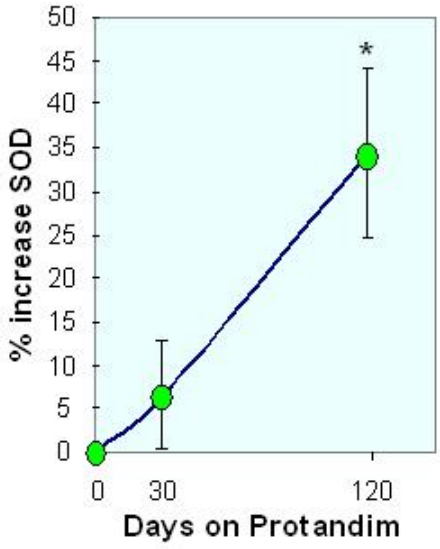
## 30% Elevation of SOD by Protandim®




Average increase in SOD = 30 ± 10% after 120 days of Protandim

*$p < 0.01$, n = 10

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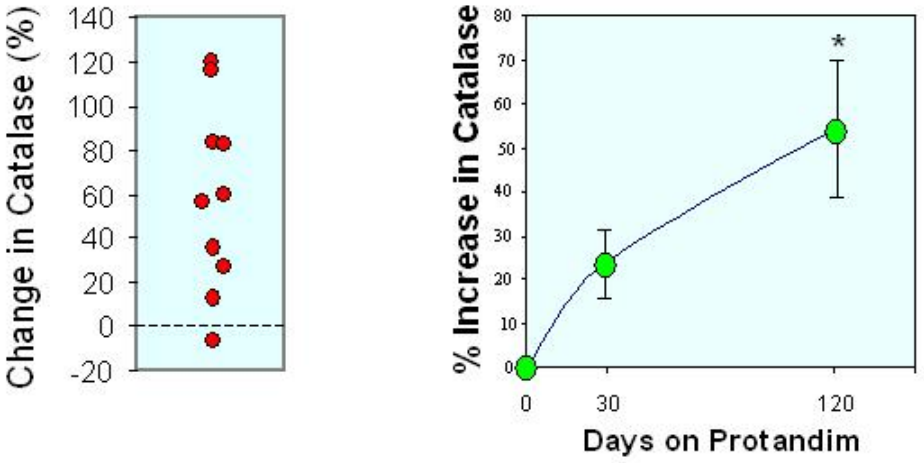
# 54% Elevation of Catalase by Protandim®




Average increase in catalase = 54 ± 15% after 120 days of Protandim
*$p$ = 0.002, n = 10

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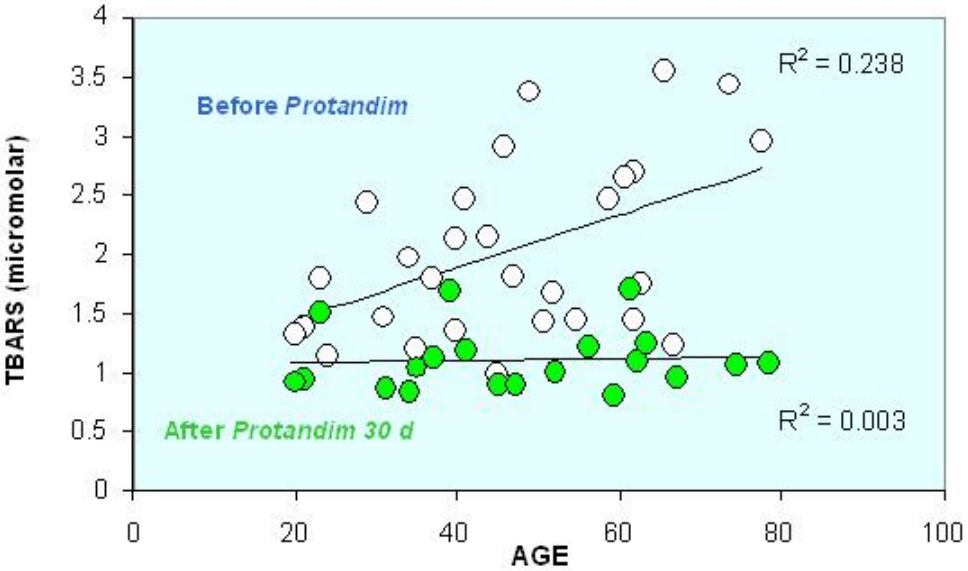
# Inhibition of lipid peroxidation (TBARS) by Protandim®




Normal subjects before supplementation with Protandim showed an age-dependent increase in TBARS. The levels of TBARS dropped an average of 40% ($p < 0.002$) after 30 days of Protandim supplementation (green circles).

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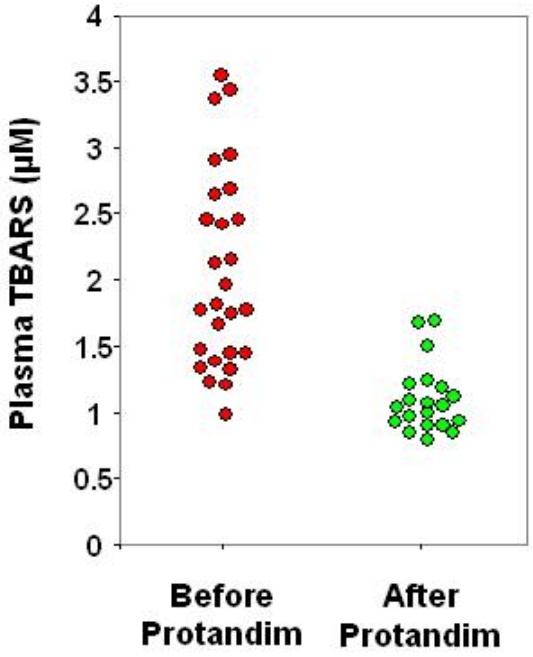
## 40% Average Decrease in TBARS by Protandim®

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## Achieved outcomes:

- Lipid peroxidation (TBARS) was inhibited
- SOD and CAT were elevated
- Possible lowering of C-reactive protein, an inflammatory marker
- Possible sparing of uric acid, a consumable antioxidant
- No adverse changes in lipid profile

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