

Proof Sheet

Protandim Verified By Third-Party Sources

Some nutritional supplements are more about hype than health. But not Protandim. The supplement's merits have been evaluated and documented by researchers in seven peer-reviewed studies, with more in the works.

These studies have been published in prestigious medical journals like *Free Radical Biology & Medicine* and *Circulation* with funding from sources that include the American Heart Association and the National Institutes of Health. Read on for a quick study on these Protandim proofs.

1

The Induction of Human Superoxide Dismutase and Catalase In Vivo: A Fundamentally New Approach to Antioxidant Therapy

Publication: *Free Radical Biology & Medicine*, Jan. 15, 2006

Authors: S.K. Nelson, S.K. Bose, G.K. Grunwald, P. Myhill, J.M. McCord, Webb-Waring Institute for Cancer, Aging and Antioxidant Research, University of Colorado Denver

In short: Protandim was administered to healthy humans ages 20 to 78 years old. After 30 days, TBARS declined by an average of 40 percent.

Bottom line: Protandim eliminated the age-related increase in cell aging factors by increasing the body's antioxidant defenses.

2

The Role of Manganese Superoxide Dismutase in Skin Cancer

Publication: *Enzyme Research*, Mar. 23, 2011

Authors: Delira Robbins and Yunfeng Zhao, Department of Pharmacology, Toxicology & Neuroscience, Louisiana State University Health Sciences

In short: This study used a two-part model to test the ef-

fectiveness of Protandim in chemoprevention. In one approach, researchers applied an SOD mimetic topically to mouse skin. In another approach, Protandim decreased tumor incidence and multiplicity by 33 percent and 57 percent, respectively.

Bottom line: Protandim may be a novel approach to chemoprevention.

3

Protandim Attenuates Intimal Hyperplasia in Human Saphenous Veins Cultured Ex Vivo A Catalase-Dependent Pathway

Publication: *Free Radical Biology & Medicine*, Mar. 15, 2011

Authors: B. Joddar, R.K. Reen, M.S. Firstenberg, S. Varadharaj, J.M. McCord, J.L. Zweiler, K.J. Gooch, Department of Biomedical Engineering, Ohio State

In short: This study examined the biochemical mechanisms that underlie the ability of Protandim to suppress intimal hyperplasia — over-proliferation of cells that line the vessel wall — a common adverse event that limits the effectiveness of vascular surgery. Treatment of human saphenous veins with Protandim blocked intimal hyperplasia and reduced cellular proliferation to that of freshly iso-

lated human saphenous veins.

Bottom line: Protandim significantly increased antioxidant enzyme activity in veins, while reducing free radical levels, lipid peroxidation, and reducing intimal proliferation.

4

The Dietary Supplement Protandim Decreases Plasma Osteopontin and Improves Markers of Oxidative Stress in Muscular Dystrophy Mdx Mice

Publication: *Journal of Dietary Supplements*, June 1, 2010

Authors: M.M. Qureshi, W.C. McClure, N.L. Arevalo, R.E. Rabon, B. Mohr, S.K. Bose, J.M. McCord, B.S. Tseng, University of Colorado, Denver and Mass. General Hospital, Harvard Medical School

In short: Oxidative damage is thought to be a pertinent factor in the development of Duchenne muscular dystrophy (DMD), the most common and lethal neuromuscular disorder in children. Researchers used surrogate markers and functional measures in a dystrophin-deficient mouse model of DMD to determine whether Protandim provides any benefit. After six months on Protandim, a 48 percent average decrease in

plasma TBARS was seen, a 57 percent decrease in plasma osteopontin and a 35 percent increase in beneficial protective plasma PON1 activity.

Bottom line: Protandim improves markers of oxidative stress and fibrosis in muscular dystrophy mice.

5

Protandim, a Fundamentally New Antioxidant Approach in Chemoprevention

Using Mouse Two-Stage Skin Carcinogenesis As A Model.

Publication: *PLoS One*, Apr. 22, 2009

Authors: J. Liu, X. Gu, D. Robbins, G. Li, R. Shi, J.M. McCord, Y. Zhao, Department of Pharmacology, Toxicology & Neuroscience, Louisiana State University

In short: To investigate whether Protandim can suppress tumor formation by a dietary approach, a two-stage mouse skin carcinogenesis study was performed. At the end of the study, both skin tumor incidence and multiplicity were reduced in the mice on the Protandim diet by 33 percent and 57 percent respectively, compared with those on basal diet.

Bottom line: Induction of antioxidant enzymes by Protandim may be practical for cancer prevention.