



**Superoxide Dismutase/Gliadin:**  
A Health Promoting and Anti-Aging Nutraceutical Product

**PRODUCT MONOGRAPH**

**SUPPLEMENT**

**JANUARY 2005**

This supplement is provided to update the GliSODin product monograph prepared by Bernard DUGAS, CSO, PhD. Please find following recent research regarding the efficacy of GliSODin in the following areas:

- I. **GliSODin promotes primary antioxidant production in vivo**
- II. **GliSODin shown to protect against cellular oxidative stress damage in humans**
- III. **GliSODin inhibits lactic acid accumulation in exercise induced oxidative stress**

GliSODin presents a radical new approach to antioxidant supplementation – by acting as an antioxidant catalyst, GliSODin promotes the production of the body’s own, primary antioxidants, including SOD, at the cellular level.

**I. GliSODin promotes primary antioxidant production in vivo (1)**

**Effect of GliSODin supplementation on antioxidant blood levels**

	Control	GliSODin
Antioxidant Status	1.39 ± 0.03	1.98 ± 0.06
superoxide dismutase SOD (U/g Hb)	1720 ± 125	3250 ± 255
glutathione peroxidase Gpx (U/g Hb)	800 ± 33	1210 ± 89
Catalase (KU/g Hb)	35 ± 5	95 ± 6

*GliSODin was supplemented at 1 mg/mouse/day vs. the placebo group for 28 days. Blood samples were tested for antioxidant levels.*

(1) Vouldoukis et.al., “Supplementation with gliadin -combined plant superoxide dismutase extracts promotes antioxidant defenses and protects against oxidative stress” *Phytotherapy Res* 18(12):957-962 2005

**II. GliSODin shown to protect against cellular oxidative stress damage in a dramatic human model. (2)**

GliSODin was shown to protect against oxidative stress in a dramatic human model. In this double-blind placebo controlled trial, healthy volunteers were given pure oxygen in a hyperbaric chamber which increased atmospheric pressure to 2.5 times normal, inducing intense oxidative stress. One group was given 1000 mg GliSODin once daily for two weeks prior to the test, while the placebo group received 1000 mg of wheat gliadin alone.

The GliSODin group, supplemented with 1000mg for two weeks, had significantly lower cellular DNA damage as evidenced by the comet assay. Further, these findings coincided with reduced blood isoprostane levels, another marker of oxidative stress. Interestingly, GliSODin is the first supplement to show this protective benefit in this model. Vitamin E, for example, did not pass this model.

## Effect of GliSODin In a human study with induced oxidative stress (2)

FIGURE 1

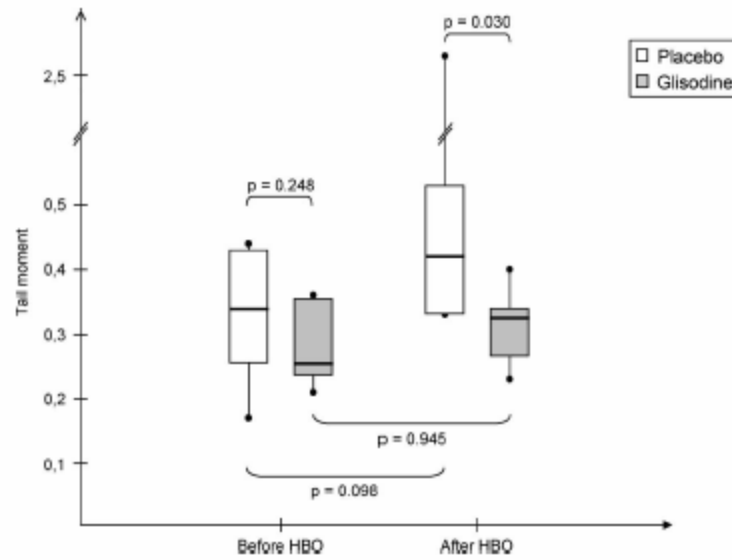


FIGURE 1 Results of the comet assay. Data are presented as box plots displaying median, quartiles and extremes. Open box plots represent the data of the placebo-group (n=9); grey box plots represent the data of the GliSODin® group (n=8).

FIGURE 2

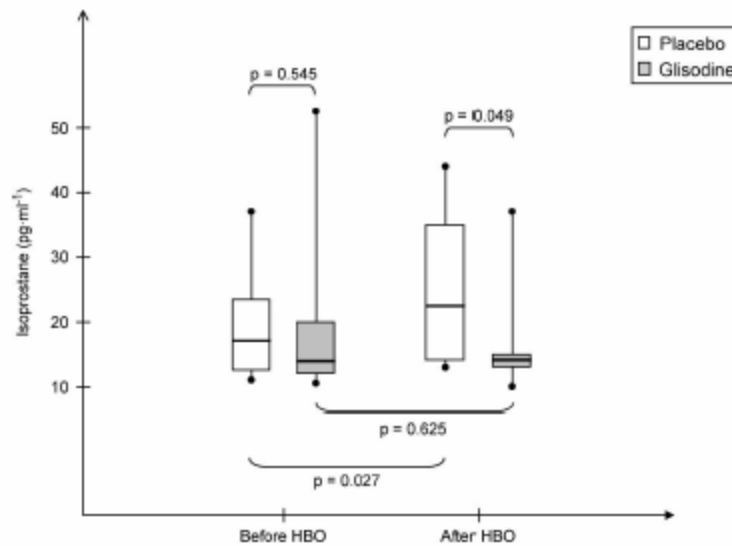


FIGURE 2 Plasma isoprostane levels. Data are presented as box plots displaying median, quartiles and extremes. Open box plots represent the data of the placebo-group, grey box plots represent the data of the GliSODin® group with n=10 in both groups.

(2) Muth, et. al. "Influence of an orally effective SOD on hyperbaric, oxygen related cell damage" Free Radical Research 38:9 (2004) pp. 927-932

### **III. GliSODin inhibits lactic acid accumulation in exercise induced oxidative stress (3)**

Extreme exercise is another model for induced oxidative stress. Several markers of this stress are serum total antioxidant status and plasma lactic acid. In a compelling study, healthy volunteers supplemented their diets with 1500 mcg of GliSODin for four weeks. Prior to GliSODin use, the volunteers participated in strenuous exercise and baseline measurements of serum total antioxidant status, plasma lactate accumulation and several other markers were measured for each participant. After supplementation, the extreme exercise was repeated and the oxidative stress markers were measured once again. GliSODin supplementation resulted in a significant change in oxidative status and a significant decrease in exercise-induced lactate release, suggesting oxidative stress was inhibited.

(3) Y. Kong, et al., Korea Cancer Center Hospital, "Influence of an orally effective superoxide dismutase (GLiSODin)® on strenuous exercise-induced changes of blood antioxidant enzymes and plasma lactate" AACC Poster, Presented July 2004



For more information, please contact PL Thomas  
[info@plthomas.com](mailto:info@plthomas.com)    [www.plthomas.com](http://www.plthomas.com)  
973-984-0900 x 215