

Shawn M. Talbott, PhD

CNS, LDN, FACSM, FAIS, FACN

Chief Science Officer

Thursday - December 18

7:40am = KFXA FOX 28

5pm News = KGAN CBS 2

9pm News = KFXA FOX 28



Causes of “Imbalance” (Stress)

- Emotional stress (deadlines, bills, traffic...)
- Physical stress (aging, sleep deprivation, exercise...)
- Environmental stress (air/water pollution, heat, cold...)
- Non-Optimal Diet (processed foods, inadequate nutrients/phytonutrients...)

- Athletes / Dieters / Short-Sleepers / Stressed
 - Share the SAME *biochemical* disruptions
 - Share the SAME *psychological* outcomes
 - Exhibit the SAME benefits to *restored biochemical balance*





What is LifeVantage?

A Lifestyle Development Company.

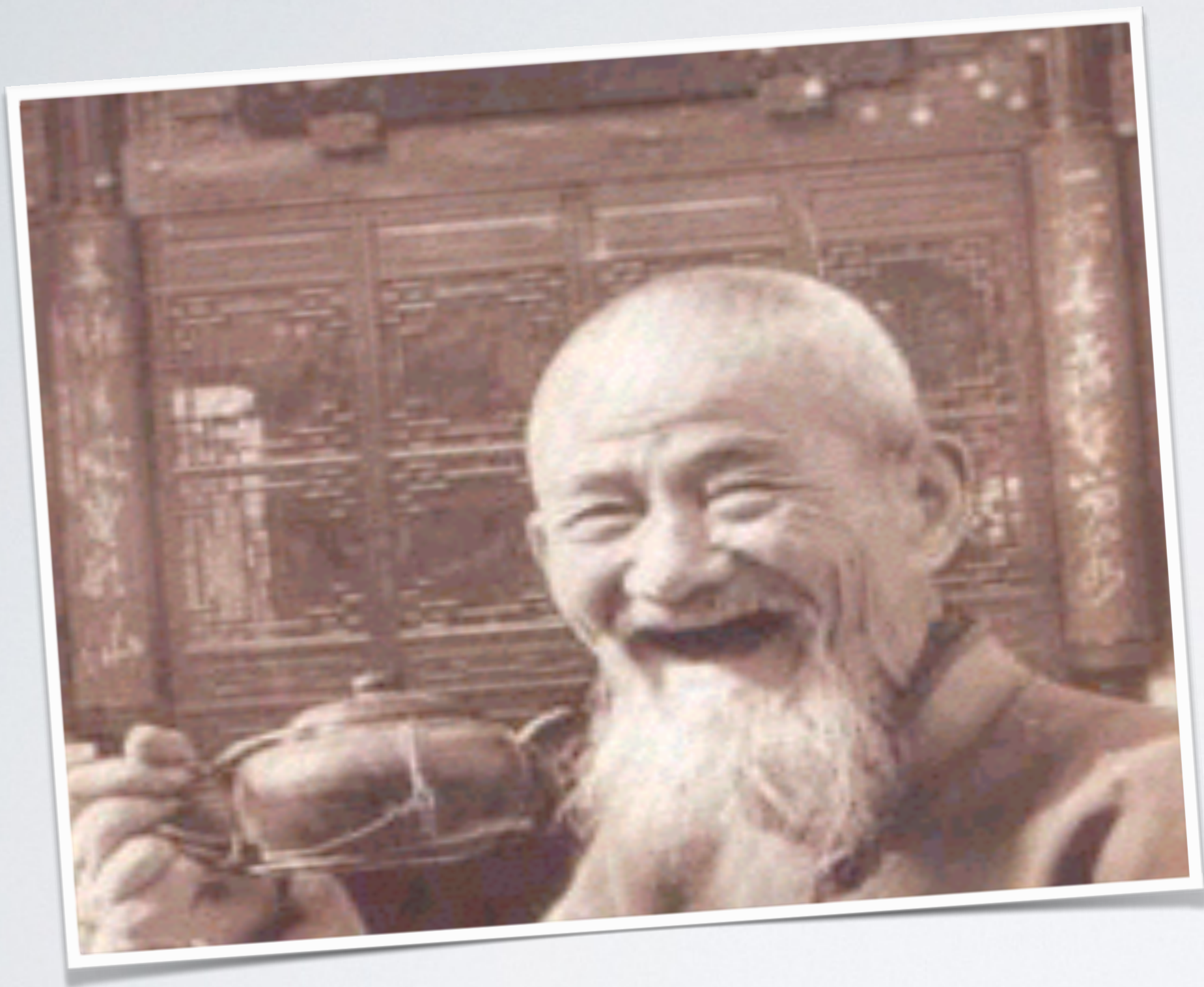
Our Vision

To help people around the world to develop their best selves and live their best lives.

Our Mission

Bring innovation and inspiration through a compelling global business opportunity offering science-based products that help everyone feel, look, and perform their best.





Vigor

3-tiered mood state...
characterized by:

Physical Energy

Mental Acuity

Emotional Well-Being



Zone

Prana

Mood

Mana

Qi

Swing

Energy

Vigor

Focus

Ki

Flow

Edge

Motivation

Runner's High

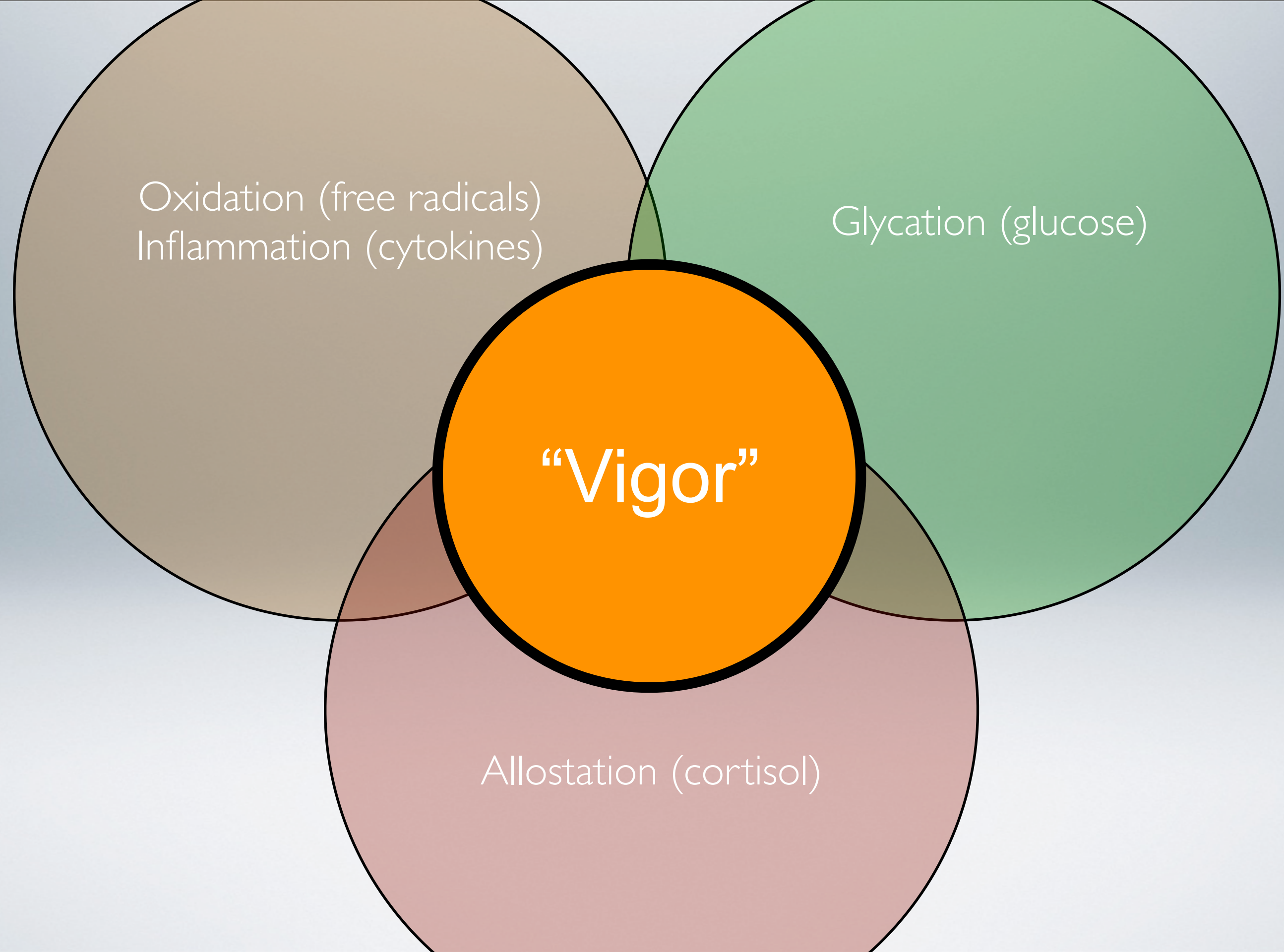
What does

Energy

mean to

YOU?



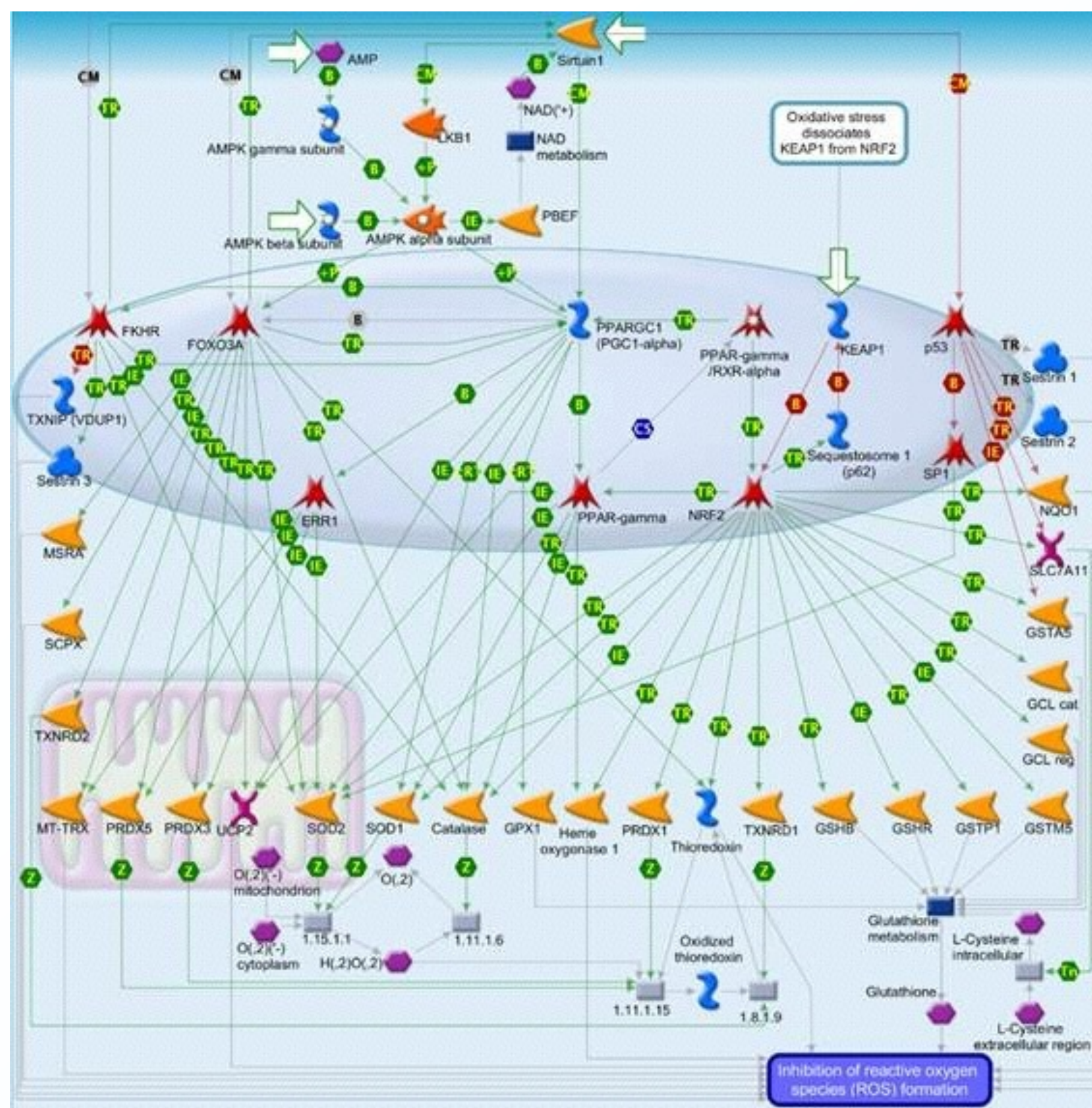




Just an Antioxidant?

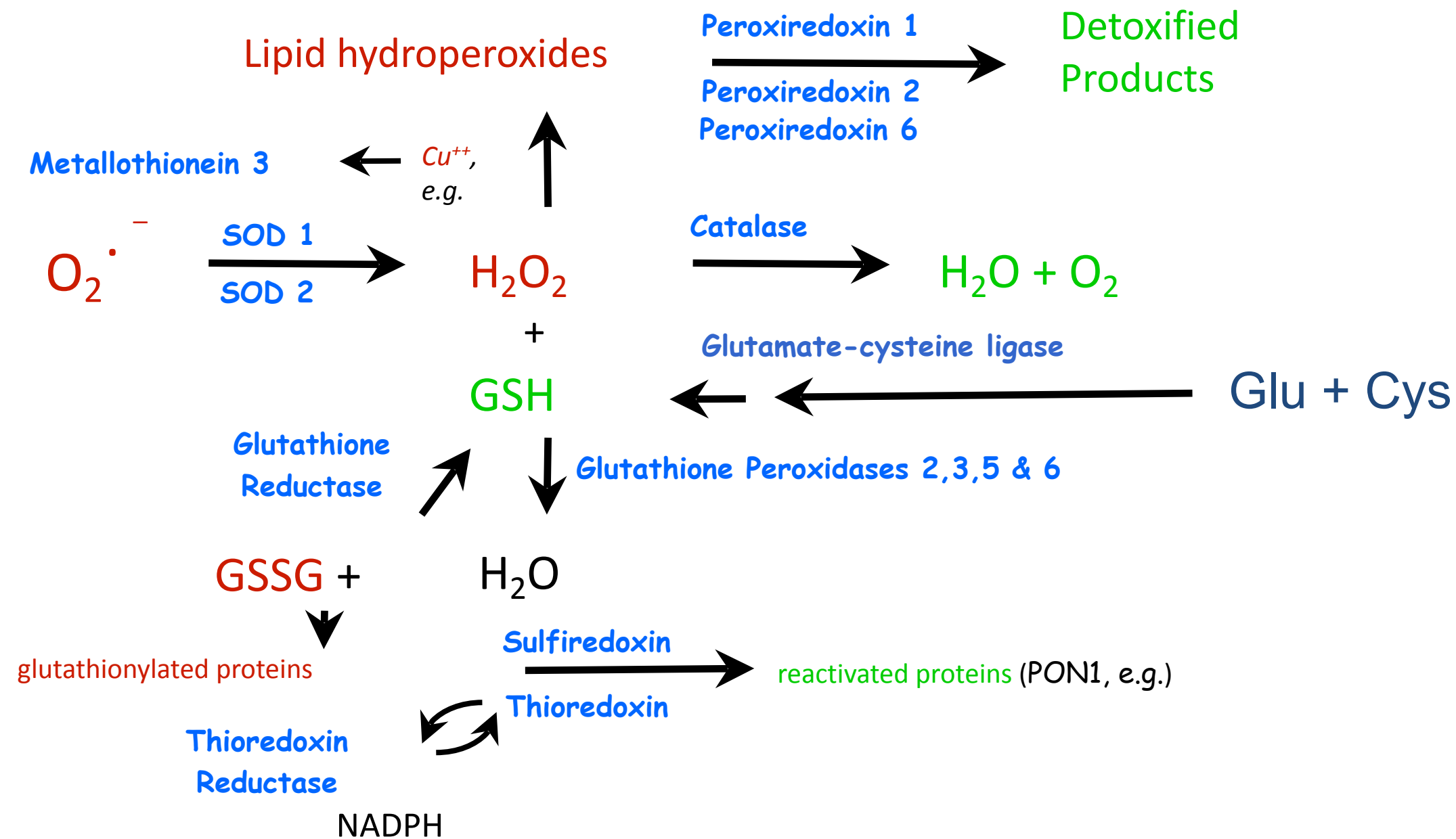


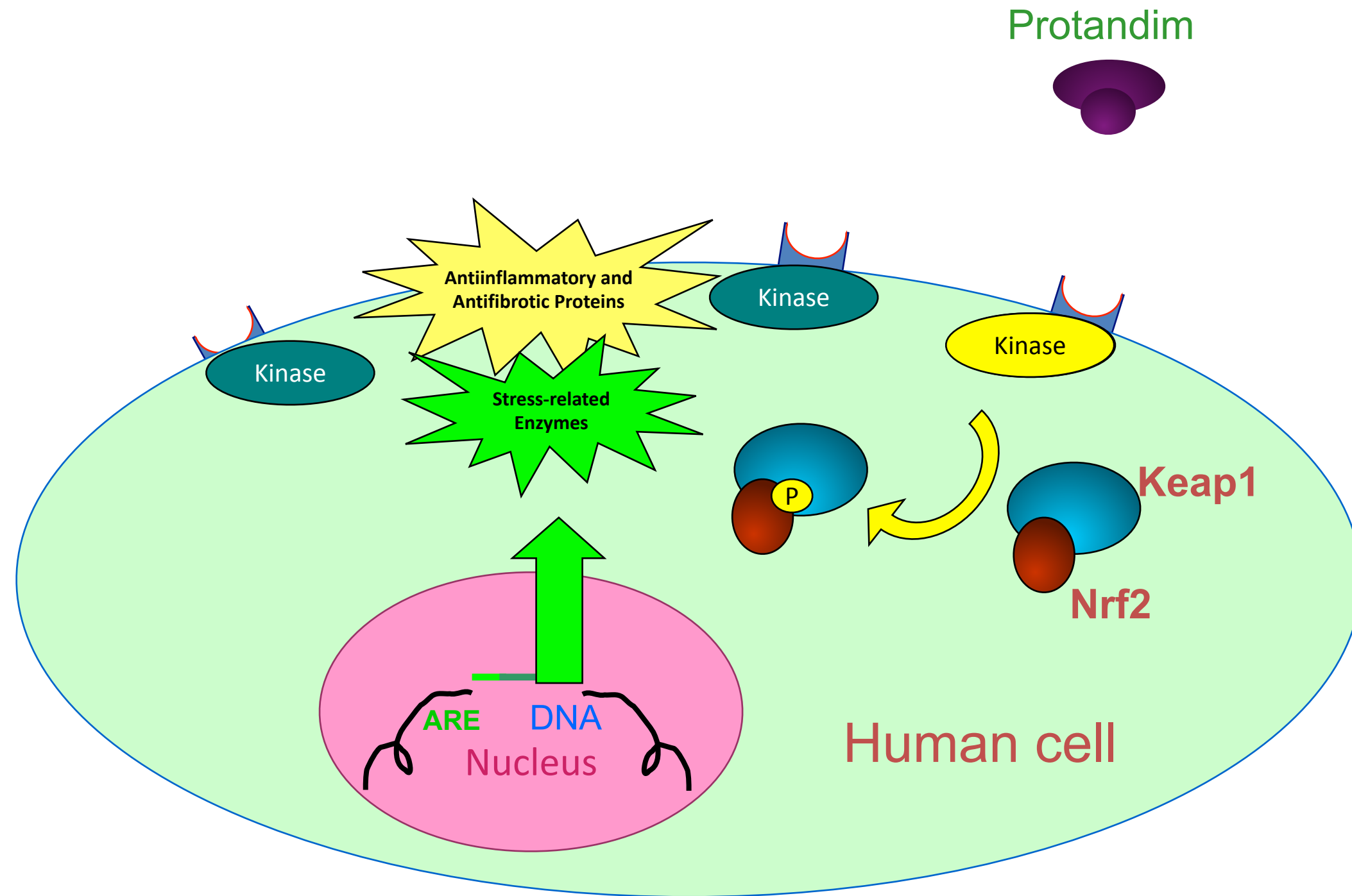
LifeVantage.
FREEDOM



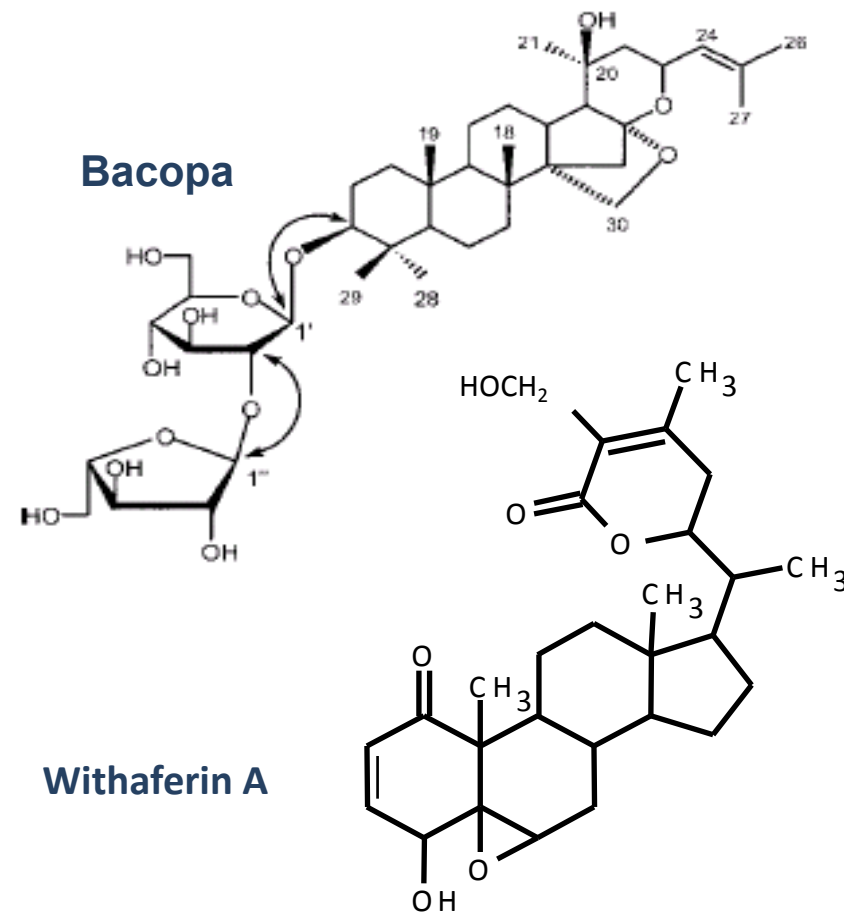
The Internal System of Protective Antioxidant Enzymes

Activated/Triggered by Nr2 Pathway

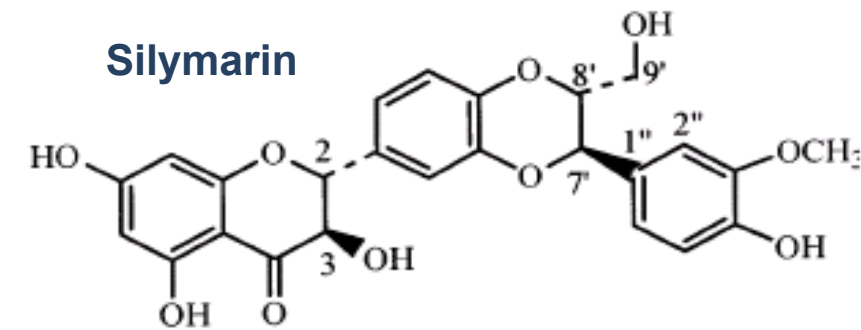
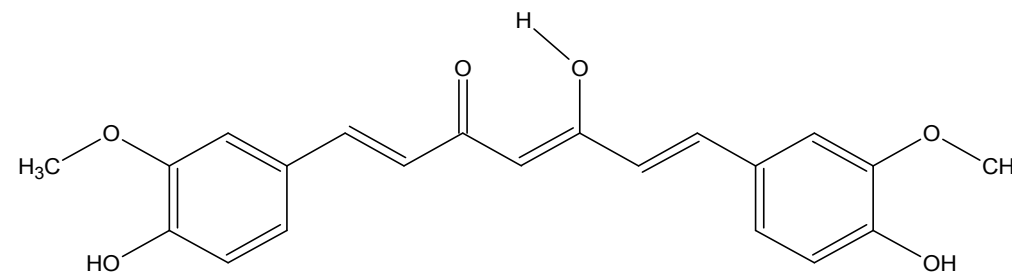




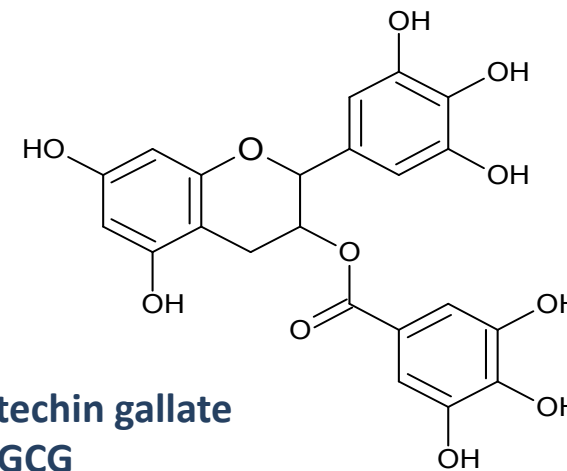
Nrf2 = a powerful “master regulator” of antioxidant enzymes and survival genes



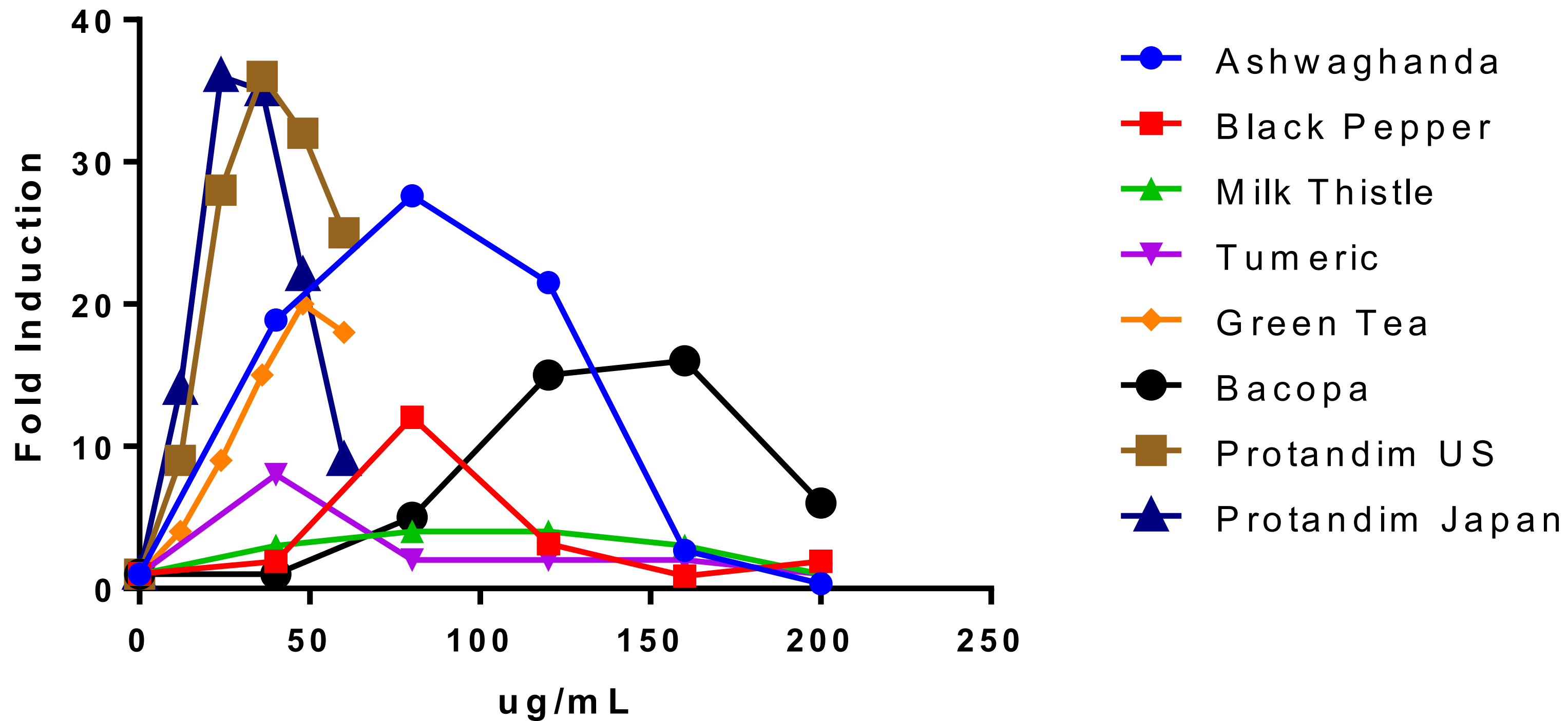
Curcumin



**Epigallocatechin gallate
EGCG**



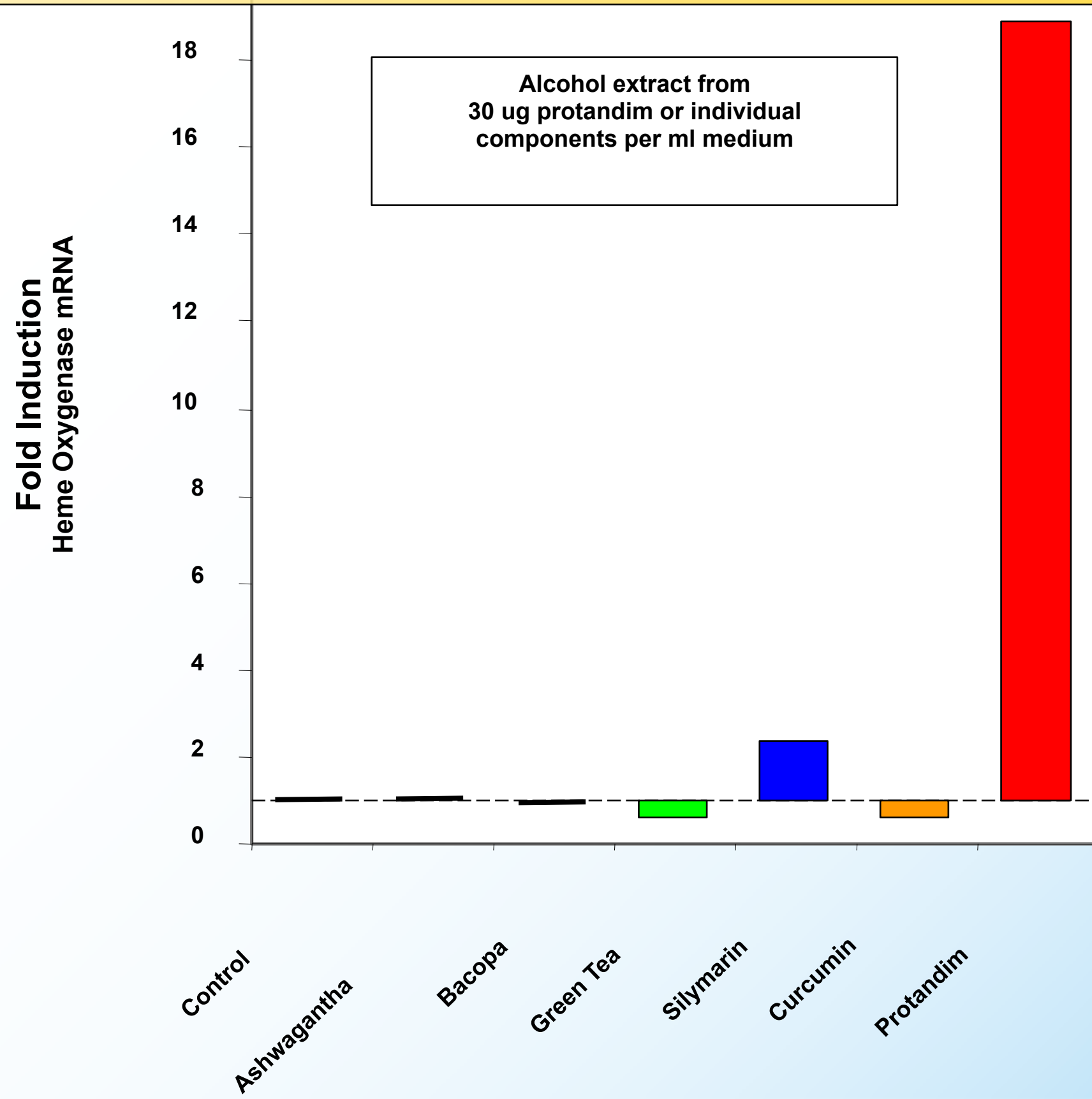
ARE reporter assay



SYNERGY = Action greater than the sum of the parts

All five ingredients together produced an **18-fold increase** in the expression of this antioxidant gene.

Protandim BLEND works *18 times more effectively than the sum of its parts.*





Heart Failure

Chronic Pulmonary Artery Pressure Elevation Is Insufficient to Explain Right Heart Failure

Huon J. Boudreau, MD, PhD^a; Ramachandran, PhD^a; Scott C. Henderson, PhD^a

^a Division of Endocrinology, Department of Medicine, University of Colorado at Denver, Aurora, Colorado, United States of America



Original Contribution

Protandim attenuates intimal ex vivo via a catalase-dependent

Binata Joddar^{a,b,c}, Rashmeet K. Reen^b, Jay L. Zweier^b, Keith J. Gooch^{a,b,*}

^a Department of Biomedical Engineering, The Ohio State University
^b Davis Heart & Lung Research Institute, The Ohio State University
^c BREN Nanomedical Engineering Laboratory, Wako-shi, Saitama
^d Department of Surgery, The Ohio State University, Columbus, OH
^e Department of Cardiothoracic Surgery, The Ohio State University
^f Division of Pulmonary and Critical Care Medicine, Department

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Free radicals
Scavenging enzymes
Catalase
Human saphenous veins
Ex vivo culture
Protandim

ABSTRACT

Hum
patency. To evaluate the role of reactive oxygen species (ROS) signaling in intima hyperplasia (IH), an early stage pathology of vein-graft disease, and to explore the potential therapeutic effects of up-regulating endogenous antio
model of HSV IH. I
=3.6-fold increase
Protandim, a multi
enzymes in sever
isolated HSV. Prot
respectively, and c
catalase activity b
and proliferation. I
cultured HSV and

The Dietary Supplement Plasma Osteopontin a Oxidative Stress in Mus

Muhammad Muddi

Warren C. McClure, MS
Nicole L. Arevalo, MA
Rick E. Rabon, BA
Benjamin Mohr
Swapan K. Bose, BS, BPharm
Joe M. McCord, PhD
Brian S. Tseng, MD, PhD

Protandim, a Fundamentally New Antioxidant Approach in Chemoprevention Using Mouse Two-Stage Skin Carcinogenesis as a Model

Jianfeng Liu¹, Xin Gu², Delira Robbins¹, Guohong Li³, Runhua Shi⁴, Joe M. McCord⁵, Yunfeng Zhao^{1,*}

¹ Department of Pharmacology, Toxicology & Neuroscience, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America, ² Department of Pathology, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America, ³ Department of Neurosurgery, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America, ⁴ Fels-Waller Cancer Center, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America, ⁵ Department of Medicine, University of Colorado Health Sciences Center, Denver, Colorado, United States of America

Abstract

Oxidative stress is an important contributor to cancer development. Consistent with that, antioxidant enzymes have been demonstrated to suppress tumorigenesis when being elevated both in vitro and in vivo, making induction of these enzymes a more potent approach for cancer prevention. Protandim, a well-defined combination of widely studied medicinal plants, has been shown to induce superoxide dismutase (SOD) and catalase activities and reduce superoxide generation and lipid peroxidation in healthy human subjects. 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, the mice on a Protandim-containing basal diet had similar body weight compared with those on the basal diet, which indicated no overt toxicity by Protandim. After three weeks on the diet, there was a significant increase in the expression levels of SOD and catalase, in addition to the increases in SOD activities. Importantly, at the end of the carcinogenesis study, both skin tumor incidence and multiplicity were reduced in the mice on the Protandim diet by 33% and 57% respectively, compared with those on basal diet. Biochemical and histological studies revealed that the Protandim diet suppressed tumor promoter-induced oxidative stress (evidenced by reduction of protein carbonyl levels), cell proliferation (evidenced by reduction of skin hyperplasia and suppression of PKC/RNK/Jun pathway), and inflammation (evidenced by reduction of ICAM-1/VCAM-1 expression, NF- κ B binding activity, and nuclear p65/p50 levels). Overall, induction of antioxidant enzymes by Protandim may serve as a practical and potent approach for cancer prevention.

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Serum Levels of Thiobarbituric Acid Reactive Substances Predict Cardiovascular Events in Patients With Stable Coronary Artery Disease

A Longitudinal Analysis of the PREVENT Study

Mary F. Walter, PhD,* Robert F. Jacob, PhD,* Barrett Jeffers, PhD,† Mathieu M. Ghadanfar, M Gregory M. Preston, PhD,§ Jan Buch, MD,‡ R. Preston Mason, PhD*†

Beverly and Boston, Massachusetts; New York, New York; and Groton, Connecticut



The Chemopreventive Effects of Protandim: Modulation of p53 Mitochondrial Translocation and Apoptosis during Skin Carcinogenesis

Delira Robbins¹, Xin Gu², Runhua Shi³, Jianfeng Liu¹, Fei Wang³, Jacquelyne Ponville⁴, Joe M. McCord⁵, Yunfeng Zhao^{1,*}

¹ Department of Pharmacology, Toxicology and Neuroscience, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America, ² Department of Pathology, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America, ³ College of Life Science, Jilin University, Changchun, Jilin Province, China, ⁴ Department of Chemistry, Nicholls State University, Thibodaux, Louisiana, United States of America, ⁵ Department of Medicine, University of Colorado at Denver and Health Sciences Center, Aurora, Colorado, United States of America, ⁶ Fels-Waller Cancer Center, Louisiana State University Health Sciences Center, Shreveport, Louisiana, United States of America

Abstract

Protandim, a well defined dietary combination of 5 well-established medicinal plants, is known to induce endogenous antioxidant enzymes, such as manganese superoxide dismutase (MnSOD). Our previous studies have shown through the induction of various antioxidant enzymes, products of oxidative damage can be decreased. In addition, we have shown that tumor multiplicity and incidence can be decreased through the dietary administration of Protandim in the two-stage skin carcinogenesis mouse model. It has been demonstrated that cell proliferation is accommodated by cell death during DMBA/TPA treatment in the two-stage skin carcinogenesis model. Therefore, we investigated the effects of the Protandim diet on apoptosis and proposed a novel mechanism of chemoprevention utilized by the Protandim dietary combination. Interestingly, Protandim suppressed DMBA/TPA induced cutaneous apoptosis. Recently, more attention has been focused on transcription-independent mechanisms of the tumor suppressor, p53, that mediate apoptosis. It is known that cytoplasmic p53 rapidly translocates to the mitochondria in response to pro-apoptotic stress. Our results showed that Protandim suppressed the mitochondrial translocation of p53 and mitochondrial outer membrane proteins such as Bax. We examined the levels of p53 and MnSOD expression/activity in murine skin JB6 promotion sensitive (P+) and promotion-resistant (P-) epidermal cells. Interestingly, p53 was induced only in P+ cells, not P- cells; whereas MnSOD is highly expressed in P- cells when compared to P+ cells. In addition, wild-type p53 was transfected into JB6 P- cells. We found that the introduction of wild-type p53 promoted transformation in JB6 P- cells. Our results suggest that suppression of p53 and induction of MnSOD may play an important role in the tumor suppressive activity of Protandim.

Oxidative Stress in Health and Disease: The Therapeutic Potential of Nrf2 Activation

Brooks M. Hybertson,^{a,b} Bifeng Gao,^a Swapan K. Bose^a and Joe M. McCord^{a,b}

^aDepartment of Medicine, Division of Pulmonary Science and Critical Care Medicine, University of Colorado at Denver, Aurora, CO 80045

^bLifeVantage Corporation, 10813 S. Riverfront Parkway, South Jordan, UT 84095

(12) United States Patent
Myhill et al.

(10) Patent No.:
(45) Date of Patent:

(54) COMPOSITIONS FOR ALLEVIATING INFLAMMATION AND OXIDATIVE STRESS IN A MAMMAL

(75) Inventors: Paul R. Myhill, Castle Rock, CO (US); William J. Driscoll, Englewood, CO (US)

(73) Assignee: Lifeline Nutraceuticals Corporation, Englewood, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

Al-Shawi, "C-Reactive Protein and 2004, vol. 291, No. 23, pp. 2818-2 Anderson, et al., "Differential Resp Cells to Induction of Apoptosis by V E Analogues, α -TEA," *Cancer Res*, Baker, et al., "Reduced RBC Veno Due to Endotoxin," *Circul Shock*, Barbora, et al., "Decreased Oxidative Colitis Supplemented with Fition, 2003, vol. 19, pp. 837-842. Bhattacharya, et al., "Antioxidant from Withania somnifera," *Ind. J. Exper. Biol.*, 1997, vol. 35, pp. 236-239



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*

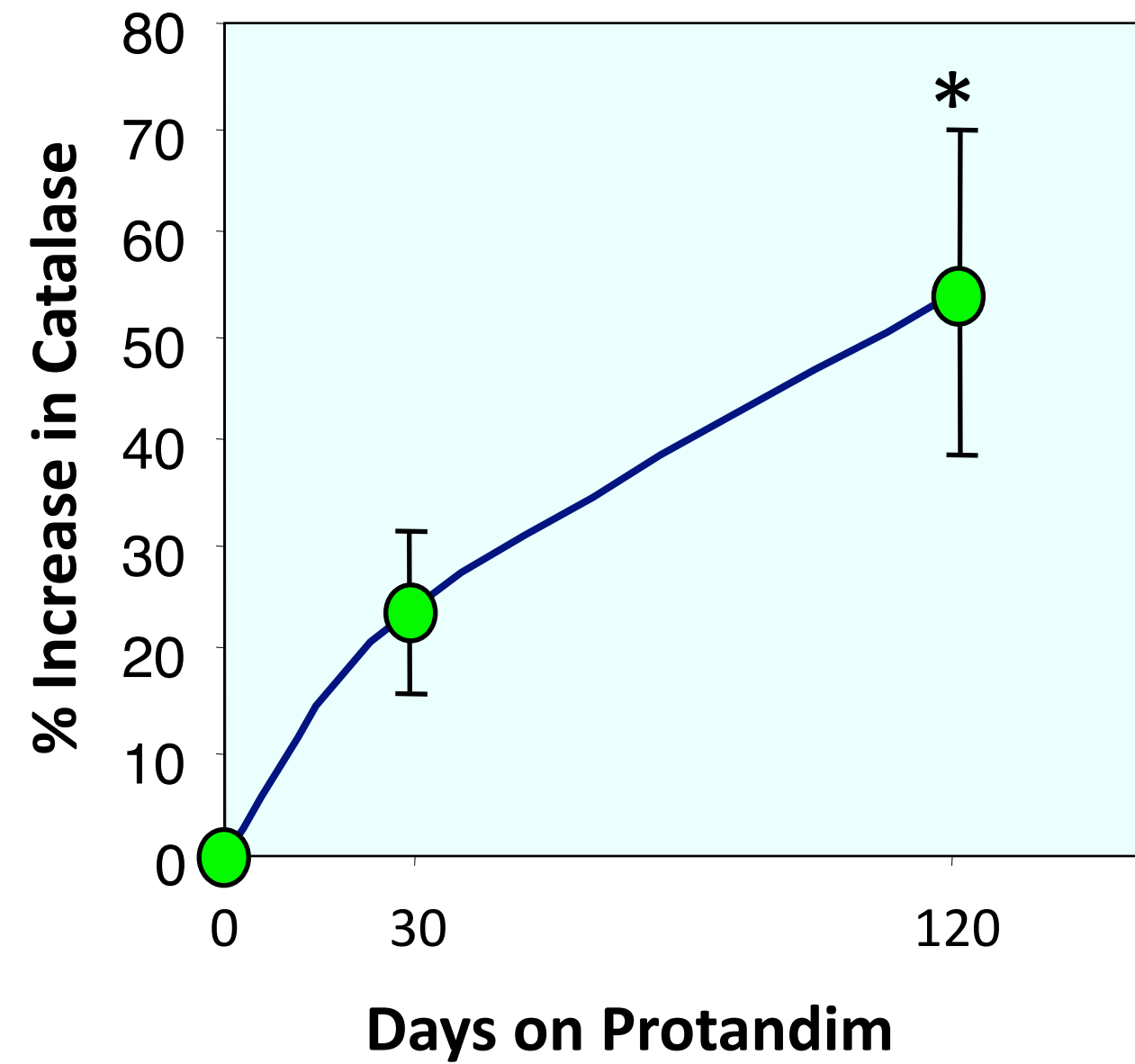
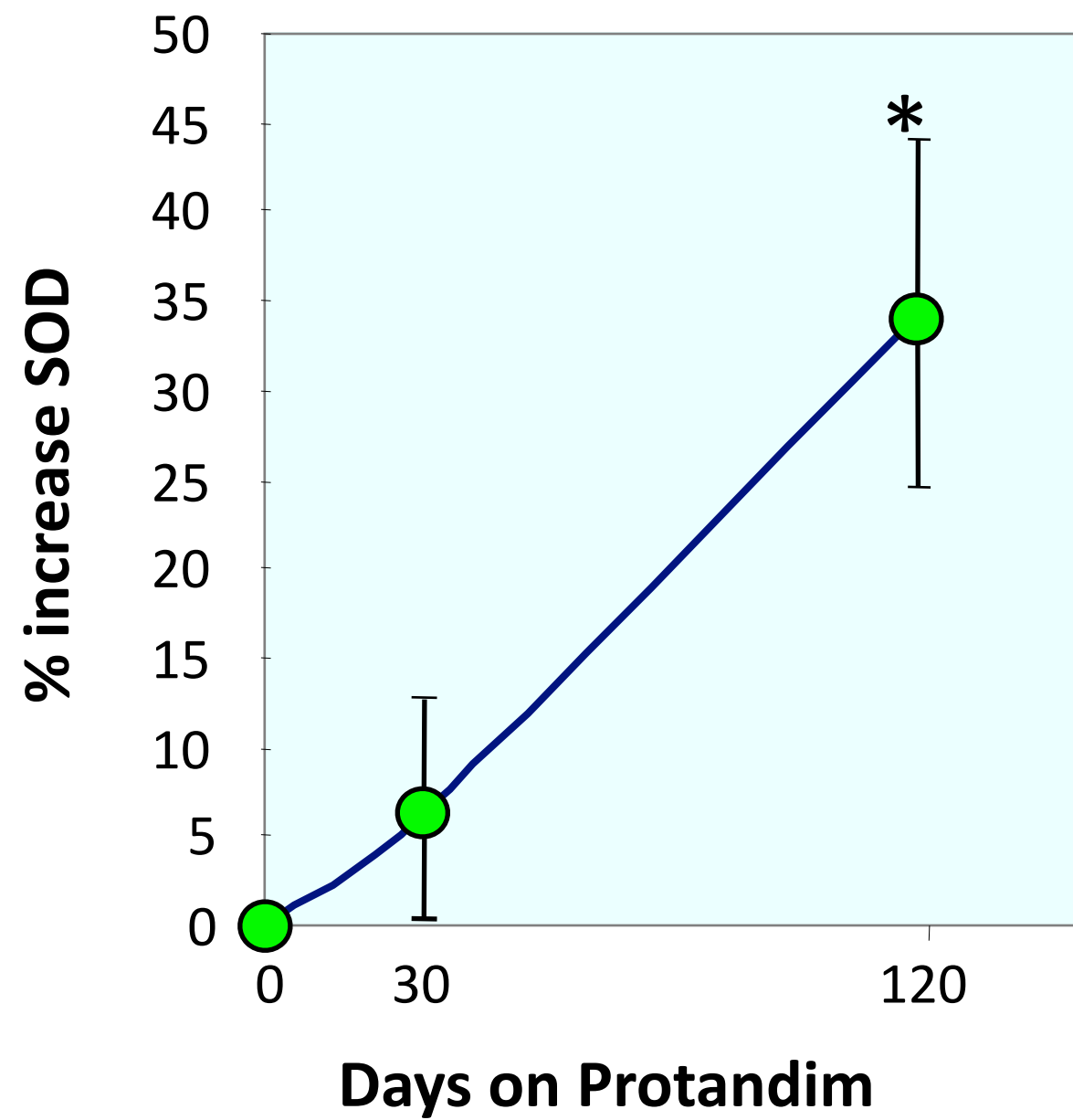
^c *Department of Preventive Medicine and Biometrics, University of Colorado Denver Health Sciences Center, Denver, CO 80262, USA*

^d *Lifeline Therapeutics, Denver, CO, USA*

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

Abstract

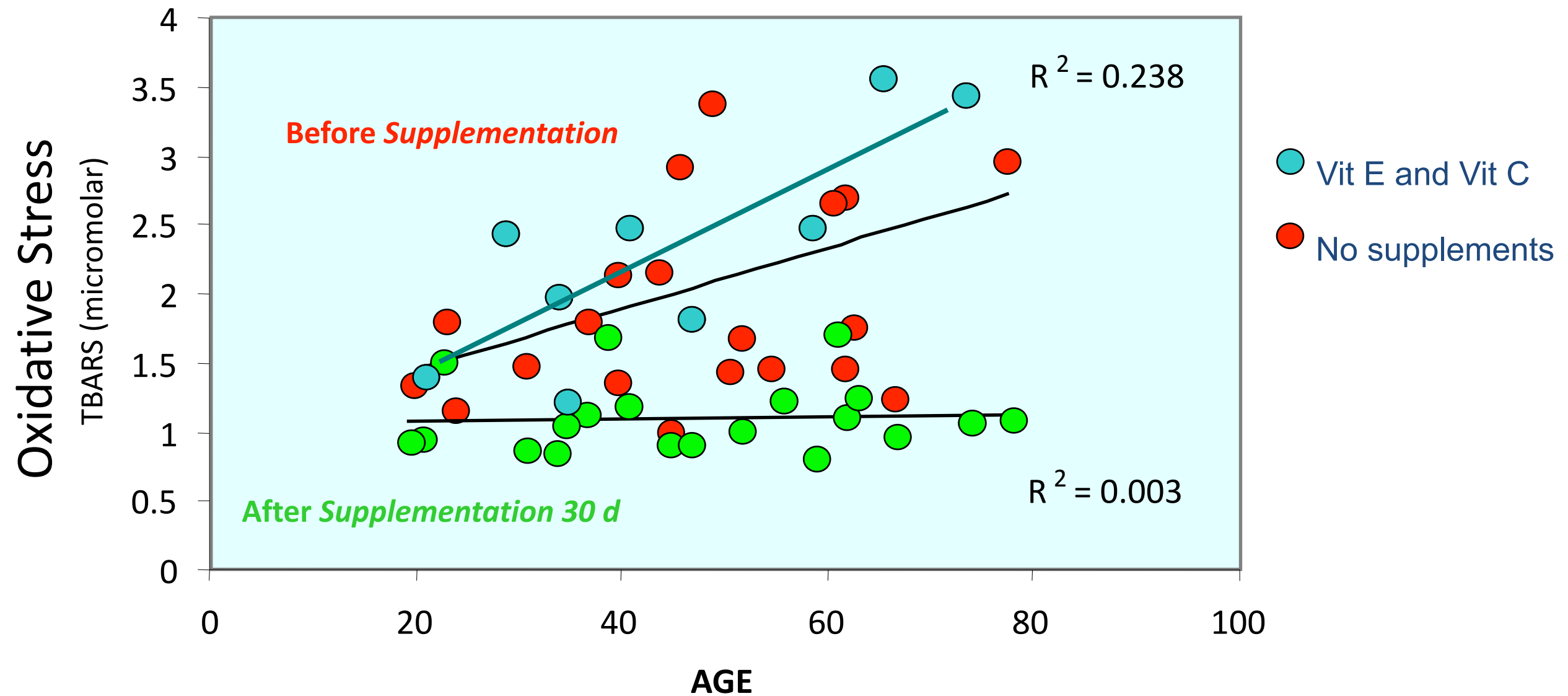
A composition consisting of extracts of five widely studied medicinal plants (Protandim) was administered to healthy human subjects ranging in age from 20 to 78 years. Individual ingredients were selected on the basis of published findings of induction of superoxide dismutase (SOD) and/or catalase in 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.



After 120 days...

SOD increased by 34%

Catalase increased by 54%



After 30 days...

“Remarkably, this age-dependent increase in TBARS was almost completely abolished by Protandim treatment (Fig. 1D), with an overall average reduction of the oxidative stress marker by 40%.”

**Exotic Ingredients + Proven Science + Exclusive IP =
World's finest products that help you Feel / Look / Perform Your Best**

Protandim/Nrf2 – Fundamentally different approach to cellular protection



Feel Your Best



Look Your Best



Perform Your Best

Coordinated Product Platform

LOOK Your Best...

***TrueScience* Regimen is equal/better compared to top “prestige” brands**

Competitor		28 Days	56 Days
89% Perricone MD Cold Plasma at 4 weeks 75% Jeunesse Global Luminesce Cellular Rejuvenation at 8 weeks	Smoother looking skin	89%	94%
80% Nu Skin TruFace at 3 months	Firmer looking skin	81%	85%
78% L’Oreal Youth Code at 8 weeks	Younger looking skin		87%
70% Lancôme Dream Tone at 8 weeks 79% SkinMedica Lytera at 12 weeks	More even skin tone		83%
79% Clarins Double Serum at 4 weeks <small>[Hydric + Lipidic System]</small> 80% Nu skin 180°System at 8 weeks	Less noticeable fine lines and wrinkles	78%	82%

Cold Plasma is a trademark of Perricone MD
Youth Code is a trademark of L’Oreal
Dream Tone is a trademark of Lancôme
Lytera is a trademark of SkinMedica
Double Serum [Hydric + Lipidic System] is a trademark of Clarins

*Competitive advertising details available upon request

Versus Select Competitive Ads*

LifeVantage.
FREEDOM
GLOBAL CONVENTION 2014

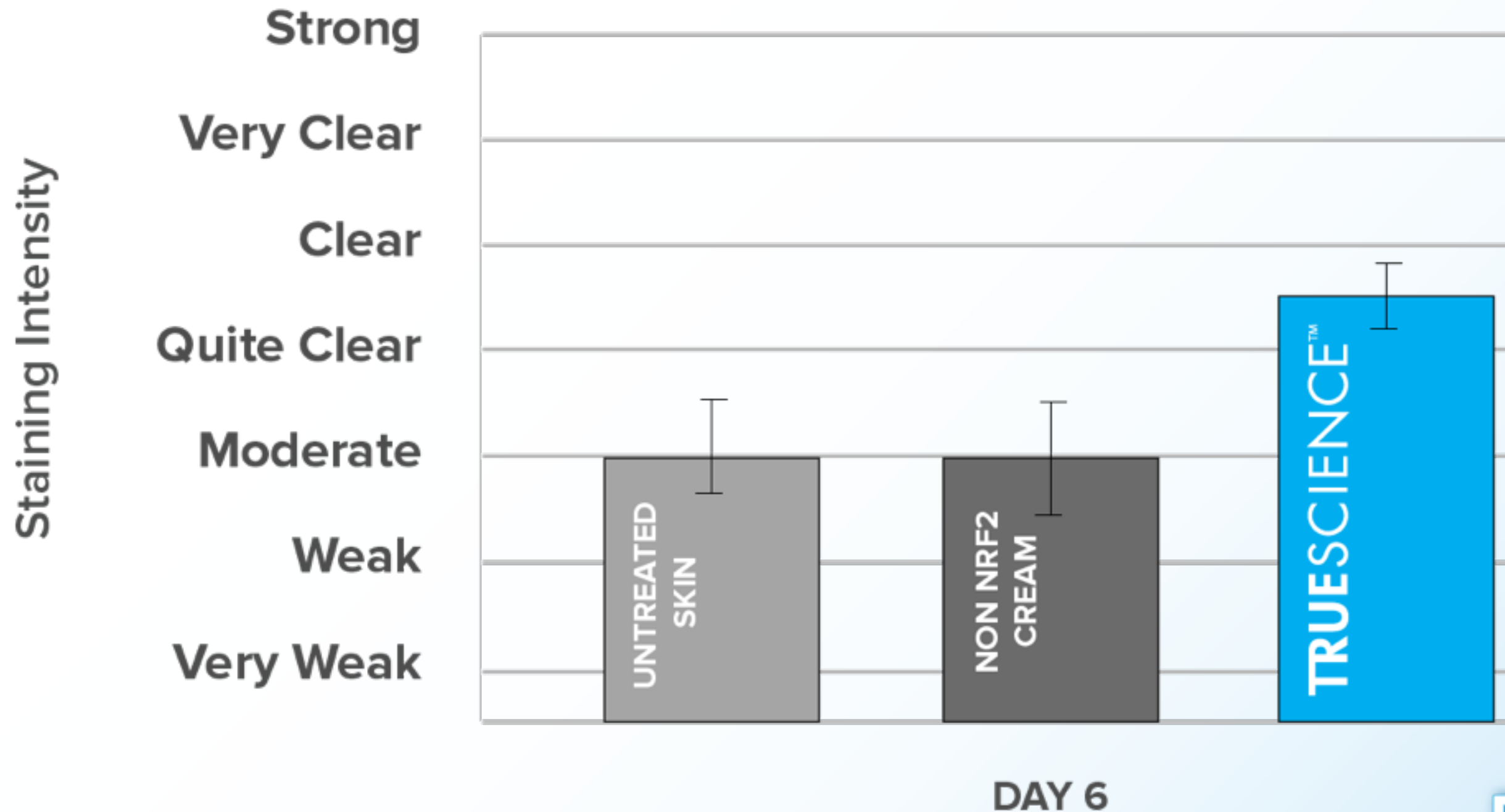
Clinical Study: What Users Said*

28 Days		56 Days
94%	Loved the fragrance	99%
90%	More hydrated skin	95%
89%	Will buy the regimen	91%
89%	Smoother looking skin	94%
88%	Softer skin	90%
84%	More luminous skin	88%
83%	Younger looking skin	87%
81%	More even skin tone	83%
81%	Firmer looking skin	85%
78%	Less noticeable fine lines and wrinkles	82%
74%	Felt younger-looking	80%
74%	Better than what I usually use	80%

*Satisfaction test, 86 women self-reported, 4 weeks and 8 weeks

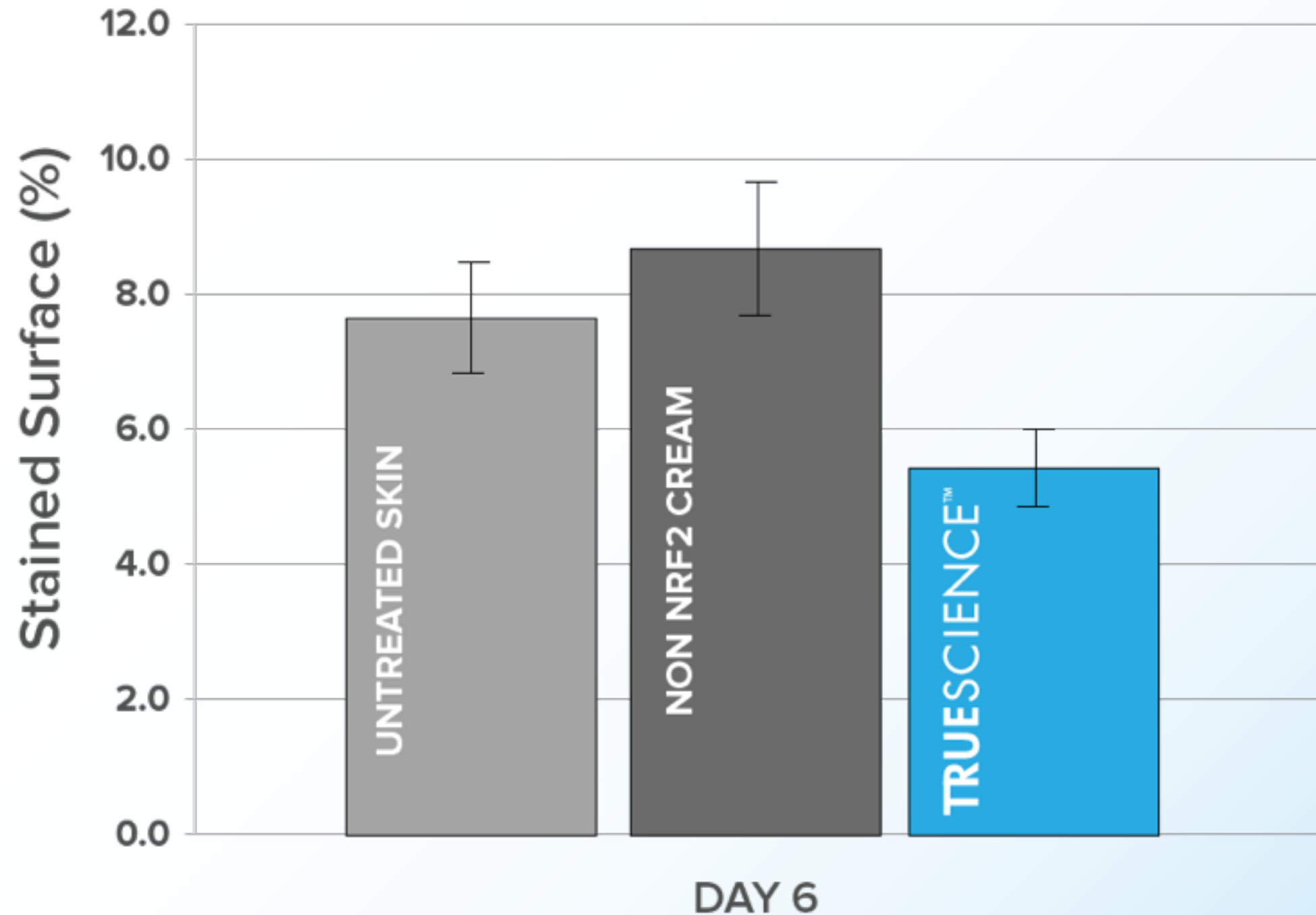
Nrf2 Staining Intensity 24 hours after UV Exposure

TrueScience™ Facial Cream results in more Nrf2 in skin, thus more protection!



Less Thymine Dimers with TrueScience

TrueScience™ Facial Cream with Nrf2 protects the cell DNA!



TrueScience™ Facial Cream with Advanced Nrf2 Technology has been shown to:

- Boost skin protection from UV exposure by reducing DNA damage
- Increase Nrf2 Protein amount, thus improve resistance to oxidative stress
- Fight the signs of aging though **all** layers of the skin



FEEL Your Best...



Tired, Stressed, Depressed... “Off”





SUPPLEMENT FACTS

Serving Size: 1 Packet

Serving Per Pouch: 30

	Amount Per Serving	% DV
Calories	10	
Total Carbohydrate	2 g	<1%*
Niacin (as Nicotinic Acid)	24 mg	120%
Vitamin B6 (as Pyridoxine HCL)	1.60 mg	80%
Vitamin B12 (as Methylcobalamin)	6 mcg	100%
Magnesium (as Magnesium Aspartate)	10 mg	2%
Caffeine	100 mg	†
Proprietary Blend	500 mg	
DMAE Bitartrate		†
Green Tea Extract (Camellia sinensis) (Aerial)		†
Quercetin Dihydrate		†
Monterey Pine Extract (Pinus radiata) (Bark)		†
L-Theanine		†

*% Daily Value are based on a 2,000 calorie diet.

† Daily Value not established

SUPPLEMENT FACTS

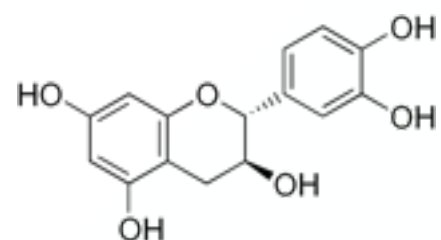
Serving Size: 1 Packet

Serving Per Pouch: 30

	Amount Per Serving	% DV
Calories	15	
Total Carbohydrate	3 g	1%*
Niacin (as Nicotinic Acid)	20 mg	100%
Vitamin B6 (as Pyridoxine HCL)	1.60 mg	80%
Vitamin B12 (as Methylcobalamin)	6 mcg	100%
Magnesium (as Magnesium Aspartate)	10 mg	2%
Proprietary Blend	280 mg	
Green Tea Extract (Camellia sinensis) (Aerial)		†
Monterey Pine Extract (Pinus radiata) (Bark)		†
L-Theanine		†
Quercetin Dihydrate		†

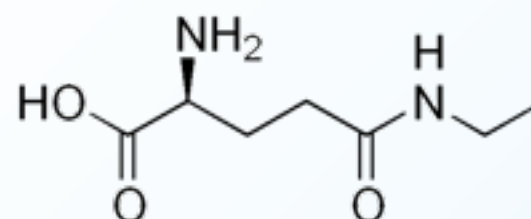
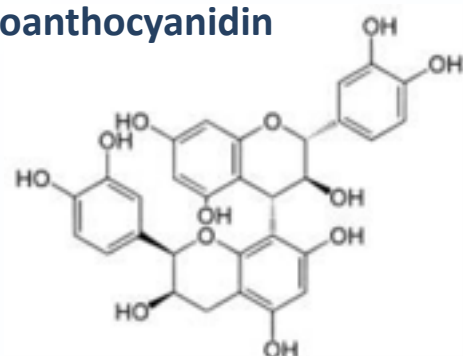
*% Daily Value are based on a 2,000 calorie diet.

† Daily Value not established

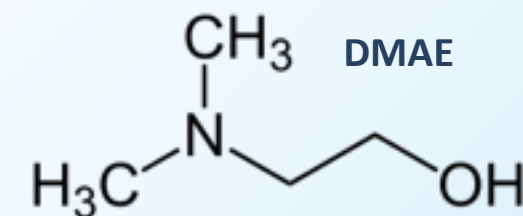


Catechin

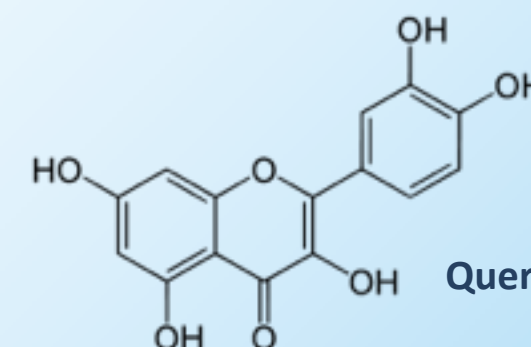
Proanthocyanidin



L-Theanine



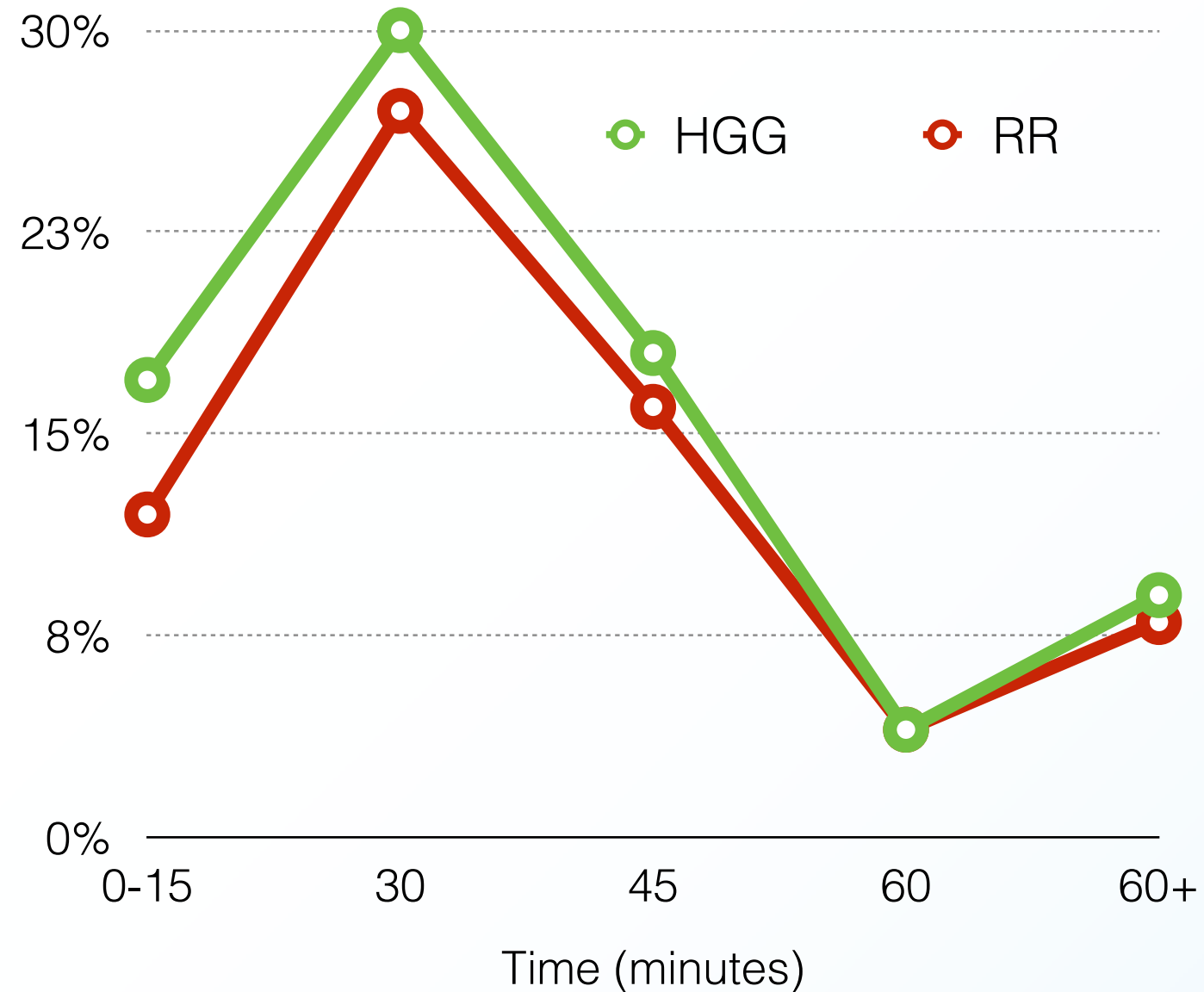
DMAE



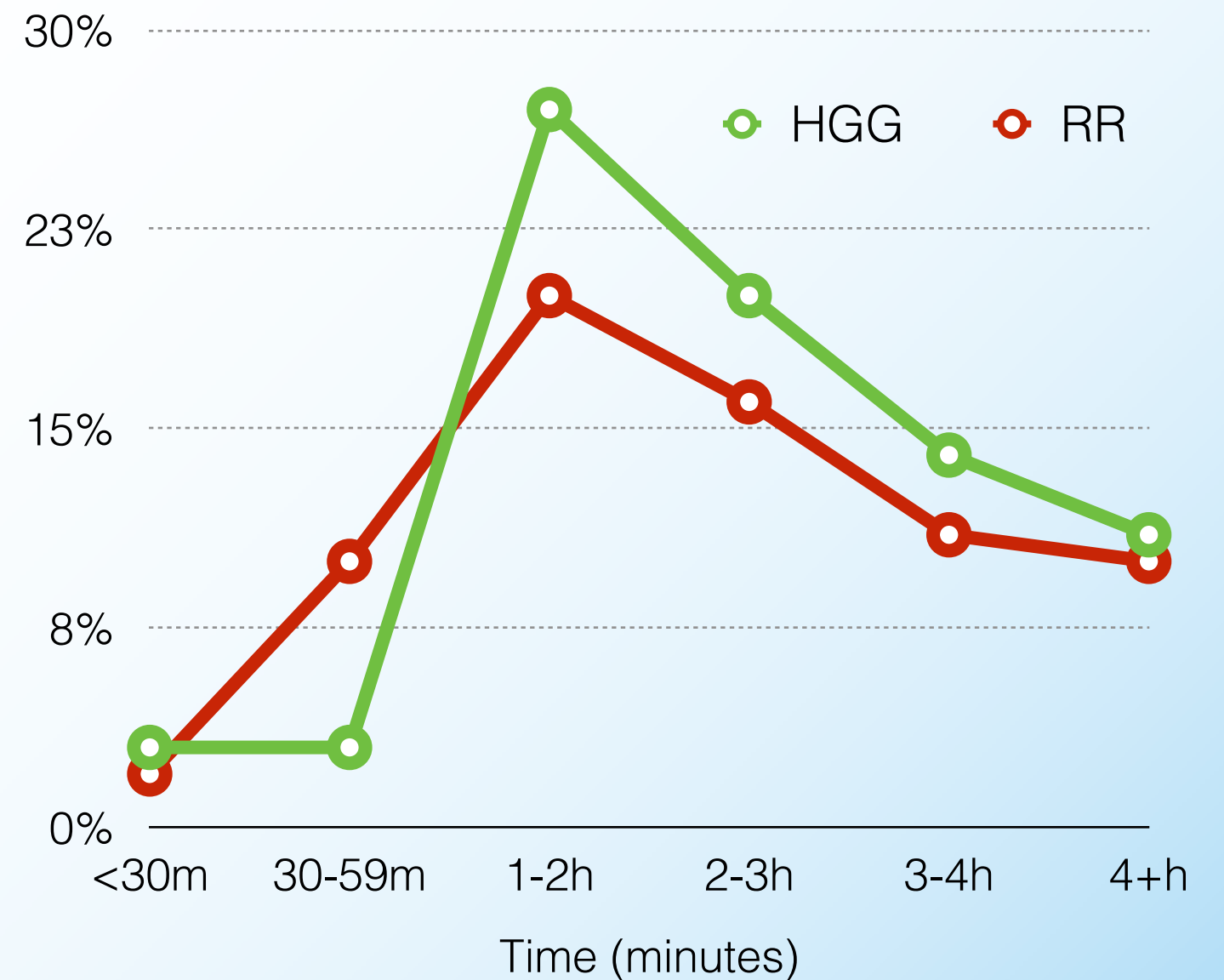
Quercetin

Axio Usage Survey

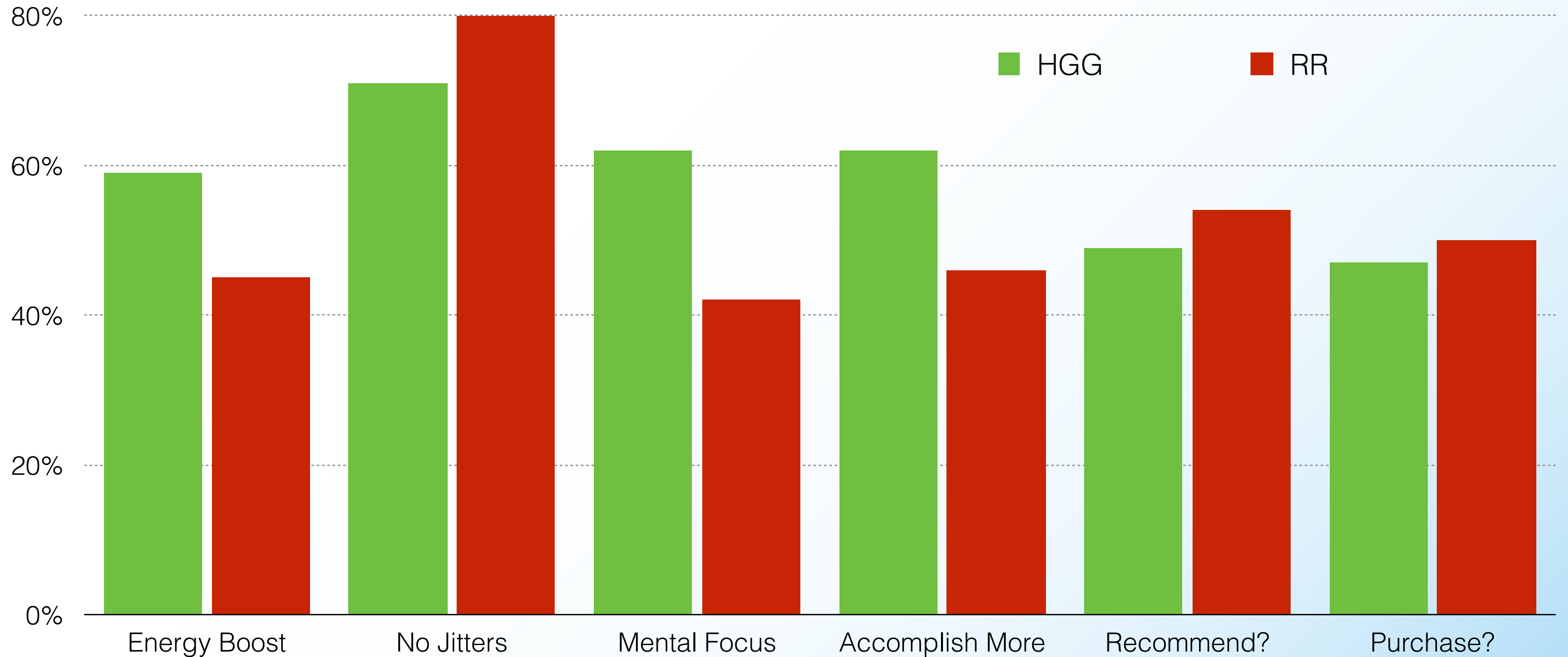
Initial Energy Boost



Duration of Energy Boost



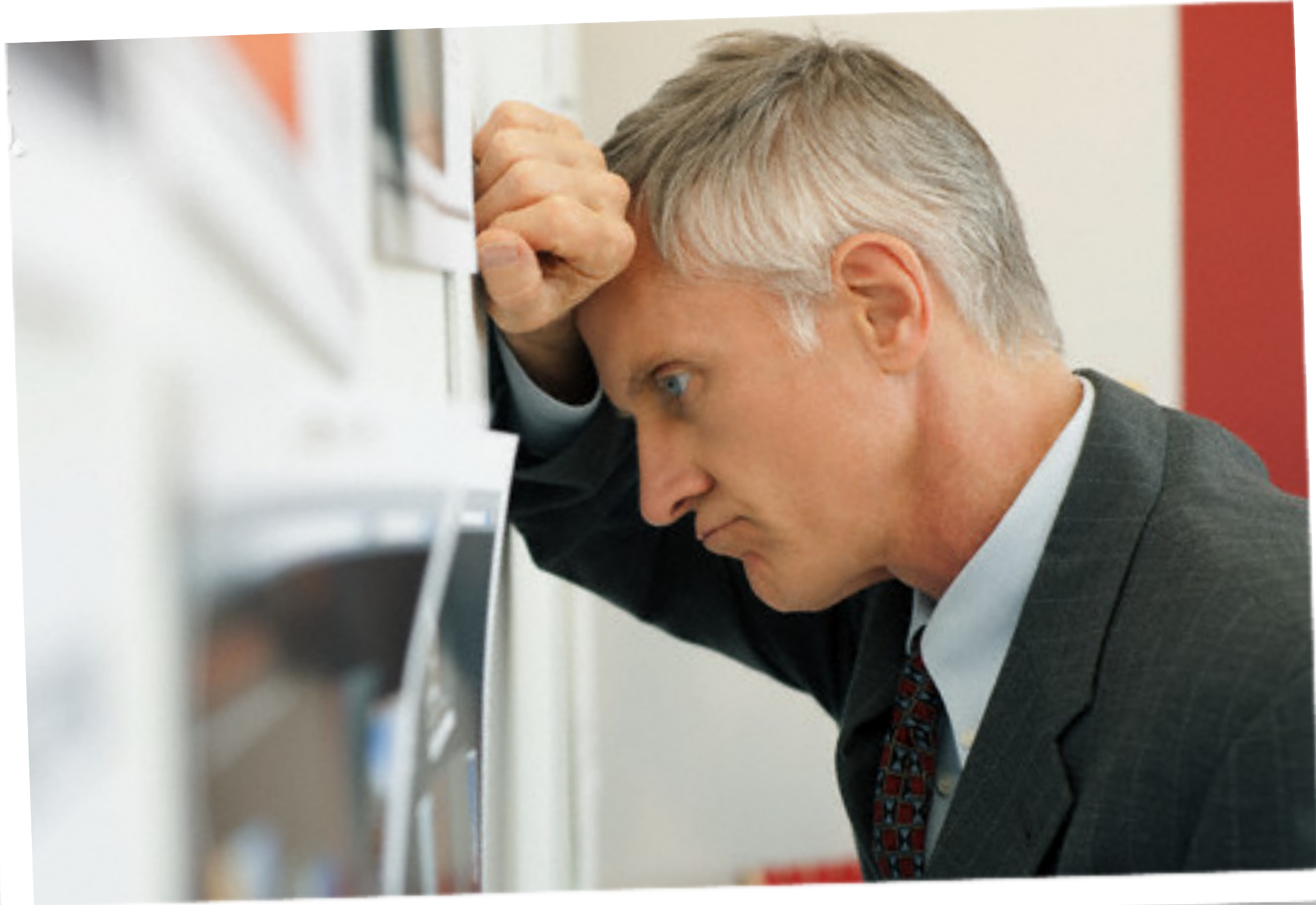
Axio Usage Survey



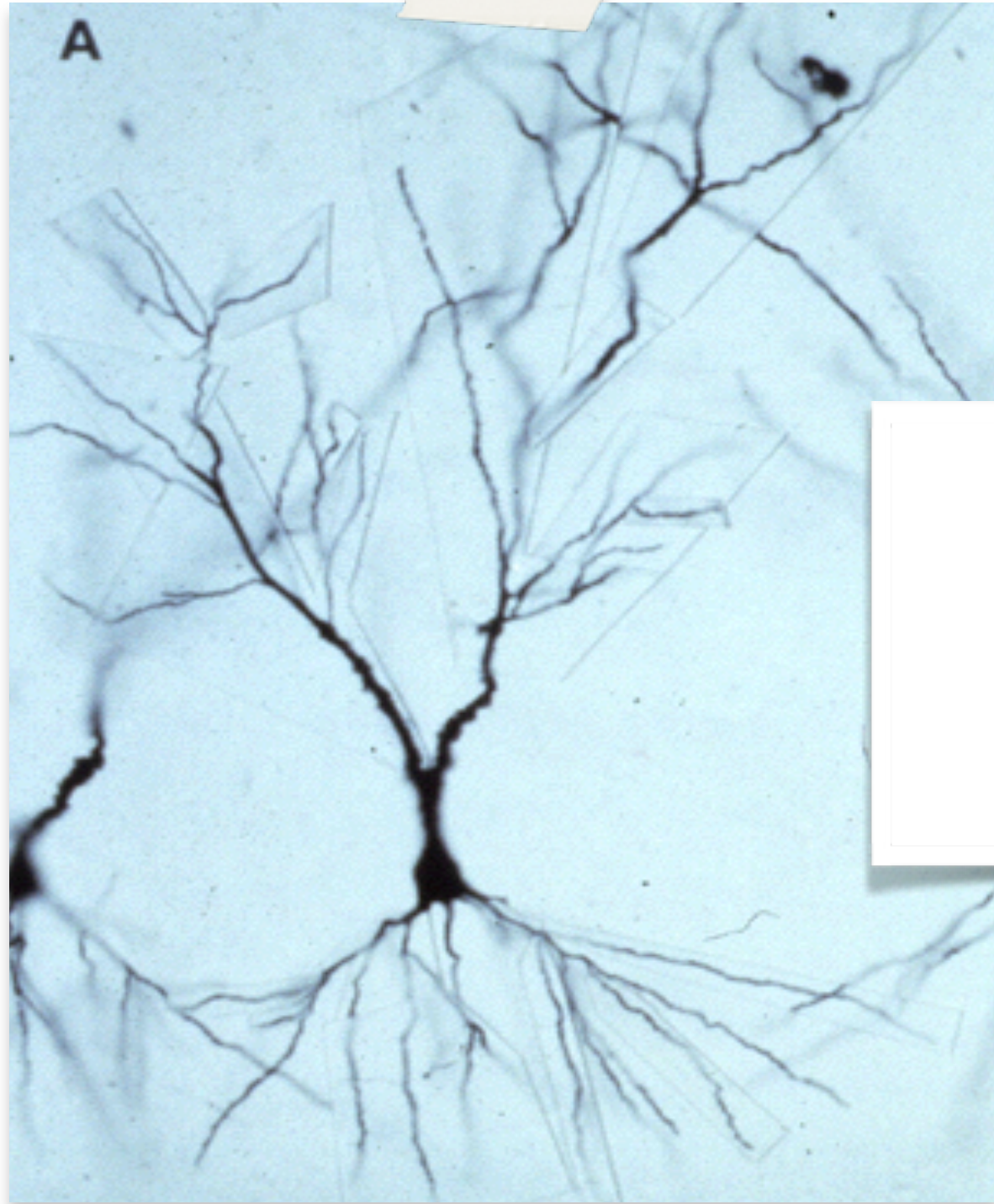
Axio Usage Survey

- "It felt like a morning cup of coffee with the energy it gave me, but more than that it **improved my focus.**"
- "I liked the energy that it gave me, I would say it lasted pretty good maybe **4 or 5 hours.**"
- "I was pleasantly surprised at this product's ability to **keep me energized, awake and focused** without harmful stimulants and **without feeling nervous, jittery or having rapid heart rate.** I would take this over caffeine any day."
- "It was a very subtle transition to having energy, just like I **naturally** had the energy. It was a good amount of energy too. **Not too wired**, not too draggy. **The perfect amount.** I didn't feel like it wore off halfway through the day or that I needed more energy. I also did not have a difficult time falling asleep at night because of it. I would **definitely buy this** instead of many other energy drinks or supplements."

PERFORM Your Best...

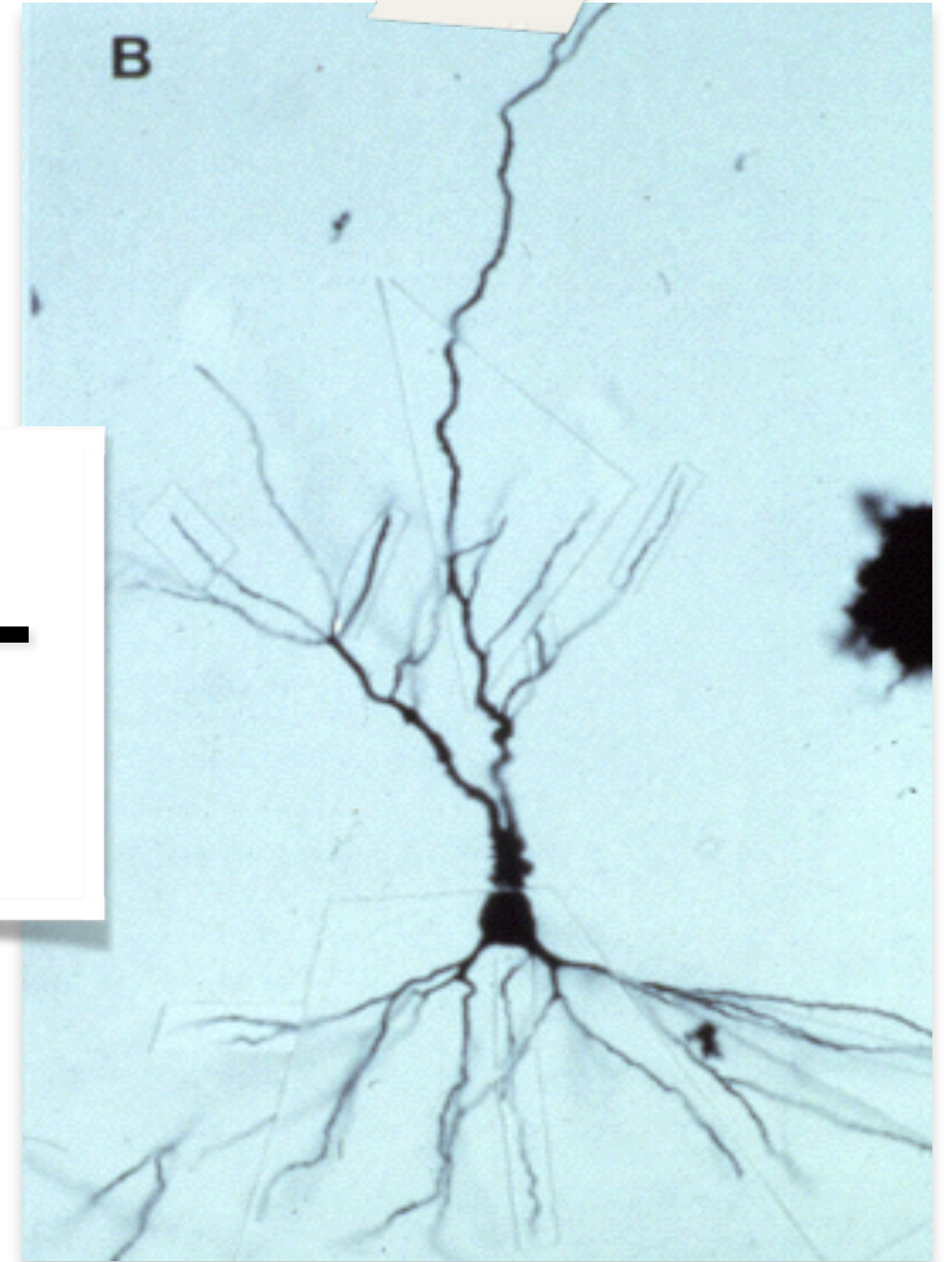


NEURONAL ATROPHY



NORMAL STRESS

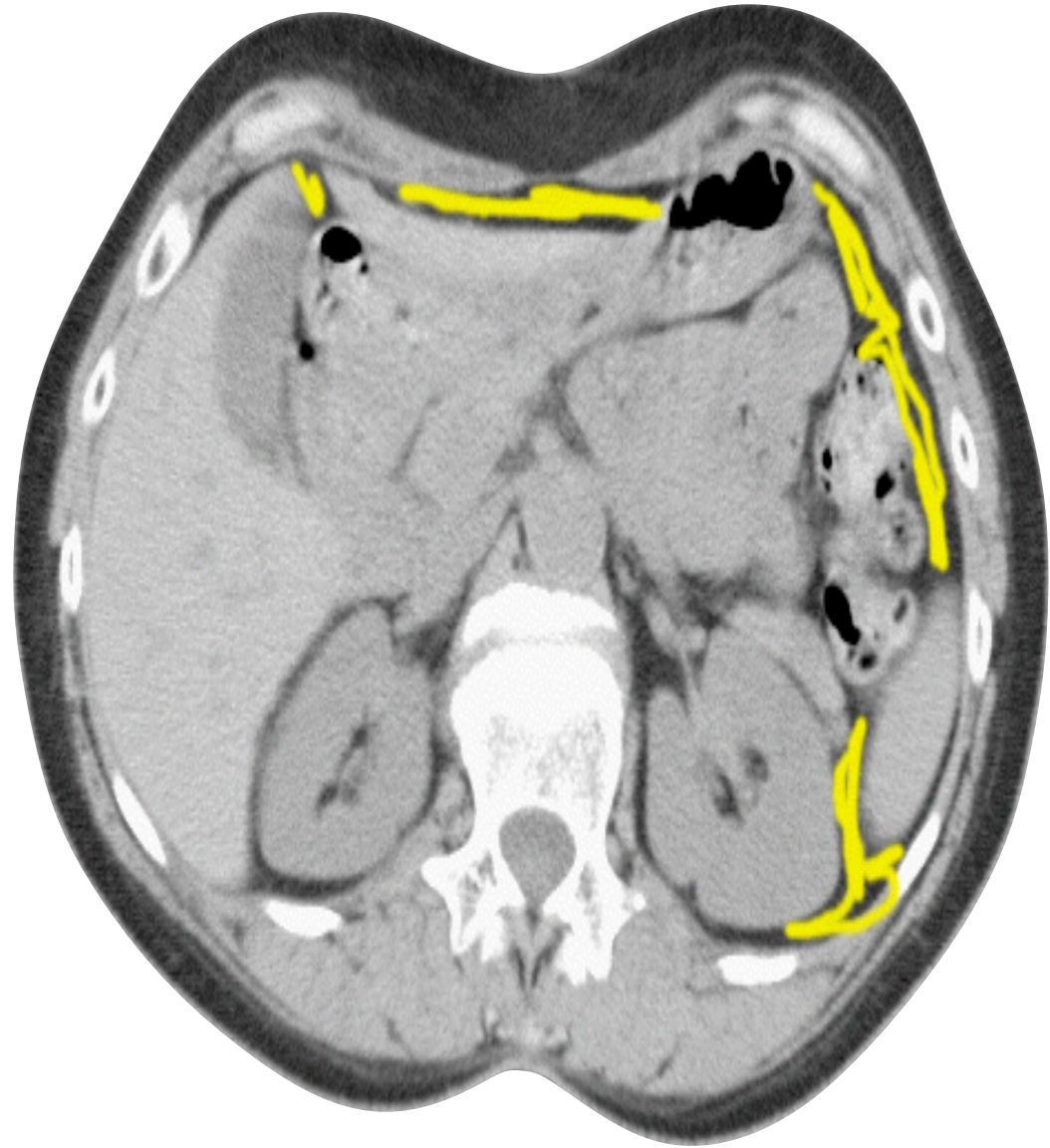
Healthy, Large, Many Projections, Optimal Function



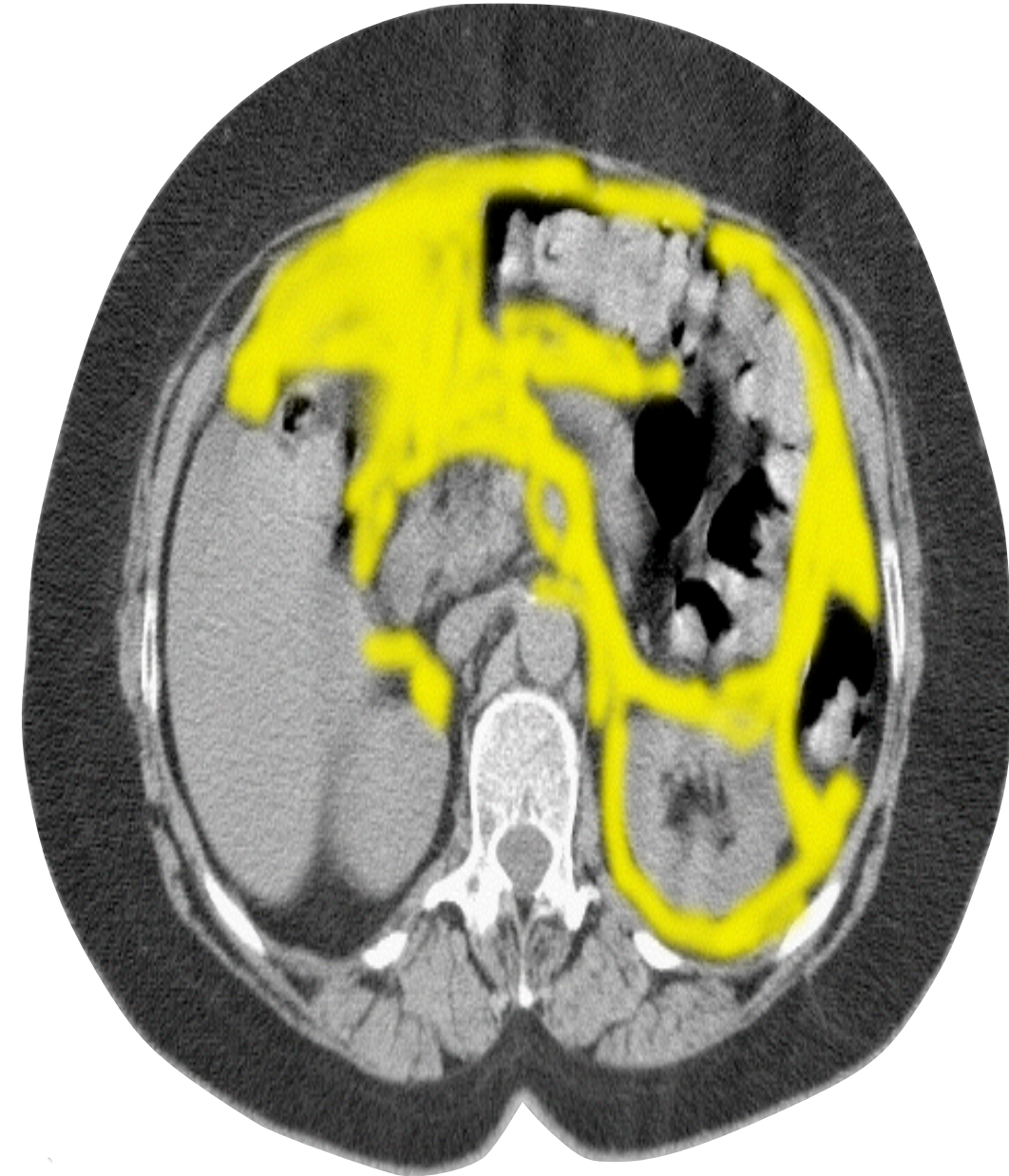
HIGH STRESS

Small, Thin, Disrupted, Structural Damage, Poor Function

ABDOMINAL FAT ACCUMULATION



Normal Stress



High Stress

Research Study Update

Completed¹, Ongoing², Planned³

- 19 studies¹ (U Colorado, Ohio State U, Louisiana State U, Virginia Commonwealth U, Colorado State U, Texas Tech U...)
- “20th study” (Mayo Clinic, 2014)¹ - anecdotal patient report prompts series of translational cell culture and rodent studies
 - Translational research = aims to make findings from basic science useful for practical applications that enhance human health and well-being
- Montreal, Canada (skin)¹
- National Institutes of Health (longevity)²
- Nashville, TN (heart health)²
- Melbourne, Australia (brain function)³
- Okinawa, Japan (lung function)³
- Research Institutions³ (Salt Lake, Miami, Louisville, Fort Collins, Boston, NYC...)
 - energy/mood/focus, performance, antioxidant metabolism, eye health...
 - canine health, periodontal health, blood sugar balance...



Serving the Foothills of Northern California Live at AM 950 and Serving the World Live at www.kahi.com



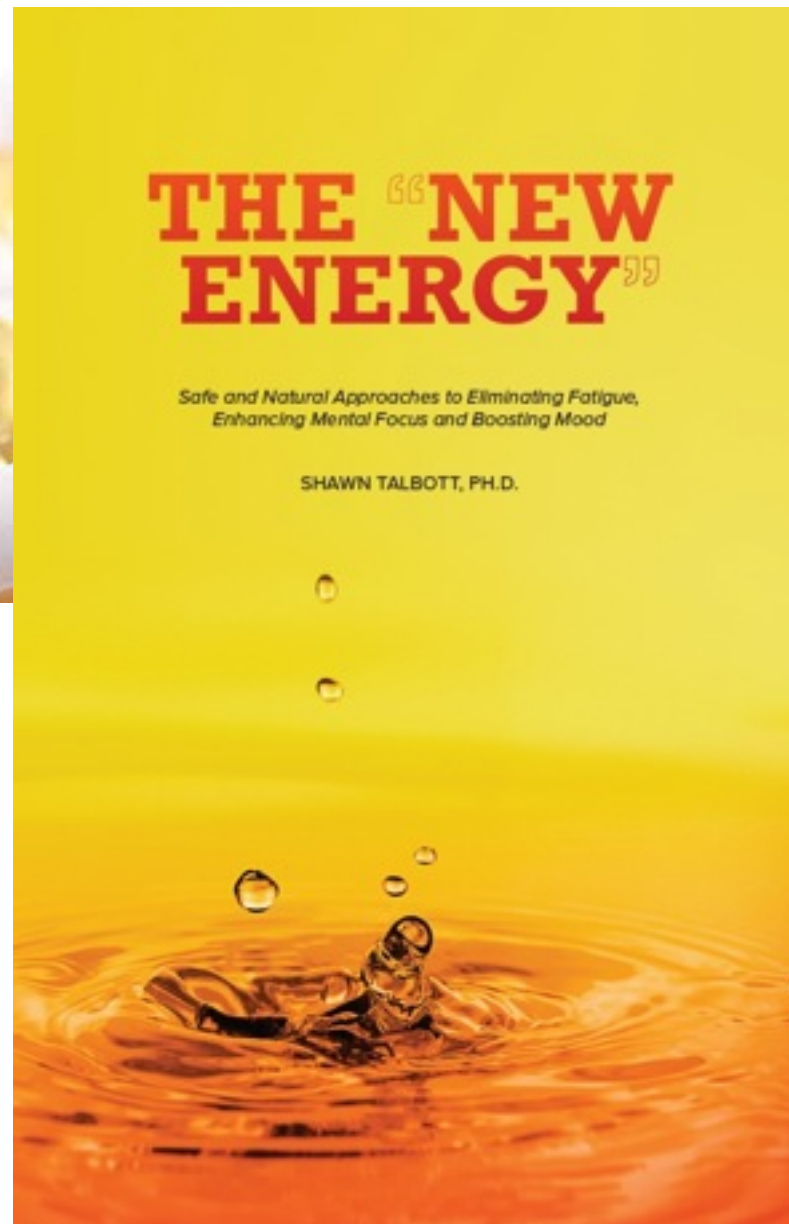
Life LAB



DEADLY ANTIOXIDANTS

Why Your Daily Vitamins May Be Causing Cancer and
Shortening Your Life and How Nrf2 Can Turn on Your
Body's Own Antioxidants for Optimal Health

SHAWN TALBOTT, PH.D.



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www.ShawnTalbott.com

www.ShareCare.com

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 LifeVantage.
FREEDOM

