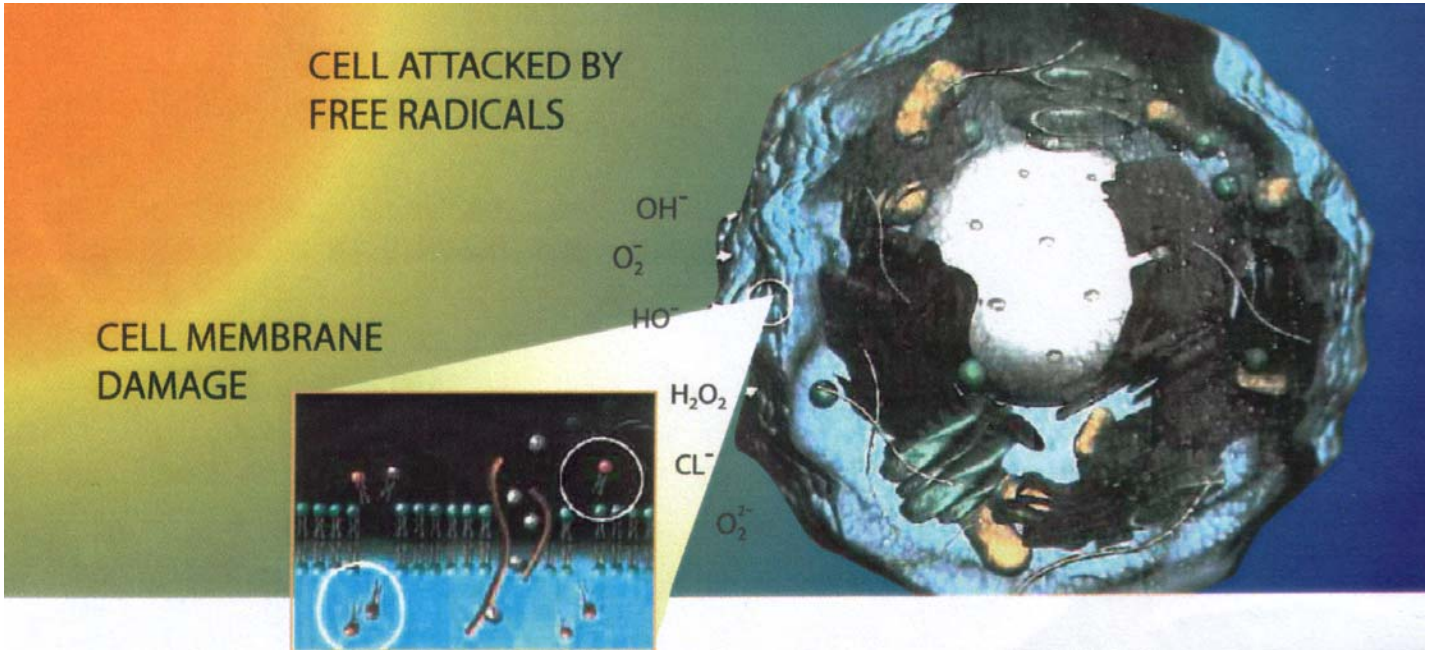
Anti-Aging Medicine World Conference

April 10, 11, 12 – 2008 - Paris



Speaker: Serge Jurasunas

Theme: Oncology how to live longer despite cancer

Topic: Oxidative stress and cancer – antioxidant therapy

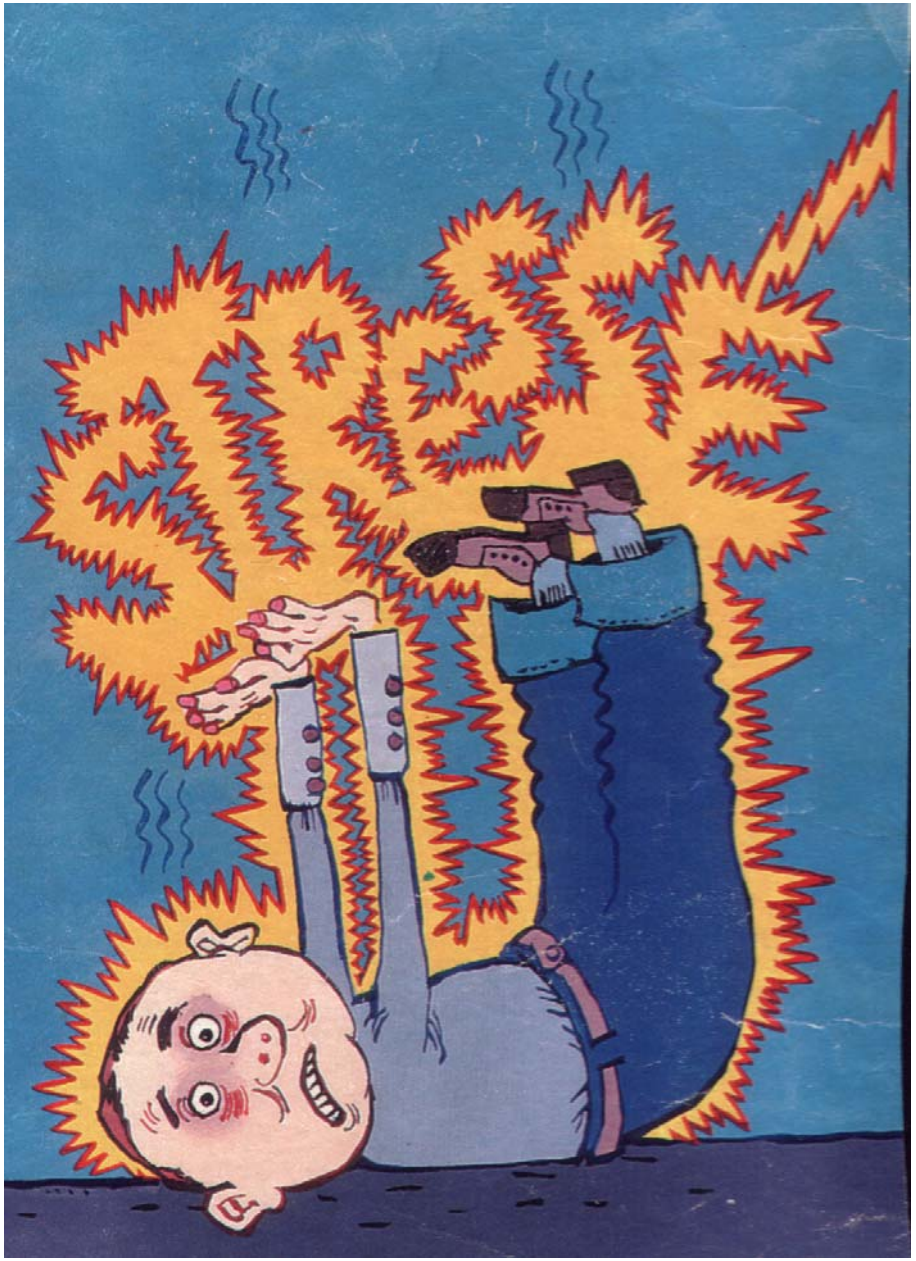
Date/time: Saturday 12th April 2008 – 16.30-16.55 P.M.

INTRODUCTION

- Considerable evidence support the contention that excessive oxidative stress interfere with the cytotoxicity of antineoplasic agents.

- New evidence suggest that dietary antioxidants supplementation can influence the response of chemotherapy by modulating excessive ROS activity increase the effectiveness, reduce adverse effects,

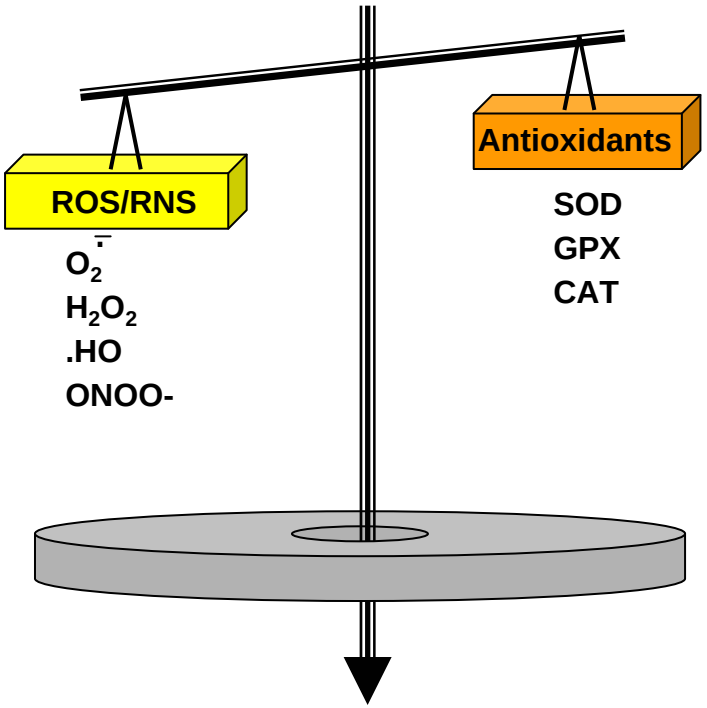
increasing Quality of Life.



He was diagnosed with a cancer.

He looks like been under oxidative stress

Oxidative Stress



Imbalance between oxidants and antioxidants in favor to oxidants

Lost of proliferation
Apoptosis resistance.

Metastasis and angiogenesis.

Oxidative stress is caused by cellular excess of ROS/RNS activity and decreasing endogenous antioxidants defence.
Damage to DNA, protein, lipids and macromolecules.
Interfere with many signal transduction pathway.

Two main problems of chemo/radiation:

- Toxicity to normal cells
- Failure to kill cancer cells

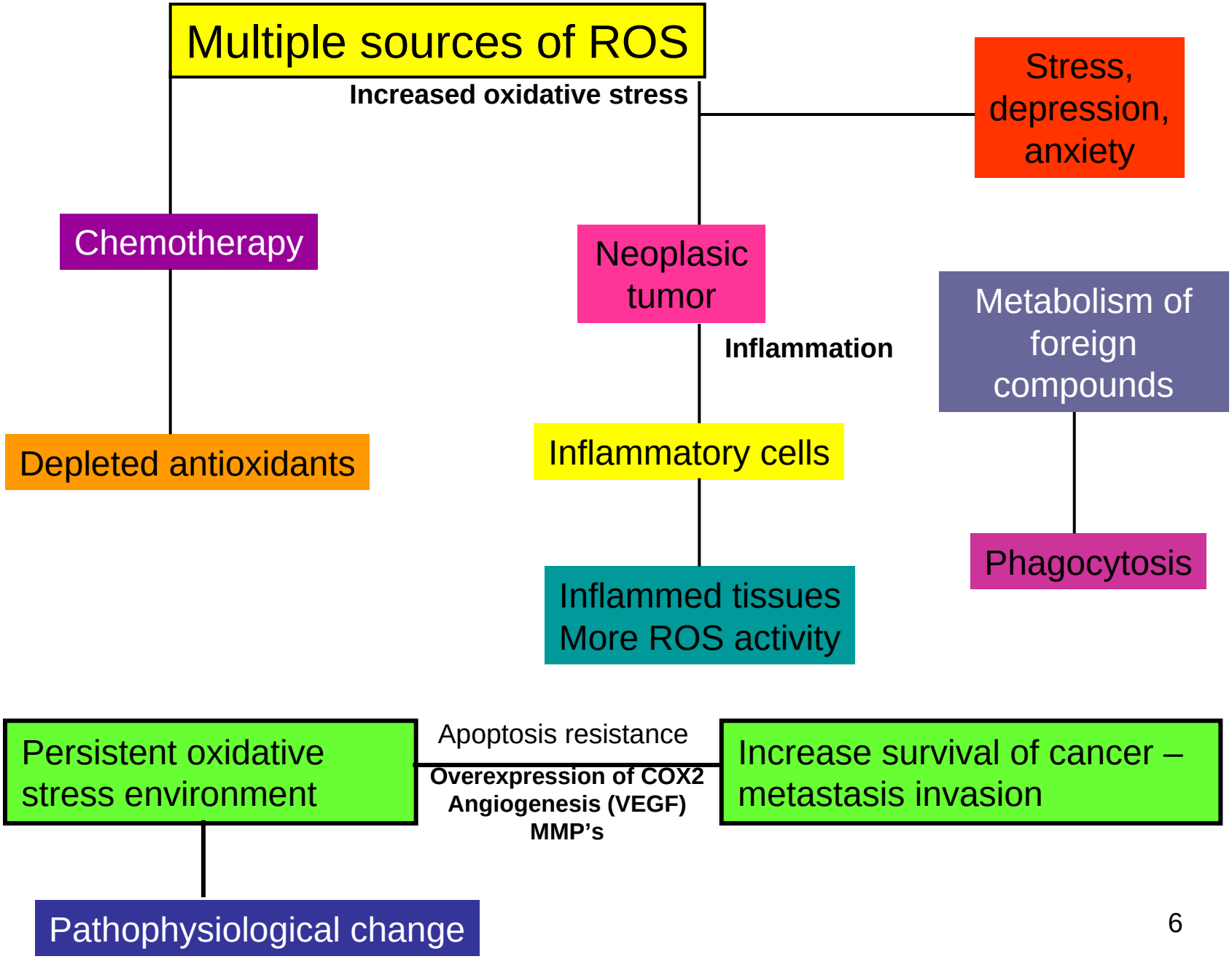
- Promote highly toxic free radicals to increase oxidative stress.

- Strong adverse effects in 80% of patients.

- Reduce antioxidants concentration levels in blood plasma.

- Vitamins – antioxidants are critical to active immune cells such as NK cells usually lower in cancer patients.

- Depleted antioxidants = Multiple source of ROS contribute to persistant stress environment that results in resistant cells to chemotherapy metastasis invasion, angiogenesis.


Multiple sources of ROS
Increased oxidative stress
Stress, depression, anxiety
Chemotherapy
Neoplasic tumor
Metabolism of foreign compounds
Inflammation
Depleted antioxidants
Inflammatory cells
Phagocytosis
Inflammed tissues
More ROS activity
Persistent oxidative stress environment
Apoptosis resistance
Overexpression of COX2
Angiogenesis (VEGF)
MMP's
Increase survival of cancer – metastasis invasion
Pathophysiological change

Oxidative stress interferes with the lenght of the cell's progression through the cell cycle.

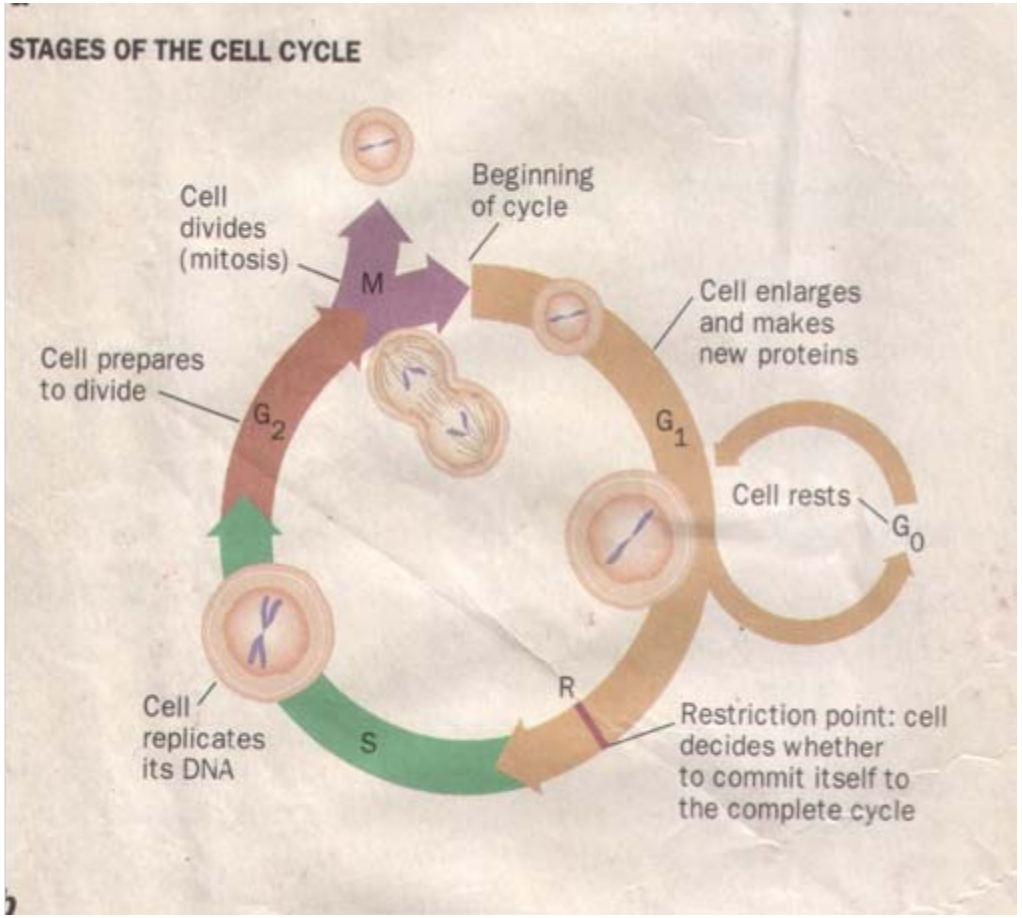
1- Anticancer drugs are cytotoxic only when tumor cells divide quickly.

2- Rate of DNA synthesis and the rate of cell proligeration are related to the degree of lipid peroxidation.

3- Oxidative stress from chemotherapy results in lipid peroxidation of cancer cells acting as negative growth regulator to slow down or arrest cell growth.

Interferes with the chemotherapy effectiveness

Consequence:



-Oxidative stress prolong the GI phase and increase cancer cell resistance.

- Cancer cells may enter the nonproliferation dormant GO Phase for prolonged periods of time.

-Reenter the division after chemotherapy is completed unresponsive to chemotherapy. (active their DNA repair damage)

- Oxidative stress impair apoptosis by inhibition of caspases due to oxidation of their thiol groups by oxidants.

- Reduced environment.

Antioxidants that prevent lipid peroxides and reverse the inhibitory effect of oxidative stress on cell proliferation. (1)

Vitamina E	Chain breaking lipid soluble antioxidant Prevent lipid peroxidation of PUFA Enhance the cytotoxicity effects of several anticancer agents
Vitamin C	Water soluble antioxidants Prevent lipid peroxidation Enhance the cytotoxicity effects of several anticancer agents
Beta-carotene	Lipid soluble antioxidants Enhance the cytotoxicity effects of several anticancer agents
Coenzyme Q10	Lipid soluble antioxidant Scavenge lipid radical within biological membrane Play an important role in preventing lipid peroxidation damage of mitochondria membrane

Superoxide Dismutase SOD – A key important antioxidant enzyme that also prevent or reduce lipid peroxidation

1 – Kenneth A. Coklin – Dietary antioxidants during cancer chemotherapy. Impact on chemotherapeutic effectiveness and development of side effects. Nutr and cancer 37 – (1) 1-18-2000

The benefit of antioxidant in cancer Therapy

(Oncol Feb. 2002 vol.16-2)

Antioxidants provide therapeutic advantages by enhancing antineoplasic agents

-Reduce or prevent from excessive ROS activity and therefore from damaging effects to normal cells.

-Reduce or prevent lipid peroxidation (increase the proliferation rate of cancer cells).

- Inhibit COX 2 activity – inhibit angiogenesis – (decrease tumor resistance).

- Selectively induce apoptosis over necrosis.

- Stimulate or restore the immune system – enhance immunologic elimination of cancer cells.

- Prevent oxidation of phagocytosis – Prevent from infection.

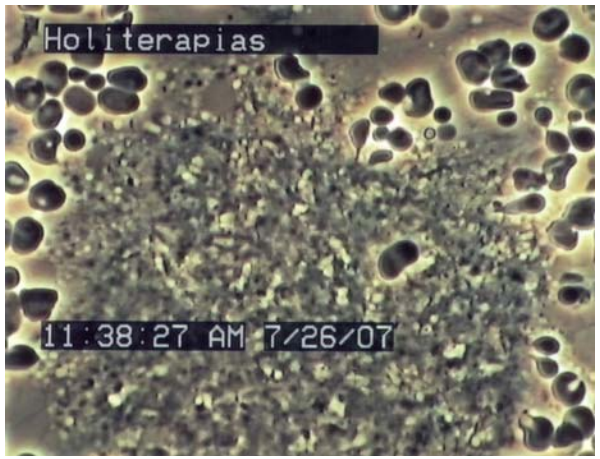
Interfere with signal transduction regulation at different levels in a way to activate tumor suppressor genes.

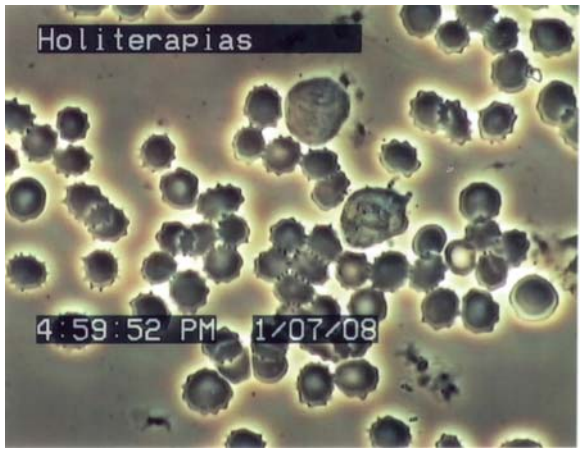
Oxidative Stress Assessement

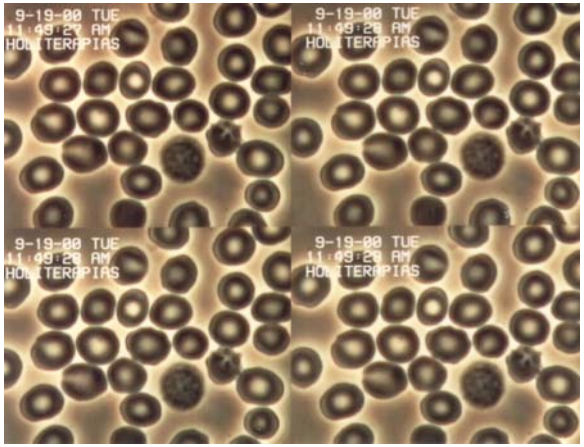
Oxidative stress can be from middle strong or very strong condition.

The technic: Peripheral blood analysis (HRBM)
Multi-phase optical microscopic system with high definition (40 x 18.000)

Target: High free radicals activity results on significative morphofunctional alteration of red blood cells indicating oxidative status and antioxidant defenses for the whole organism (1)







Serge Jurasunas – Holiterapias 2008

(1) Minneti M and Malorni W. Redox Control of red blood cell biology: The red blood cell as target and source of prooxidant species – Antioxid Redox Signal 8: 1165-1169-2006

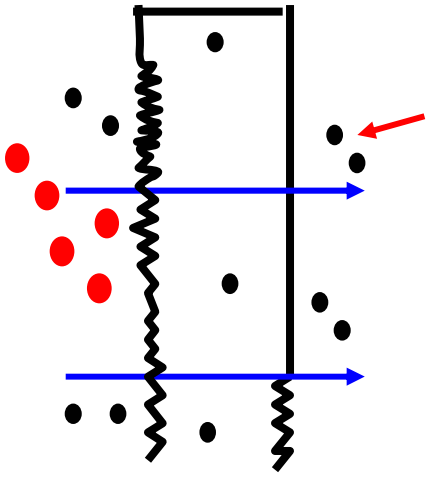
A new antioxidant therapy – Anoxe

Targeting of cancer inflammatory mediators

The compound: Low molecular weight antioxidant compound having a SOD molecule like activity. Dietetic supplementation made from small molecules extracted from modified selected vegetables, herbs and seeds rich in antioxidants and with no toxicity.

Presentation: granule sachets of 3g for oral intake to preserve the fully active antioxidants enzyme.

Characteristics: The compound is quickly abdorbed by the body and highly effective against ROS activity and lipid peroxide.



Anoxe – Low molecular antioxidant compound SOD like activity – 7.3 x 1,000 unit/g

Plants/herbs	Active Ingredients Full spectrum of antioxidant	Pharmacological effects
Vegetable basis Soya bean Japanese darkon raddish Rice bran Green tea Wheat germ Yuzu orange Hatomugi Sesame seed	Vitamin A.C.E. Beta-carotene Catalase Glutathione Riboflavine Polyphenols Flavonoids Tannins Catechins	Decrease ROS activity. Strong anti-inflammatory property. In vitro – inhibit COX1-COX2 activity Strong oxido-reduction property. In vitro decrease Tyrosinase activity. May inhibit NF.KB
	Balance Antioxidants in blood circulation. Very strong antioxidant property.	Prevent or decrease lipid peroxidation. Antibacterien. Protect RBC – WBC from oxidation. Anti-bacterial/fungal activity Strengh immune function.
Modified to extract low molecular antioxidants fully active	Very quick absorption into the body	

Effects of Anoxe over lipid peroxides in presence of DHA and measured with TBA

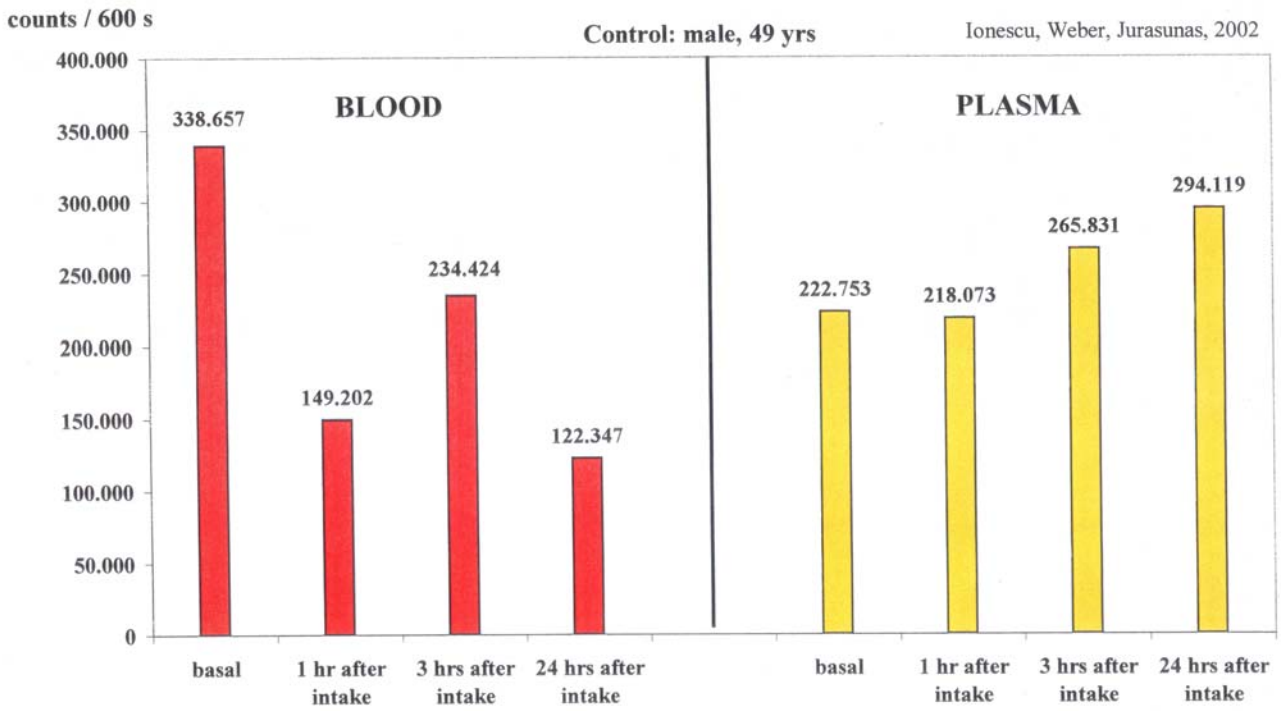
Scale of 100 units of peroxides produced by DHA alone

Index of lipid peroxides produced

	Polyunsaturated	100
Very effective	Anoxe	39
	Vitamin E	83
	Untreated ingredients of Anoxe	85
	S.O.D. enzyme	94
	Catalase enzyme	105
	Vitamin C	136

Evaluation of Anoxe free radical quenching activity *in vivo*

Fig. 4 Effects of Anoxe intake (15 g / 250 ml H_2O) on free radical generation in blood and plasma, in vivo



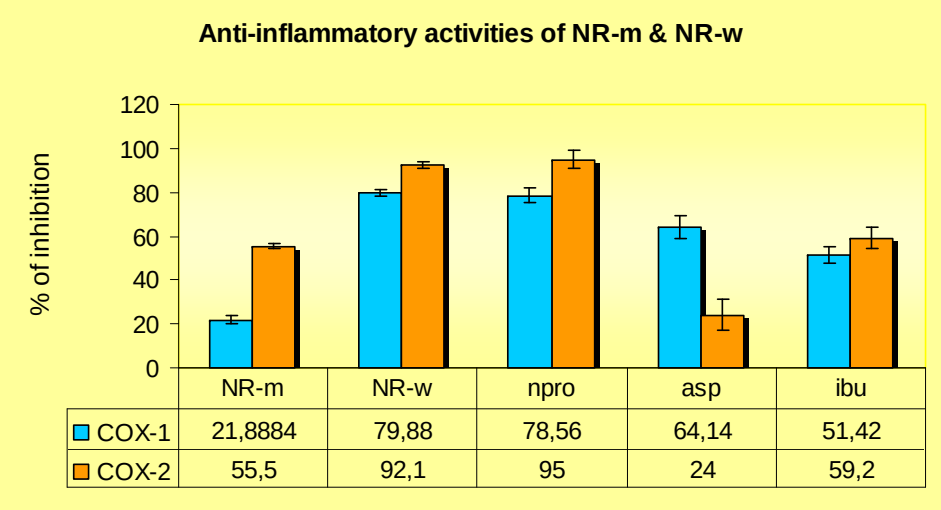
The single administration of 250ml of a 6% Anoxe solution resulted in a clear-cut reduction of the photon counts (free radical levels in whole blood at 1,3 and 24 hours, after intake, in all tested samples.

The most significant ROS-inhibition was registered at 1 hour and 24 hours, after 15g Anoxe intake.

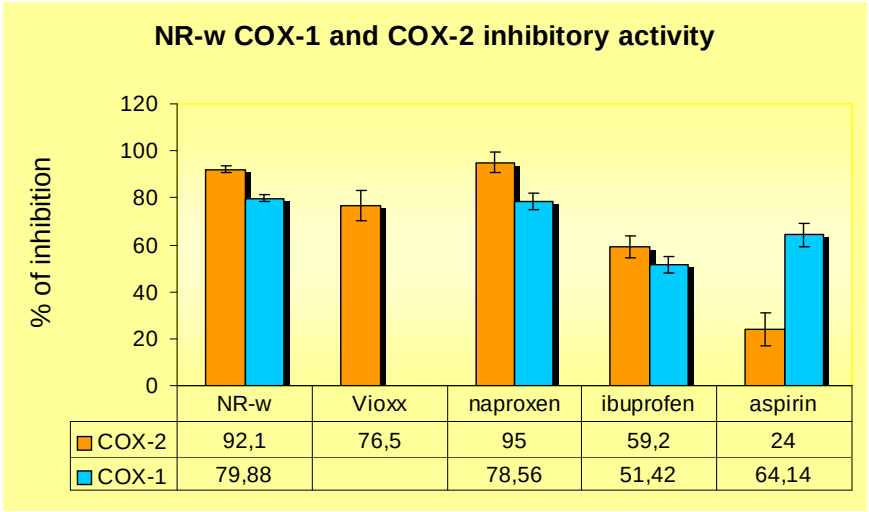
Anti-inflammatory and COX-2 inhibitory property of Anoxe

Bioactive Natural Products Laboratory

National Food Safety and Toxicology Center – Michigan State Univ. - USA



	NR-m	NR-w	npro	asp	ibu
COX-1	21,8884	79,88	78,56	64,14	51,42
COX-2	55,5	92,1	95	24	59,2



	NR-w	Vioxx	naproxen	ibuprofen	aspirin
COX-2	92,1	76,5	95	59,2	24
COX-1	79,88		78,56	51,42	64,14

Conclusion:

Anoxe is an innovative biological compound with bioavailability

-Reduce and neutralize excessive ROS activity.

-Significant anti-inflammatory activities.

-As inhibitor of COX2 may be considered as a novel agent to inhibit angiogenesis.

- Boost the immune system activity

- Potential clinical application to protect normal cells from damaging effects of chemotherapy and enhance the effectiveness of chemotherapy.

H.R.B.M. – 6,000 x

F. 80 years
– Rheumatoid arthrits – degeneration of the aortic valve – Bad physical condition

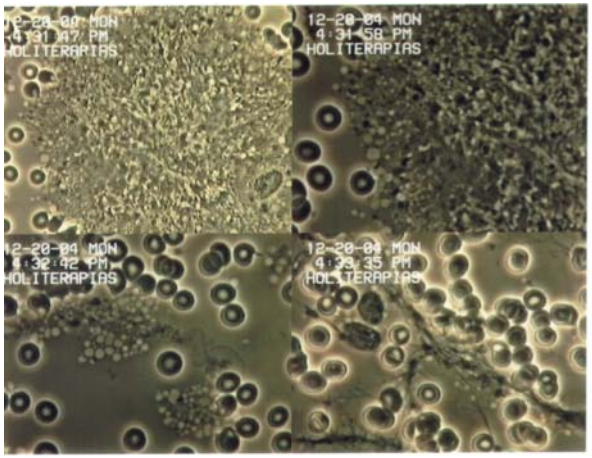


Photo 1

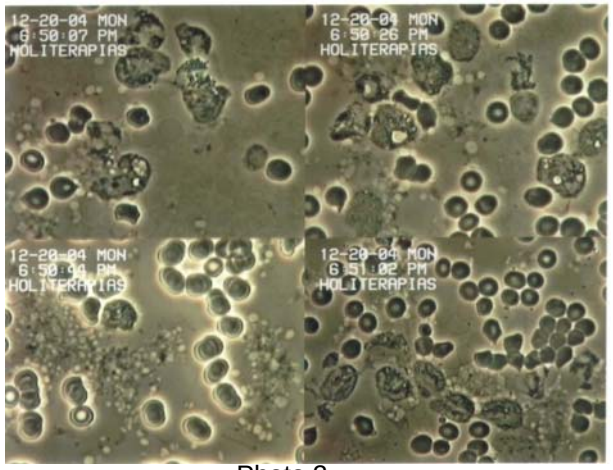


Photo 2

Dosage:
18g per day
during 15 days

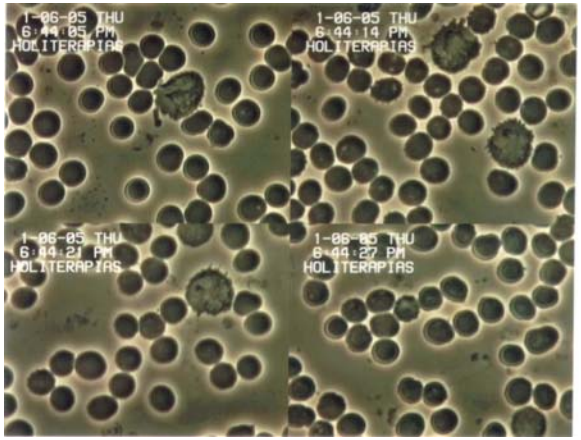


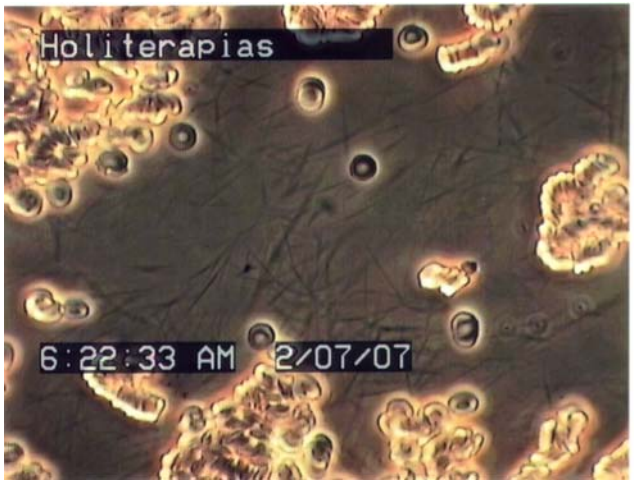
Photo 3

A 100% change in the blood status increased immune function.
Normalization of phagocytosis.
Elimination of large colonies of yeast form – like candida.

Case 13125

F. 42 years old – cancer of colon

1 – Blood examined 3 days after chemotherapy session – 1st consultation – adverse effects.



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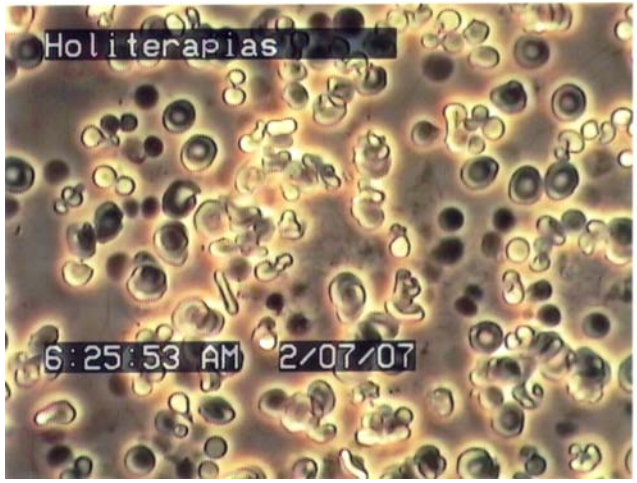


Photo 2

Dosage:
18g per day

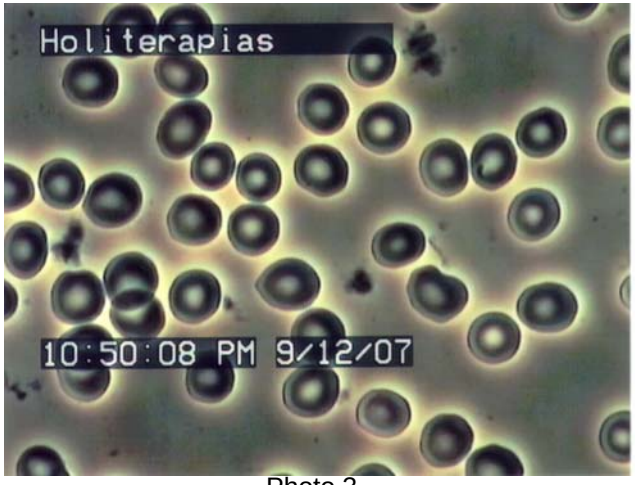


Photo 3

After one month:

2 - Blood examined one week after a chemotherapy session but the patient follow as support the antioxidant therapy. Significative result with less adverse effects.

Case 602

F. 68 years old – uterus carcinoma - chemotherapy

High oxidative stress

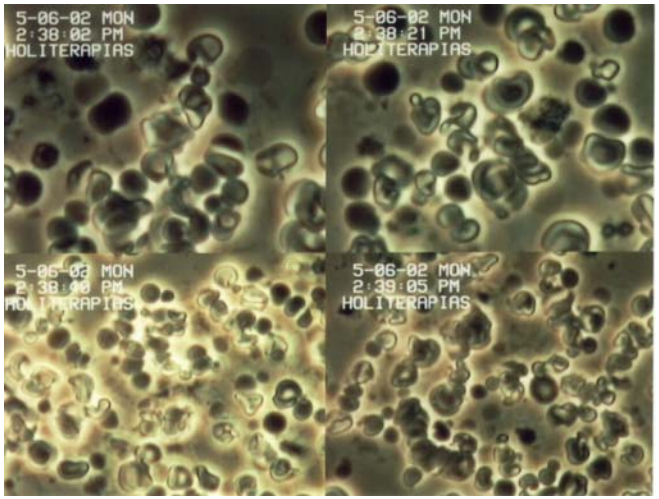


Photo 1

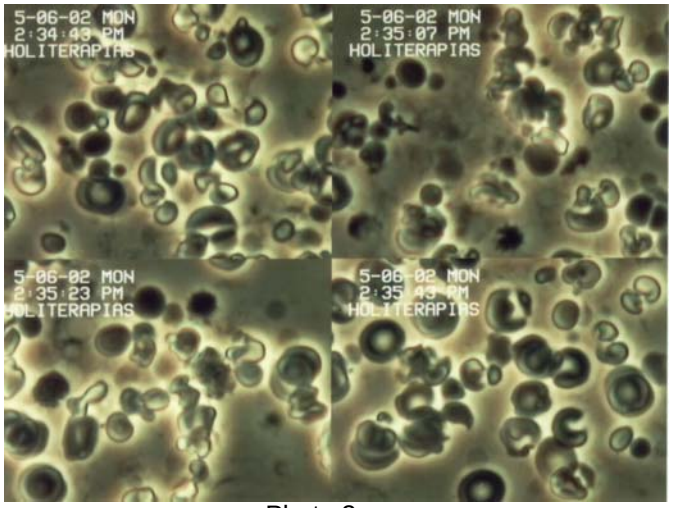


Photo 2

Dosage:
18g per day
no specific diet
during 7 days

After 7 days
100% modification of
the red cells status.

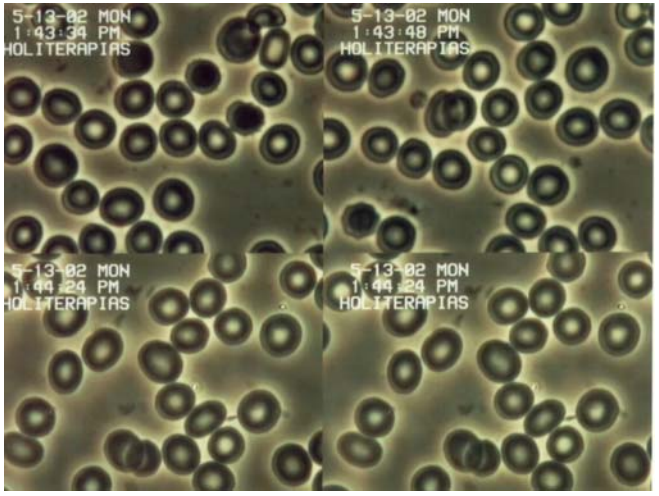


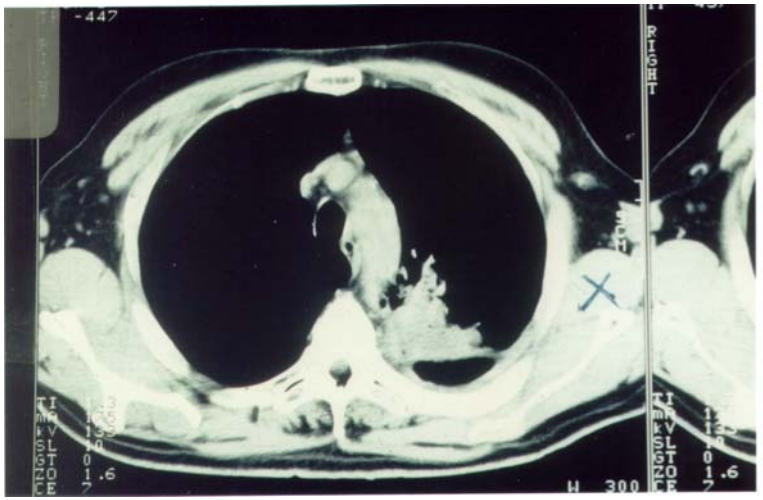
Photo 3

Balanced antioxidants status

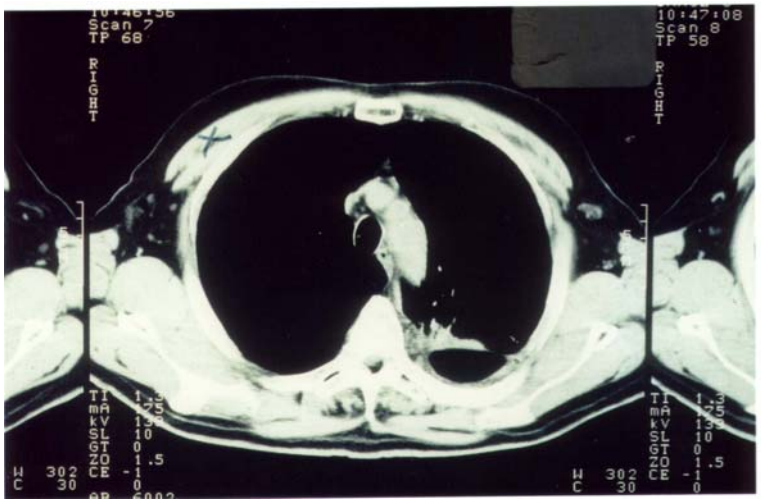
Effects of Anoxe – A low molecular antioxidant compound on a resistant tumor to radiation therapy

M. 42 years – lymphoma treated with chemotherapy.

Recurrency with a large tumor localized in the bronchial area resistant to new radiation therapy.



Before treatment



After treatment

40 days using the low molecular antioxidant compound Anoxe (together with radiation) at 24g per day.
Shown a significative reduction of the tumor size.

Colorectal Cancer
F-55 years
Standard Therapy

May 2005
CA 19.9 – 26 u/ml
CEA .....

One year →

Poor quality of life
Strong adverse effects

June 2006
CA 19.9 – 1000 u/ml
CEA 69.7ng/ml

Liver metastases

Beginning of July 2006

The difference →

Increasing Quality of Life

End of July 2006

Antigene CA 19.9 – 834 u/ml
Tumor marker CEA – 60 ng/ml

Anoxe
L.C.E.

CA 19.9 – 498 u/ml
CEA 46.6 ng/ml

References (cyclooxygenase 2)

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**Carole Nico et al – Superoxide dismutase (SOD) mimics control tumor Growth by modulating endogenous production of reactive oxygen Species (ROS).
3th International Seminar on SOD. 2004 – June 10-11 – Institute Pasteur – Paris - France**

Thank you for your attention

For more information:

-Measuring oxidative stress level with the technique of FORM test (Free Oxygen Radical Monitor) in cancer disease – Balancing antioxidant levels with the compound Anoxe (Publication available on request).

- Therapeutic application of a new molecular antioxidant compound (Anoxe) in ROS activities.

-Int. Symposium on ROS/RNS, diagnostic, preventive and therapy application St. Petersburg 2002-8-11 July – Russia.

- My journey to Anoxe – (A cancer therapy revolution in Europe – By Serge Jurasunas and Mike Culbert.

- Mitochondria and Cancer by Serge Jurasunas – Townsend Letter August/Sept.2008 – (USA)

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