

**AANP convention / Palm Springs August 22-25**

See NewWorld Natural Products BOOTH 316 next to the food court.

# Naturopathic Physicians Medical Review

August—October 2007 Issue

**Mission Statement:** Providing physicians with the therapeutic power of LIVE plant and WHOLE food medicines.

*Concord grape rated highest antioxidant; now added to the VerryBerry. Mass Spec of Concord grape juice shows highest concentration and broadest range of polyphenol antioxidants. See article on bottom of page 2*

## **EDITORIAL: Silk Worms and Flavonoids:**

My first research on flavonoids, commenced at 11 years old picking and studying the berries in the strawberry fields on our 150 acre farm in northwestern Ohio.

--800 flavonoids were categorized in 1970 when Ed Madison, Nutritionist, ND and Clinical Director at Bastyr was emphasizing flavonoids as a valuable tool for ND's in their practices. Now there are 8000 flavonoids categorized.

--In the 1970's the pharmaceutical companies were also studying flavonoids as a prototype molecule for creating medicines that had tissue targeting specificity (Plant Flavonoids in Biology & Medicine I & II, 1970).

--This past November when I attended at the King's Royal Flora Exhibition in Thailand they dedicated an entire pavilion to flavonoids, teas and other high flavonoid plants. The Thai's say their silk is the best in the world. I had an EPIPHANY as to why the primary food source of the silk worms is the mulberry leaf. In Thai research they have produced numerous studies on the benefits of the high flavonoid mulberry leaves. We know flavonoid intake increases C.T. integrity. Could the flavonoids in the mulberry leaves being eaten by the silk worms be a contributing factor to imparting high tensile strength to the famous Thai silk? **Dr. Bill Mitchell** always told me when I preceptored with him in his practice that "flavonoids have an affinity for the microcirculation". Working with Bill, I saw the prolific use of flavonoids. His wisdom should serve us well.

Nita Bishop, ND

NewWorld Natural Products reaches a milestone production of our 10,000<sup>th</sup> bottle of VerryBerry for the Naturopathic physicians. See new commemorative bottle label

## Highlights of this issue:

- Editorial: Silk Worms and Flavonoids: Report on the King of Thailand's Royal Flora Exposition
- Sacha inchi: Amazonian plant won the Gold Medal at the World edible oil fair in Paris for being the richest vegetable source of essential fatty acids Omega 3(48%) & Omega 6 (35%).
- Chemopreventative black raspberry/black cumin seed: Clinical studies begin at the Berman Center for Clinical Research and Outcomes, Minneapolis Medical Foundation, Hennepin County Medical Center, University of Minnesota, PI Arnold S. Leonard, M.D., Ph.D.
- Cranberry PAC's: Alpha-Proanthocyanins found to be active anti-adherence factor. A unique concept: combining cranberry PAC's plus a proprietary 7 probiotic formula IN ONE CAPSULE for women with acute or recurring UTI's. Why has this never been done before?
- Re-thinking Flavonoids: New 2007 studies to consider from Linus Pauling Institute/OSU.
- Negative research studies on supplements/herbs: A Naturopathic Perspective



**New World  
Natural Products**



Box 417  
Granite Falls, WA 98252  
Phone: 425.830.9594  
Fax: 360.691.6451  
drnita@nwnp-global.com  
[www.nwnp-global.com](http://www.nwnp-global.com)

*Nita Bishop, N.D.*

# Medical Review

## Sacha Inchi wins Gold Medal at Paris International Exhibition: ChocOmega

If you are concerned about the fish oils containing PCB's, mercury or just looking for an alternative for your vegetarian patients, Sacha inchi (*Plukenetia volubilis*) has arrived. This seed is a rich and natural legacy from the ancient civilizations of Peru culminating with the Incas to the Peruvian amazon rainforest where NewWorld Natural Products partner Productes Naturales de la Selva grows the seedlings provided by the Peruvian government. It is a native oleaginous plant whose seeds have a high content of Omega 3(48%), Omega 6 (35%), & Omega 9(9%) and high levels of calcium and protein. The plant is unique with a star shaped fruit holding 4 seeds per pod and has a continuous production of fruits with a lifespan of over 10 years. The seeds are pressed to make the oil which has been analyzed with spectroscopy <sup>1</sup>H nuclear magnetic resonance, and as per the Journal of American Oil Chemists' Society reports significant bands of the IR spectrum of this oil showing a high degree of unsaturation (92%).

\*\*Samples of the ChocOmega (omega 3,6,9 chocolate/treenut nut filled bars) were unveiled at the NWND convention in Portland in April 2007 and are becoming the most asked for product by ND's.

**CONCORD GRAPE JUICE HIGHEST ANTIOXIDANT:** A newly published study from the researchers at the University of Glasgow, Scotland published in the Journal of Agriculture and Food Chemistry using HPLC and Mass Spectrometry to identify and quantify individual phenolic compounds in different fruit juices suggests *concord grape juice has the highest concentration and broadest range of polyphenol antioxidants.* This is the 2<sup>nd</sup> study in less than a year that demonstrates the superior antioxidant capacity of concord grape juice. In July 2006 an independent study published in the American Journal of Clinical Nutrition ranked Welch's 100% grape juice from Concord grapes as the number one beverage for antioxidant capacity after testing over 1000 foods and beverages. However University of Glasgow researchers suggest the health benefits of polyphenols may be best achieved with a consumption of a broad range of juices, consisting of purple grape juice, cranberry, grapefruit and apple. (Reference the mixture: VerryBerry).



Doctors and medical students are welcome to visit the the 220 acre Amazon Nursery in upper amazon basin, upriver from Iquitos, Peru near Rio (river) Nanay



Productes Naturales de la Selva (Natural Products of the Forest) Greg/Reynaldo/Solomon on the amazon farm.

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Phone: 425.830. 9594  
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drnita@nwnp-global.com  
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# Medical Review

## Human Clinical Trial on Black Raspberry/ Black Cumin Seed Oils and Fruit Seed Flours Begins:

The Berman Center for Clinical Research and Outcomes which is attached to the Minneapolis Medical Foundation, Hennepin County Medical Center, and University of Minnesota will be starting a clinical trial in the first quarter of 2007 with 30 patients using the dietary supplements **Immuno-Viva™** and **Immune Lift™**. The clinical trial will be comprehensive by measuring more than a dozen different physical markers of cardiovascular, immune and anti inflammation health. The clinical trial will measure benefits from **Immuno-Viva™** after 30 days and then **Immune Lift™** will be added to the regime along with **Immuno-Viva™**. PI – Arnold S. Leonard, M.D., Ph.D.

**Reference studies by Arnold S. Leonard, MD, PhD for Botanic Oil.** [www.BotanicOil.com](http://www.BotanicOil.com) (Naturopathy Digest, July 2006)

*Nigella sativa* was found in Tutankhamen's tomb implying that it played an important role in ancient Egyptian practices. Earlier references to "black seed" is found in the Old Testament. Avicenna (Ibn Sina, 980-1037), the renowned Persian philosopher and physician who wrote the classic text *The Canon of Medicine* referring to the black seed as the seed that "stimulates the body's energy and helps recovery from fatigue or dis-spiritness".

We have seen the positive animal studies on black raspberry and colon cancer from Ohio State and the University of Minnesota.

Black cumin seed is a valuable source of protein, carbohydrates, EFA's, vitamins A, B1, B2, C and niacin as well as minerals such as calcium, potassium, iron, magnesium, selenium and zinc.

**Note:** **Immuno-Viva** contains **Thymoquinone** which is a chemoprotective constituent which exhibits anti-inflammatory, immunological effects. Other constituents in ImmunoViva include beta sitosterol and nigellone. The oil is 80% unsaturated fatty acids.



### **Immuno-Viva™**

is a blend of black raspberry (*Rubus occidentalis*), black cumin (*Nigella sativa*) used for immune, cardiovascular and anti-inflammatory systems.

**Immune Lift™** is a powder made from 2 natural seed flours (black raspberry, black cumin) See Chemical compositions, antioxidant capacities and anti-proliferative activities of selected fruit seed flours, *J of Agri and Food Chem* 2006, 54, 3773-3778. TM-Botanic Oil, Spooner Wisconsin, [www.BotanicOil.com](http://www.BotanicOil.com)



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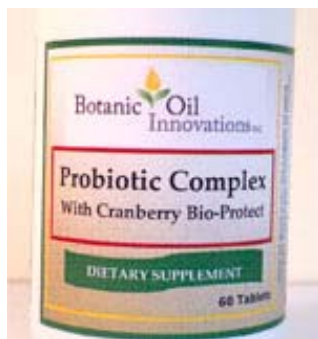
[drnita@nwnp-global.com](mailto:drnita@nwnp-global.com)  
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# Medical Review

## UTI's & E.Coli vs. Alpha-PAC's (proanthocyanicins):

Naturopathic standard of care for UTI's can include both cranberry PAC's proanthocyanidins and Probiotics. However due to a conflict between the cranberry and probiotics – cranberry will degrade a probiotic-- you normally do not combine them in the same capsule, but are always dosed separately. A new stabilized product containing both the alpha PAC's and 7



probiotics has been perfected from a collaboration between Washington-state based Nutraceutix, Inc. and Botanic Oil, Spooner Wisconsin, which offers three advantages to your female patients with acute or recurring UTI's or women with short urethra's contributing to recurring bacterial infections:

1. Special CranProtect technology prevents gastric acid from eroding the caplet until it reaches the intestine allowing full absorption of its contents in the intestine.
2. Includes a large percentage of anti-adhesion agents: 23% of the total proanthocyanidins in the product are in the alpha form. The alpha form of the proanthocyanidins has been shown to be the anti-adhesion agent that prevents E. Coli from adhering to the urinary tract wall.
3. With CranProtect the patient is offered a full spectrum of 7 probiotics with 1.5 billion CFU per caplet. The benefits are apparent: Increased patient compliance: your patient only takes one pill vs dosing 2 different cranberry and probiotic pills at alternate intervals where the patient may run the risk of therapeutic ineffectiveness.

The alpha-PAC (proanthocyanidin) in cranberries is a different type of PAC than that found in grapes and thus more effective. *"CranProtect was administered to a DMII patient with recurring UTI's due to dumping sugar into her urine/ increasing bacterial growth. She now takes the CranProbiotic prophylactically which has stabilized her for the first time in years."*

*Nita Bishop, ND*

**"Now available:** CranProtect: PAC (proanthocyanidin) power of CRANBERRY + 7 potent PROBIOTICS in an efficacious UTI medicine.



### News from the March Natural Products ExpoWest/ Anaheim, CA:

Super food CamuCamu/Vitamin C: **The CamuCamu product tested at 26 grams PER 100 grams Vit C ascorbic acid and as per OSU this makes it one of the highest testing Vit C sources in the world.**

The CamuCamu from the Amazon is distributed by NewWorld Natural Products and comes from Productos Naturales de la Selva (Natural Products of the Forest) an affiliate of NewWorld Natural Products which has a 220 acre medicinal plant farm in the upper Amazon basin of Peru. CamuCamu is a real Vitamin C source plus containing a spectrum of supportive nutrients including: 3 branch chain amino acids (leucine, isoleucine, valine), riboflavin, thiamin, etc. For CamuCamu samples contact NewWorld Natural Products.

See OSU analysis of camu camu @ [nwnp-global.com](http://nwnp-global.com)



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[www.nwnp-global.com](http://www.nwnp-global.com)

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**RE-THINKING FLAVONOIDS:**

A surprising new study released by Linus Pauling Institute/OSU (2007) states:

"...flavonoids are highly metabolized, which alters their chemical structure and diminishes their ability to function as an antioxidant".

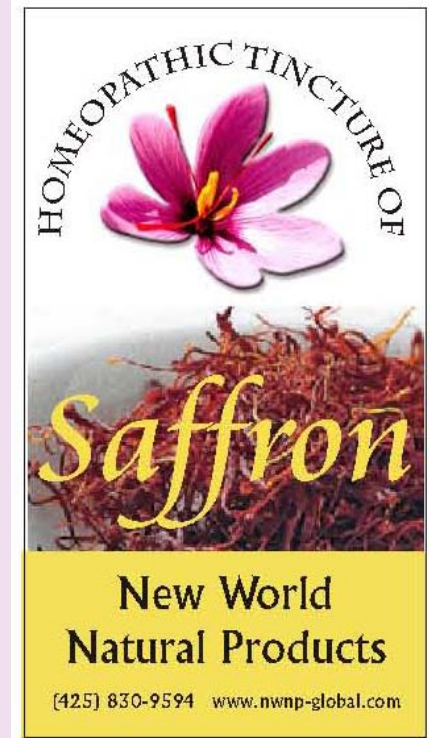
However the study goes on to say.....

" flavonoids gear up Phase II enzymes and by doing so may be of value in cancer prevention by killing CA cells and inhibiting tumor invasion."

There is one statement in this study which N.D.'s should be cognizant of demonstrating the new research on flavonoids: " ***this does not preclude the possibility that flavonoids may accumulate in tissues where they might exert local antioxidant effects or that very low concentrations of flavonoids may modulate cell signaling, gene regulation, angiogenesis, etc.....***"

Additionally the reviewers noted that "there is evidence that the compounds increase the activation of existing nitric oxide synthase which has positive effects on blood vessels, preventing inflammation and lowering blood pressure."

As the co-author of this Linus Pauling study, B. Frei, states, "What goes on with Flavonoids in the *test tube* is not what is happening in the *body*". This could be why there is scant *in vivo* research on flavonoids. Remember that a majority of flavonoids are water soluble anthocyanin glycosides, containing numerous hydroxyl groups. In order for most compounds to pass thru the gut the sugar is broken off (forming an aglycone) for better assimilation. We hypothesize that the absorption of a flavonoid aglycone is very poor. But the question begs, how can a flavonoid possibly be appreciated as being bioavailable in the form of an aglycone – a mere semblance of its former self, and something that we don't normally ingest in our daily diet? Also, in the plant world, flavonoids do not normally occur in isolation. A plant or fruit consists of a whole synergistic spectrum of flavonoids, not just one in isolation. The effectiveness of flavonoids comes from a broad range of constituents, unfortunately it is difficult to measure with our current instrumentation. The other conundrum is, "which came first the chicken or the egg?"



**"Historical Evidence supports medicinal use of Saffron"** Saffron has been used for thousands of years in herbal formulations and Ayurvedic medicines. New research from Iran shows Saffron has a high concentration of carotenoids which imparts both chemo preventative and detoxification qualities. Clinical findings suggest Saffron is a safe and effective anti-depressant.

Linus Pauling Institute Article reference: Free Radical Biology & Medicine, Vol 41, pp 1727-1746. Published by: Linus Pauling Institute/OSU 2007

"Consumption of flavonoid-rich foods and increased plasma antioxidant capacity in Humans: cause, consequence or Epiphenomenon".

Authors: S.B. Lotto, B. Frei

# Medical Review

Are free radicals the cause of cell death/apoptosis or are they the "smoke after the fire", i.e. actually the consequence of damage? I believe that both of these questions are tied into the same answer which revolves around genetic expression in cells. (see more to come in the next issue).

(Side note: In 2006 Nita Bishop, ND wrote a series of articles in Naturopathy Digest for the N.D. community about the new knowledge that is accumulating regarding flavonoids as anti-oxidants (April 2006: The Quantum Physics of Flavonoids I & II, and Reactive Oxygen Species July 2006) to help explain what the Linus Pauling study is now saying might be occurring. To view these articles go to NewWorld Natural Products website ([www.NWNP-global.com](http://www.NWNP-global.com)) or [www.NaturopathyDigest.com](http://www.NaturopathyDigest.com). Or **call Dr. Nita Bishop to receive a copy of these articles.**

## NEGATIVE STUDIES ON HERBS/SUPPLEMENTS:

- Could we be designing the studies wrong?
- Are we using the wrong model/methodology?
- Are we asking the wrong questions? Underdosing patients?

I recently attended the Natural Products/ ExpoWEST convention in Anaheim, California where Mark Blumenthal, American Botanical Council and Norm Farnsworth, University of Illinois Pharmacognosy department made important points on why the research and media in general may appear negative toward natural products. We are using our newsletter to make these pertinent comments available to the N.D. community:

Mini Reviews on: Garlic, Echinacea, Saw Palmetto, Ginkgo, Ginseng, St John's Wort.

Let's take a look at these studies in more detail:

**2002 Negative St. John's Wort /Sertraline (Zoloft) study**, even after SJW had been shown to be effective by numerous preceding positive studies on mild depression. (Ex: 1997 BMJ M-A of 23 RCT's positive for using SJW in mild-moderate depression (Linde et al), etc.) Hypericum depression trial study group. Effect of Hypericum perforatum (SJW) in major depressive disorder – a randomized controlled trial JAMA 2002; 287: 1807-14.

--Key Point: The comparison may have been apples and oranges and therefore inaccurate: SJW is commonly used for mild to moderate depression vs Zoloft/Sertraline which is used for severe depression.

## As per Mark Blumenthal, American Botanical Council:

### Top 10 Questions To Ask re: Supplement Trials:

- Is a Meta-Analysis the best vehicle to use to test natural medicine?
- Are the researchers putting more emphasis on statistically significant vs clinically significant outcomes?
- Are the researchers familiar with the effects of accurate dosing?
- Are appropriate patient groups being chosen to participate in the study?
- Has too much emphasis been placed on "what is good for the average population" vs "what is good for the patient"?
- Are appropriate instruments being used to test the general wellness of the "n" group?
- Most researchers have no nutritional training or background and are not familiar with the products they are testing. Does this make a difference?
- Are standard extracts being used or the whole plant + active constituents?
- Would smaller trials demonstrate better, more accurate results?



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# Medical Review

More on SJW: To follow this downward spiral, the UK Committee on Safety of Medicines issued an advisory on the use of SJW and 50% of Rx drugs metabolized by P450 enzyme system.

•2002 Ginkgo: 6 weeks of supplementing did not improve memory, learning or concentration in older adults w/normal memory. Solomon et al. Ginkgo for Memory Enhancement: A Randomized controlled trial JAMA 2002;288:835-840. n=230 65 y.o. adults dose 120 mg EGb 761/day.

--Key Point: ABC News ignored a Meta analysis released in 2002 by British Alzheimer's Society & Cochrane Collaboration of 33 randomized controlled trials for ginkgo and dementia (cognitive impairment) showed "promising evidence". Birks et al Ginkgo biloba for cognitive impairment and dementia Cochrane Library, Issue 4, 2002.

•2005 Negative Echinacea study: Echinacea prep did not prevent infection nor reduce duration or severity of sx. N=399 college students (avg 20 yrs), R DB, PC, 7 arm, 3 extracts of E. angustifolia root used, 1.5 ml tid (300 mg dried root tid – 900 mg/d. Rhinovirus challenge. Turner RB, et al An evaluation of Echinacea angustifolia preparations I experimental rhinovirus infections. N Engl J Med 2005; 353:341-348.

--Key questions:

- Could we be missing the boat with dosage and timing? Dosage levels and frequency may have been insufficient to warrant an accurate comparison.
- As per Herbal Science Group/WHO monograph 1999 and Canada's NHPD 2004 the actual dosage of 3000 mg/day would have been more appropriate.
- Why was Echinacea being tested specifically against the Rhinovirus vs being tested as a support for a healthy immune system?

2007 Garlic Does not Lower LDL in Stanford University Trial: No reduction in LDL in 6 mo study; in adults with moderate hypercholesterolemia; a randomized clinical trial. Gardner, Lawson, et al Effect of raw garlic vs commercial garlic supplements on plasma lipid concentrations Arch Int Med 2007;167:346-353. 4-arm, R, DB, PC with fresh garlic, Garlicin (Nature's Way), Kyolic, placebo.

## Free Radical Stress



Check Up Free Radical Test Kit

### The Question . . .

Does your patient have free radicals?

### The Answer . . .

Choose an Antioxidant that works!

VerryBerry antioxidant supplement



Special discount when you order VerryBerry and Check Up together at [www.nwnp-global.com](http://www.nwnp-global.com) or at (425) 830-9594

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Fax: 360.691.6451  
[drnita@nwnp-global.com](mailto:drnita@nwnp-global.com)  
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# Medical Review

--Key question to ask on Garlic research: Should we be putting more emphasis on inhibiting plaque in arterial walls vs: lowering blood lipid levels?

Negative Glucosamine bioavailability study: Comparison was made with Glucosamine HCl vs Glucosamine sulfate.

--Key question : G-sulfate has been the standard glucosamine used in most trials. There is a definite flaw in the research and the researchers if they are considering all glucosamine products the same.

• 2007 Vitamin A, E and Beta carotene: Not good antioxidants: A pooled analysis published in the Journal of American Medical Association, similar to other meta-analysis published in 2005 (Annals of Internal Medicine (132(1):37-46), showed beta carotene and Vit E being associated with 4-7% increased risk of mortality whereas no increased mortality risk was associated with Vit C.

--Key points to consider: This "pooled analysis" study has drawn much criticism due to the methodology used. There is a wealth of epidemiological evidence linking dietary antioxidant intake to reduced risk of a wide range of diseases such as cancer and cardiovascular disease. As we saw in the negative UW study on beta carotene, when antioxidants have been extracted, purified or synthesized and put into supplements, the antioxidants, according to RCT's do not always produce the same positive results.

Meir Stampfer, professor of nutrition and epidemiology at Harvard School of Public Health stated the studies reviewed were too different to pool them together into a meta-analysis. "this study does not advance our understanding and could easily lead to misinterpretation of the data", he stated.

## Next Issue:

- Report from Oregon Food Sciences Berry Health Symposium 2007. Research presented by international scientists.
- New research on Cacao, the High Flavonoid Amazon chocolate elevated to a new level as a possible vitamin.
- BIOFILMS, "Bomb Shelters for bacteria":  
What are they?  
How important are they?  
How are Flavonoids helpful?

If you would like to save a tree and receive this as an email please let us know.

If you would like to be taken off the list of recipients, please let us know.



See **NewWorld Natural Products BOOTH #316**

next to the food court at the August Convention.

Wednesday: We are sponsoring a table at CASINO NIGHT to raise \$\$\$ for state licensure.



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