Mulberry (Morus alba) leaf, often recognized as the food of silk-worms, has been used in traditional Chinese medicine for hundreds of years as a "cooling herb to remove excessive heat and toxins from the body."\(^1\) It is also used as a food ingredient in India, where mulberry leaf powder is mixed with wheat flour in a 1:4 ratio to make paratha, a common breakfast and dinner food item.\(^2\)

Mulberry leaf is rich in flavonoids and possesses strong anti-oxidant properties.\(^3,4\) Its major flavonol, quercetin, was found to attenuate atherosclerotic lesion development in LDL-receptor-deficient mice,\(^5\) and a human study showed that a mulberry extract greatly improved serum lipid profiles and erythrocyte membrane lipids in patients with type 2 diabetes.\(^6\)

In recent years, there has been considerable interest in the anti-diabetic properties of mulberry. Studies\(^7,8\) have shown that alkaloids and N-containing sugars isolated from mulberry leaves are potent inhibitors of alpha glucosidase, a key enzyme in carbohydrate digestion, and therefore glucose absorption. In addition, fagomine, a pseudo-sugar isolated from mulberry leaf, potentiates glucose-induced insulin secretion.\(^9\) Animal studies have shown that mulberry leaf extract inhibited postprandial hyperglycemia in rats;\(^10\) reduced blood glucose concentration after 60 minutes of glucose administration when co-administered with Caiapo;\(^11\) and controlled hyperglycemia, glycosuria, albuminuria, and retarded the onset of retinopathy in rat diabetic models.\(^12\)

Human studies have also demonstrated its anti-diabetic activity when used alone\(^6\) or in combination with other ingredients, such as propolis.\(^13\)

Development of a proprietary mulberry leaf extract

A review of the literature, along with our own pilot studies, clearly showed that the health benefits of mulberry leaf greatly continued on page 4
Summer is beginning to wind down; it is hard to believe that time can go so fast! I hope that all of our new and renewing members have had the opportunity to enjoy the outdoors and all that this time of year has to offer. While many of us are lounging, the NCC Executive Committee is planning for some spectacular offerings at ADA’s Food & Nutrition Conference & Expo (FNCE) in Chicago beginning October 25, 2008. Look for more information in this issue as well as in the fall issue that you should receive just prior to FNCE. You can also visit www.eatright.org/fnce08.

I am excited for October to arrive as this will be the first FNCE I have had the opportunity to attend since 2005. I am looking forward to reconnecting with many of you who I have met in the past and to make new acquaintances. Please take the opportunity to say hello when you see me at one of many of the functions that we are offering or participating in.

This issue of the newsletter is updating us on what is happening in the world of nutritional genomics. This area is one that we as nutrition and healthcare professionals should begin to embrace if we have not already. We know that we have a certain genetic predisposition, but our lifestyle, food choices, and our environment can certainly make a difference in the outcome. We also are finding more natural substances that may have an impact on blood sugar in persons with diabetes; an article on mulberry leaf extract provides us with one such botanical. And, we are offering a new column beginning with this issue. My Healing Journey, edited by Marie Fasano Ruggles, RD, CN, CDE will highlight how our nutrition and healthcare colleagues have dealt with issues surrounding their health with integrative therapies. These columns and more will stimulate you to learn more about the young, up and coming field of complementary nutrition that encompasses nutritional genomics and integrative therapies.

If you have an article, a healing story, or anything you would like to share with me about or for the newsletter, do not hesitate to email me at peaknut@casacadeaccess.com. I look forward to seeing many of you at FNCE in Chicago this year.

Those of you who would like to contribute an article or have topics that you would like to see in future issues, please feel free to drop me an email or give me a call – peaknut@cascadeaccess.com or 702-346-7968 – or contact any one of the capable NCC leaders listed on the back of the newsletter.
Dear NCC Members,

Welcome to the 2008-2009 Nutrition in Complementary Care Practice (NCC) Dietetic Practice Group of the American Dietetic Association. For new members of NCC, we’re glad you’ve joined us. Returning members – we are delighted that you are back for another year. Our primary goal this year is to enhance your member benefits. We’ve already begun some changes and trust that these will enhance your professional and personal lives.

First and foremost, NCC will conduct its first pre-Food & Nutrition Conference & Expo (FNCE) workshop in Chicago. “Gut Health – The Inner Tube of Life” will be held Saturday, October 25, 2008 and will offer 5 CPEUs. This dynamic workshop will be presented by NCC members Kathie Swift, MS, RD and Colleen Fogarty Draper, MS, RD, along with gastroenterologist Gerard E. Mullin, MD from Johns Hopkins University.

For those attending FNCE, there are a number of incredible events planned; see FNCE Schedule on page 19. The member reception, breakfast with speaker and one CPEU, and yoga (co-sponsored by the American Dietetic Association Foundation) will continue this year. We also hope to see you at the DPG Showcase and Product Marketplace – please stop by and say hello to the Executive Committee (EC) members. Stay tuned for an exciting announcement for students at FNCE!

Many NCC members attended the Food as Medicine (FAM) Conference in Baltimore in mid-June where they enjoyed a networking reception. Whether you attended the FAM symposium or not, if you are interested in starting a networking group in your area, please contact Rita Batheja, MS, RD, CDN, Member Services Chair to help you to get the word out. Networking is where “great” minds connect as well as mentor those who are interested in complementary/functional medicine.

NCC’s networking relationship with the Institute for Functional Medicine officially kicked off in May and continued in June. Over 750 NCC members participated in the first two webinars, which provide members with two CPEUs at no cost. If you were not able to participate, the webinars are archived and available for your viewing. You can now register for the November 4, 2008 webinar, Nutrigenomics in Clinical Practice, which will be presented by NCC Members Ruth DeBusk, PhD, RD, and Colleen Draper, MS, RD. Due to the great overwhelming success of this networking relationship, we are hoping to establish several additional networking relationships with non-profit organizations that are aligned with our mission and vision.

For those of you who have accessed the Natural Medicines Comprehensive Database (NMCD), you are aware of the wealth of information contained in this resource. This $92 value is one of the most cited benefits of NCC membership. To gain access to the database, please go to www.complementarynutrition.org and click on Member Benefits. The NCC Newsletter continues to be one of the best around and provides you with 2 CPEUs each year at no additional cost. We will work on kicking it up a notch to bring you additional knowledge and resources.

The NCC EC is very hard working, enthusiastic, and dedicated, and wants NCC to be an indispensable resource for you in your work with clients, friends, and family. The list of EC members is included on the back cover of each newsletter and on the website under Who We Are. Please feel free to contact one of these members, myself at magettings@psu.edu, or Kathy Bernard, our Administrative Assistant, at nccadmin@optonline.net or 1-800-279-6880 if you have questions, concerns, ideas, and/or want to help with some projects.

Warm Regards,
Mary Alice Gettings, MS, RD, LDN, CDE
Chair, NCC

Chair’s Corner:
Mary Alice Gettings, MS, RD, LDN, CDE

Save time and avoid missing important NCC and ADA news!

ADA makes it easy for you to update your contact information. Visit the online Business Center at http://www.eatright.org/obc to access your profile; e-mail membreshp@eatright.org; fax changes to 312/899-4812; or call the Member Service Center at 800/877-1600, ext. 5000, from 8 a.m. to 5 p.m. Central time, Monday through Friday.
varied according to differences in extraction methods. Whereas some extracts had minimal or no effects on animal or human postprandial blood glucose elevation, the efficacy of others appeared comparable to acarbose, an orally administered pharmaceutical agent that acts as an alpha glucosidase inhibitor (unpublished findings).

**First published clinical trial**

The first published study on one such proprietary mulberry leaf extract appeared in *The American Journal of Clinical Nutrition* in 2006. The trial was conducted by researchers at the Minneapolis Veterans Affairs Medical Center/Department of Medicine, University of Minnesota. The rationale behind the clinical trial was that although *in vitro* studies had demonstrated that tea constituents could inhibit the activities of alpha-glucosidase, (and alpha-amylase, intestinal sodium-glucose transporters, and pancreatic lipase), no *in vivo* studies in animals or humans had shown that tea preparations might cause malabsorption of carbohydrate or fat.

In a cross-over design, 20 healthy subjects (10 males; 10 females) were randomly assigned to drink either the tea extract or a placebo beverage, concurrently with two different test meals. The tea extract contained 0.1 g of blacktea, 0.1 g of green tea, and 1.0 g of mulberry tea. One test meal contained 50 g of carbohydrate as white rice, 10 g of butter, and 0.2 g of [13C]triolein. The second meal consisted only of lipid (30 g of olive oil and 0.2 g of [13C]triolein). Breath hydrogen and 13CO2 concentrations were assessed hourly for 8 hours. Symptoms were reported over the 8 hours and rated on a linear scale of 0 (none) to 4 (severe).

The results showed a statistically significant increase in breath-hydrogen concentrations in the subjects ingesting the extract versus the placebo and consuming the carbohydrate-containing meal, a finding indicating that the extract induced carbohydrate malabsorption. Based on the breath H2 increase, it was calculated that the tea extract induced malabsorption of 25% of the carbohydrate in the rice. The 13CO2 measurements, however, failed to demonstrate triacylglycerol malabsorption. No significant increase in symptoms was observed with the tea extract. The results of this study provided encouragement for continued study on the potential of mulberry leaf extract in the treatment of diabetes and obesity.

**Second published clinical trial**

The second published study of the proprietary mulberry leaf extract appeared in *Diabetes Care* in May, 2007. Its title, “Influence of mulberry leaf extract on the blood glucose and breath hydrogen response to ingestion of 75 g of sucrose by subjects with type 2 diabetes and controls,” summarizes the main objectives of the study. Like the first published clinical trial, this study was conducted by researchers at the Minneapolis Veterans Affairs Medical Center/Department of Medicine, University of Minnesota.

As a double-blind crossover study, 10 healthy controls and 10 subjects with type 2 diabetes ingested 75 g of sucrose with 1.0 g of mulberry leaf extract or placebo. Blood glucose was assessed at intervals for 2 hours in the controls, and for 4 hours in the subjects with diabetes. Breath samples were collected hourly for 8 hours for H2 determinations. Symptoms were also monitored for approximately 10 hours after sucrose ingestion.

The results showed that the mulberry extract significantly reduced the increase of blood glucose at 15, 30, and 45 minutes after sucrose ingestion in both the controls and subjects with diabetes; however, it increased blood glucose concentrations at the tail-end of the tolerance test. The area under the curve was not significantly altered by the mulberry treatment, but fluctuations in glucose concentrations were significantly reduced (p<0.01). Breath H2 analysis indicated that the extract caused malabsorption of 12 to 16 g of sucrose. However, the extract did not result in a significant increase in symptoms.

One might ask if the mulberry-induced diminution of blood glucose concentrations at the early time points, but higher values at the later time points, has clinical utility for subjects with diabetes. The common measure of efficacy of an anti-diabetic regimen is its influence on HbA1c, a time-averaged indicator of the mean glucose exposure of red blood cells (and the body) to glucose. Given that mulberry induced no significant differences in the area under the curve for changes in glucose concentration, the extract may have a minimal effect on HbA1c concentrations.
Supplements

However, two recently published large clinical trials (the ACCORD and the ADVANCE trials) clearly found that tight blood sugar control alone did not reduce cardiovascular risks in type 2 patients. The findings of the Diabetes Control and Complications Trial also indicated that a factor other than the integrated blood glucose concentration (as assessed by HbA1c) plays a role in the microvascular complications of diabetes. This factor may be fluctuations in blood glucose concentration. Brownlee and Hirsch have proposed that the generation of reactive oxygen species is the common pathway responsible for diabetes complications, and a variety of in vivo and in vitro studies have shown that fluctuations in blood glucose concentration (rather than hyperglycemia per se) are associated with an increased production of markers of oxidative injury.

As shown in Table 1, the mulberry extract significantly reduced the fluctuation of blood glucose during the tolerance test of the aforementioned study. For example, the peak-to-trough differences in blood glucose concentration in subjects with type 2 diabetes averaged 99 ± 11 mg/dl and 133 ± 12 mg/dl for the mulberry versus placebo (p <0.01), respectively. Thus, mulberry extract might aid in preventing diabetic complications despite its presumed minimal effect on HbA1c concentrations.

Take home message

Mulberry leaf is widely used in Asia for the treatment of diabetes. The above studies provide a physiological basis for its usage, and indicate that further investigation on the clinical utility of this herbal product for diabetes treatment in the West is needed. (See Table 1, below.)

Dr. Li-Tao Zhong (Dr. Lee Zhong) founder and President of Neuliven Health, Inc. earned his M.D. at Shanghai Medical University, China, and his Master’s Degree in Medical Microbiology at the University of Hawaii, Manoa. He has authored and co-authored several published clinical studies including one in Diabetes Care (May 2007) and the American Journal of Clinical Nutrition (September 2006). Contact Dr Zhong at 858-578-0527 or LZhong@Nature-Gen.com.

Michael D. Levitt, MD, ACOS for Research at Minneapolis Veterans Affairs Medical Center has authored and co-au-

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<th>†Area of increase above fasting</th>
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* = p <0.05; ** = p <0.01

Data represent mean ± sem. The significance of the differences for mulberry vs. placebo for the 10 healthy controls and 10 subjects with type 2 diabetes was determined using a two-tailed, paired t-test.

* Calculated using blood glucose concentrations minus the fasting concentration for the entire period of glucose measurement, with values below fasting treated as negative area.

† Calculated using only the blood glucose concentrations minus the fasting which were above or equal to the fasting concentration.

‡The difference between the highest and lowest glucose values observed in each test.
thored numerous published clinical studies on diabetes and gastrointestinal conditions. Contact Dr Levitt at Minneapolis Veterans Affairs Medical Center (151), 1 Veterans Dr., Minneapolis, MN 55417 or michael.levitt@med.va.gov

References

The authors would like to thank Janice Baker, MBA, RD, CDE, for her helpful discussions and assistance in submitting the paper and Eugenia Scharf, PhD, for manuscript preparation.

Supplements

Members in the News

Kathie Swift MS RD, NCC Chair-elect was interviewed along with Dr. James S. Gordon MD, founder of The Center for Mind-Body Medicine, for the Editorial section of Alternative Therapies in Health and Medicine. May/June 2008, Vol. 14, No 3.

The following NCC members are to be congratulated for their leadership achievements and contributions to the profession and practice of dietetics! They will be recognized for their efforts at this year’s FNCE in Chicago, IL, October 25-28, 2008.

Marjorie Hulsizer Copher Award
Judith L. Dodd, MS, RD, FADA, LDN

Medallion Awards
Susan L. Roberts, JD, RD, LD
The following story is about the three-year healing journey of Candee Spence, MS, RD, LDN, CLT, a registered dietitian (RD) who works at the Center for Integrative Medicine in Johnson City, TN, where she incorporates functional testing and treatment into her own practice. As a result of her own powerful healing experience, Candee is now able to utilize functional testing to pinpoint metabolic abnormalities and develop targeted protocols for her patients. Candee frequently identifies patients with food sensitivities and adrenal fatigue, makes recommendations for additional evaluation, and provides complementary treatments that deliver results.

What were your initial symptoms? How were they evaluated?

In 2004, after being an RD for one year, I started to experience tachycardia and generalized weakness combined with an elevated heart rate of up to 165 while sitting; these episodes resulted in intense fatigue. A cardiologist wanted to start me on a beta blocker. Instead of starting a medication to cover up the symptoms, I wanted to determine the underlying cause, so I underwent food sensitivity testing through the LEAP program (Signet Diagnostic Corp.). I chose this test because I had previously looked at different testing methods to help a patient of mine, and this method seemed more thorough and had credible research to support it. With LEAP, the patient starts out eating their safest foods, not just “safe” foods on a generalized list. The testing provides a degree of safeness - it is not just positive or negative, as some safe foods may illicit a reaction in some persons. With this knowledge, I subsequently became a trained LEAP therapist and chose the therapy for myself. My symptoms were characteristic of those of a food intolerance - always 1-2 hours after meals. I also had a lifelong history of intermittent GI symptoms, including diarrhea, bloating, and pain, which are classic food sensitivity symptoms.

The program involves a detailed blood test for 150 foods/chemicals plus an individualized diet plan. In my opinion it is superior to any other food sensitivity test because the method of testing is more comprehensive than regular IgG testing, which does not always correlate with food sensitivities. IgG tests often indicate the presence of a food, but it may not actually link with symptoms.

I chose LEAP not only because I am a LEAP Therapist, but also because I believe that it is the most effective form of testing for food sensitivities. I have first-hand experience observing patients with “life changing” results by following LEAP protocols based on personal blood results.

What approach to treatment did you use?

I always choose natural approaches to healing over conventional treatments, due to the side effects associated with prescription medications. Beta blockers were ruled out since they are known to cause fatigue and birth defects (I am of childbearing age).

In December 2005, I started the diet protocol from my LEAP evaluation (I ordered my own testing and interpreted my own results with the help of Jan Patenaude, RD, Director of Medical Nutrition for Signet Diagnostic Corp.). The results revealed that I was highly reactive to six foods and moderately reactive to more than a dozen other foods and food additives.

When did you start to see improvements in your health?

Within one week of starting my individualized LEAP ImmunoCalm diet, my symptoms were significantly improved - no tachycardia, improved energy, and no weakness. In two weeks, these symptoms were almost completely gone, except for the persistence of a few...
mild symptoms. I felt like a new person. My initial symptom survey dropped from 56 to 8 points by the end of the month. The symptom survey is a way of tracking the individual’s symptoms through ranking severity and frequency of various symptoms related to food sensitivities.

**Were any additional tests utilized to evaluate your symptoms?**

Yes. After feeling great for one full year, I started experiencing gastrointestinal symptoms - diarrhea, gas, bloating, and pain - accompanied by the return of fatigue. I also started having dry eyes, joint pain, irritability, salt/sweet cravings, hypoglycemia, and poor concentration/cognition.

As a result of learning about adrenal fatigue while attending a conference on thyroid and adrenal organs, I tested my salivary cortisol (adrenocortex test), which revealed low cortisol levels throughout the day with normal DHEA – hallmarks of adrenal fatigue. At the symposium, I learned that salivary cortisol as compared to blood cortisol was a better indicator of what was available to the tissues; blood is more likely to provide an average level. While patients may have both high and low levels of cortisol throughout the day, which averages out to be normal, it is common that there is some adrenal stress going on.

Through research I suspected I may have gluten sensitivity (due to the wide array of symptoms noted above), which led me to additional stool testing (gluten sensitivity panel). It did in fact reveal I had gluten and casein sensitivities. The LEAP evaluation tests for wheat and cows milk sensitivities, but not gluten or casein. While my previous blood tests for celiac were negative, I suspected that gluten was definitely an underlying issue. Adding to my previous food sensitivities, I now removed gluten and casein and started a protocol for adrenal fatigue.

**What criteria do you use to choose supplements?**

I choose supplements from professional brands that update their formulations according to current research and that complete either third party testing on their products or in-house testing that can guarantee purity, quality, and optimal absorption.

**Did insurance cover any of your testing?**

Insurance covered LEAP food sensitivity testing as well as the adrenal, heavy metal, and conventional celiac screening tests. Stool testing for gluten sensitivity ($389) was not covered. Since health and nutrition professionals can purchase professional supplements at a discount, I was able to benefit from wholesale pricing for all my supplements, some of which were only needed for a short period of time.

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An adaptogen is “a substance, often an herb, that normalizes a biochemical process or tissue function, i.e. it brings the process of function back towards normal, no matter if it is too high or too low.” Also “An adaptogen supports the body’s ability to adapt ideally to its environment. These herbs are believed to have a bimodal function of action either by providing a stimulant effect or a sedative effect depending on the needs of the individual in a particular situation.”

I chose the adaptogenic herbs to increase energy, to help my body deal with stress, and to support healing to the adrenals. The brand I chose contains certified BSE free adrenal extracts to help rebuild adrenal gland tissue and restore proper function.

Additional nutrients were also needed for proper adrenal functioning. For example, glutamine has been shown to enhance gut healing in times of stress. And probiotics maintain gut integrity, which is known to be an issue with gluten sensitivity.

My diet was similar to what was recommended for healthy adrenal function - whole organic foods, vegetables, fruits, sea salt, and no caffeine, sugar, or chocolate. I worked on better stress management through yoga, prayer, meditation, deep breathing, watching comedies, etc. I was on my way to adrenal recovery.

Simultaneously, I started to have increased abdominal pain and loose stools. LEAP retesting showed that my reactions to foods had changed, probably due to continued use of the main underlying cause – gluten. After removal of gluten and the new food sensitivities, my symptoms fully resolved.
What approach do you use for ongoing maintenance and monitoring?

I added glutamine, probiotics, and fish oil to support my gut healing. I also occasionally have dairy products, but always consume them along with AllerGzyme, an enzyme that helps break down casein. I know it makes a difference because I pay for it when I ingest casein without taking the enzyme.

After 6 months I have been able to add back most moderately reactive foods. I follow a three-day rotation diet most of the time – rotating non-reactive foods to decrease the risk of developing further sensitivities. If I have a particular food on Monday, I don’t eat it again until Thursday.

I recently finished a detoxification/heavy metal protocol since a hair evaluation revealed I had elevated levels of lead, arsenic, gadolinium, and uranium. Even though I continue to be symptom free, I am using detoxification to avoid long-term damage and to support liver detoxification.3,4

What is the “take-home” lesson that you learned as a result of your personal healing journey?

One thing leads to another! Each problem and test I did seemed to be linked together. While one helped significantly, it was not the only piece in the puzzle.

Don’t give up, and do your own research. Other practitioners (including integrative) may not be able to connect the dots. Look for underlying causes instead of just treating symptoms.

Evaluate the entire person. For example, knowing that adrenal fatigue can be associated with food sensitivities, gluten sensitivity, heavy metal load, etc., you can dig deeper and find that it is all connected. Looking at history and environmental exposures, stress levels, and other factors can also help.

If you have a healing story to share (yours or a fellow health and nutrition professional you treated) e-mail a brief summary to Marie at FamFoodNet@aol.com. Put “my story” in the subject Line.

Candee Spence, MS, RD, LDN, CLT works with the Center for Integrative Medicine/Oaks Castle Clinic in Johnson City, Tennessee where she specializes in food sensitivities, gastrointestinal disorders, and other disease prevention/treatment modalities. Contact Candee at 423-979-6291 or candeespence@charter.net.

References

For more information on LEAP and CLT training, go to www.nowleap.com.
Whole Medical Systems

Introduction

Whole medical systems involve complete systems of theory and practice that have evolved independently from or parallel to allopathic (conventional) medicine. Many are traditional systems of medicine that are practiced by individual cultures throughout the world. Major Eastern whole medical systems include traditional Chinese medicine (TCM) (A whole medical system that originated in China. It is based on the concept that disease results from disruption in the flow of qi and imbalance in the forces of yin and yang. Practices such as herbs, meditation, massage, and acupuncture seek to aid healing by restoring the yin-yang balance and the flow of qi.) and Ayurvedic medicine (A whole medical system that originated in India. It aims to integrate the body, mind, and spirit to prevent and treat disease. Therapies used include herbs, massage, and yoga, one of India’s traditional systems of medicine.). Major Western whole medical systems include homeopathy (A whole medical system that originated in Europe. Homeopathy seeks to stimulate the body’s ability to heal itself by giving very small doses of highly diluted substances that in larger doses would produce illness or symptoms, an approach called “like cures like”) and naturopathy (A whole medical system that originated in Europe. Naturopathy aims to support the body’s ability to heal itself through the use of dietary and lifestyle changes together with CAM therapies such as herbs, massage, and joint manipulation.). Other systems have been developed by Native American, African, Middle Eastern, Tibetan, and Central and South American cultures.

Traditional Chinese Medicine

TCM is a complete system of healing that dates back to 200 B.C. in written form. Korea, Japan, and Vietnam have all developed their own unique versions of traditional medicine based on practices originating in China. In the TCM view, the body is a delicate balance of two opposing and inseparable forces: yin and yang (The concept of two opposing yet complementary forces described in traditional Chinese medicine. Yin represents cold, slow, or passive aspects of the person, while yang represents hot, excited, or active aspects. A major theory is that health is achieved through balancing yin and yang and disease is caused by an imbalance leading to a blockage in the flow of qi.). Among the major assumptions in TCM are that health is achieved by maintaining the body in a “balanced state” and that disease is due to an internal imbalance of yin and yang. This imbalance leads to blockage in the flow of qi. In traditional Chinese medicine, qi is the vital energy or life force proposed to regulate a person’s spiritual, emotional, mental, and physical health and to be influenced by the opposing forces of yin and yang (or vital energy) and of blood along pathways known as meridians. TCM practitioners typically use herbs and acupuncture,
a family of procedures that originated in traditional Chinese medicine. Acupuncture is the stimulation of specific points on the body by a variety of techniques, including the insertion of thin metal needles through the skin. It is intended to remove blockages in the flow of qi and restore and maintain health and wellness.

Treatments in TCM are typically tailored to the subtle patterns of disharmony in each patient and are based on an individualized diagnosis. The diagnostic tools differ from those of conventional medicine as practiced by holders of MD (medical doctor) or DO (doctor of osteopathy) degrees and by their allied health professionals, such as physical therapists, psychologists, and registered nurses. There are three main therapeutic modalities:

1. Acupuncture and moxibustion. In traditional Chinese medicine, moxibustion is the use of heat from burning a plant or part of a plant used for its flavor, scent, or potential therapeutic properties (moxa) on or near the skin at an acupuncture point stimulates the flow of qi and restores health.

2. Chinese Materia Medica (the catalogue of natural products used in TCM). Although TCM proposes that natural products catalogued in Chinese Materia Medica or acupuncture can be used alone to treat virtually any illness, quite often they are used together and sometimes in combination with other modalities (e.g., massage, moxibustion, diet changes, or exercise).

3. Massage and manipulation

The scientific evidence on selected modalities from TCM is discussed below.

Acupuncture

The report from a Consensus Development Conference on Acupuncture held at the National Institutes of Health (NIH) in 1997 states that acupuncture is being “widely” practiced—by thousands of acupuncturists, physicians, dentists, and other practitioners—for relief or prevention of pain and for various other health conditions.1 In terms of the evidence at that time, acupuncture was considered to have potential clinical value for nausea/vomiting and dental pain, and limited evidence suggested its potential in the treatment of other pain disorders, paralysis and numbness, movement disorders, depression, insomnia, breathlessness, and asthma.

Preclinical studies have documented acupuncture's effects, but they have not been able to fully explain how acupuncture works within the framework of the Western system of medicine.

It is proposed that acupuncture produces its effects by the conduction of electromagnetic signals at a greater-than-normal rate, thus aiding the activity of pain-killing biochemicals, such as endorphins and immune system cells at specific sites in the body. In addition, studies have shown that acupuncture may alter brain chemistry by changing the release of neurotransmitters and neurohormones and affecting the parts of the central nervous system related to sensation and involuntary body functions, such as immune reactions and processes whereby a person's blood pressure, blood flow, and body temperature are regulated.2,3

Chinese Materia Medica

Chinese Materia Medica is a standard reference book of information on medicinal substances that are used in Chinese herbal medicine.4 Herbs or botanicals usually contain dozens of bioactive compounds. Many factors—such as geographic location, harvest season, post-harvest processing, and storage—could have a significant impact on the concentration of bioactive compounds. In many cases, it is not clear which of these compounds underlie an herb's medical use. Moreover, multiple herbs are usually used in combinations called formulas in TCM, which makes the standardization of herbal preparations very difficult. Further complicating research on TCM herbs, herbal compositions and the quantity of individual herbs in a classic formula are usually adjusted in TCM practice according to individualized diagnoses.

In the past decades, major efforts have been made to study the effects and effectiveness of single herbs and of combinations of herbs used in classic TCM formulas. The following are examples of such work:

• Artemisia annua. Ancient Chinese physicians identified that this herb controls fevers. In the 1970s,
scientists extracted the chemical artemisinin from Artemisia annua. Artemisinin is the starting material for the semi-synthetic artemisinins that are proven to treat malaria and are widely used.\textsuperscript{5}

- *Tripterygium wilfordii Hook F (Chinese Thunder God vine).* Thunder God vine has been used in TCM for the treatment of autoimmune and inflammatory diseases. The first small randomized, placebo-controlled trial of a Thunder God vine extract in the United States showed a significant dose-dependent response in patients with rheumatoid arthritis.\textsuperscript{6} In larger, uncontrolled studies, however, renal, cardiac, hematopoietic, and reproductive toxicities of Thunder God vine extracts have been observed.

**Ayurvedic Medicine**

Ayurveda, which literally means “the science of life,” is a natural healing system developed in India. Ayurvedic texts claim that the sages who developed India’s original systems of meditation (A conscious mental process using certain techniques -- such as focusing attention or maintaining a specific posture -- to suspend the stream of thoughts and relax the body and mind. Yoga developed the foundations of this medical system.) is a comprehensive system of medicine that places equal emphasis on the body, mind, and spirit, and strives to restore the innate harmony of the individual. Some of the primary Ayurvedic treatments include diet, exercise, meditation, herbs, massage, exposure to sunlight, and controlled breathing. In India, Ayurvedic treatments have been developed for various diseases (e.g., diabetes, cardiovascular conditions, and neurological disorders). However, a survey of the Indian medical literature indicates that the quality of the published clinical trials generally falls short of contemporary methodological standards with regard to criteria for randomization, sample size, and adequate controls.\textsuperscript{7}

**Naturopathy**

Naturopathy is a system of healing, originating from Europe, that views disease as a manifestation of alterations in the processes by which the body naturally heals itself. It emphasizes health restoration as well as disease treatment. The term “naturopathy” literally translates as “nature disease.” Today naturopathy or naturopathic medicine is practiced throughout Europe, Australia, New Zealand, Canada, and the United States. There are six principles that form the basis of naturopathic practice in North America (not all are unique to naturopathy):

1. The healing power of nature
2. Identification and treatment of the cause of disease
3. The concept of “first do no harm”
4. The doctor as teacher
5. Treatment of the whole person
6. Prevention

The core modalities supporting these principles include diet modification and nutritional supplements, herbal medicine, acupuncture and Chinese medicine, hydrotherapy, massage and joint manipulation, which is the application of controlled force to a joint, moving it beyond the normal range of motion in an effort to aid in restoring health. Manipulation may be performed as a part of other therapies or whole medical systems, including chiropractic medicine, massage, and naturopathy, and lifestyle counseling. Treatment protocols combine what the practitioner deems to be the most suitable therapies for the individual patient.\textsuperscript{8}

As of this writing, virtually no research studies on naturopathy as a complete system of medicine have been published. A limited number of studies on botanicals in the context of use as naturopathic treatments have been published. For example, in a study of 524 children, echinacea did not prove effective in treating colds.\textsuperscript{9} In contrast, a smaller, double-blind trial of an herbal extract solution containing echinacea, propolis (a resinous product collected from beehives), and vitamin C for ear pain in 171 children concluded that the extract may be beneficial for ear pain associated with acute otitis media.\textsuperscript{10} A naturopathic extract known as Otikon Otic Solution (containing *Allium sativum, Verbascum thapsus, Calendula flores*, and *Hypericum perforatum* in olive oil) was found as effective as anesthetic ear drops and was proven appropriate for the management of acute otitis media-associated ear pain.\textsuperscript{11} Another study looked at the clinical effectiveness and cost-effectiveness of naturopathic cranberry tablets--versus cranberry juice and versus a placebo--as prophylaxis against urinary tract infections (UTIs). Compared with the placebo, both cranberry juice and cranberry tablets decreased the number of UTIs. Cranberry tablets proved to be the most cost-effective prevention for UTIs.\textsuperscript{12}
Homeopathy

Homeopathy is a complete system of medical theory and practice. Its founder, German physician Samuel Christian Hahnemann (1755-1843), hypothesized that one can select therapies on the basis of how closely symptoms produced by a remedy match the symptoms of the patient’s disease. He called this the “principle of similars.” Hahnemann proceeded to give repeated doses of many common remedies to healthy volunteers and carefully record the symptoms they produced. This procedure is called a “proving” or, in modern homeopathy, a “human pathogenic trial.” As a result of this experience, Hahnemann developed his treatments for sick patients by matching the symptoms produced by a drug to symptoms in sick patients. Hahnemann emphasized from the beginning carefully examining all aspects of a person’s health status, including emotional and mental states, and tiny idiosyncratic characteristics.

Since homeopathy is administered in minute or potentially nonexistent material dosages, there is an a priori skepticism in the scientific community about its efficacy. Nonetheless, the medical literature provides evidence of ongoing research in the field. Studies of homeopathy’s effectiveness involve three areas of research:

1. Comparisons of homeopathic remedies and placebos
2. Studies of homeopathy’s effectiveness for particular clinical conditions
3. Studies of the biological effects of potencies, especially ultra-high dilutions

Five systematic reviews and meta-analyses evaluated clinical trials of the effectiveness of homeopathic remedies as compared with placebo. The reviews found that overall, the quality of clinical research in homeopathy is low. However, when high-quality studies were selected for analysis, a surprising number showed positive results.

Let your fellow NCC members know about your accomplishments. Email Sarah Harding Laidlaw at: peaknut@cascadaccess.com with information about YOU and YOUR business, innovative approaches to CAM, and achievements.

Overall, clinical trial results are contradictory, and systematic reviews and meta-analyses have not found homeopathy to be a definitively proven treatment for any medical condition.

Summary

While whole medical systems differ in their philosophical approaches to the prevention and treatment of disease, they share a number of common elements. These systems are based on the belief that one’s body has the power to heal itself. Healing often involves marshalling multiple techniques that involve the mind, body, and spirit. Treatment is often individualized and dependent on the presenting symptoms. To date, National Center for Complementary and Alternative Medicine’s (NCCAM) research efforts have focused on individual therapies with adequate experimental rationale and not on evaluating whole systems of medicine as they are commonly practiced.

References

On June 12th through June 15th, I had the pleasure of attending the annual Food as Medicine Symposium sponsored by The Center for Mind-Body Medicine, a non-profit educational organization. This year the symposium was held in Baltimore, MD, with more than 335 nutrition and healthcare professionals attending this amazingly comprehensive training, including several of our very own NCC DPG members. The course was co-directed by Kathie Swift, MS, RD, NCC Chair-Elect, and James Gordon, MD, Georgetown University professor and Founder/Director of The Center for Mind-Body Medicine.

The keynote speaker was Mark Hyman, MD, New York Times best-selling author of *UltraMetabolism* and Editor-in-Chief of *Alternative Therapies in Health and Medicine*, a peer-reviewed professional journal. Dr. Hyman shared a sobering yet optimistic presentation of the state of medicine today and the emerging field of functional medicine, which he describes as “the future of medicine, available now.” He explained that functional medicine moves beyond “traditional medicine that has a tendency to apply a pill to the ill or a drug to the bug,” and incorporates new research that allows treatment of root causes of dysfunction rather than disease symptoms.

Attendees were riveted to their chairs and fascinated by Dr. Hyman’s presentation. Incredibly tasty and healthy organic food was savored at meals and snacks, which was prepared by Food as Medicine Executive Chef and Faculty Preceptor at the University of California, San Francisco Medical School, Rebecca Katz, MS. Chef Katz and the staff at the Marriott Waterfront Hotel offered beautifully prepared organic breakfast and lunch buffets daily. Every morning, a unique grain (such as buckwheat, quinoa, or millet) was offered along with colorful and phytonutrient-rich fresh fruit; nuts and seeds; non-dairy milks such as almond, soy, and rice; soy and goats-milk yogurts; and natural sweeteners such as agave nectar and grade B maple syrup. Lunch breaks were extra long to allow time for discussion and relaxation, and were also filled with a wonderful variety of vegetables, legumes, grains, Pacific salmon and halibut, as well as zesty soups. Aromatic teas, both herbal and traditional, perfumed the halls. A sea of diverse smiling faces, all introducing themselves to each other, swapping business cards, chatting about the conference, and exchanging ideas and information, flowed throughout the entire event.

Forty-five minutes of wonderful (optional) yoga and Qigong sessions started the day, followed by breakfast, and then morning sessions full of energy and enthusiasm. There were 19 truly gifted faculty speakers who each presented a unique aspect of the integration of nutrition science into clinical practice. Topics included (for a complete list, see www.cmbm.org):

- Macro and Micronutrients: Physiological Influences and Applications
- Exploring the Gut: A Healing Journey
- Stress, Nutrition, and Hormone Physiology
- An Integrative Approach to Depression
- Women’s Health and Nutrition
- An Integrative Approach to Childhood Obesity
- Nutrition and Laboratory Assessment
- Culture, Community, and Connections
- Condition Specific Nutrition Therapy

Presenters included our esteemed colleague, Colleen Fogarty Draper, MS, RD, President and Founder of Nugenso Company and NCC Education Chair. Colleen helped shed light on the present and future state of nutritional genomics – a cutting edge science that revolves around the interplay among genes, diet, and lifestyle. For more information about nutritional genomics, check out the Nutrigenomics for Dietitians Initiative, or NDI, on the NCC website (www.complementarynutrition.org).

Another outstanding presenter was Patrick Hanaway, MD, Chief Medical Officer of Genova Diagnostics (formerly known as Great Smokies Diagnostic Laboratory) and President-Elect of the American Board of Integrative Holistic Medicine. Considering there was so much information to present in such a short time, I was especially impressed by his ability to get across a few key, but critical, take-home messages to the participants. If I had to distill it down to one point, I would say that Hanaway really helped us to understand that “normal is not always healthy,” again emphasizing biochemical uniqueness. For example, for thyroid function, what
values are associated with adverse outcome? Is there any evidence that variation of thyroid function within the statistical normal range can lead to adverse outcomes? If so, it might be worth knowing that an individual’s thyroid function is abnormal for them, even though it lies within the statistical normal range for pooled individuals.

Another enlightening presentation was led by NCC’s Chair-Elect, Kathie Swift, MS, RD. The topic of her talk reviewed elimination diets, which Kathie prefers to refer to as “illumination” diets because they prove to be so helpful in the health outcomes of our patients. Kathie discussed the usefulness of eliminating various common food allergens/intolerances, including gluten, not only for those suffering from celiac disease, but for a variety of auto-immune and inflammatory conditions. However, she reminded us to emphasize to our patients what can be eaten rather than only discussing what cannot. She also helped participants learn how to more appropriately phrase questions. For example, rather than asking the question “What are you sensitive to?” Kathie encouraged us to ask “Why are you so sensitive to ------?” – a much more open ended question. Kathie was also a panel member with five other speakers who discussed important subjects on the business of nutrition such as insurance issues, fees, reimbursement, and other business-related matters. The business aspects of functional nutrition were topics on the minds of many of the participants who wanted the “how-to’s” of running a medical nutrition practice, not just the science of it.

Another highlight of the Food as Medicine conference was the various gatherings that were specifically for nutrition professionals to discuss and exchange ideas and share strategies for nutrition education promotion. Rita Batheja, MS, RD, CDN, NCC Member Services/Reimbursement and Legislative Chair, took the responsibility of getting all the nutrition professionals together to get to know one another and solicit others to join NCC, as well as to recruit volunteers to get the job done! NCC is indebted to Rita for her zeal and dedication to the DPG with the most steadfast energy and passion!

On a slightly different note, I must share with you that one of the best parts of attending the Food as Medicine conference was just to see this amazing group of professionals dancing like nobody’s business! On Saturday night, a group of us went out to a really hip and happening tapas style restaurant and dance club. What a night! Without mentioning names, I’ll just say that this group likes to let their hair down! Dancing until the wee hours of the morning, it was a hilarious and outrageously fun evening that left us all looking a little weary (to say the least) the next morning!

My fellow NCC members, I highly encourage you to consider attending the next Food As Medicine Symposium to be held in January of 2009 in San Francisco, and again in June 2009 (location to be announced). You will savor a wonderful collage of evidence-based nutrition science, clinical pearls for practice, and cutting edge state-of-the-art information on the latest applications and research. And best of all, you will surround yourself with wonderful, like-minded individuals, and create important networking opportunities, life-long friendships, and connections to colleagues that will feel instantly authentic, stimulating your mind and body while nurturing your soul.

Sheila Dean, MS, RD, LD/N, CDE is the owner of a functional medicine-based private practice, in Pal Harbor, FL continues her studies as a part-time doctoral student and currently teaches at the University of Tampa. Contact Sheila at SDeanRD@aol.com or 727-781-4326. www.IntegrativeNutritionSolutions.com

Whole Medical Systems  continued from page 134


Adapted from: Whole Medical Systems: An overview of one of five background papers on the major areas of complementary and alternative medicine (CAM). The series was prepared as part of the National Center for Complementary and Alternative Medicine’s (NCCAM’s) strategic planning efforts for the years 2005 to 2009.

This publication is not copyrighted and is in the public domain. Available at: http://nccam.nih.gov/health/backgrounds/wholemed.htm. Last accessed 7/20/2008.
Progress is occurring on the nutritional genomics front within dietetics, making this a good time to provide an update on U.S. and Canadian activities. Not surprisingly, the American Dietetic Association (ADA) is spearheading the effort in the United States. Back in 2001, ADA began to alert the profession to the importance of genetics in dietetics with a workshop and presentation at the annual meeting in St. Louis. Since that time, ADA has continued to offer plenary sessions in nutritional genomics at annual meetings, including the President’s Address and research symposium on epigenetics in 2006, and published the book Genetics: The Nutrition Connection as a first step for dietetics professionals to learn how genetics relates to food and nutrition.

Activities underway include assessing the present knowledge and needs of dietitians with respect to nutritional genomics, as well as educational initiatives designed to develop the needed knowledge and skills. In collaboration with San Francisco State University and the University of California, Davis, ADA has participated in an online survey intended to evaluate the present knowledge and attitudes of dietitians concerning nutritional genomics, and to identify the needs for becoming competent within this area. The survey has been completed and the data are expected to be available in the near future. Another important assessment activity is the preparation of a nutritional genomics “backgrounder” for use by the House of Delegates (HOD), to guide its discussion in this area during its Fall 2008 meeting at FNCE.

Educating dietitians in nutritional genomics is an ongoing commitment. For the past three years, the Journal of the American Dietetic Association has published a variety of articles by leading researchers and thought leaders in the field. Another initiative is ADA’s partnership with the National Coalition for Health Professional Education in Genetics (NCHPEG) and the British Dietetic Association, to develop a genetics website for dietitians. Many genetic and dietetic professionals have contributed to the development of this site, with the goal of introducing genetic principles and the role of nutritional genomics in a case-based format. This is an exciting development and is expected to be available at www.nchpeg.net in time for FNCE 2008. ADA will also introduce a new book on nutritional genomics in time for FNCE 2009, one focused on the underlying science as well as applications to practice.

Beyond ADA, nutrition textbooks are increasingly including nutritional genomics in their chapters, and nutritional genomics courses are beginning to be offered at U.S. universities. The University of California, Davis led the way in 2006, and in Fall 2007, the University of Medicine & Dentistry of New Jersey offered an online graduate course in nutritional genomics. That course will be offered again in spring 2009, and is expected to be available for continuing professional education credit as well. A number of other universities are discussing ways to incorporate nutritional genomics into their undergraduate and graduate programs.

In Canada, there’s a collaborative effort on the part of a coalition of dietetic, public health, and health law experts in universities, government agencies, and professional associations, to anticipate and meet the needs of health care professionals and the Canadian public with respect to nutritional genomics. Recently, a meeting of Canadian leaders jointly sponsored by the Advanced Foods & Materials Network (AFMNet); the Public Health Agency of Canada’s Office of Biotechnology, Genomics, and Population Health; the University of Ottawa Institute for Science, Society, and Policy; and the University of Alberta Health Law Institute was held to assess progress and plan for the immediate future. At the table were representatives of the Dietitians of Canada; two Canadian Research Chairs (in Nutritional Genomics and in Science and Society); and academics in the nutrition sciences.
behavioral sciences, and health law from the University of Alberta, the University of Ottawa, the University of Toronto, and the University of Ontario Institute of Technology.

I came away very impressed with the integrated approach these leaders have taken and the ambitious plans for the future. Judging from the progress to date, there’s every reason to believe this coalition will continue to make inroads into bringing nutritional genomics to the forefront. They have assessed the public and health care provider knowledge of, and interest in, nutritional genomics, as well as the capacity gap in meeting the coming workforce needs for health care professionals competent in this area. Canadian dietitians did not feel knowledgeable about this new field; however, they understood that it was important to dietetics and were very interested in becoming competent in this area. From the specific needs identified, the academic teams have developed teaching materials appropriate for undergraduate and graduate students. There is good consensus that web-based learning is the preferred delivery mode, particularly given the need of providing continuing education to dietitians in the workforce. Considerable thought has gone into determining what dietitians will need in practice, how best to prepare them, and the technological tools available. Emphasis is on delivering messages through case examples with which dietitians are familiar. Among the successes to date are the development of evidence-based practice guidelines, clinically helpful tools for practitioners to use with consumers, web-based seminars, online modular courses, and online fact sheets. Under discussion are additional initiatives that will extend the base already established, and take nutritional genomics education to the next level. This collaborative group has also written a book, *Nutrition and Genomics: Issues of Ethics, Law, Regulation, and Communication*, which examines issues pertinent to developing nutritional genomics in order to meet consumer and health professional needs, including the education and training of dietitians as a strategy for filling the coming capacity gap in providers competent in nutritional genomics (Elsevier, in press).

Where is all this leading? Dietitians are beginning to understand the fundamental importance of nutritional genomics to food and nutrition, and are seeking the basic science knowledge. They will soon be seeking skills in the practical applications of nutritional genomics as well. Guidelines and teaching materials are needed for educating 1) the educators of dietitians, 2) undergraduate and graduate students, and 3) dietitians in practice. Following these basic educational needs will be the need for training programs through which skill-building, competence, and confidence can be developed so that dietitians can serve as the acknowledged expert in nutritional genomics. Additionally, science-based guidelines will need to be developed and the evidence analysis continually updated to support practitioners working in this rapidly evolving field.

*Ruth DeBusk, PhD, RD* a former university genetics professor is now in private practice where she combines the fields of genetics and nutrition. *Ruth is a founding member of and current advisor to NCC. Contact Ruth at: 850-562-7012 or ruthdebusk@comcast.net.*

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**Applied Natural Products**

The Master of Applied Natural Products is designed as a blended curriculum (both online and in classroom) which can be completed in 21 months (two courses each semester for five semesters).

The program offers academic learning in the areas of dietary supplements, natural products informatics, functional medicine, phytochemical therapies and epidemiology. Candidates interested in the program must have a prior health baccalaureate professional degree.

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For more information, please Lana Dvorkin-Camiel lana.dvorkin@mcphs.edu.

**Massachusetts College of Pharmacy and Health Sciences**

Summer 2008 Volume 11, Issue 1
www.complementarynutrition.org
Animal, Vegetable, Miracle: A Year of Food Life
B. Kingsolver with C. Kingsolver & S. Hopp
2007; Harper-Collins
370 pp., softcover: $14.95
ISBN: 978-0-06-085256-6

Best selling novelist, Barbara Kingsolver, along with her daughter, a college co-ed pursuing studies in health sciences, and her husband, a professor of environmental sciences, write a compelling narrative on their yearlong experience eating locally grown and purveyed foods. This is not a reference text per se, rather a great summer read chock full of everything nutrition—growing, marketing, purchasing, preparing, eating and even ‘experiencing’ food.

As nutrition and healthcare professionals, we often compartmentalize food—evaluating it merely for its nutritive value or lack thereof as in antioxidants in fruits and vegetables or empty kilocalories as in chips and pretzels. Or, we debate the merits of agricultural systems—organic versus conventional. Or, we blame food for the plethora of physio-psychosocial maladies prevalent in today’s culture—obesity, type 2 diabetes, dyslipidemia, or the spectrum of eating or autism disorders. Rarely, do we embrace food for its myriad of functions simultaneously. This book does just that. It celebrates food while inviting the reader to investi-gate how what we eat affects the environment. It, too, embraces the nutritive aspect of food both cellurally and communally.

The authors are scientists by education—an ecologist and evolutionary biologist turned journalist/ novelist, an environmental scientist and researcher, and an aspiring biological anthropologist/dietitian. Thus, the book is grounded in facts. Resources for additional information are included as an appendix with a list of additional book titles for further reading, web sites and postal addresses for various governmental, non-governmental, not-for-profit agencies, and a select few scientific journal citations. Similarly, readers are welcome to access the authors’ webpage (www.animalvegetablemiracle.com) for updated references and citations. What is lacking is an extensive list of traditional scientific references (i.e. peer reviewed papers).

For the nutrition and healthcare professional wanting an enjoyable and entertaining read while gaining valuable information on today’s geopolitical buzzwords—organic, local, sustainable—this is a great find. Compliments of my county library, I originally listened to this book on CD during my 60 minute roundtrip commute; it was such an engaging story, I purchased a printed copy for ongoing reference.

Katherine Stephens-Bogard, MS, RD, CDE, is the Continuing Professional Education Editor for the NCC newsletter; she gardens, cooks, and counsels clients in southwestern Pennsylvania and northern West Virginia. Contact Katherine at ksbrib@netzero.net or kstephensbogard@washingtonhospital.org or 724-250-6298.
Thank You

To the following NCC volunteers who have helped to make this DPG, our web site, and newsletter the premier resource for reliable information on Complementary Nutrition and Integrative Therapies during 2007-2008. Without them, all we have accomplished would not have been possible.

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For those NCC members who eagerly assisted Rita Batheja at the New York State Dietetic Association annual conference: Dave Grotto, Mary Beth Augustine. Dorothy Humm

For those members who assisted with the Dietitian’s Event at FAM and the Dietitian’s networking: Erica Hart, Girija Ayaala, Ranjna Chhabra, Sheila Dean, Diana Noland.

2008 NCC FNCE SCHEDULE

Thursday, Executive Committee Meeting 3 – 7:30 pm
October 23 Intercontinental Hotel, 505 North Michigan Avenue
Room: Illinois

Friday, Executive Committee Meeting 8 am – 5 pm
October 24 Hyatt Regency Chicago, 151 East Wacker Room: Buckingham Room

Saturday, Pre-FNCE Workshop 10 am – 3:30 pm
October 25 “Gut Health: The Inner Tube of Life”
Hyatt Regency on Wacker Room: Grand F

Sunday, Product Market Place - Booth #51 8 am – 4 pm
October 26 Room W-355A, McCormick Place West

Sunday, Member Reception 6:30 – 8:30 pm
October 26 Hyatt Regency on Wacker Room: Columbus AB
Sponsored by Pharmavite and The Ester-C Company

Monday, DPG Showcase – Booth #21 10:30 am – 1 pm
October 27 Room: W-355A, McCormick Place West

Monday, NCC DPG Priority Session 3 – 4:30 pm
October 27 Drug/Supplement Interactions and Nutrient Depletions: Applications for the Dietitian Room 375 DE

Tuesday, Member Breakfast 7 – 9 am
Hyatt Regency on Wacker Room: Columbus UJ
“Vitamin C: Beyond the RDA for Optimal Wellness”
Speaker: Steven Lamm, MD, Clinical Assistant Professor New York University Medical School, New York, New York (1 CPEU). Sponsored by The Ester-C Company

Yoga (sponsored in conjunction with ADA Foundation) – check FNCE Program Book for room location.
Hyatt Regency Chicago Horner Room
Saturday, 2 p.m. – 3 p.m.
Sunday, 5:30 p.m. – 6:30 p.m.
Monday, 5:30 p.m. – 6:30 p.m.
Tuesday, 6 a.m. – 7 a.m.

RSVP for Member Reception and Breakfast at www.complementarynutrition.org
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