

Office of Dietary Supplements Update

National Institutes of Health,
U.S. Department of Health and Human Services

2002 Annual Bibliography of Significant Advances in Dietary Supplement Research

Special points of interest:

- Fourth Annual Bibliography Published
- Carnitine Conference 2004
- Vitamin D Conference Highlights
- Botanical Research Center publications

The 2002 *Annual Bibliography of Significant Advances in Dietary Supplement Research* is the fourth in a series of yearly publications that highlights 25 of the most promising new research studies published on dietary supplements in the past year.

As with previous issues, a rigorous multi-step process is used to select the top 25 papers. The first step is a comprehensive literature search to identify the peer-reviewed journals that published research on dietary supplements. Then, the editors are asked to nominate “flagship” original research that appeared in their journals the previous year. The scientific reviewers are also invited to elect

noteworthy papers and through this process, over 350 papers were nominated for this issue. These papers were then forwarded to internationally recognized scientists for evaluation and scoring. The top 25 papers were annotated by the Office of Dietary Supplements and compiled into a bibliography. To help track research developments in the field of dietary supplements, citations of papers that appeared in previous issues of the bibliography have been added to the appendix section.

The new 2002 issue features bibliographies of new research on antioxidants vitamins, minerals, amino

acids and fatty acids, botanicals, and fiber/soy. Following are examples of new research that was highlighted in this issue:

- Effect of daily vitamin E and multivitamin-mineral supplementation on acute respiratory tract infections in elderly persons: a randomized controlled trial
- Effects of coenzyme Q10 in early Parkinson’s Disease: Evidence of slowing down of the functional decline
- Analysis of thirteen populations of Black cohosh for formononetin
- Dietary isoflavones and bone mineral density: Results from the study of Women’s Health Across the Nation.

Continued on page 2...

Inside this issue:

Vitamin D Conference Summary	2
Database Updates	2
ODS-Sponsored Research Publications	3
Calendar—Exhibits and Symposia	3
Next issue	4

Save the Date: Carnitine Conference 2004

The National Institute of Child Health and Human Development (NICHD), National Center for Complementary and Alternative Medicine (NCCAM), National Institute of Mental Health (NIMH) and Office of Dietary Supplements (ODS) are sponsoring a conference at the NIH campus, **March 25-26, 2004** entitled

“Carnitine: the science behind a conditionally essential nutrient.”

The overall conference goals are to:

- Provide the scientific and lay communities with the most updated, evidence-based information on carnitine in health and disease prevention.

- Clarify issues relevant to appropriate uses of carnitine.
- Propose new areas of research for future studies on this nutrient.

For more information, check the ODS Web site, <http://www.dietary-supplements.info.nih.gov>.

Vitamin D and Health in the 21st Century: Bone and Beyond

The Office of Dietary Supplements and the National Institute of Child Health and Human Development (NICHD) co-sponsored a two-day conference entitled, "Vitamin D and Health in the 21st Century: Bone and Beyond" on October 9-10, 2003.

The two-day conference, held at NIH, was organized to achieve the following goals:

- Present current data/research about the prevalence of vitamin D deficiency;
- Determine the critical research needs in the evaluation

of vitamin D biology;

- Determine data needs for establishing dietary requirements across the full developmental spectrum but with particular attention to women, infants, and children; and
- Assess factors affecting and current options for improving vitamin D status of women, infants, and children in the United States and internationally.

Vitamin D is an essential nutrient that is unique, both in terms of its metabolism/physiology, and the human reliance on both endogenous

production and exogenous sources to meet biological requirements. Recently, evidence has been published indicating a re-emergence of vitamin D-deficient rickets among children. Research has also noted an alarming prevalence of low vitamin D blood levels among all ages in the United States, which may be related to other diseases, such as breast cancer, weakened immunity, and a host of other diseases. Until the revelation of these data, it was assumed that Vitamin D deficiency was no longer a significant health problem and that

the successful national food fortification program served as a role model of public health intervention.

As a result of this conference, a focused research program that will provide data essential for the promulgation of evidence-based public policy about achieving vitamin D adequacy in the United States and elsewhere is being put into place.

For more information, please visit the NICHD Web site at <http://www.nichd.nih.gov/p/index.htm>.

Database Updates

CARDS

Abstracts can now be downloaded from the search results page of the Computer Access to Research on Dietary Supplements (CARDS) Database. This feature was added to help users more easily access information on active dietary supplement research trials.

The abstracts can be downloaded in three different file types: plain text, MS

Word or HTML. Just click the "ADD" icon and then "Update List" from either the main search results page or from the abstract page. Once abstracts have been added to the list, they may be viewed and downloaded in the file format of the user's choice.

CARDS FY 2002 data are expected to be available to the public on December 19, 2003. There are 571 Dietary Supplement related projects in FY 2002, bringing the total

number of projects in the CARDS database to 1751.

IBIDS

The International Bibliographic Information on Dietary Supplements (IBIDS) database has a new team leader, professional librarian Jenifer Kirin.

Ms. Kirin has extensive medical and health reference research and database experience. Previously, she worked as a medical

research librarian for the American College of Cardiology and Howard Hughes Medical Center. The IBIDS team is excited to have Ms. Kirin on board to manage the large database, which now contains over 700,000 bibliographies.

2002 Bibliography of Dietary Supplement Research (cont.)

Continued from page 1...

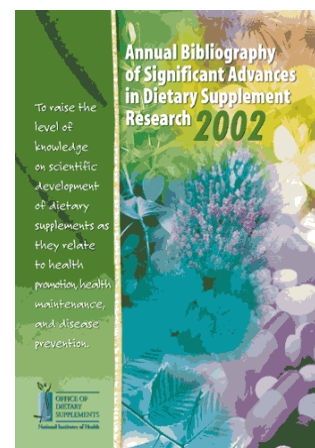
This project is the result of the continued efforts by many individuals, whose outstanding contributions and combined efforts make it possible for ODS to bring you this publication each year, including the individual scientists, journal editors, scientific reviewers, staff at the Office of Dietary Supple-

ments, and the National Agricultural Library, USDA.

Please contact the ODS office if you need multiple copies of this or past issues.

Current and previous issues can also be downloaded from the Office of Dietary Supplements Web site

<http://dietary-supplements.info.nih.gov>.



ODS-Supported Botanical Research Centers Advance Evidence Base

NIH currently supports six Dietary Supplement Research Centers focused on botanicals. Funding is provided by the Office of Dietary Supplements, National Center for Complementary and Alternative Medicine, National Institute of Environmental Health Sciences, National Institute of General Medical Sciences, and the Office of Research on Women's Health.

The six university-based centers are located at:

- Iowa State University and University of Iowa
- Purdue University and University of Alabama,

Birmingham

- University of Arizona, Tucson
- University of California, Los Angeles
- University of Illinois at Chicago
- University of Missouri

Following are selected publications from each of the centers:

Iowa

Kraus GA, Bae J. Synthesis of undeca-2E-en-8,10-dienoic isobutylamide. A Novel Constituent of *Echinacea angustifolia*. *Tetrahedron Lett* 2003;44: 5505.

Wills NJ, Park J, Wen S, Kesavan GA, Kraus GA, Petrich JW, Carpenter S. Tumor cell cytotoxicity of hypericin and related analogs. *Photochem Photobiol* 2001;74:216-220.

Arizona

Pfeiffer E., Hohle S, Solyom AM, Metzler M. Studies on the stability of turmeric constituents. *J of Food Engineering* 2003;56:257-259.

Lantz RC, Chen GJ, Jolad SD, Solyam AM and Timmerman BN. The effect of turmeric extracts on inflammatory mediator production. *Phytomedicine* (in press).

Purdue/Alabama

Morfe DJ, Morfe DM, Sun H, Cooper R, Chang J and Janle EM. Tea catechin synergies in inhibition of cancer cell proliferation and of a cancer specific cell surface oxidase (ECTO-NOX). *Pharm & Toxicol* 2003;92:234-241.

Prasain JK, Jones K, Kirk M, Wilson L, Smith-Johnson M, Weaver CM, Barnes S. Identification and quantification of isoflavonoids in kudzu dietary supplements by HPLC and electrospray ionization tandem mass spectrometry. *J Agr Food Chem* 2003;51:4213-4218.

Continued on page 4.

Calendar

Symposia Calendar

Dec 9, 1-3pm: Women's Health Research for the 21st Century. Boning Up on Osteoporosis: Emerging Therapies for Prevention and Treatment. (ORWH) - Masur Auditorium. <http://www4.od.nih.gov/orwh/2003Seminars.pdf>

Dec 18-19, 8-5pm: Selenium Biochemistry 2003: Celebrating 30 Years of Selenoprotein Research. (NHLBI)- Hyatt Regency Bethesda. <http://www.nhlbi.nih.gov/meetings/se2003.htm>

Jan 12-13, 2004, 8-5pm: From Clinical Trials to Community: The Science of Translating Diabetes and Obesity Research (NIDDK, OBSSR and CDC) - Natcher Auditorium. <http://calendar.nih.gov/cgi-bin/calendar>



Have a Happy and Safe Holiday Season!

From the Office of Dietary Supplements



Office of Dietary Supplements National Institutes of Health

6100 Executive Blvd.
Rm. 3B01
MSC 7517
Bethesda, MD 20892
Phone: 301-435-2920
Fax: 301-480-1845

WE'RE ON THE WEB!

[HTTP://DIETARY-SUPPLEMENTS.INFO.NIH.GOV](http://DIETARY-SUPPLEMENTS.INFO.NIH.GOV)

Upcoming Features and Announcements

Next Issue:

- **REVISED vitamin and mineral fact sheets available**
- **Interview with Dr. Joe Betz, "The Science of Pharmacognosy"**
- **Dietary Supplements: Tips for the Savvy Older Consumer**

ODS-Supported Research Publications (cont.)

Illinois

Burdette J, Liu J, Chen SN, Fabricant DS, Pierson CE, Barker EL, Pezzuto JM, Mesecar AD, van Breeman RB, Farnsworth NR, Bolton JL. Black cohosh acts as a mixed competitive ligand and partial agonist of the serotonin receptor. *J Agri Food Chem* 2003;51:5661-5670.

Johnson BM, Qiu S, Zhang S, Zhang F, Burdette JE, Yu L, Bolton JL, van Breeman RB. Identification of electrophilic mammalian metabolites of Piper methysticum Forst (kava). *Chem Res Toxicol* 2003;16:733-740.

Missouri

Day JK, Bauer AM, desBordes C, Zhuang Y, Kim B, Newton LG, Nehra V, Forsee KM, MacDonald RS, Besch-Williford C, Huang THG, Lubahn DB. Genistein alters DNA methylation patterns in mice. *J Nutr* 2002; 132:2419S-2423S.

Wang G, Xu J, Rottinghaus GE, Simonyi A, Lubahn DB, Sun GY, Sun AY. Resveratrol protects against global cerebral ischemic injury in gerbils. *Brain Research* 2002;958:439-447.

California

Sartippour MR, Shao ZM, Heber D, Beatty P, Liu C, Zhang L, Ellis L, Liu W, Go VL, Brooks MN. Green tea inhibits vascular endothelial growth factor (VEGF) induction in human breast cancer cells. *J Nutr* 2002; 132:2307-11.