



Cranberry Advisory Board Meets in San Diego

The 2003 Experimental Biology conference attracted over 12,000 researchers to San Diego to review new and emerging research, including research on cranberry and health. Not only did they attend sessions on the latest cranberry research at Experimental Bio (see story, page 2), a select group convened for the Cranberry Institute's (CI's) Scientific Advisory Board (SAB) meeting.

Cranberry SAB members include Drs. Johanna Dwyer, director of the Frances Stern Nutrition Center at New England Medical Center; Clare Hasler, founding director of the University of Illinois' Functional Foods for Health Program; David Heber, director of the Center for Human Nutrition at UCLA; Martin Starr, Science Advisor to the CI; and Sharon Shoemaker, founder and executive director of the California Institute of Food and Agricultural Research (CIFAR). Housed at UC Davis, CIFAR acts as a clearinghouse for functional foods research.

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New Research Demonstrates Antioxidant Properties of Cranberry Sauce

A recent study from biologists at Winona State University, Minnesota, confirms that cranberry sauce possesses antioxidants that may provide the public with cardioprotective and anticancer properties similar to, though not quite as strong as, those associated with cranberry beverages and whole, fresh cranberries.

The *in vitro* six-month study, performed by Dr. Ted Wilson of Winona State University's department of biology and students Sara Staupe and Tiffany Niskala, found that both jellied and whole berry styles of cranberry sauce yield this benefit. Wilson presented the work at the 2003 Experimental Biology conference held earlier this month in San Diego, California.

Cranberry sauces contain polyphenolic compounds at levels comparable to cranberry beverages containing at least 27 percent cranberry juice, as well as pure cranberries. This preliminary study showed that sauce polyphenol content and antioxidant capacity may have some correlation ($R^2=0.69$ at 1:1,000 dilution), suggesting that sauce antioxidant activity may be related to polyphenol content.

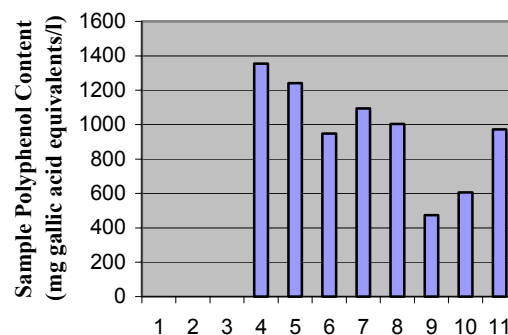
The study further suggests that the source or variety of the cranberry sauce probably does not significantly affect its ability to provide antioxidant protection.

While patients and clients may think of cranberry sauce as a traditional condiment on the winter holiday table, one can derive the benefits of cranberry sauce year-round. As the weather warms, encourage use of cranberry sauce as a flavorful accompaniment to entrées cooked on the outdoor grill or other menus full of fresh fruits and vegetables.

References

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Cranberry Sauces Protect LDL Cholesterol Against Oxidative Stress at a 1:1,000 Dilution



Products Tested/Data Identification Key:

LDL incubated with:
 #1 - no cupric ions
 #2 - just cupric ions (100 percent oxidation)
 #3 - cupric ions in the presence of 1.0 mM ascorbic acid (antioxidant control)

LDL incubated with LDL, cupric ions, and cranberry materials at 1:1,000 dilution:

- #4: - 100% cranberry juice
 #5: - 27 % cranberry juice
 #6: - jellied sauce - Source A
 #7: - jellied sauce - Source B
 #8: - jellied sauce - Source C
 #9: - whole berry sauce - Source A
 #10: - whole berry sauce - Source B
 #11: - whole berry sauce - Source C

Chart courtesy of Dr. Ted Wilson, Winona State University

Calendar of Events

California Institute of Food and Agricultural Research (CIFAR) Conference XVII: Food Functionality for Taste, Health & Well-Being, May 13, 2003. Culinary Institute of America, St. Helena, CA. Dr. Martin Starr will give a presentation on cranberry's health benefits. For more information, visit www.cifar.ucdavis.edu

American College For Advancement in Medicine: Spring Conference, May 14-18, 2003, Washington, DC. For more information, visit www.acam.org

American Aging Association 2003 Annual Conference: Nutritional Modulation of Aging and Age-Related Diseases, June 6-9, 2003, Baltimore, MD. For more information, visit www.americanaging.org

Florida Dietetic Association 2003 Annual Meeting, July 13-16, 2003, Naples, FL. Dr. Martin Starr will give a presentation titled "Cranberry Health Research Update: Big Benefits in a Small Package." For more information, visit www.eatrightflorida.org

American Dietetic Association 2003 Food & Nutrition Conference & Expo, October 25-28, 2003, San Antonio, TX. For more information, visit <http://www.eatright.org/fnce/2003.html>

Research Round-Up: American Chemical Society and Experimental Bio Conferences

A bumper crop of emerging studies focused on the cranberry at this season's major scientific conferences. In March, researchers gathered in New Orleans for the American Chemical Society's annual meeting. Dr. Joe Vinson et al of the University of Scranton presented preliminary findings on the heart health benefits of cranberry juice cocktail. The latest in a long chain of research connecting cranberry consumption to heart health, this pilot study suggests a positive link between cranberry juice and a potentially significant increase of HDL "good" cholesterol.

The University of Massachusetts at Dartmouth contributed offerings from three research teams. Dr. Yeugang Zuo presented research on the American cranberry's anti-breast cancer effects. Dr. Zuo et al found the cranberry to contain the highest phenolic content and highest free-radical scavenging capacity among 20 fruits tested and provided experimental results demonstrating that, 20 hours after treatment with a 6.7 percent cranberry juice, over 20 percent of the human breast cancer cells were killed, indicating a potentially significant protective role for cranberry juice against breast cancer. Separately, Brian Murphy et al isolated an extract from cranberry fruit demonstrating antitumor activity in leukemia, breast, prostate, lung and cervical cancer cell lines, leading to greater understanding of which parts of the structure of the cranberry may provide protection from cancer. Finally, Debra Davis et al observed a decreased incidence of fungal diseases on wild vs. cultivated cranberries, and identified the microorganisms associated with wild cranberries may act as biocontrol agents to prevent disease occurrences.

Additionally, Dr. I. O. Vvedenskaya et al, from Rutgers University, charted the development of various flavonoid compounds during the cranberry fruit's growth process, demonstrating which components reach full strength at early stages, when the cranberry reaches its full size and when it ripens.

In addition to Dr. Wilson's research, Experimental Bio's April conference also included a presentation from Dr. Vinson on the University of Scranton heart health study described above. Dr. Vinson's study received funding from the Cranberry Institute and the Wisconsin Cranberry Board.

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