Herbal Supplements Face New Scrutiny

By LAURA LANDRO

Elderberry extract and acai to boost the immune system. Black cohosh to lessen the discomforts of menopause. Soy capsules to prevent bone loss and prostate cancer.

Many botanical supplements—made from the seeds, bark, leaves, flowers and stems of a wide range of plants—have been widely used as folk remedies for centuries. Americans have been consuming growing quantities of the supplements in hopes of warding off disease and easing symptoms of various conditions. But there is scant scientific evidence to support their health benefits.

Usage of botanicals is growing.

Now, the federal government is stepping up research into the safety and effectiveness of a wide range of over-the-counter supplements, including plant oils, garlic, soy, elderberry, licorice, black cohosh, St. John's wort and the Asian herb dong quai. The aim is to better understand how compounds in the plants affect health and to help consumers make more informed choices about supplements, which can interact with prescription drugs, cause side effects or lead to new health risks. Sales of botanical supplements in the U.S. topped $5 billion last year, up 17% from five years earlier, according to the non-profit American Botanical Council.

"Sometimes people assume because a product is natural, it is also safer. But these compounds can have both benefits and potential side effects and we need to understand both of those," says Floyd Chilton III, director of the Center for Botanical Lipids and Inflammatory Disease Prevention at Wake Forest University Baptist Medical Center in Winston-Salem, N.C. Dr. Chilton's center received a $7.5 million federal grant to study botanicals, including whether plant oils such as echium and borage can help play a role in preventing cardiovascular disease, asthma and diabetes.

"People are using supplements for purposes for which they were not intended," such as treating health conditions they have self-diagnosed, or using multiple supplements in combination with prescription medications, says Marguerite Klein, director of the Botanical Centers Research program at the National Institutes of Health. One concern, she says is the heavy use by women of
Black cohosh to treat menopause symptoms, such as hot flashes. Limited research seems to support the black cohosh's benefit. But it isn't known how the botanical works. Black cohosh has been linked in some patients to liver damage, and breast-cancer patients are often advised to avoid using it because its effects on breast tissue are unknown.

Helping to spur the research initiative are the Office of Dietary Supplements and the National Center for Complementary and Alternative Medicine, both part of the National Institutes of Health. The agencies last month awarded grants totaling about $37 million to five dietary supplement research centers, expanding a program that has already awarded more than $250 million in research grants for herbs and botanicals since 2002. The NIH is also funding research into botanical products through the National Cancer Institute, which is interested in how components in botanicals might influence cancer risk and tumor growth.

Studies funded by the federal grants have so far shown that chamomile capsules may help reduce anxiety compared to a placebo and that an extract from the milk thistle plant can interfere with the life cycle of the hepatitis C virus. They also have refuted some purported benefits of botanicals, showing, for instance, that ginkgo biloba does not prevent heart attack, stroke, or cancer, or stem memory loss and that St. John's wort was no better than a placebo in treating symptoms of attention deficit hyperactivity disorder in children and teens.

Unlike drugs, which must be tested in clinical trials and approved by the Food and Drug Administration before they can be marketed, botanicals and other supplements don't require regulatory approval. The FDA in June began requiring all supplement makers to follow strict quality manufacturing standards, but the agency only periodically inspects plants.

An investigation published in May by the General Accounting Office found deceptive marketing practices at a number of online retailers, including claims that supplements could prevent or cure conditions such as diabetes, cancer, or cardiovascular disease. The investigation also found trace amounts of potentially hazardous contaminants, such as lead or bacteria, in 37 of 40 herbal dietary supplement products it tested.

Tod Cooperman, president of ConsumerLab.com, which tests supplement brands for quality, says the group finds problems with about 25% of all supplements, and especially with herbal products, many with ingredients from overseas. A recent review of supplements made from ginseng—commonly taken to boost energy and vitality—found that 45% failed quality tests because they didn't contain the advertised amount of ginseng or were contaminated with lead. Test results and other information are available to members, who pay $30 annually.

Consumers also can find information about potential uses, benefits and risks of dietary supplements at federal websites ods.gov and nccam.gov. Another government site, Medlineplus.gov, grades scientific evidence on a variety of supplements.

William Cefalu, director of the Pennington Biomedical Research Center at Louisiana State University in Baton Rouge, says researchers are only beginning to understand how thousands of different compounds in a single plant may interact, and how the concentration of a particular plant chemical affects its potency. For example, peppermint tea is considered safe to drink, but
Because the potency of wild plants can vary, some researchers are cultivating their own. At the Center for Botanical Interaction Studies at the University of Missouri in Columbia, 600 types of soybean seeds are being cultivated to study different concentrations of the same compounds in the plants and how they might work to prevent prostate cancer. The center is also growing 60 types of elderberries to study the plant's possible role in boosting the immune system against infection and fighting cancer and inflammation in the body. Center director Dennis Lubahn says there may be variations in individual plants that will make a difference in how well they fight disease. "We've come a long way from the traditional medicine woman sampling leaves in the forest," he says.

Petal Power?

Researchers are studying if plant-based supplements on the market can help treat many diseases and conditions.

<table>
<thead>
<tr>
<th>BOTANICAL</th>
<th>POSSIBLE BENEFIT</th>
<th>POSSIBLE RISKS</th>
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<tbody>
<tr>
<td>Black cohosh</td>
<td>Prevention of hot flashes and other menopause symptoms, may help improve bone density.</td>
<td>No long-term safety data on breast tissue; may cause liver damage.</td>
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<tr>
<td>Soy (phytoestrogens)</td>
<td>May lower risk of LDL ('bad') cholesterol; reduce hot flashes and other menopause symptoms.</td>
<td>Possible role in development of breast, uterine cancers.</td>
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<tr>
<td>Milk thistle</td>
<td>May promote growth of liver cells, improve symptoms of liver disease; possible treatment for hepatitis C.</td>
<td>May lower blood-sugar levels in diabetics; allergic reactions, gastrointestinal side effects.</td>
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<tr>
<td>Ginseng</td>
<td>May lower blood sugar, boost immunity, increase stamina.</td>
<td>Headaches; allergic reactions; sleep and gastrointestinal problems.</td>
</tr>
<tr>
<td>Elderberry</td>
<td>Anti-oxidant, may lower cholesterol, boost immune system, improve heart health.</td>
<td>Diuretic effects; no scientific data on benefits.</td>
</tr>
<tr>
<td>Cranberry (extracts, tablet, capsules)</td>
<td>May prevent urinary tract disorders, stomach ulcers, dental plaque; anticancer benefits.</td>
<td>Could cause GI upset; may interact with blood-thinning drugs.</td>
</tr>
<tr>
<td>Supplement</td>
<td>Benefits</td>
<td>Side Effects</td>
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<tr>
<td>Evening primrose</td>
<td>Modest benefits for eczema; may be useful for rheumatoid arthritis and breast pain.</td>
<td>May cause gastrointestinal upset, headache.</td>
</tr>
<tr>
<td>St. John's wort</td>
<td>May help treat mild depression.</td>
<td>May limit effectiveness of prescription medications; unproven as treatment for major depression.</td>
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</table>
Not long ago Betsy Rodriguez, who oversees retirement systems at the University of Missouri, said a fundamental change is needed to make them viable. She meant otherwise the plan will go broke.

For all these years the UM System has paid defined benefits to retirees based on length of service and amount of salary earned. You do the time and earn the pay, and you are guaranteed a certain amount of retirement money for life. This sort of system remains typical of large public retirement systems and even a few private systems such as automakers, but as the pool of retirees becomes ever larger and underwriting revenues relatively less, the writing shows up on the wall.

To keep its defined benefit system, recently the Missouri General Assembly passed a law requiring state workers to contribute revenue from their salaries. Everyone offers advice about changes that might be needed in Social Security. And now the university plans to phase in a “defined contribution” system like the 401(k) plans familiar to most private-sector workers.

Defined contribution plans use money from workers and employers to underwrite retirement accounts. Benefits depend on invested returns. These plans can’t go broke, but they don’t guarantee retirement benefits. To ensure its plan will remain “viable,” the university will eventually convert to a defined contribution plan.

A recommendation will go to the Board of Curators in December. Meanwhile, input from faculty and staff will be sought.

In concept and mathematics the change is not complicated, but in philosophy it is profound. Until now, the university and state have had to come up with whatever amount of money it took each year to fund the guaranteed benefit obligation assured for each eligible retiree.

The university will want to maintain a generous contribution to the new program, but it won’t guarantee how much money will accrue in the end. Each worker will have his own portable savings account. Defined contribution systems of this type will become the norm among public agencies to keep them viable.
COLUMBIA MISSOURIAN

MU professors to discuss Supreme Court decision on campaign spending

By Deniz Koray
September 13, 2010 | 6:36 p.m. CDT

COLUMBIA — Are corporations people? That's the question the League of Women Voters of Columbia-Boone County hopes to discuss during a Wednesday forum held in conjunction with Constitution Day.

The forum, called "If You Prick Them, Do They Bleed? Corporations as Persons," will begin at 7 p.m. Wednesday in the commission chambers of the Roger B. Wilson Boone County Government Center, 801 E. Walnut St.

Refreshments will be available at 6:30 p.m.

Panelists will include professors Paul Litton, Richard Reuben and Christina Wells of the MU School of Law, as well as professor Marvin Overby of the political science department.

They will be discussing the effect of Citizens United v. Federal Election Commission, a case in which the Supreme Court decided in a 5-4 ruling that the First Amendment prevents the government from limiting campaign spending by corporations, nonprofits and advocacy groups. The Supreme Court's interpretation treats money, specifically campaign donations, as a form of protected speech.

The case, which was decided Jan. 21, weakens the Bipartisan Campaign Reform Act passed in 2002 and sponsored by Sens. John McCain, R-Ariz., and Russ Feingold, D-Wis. It's commonly known as the McCain-Feingold Bill.

Linda Kaiser, president of the League of Women Voters of Columbia-Boone County, said the forum will be useful because it covers an important topic with which many people are unfamiliar.
"The Supreme Court's decision overturned years of precedents. Huge amounts of money can now alter the process of elections, and we are concerned that it will have a negative impact on democracy," Kaiser said.

The national chapter of the League of Women Voters of the United States filed an amicus curiae brief siding with the Federal Election Commission in December 2009.

The forum is a yearly event in conjunction with Constitution Day, which is Sept. 17, the date the Constitution was signed in 1787.

This will be the fourth straight year that the league will host a panel relevant to Constitution Day. In previous years, discussions have centered around the role of privacy in the Constitution as well as the most important constitutional rights.
Different schools, different approaches to alcohol awareness

By Daniel Longar
September 13, 2010 | 7:12 p.m. CDT

COLUMBIA — Kim Dude has worked with MU's alcohol awareness programs for more than 30 years, and she had many questions in the days after a young woman fell over a railing and was critically injured at a Columbia bar two weekends ago.

One of them was: "You have to ask, where were her friends?" Dude, director of the Wellness Resource Center, said.

The MU Wellness Resource Center is launching a new program called “Life is not a spectator sport,” which strives to inspire students to notice when alcohol is causing a problem, and then to develop the skills they need to intervene. The program’s launch is not related to the incident at Quinton's Bar and Grill.

The woman, 19-year-old Kelsi Poe, remained in critical condition Monday at University Hospital after tumbling over a railing at Quinton's on Sept. 4. Poe's blood-alcohol level was .32 — four times the legal driving limit. Poe is a student at Columbia College.

Nearly 600,000 college students are injured each year in alcohol-related accidents. According to collegedrinkingprevention.gov, 1,825 college students between the ages of 18 and 24 died from alcohol-related injuries in 2009, including motor vehicle crashes.

MU, Columbia College and Stephens College have all developed alcohol awareness programs that aim to prevent or reduce these types of accidents. Dude said more needs to be done to increase student vigilance about alcohol poisoning.

"Honestly, I want to start a revolution where students care more about each other," Dude said. "I think students care about the world, but not enough about each other."

MU: A year-round effort
MU's Wellness Resource Center offers alcohol awareness programs to incoming freshmen during Summer Welcome, one of which is a skit performed by peer educators. They sponsor and hold another 150 to 250 events throughout the year.

October is national Alcohol Responsibility Month. "Many of our big showcases are in the month of October, but we have programs all year around," Dude said.

An Alcohol Responsibility Month 12-hour walk is scheduled for Oct. 8 from noon until midnight. "This is our biggest event of the year," Dude said. "There will be hundreds of students." The walk at Stankowski Field includes music and food for the walkers.

The Wellness Resource Center has received awards for its programs. The U.S. Department of Education selected the resource center as a model prevention program in the country in 1999, 2006 and 2010.

The center also helps train the staffs of restaurants and businesses to watch for over consumption. A free online training program is available on the center's website.

"We face many, many challenges," Dude said. "We are competing with all the media, the movies, and everyone that glamorizes alcohol."

**Columbia College: A focus on prevention**

At Columbia College, incoming freshman and transfer students with fewer than a total of 45 credit hours are strongly encouraged to take the class Introduction to Columbia College. The class requires students to attend multiple events and take an E-chug Online Alcohol Assessment within the first four weeks of classes.

Director of Student Development at Columbia College, Kim Coke, said the focus is on prevention. "We give students the information to make responsible choices," Coke said.

The E-chug Online Alcohol Assessment is a supplement to the classroom that provides personalized feedback about individual drinking patterns, specific health and unique family factors, alongside information about the campus and community.

After the E-chug assessment, peer educators lead discussions about the responsibilities of friends drinking together. The peer educators at Columbia College also sponsor the
Root Beer Kegger and BBQ. The event focuses on actions students can take to minimize problem drinking and make better decisions about using alcohol.

In October, the peer educators led programs in the residence halls and the student commons that promote alcohol awareness. Columbia College also uses passive programs like bulletin boards and displays as positive reinforcement.

The college uses shifts in cultural trends and peer-input in determining the direction of its programs, Coke said.

**Stephens College: Mandatory class, and acceptance**

Stephens is not a dry campus, which means students over the age of 21 can have alcohol in their rooms as long as no one in the room is under age. But alcohol education is mandatory for all new students including transfers.

"We are in the middle of the middle of the road," said Deb Duren, Vice President for Student Services at Stephens College. "We don't encourage people to drink, but we understand that some will."

At the beginning of each year, Stephens holds a four day-orientation that includes a safety and security meeting. It addresses various health issues including alcohol use and abuse. In these first few days, program leaders promote the idea that friends should look out for friends.

Stephens students also attend a seven-week student success course that addresses issues that young women face while in college including drugs and alcohol and tips to have a successful college career.

Duren said health services engages in proactive education about alcohol and other related issues that students might face in college. Greek organizations and counselors also put on programs in the dorms that teach students more about alcohol awareness during October.

*Missourian reporter Walker Moskop contributed to this report.*
Cancer center construction begins at Missouri

September 14, 2010 5:02 AM ET

COLUMBIA, Mo. (AP) - Construction has begun in Columbia on a $203 million University Hospital expansion that will include a new cancer treatment center.

The University of Missouri Health Care project consists of an eight-story addition with 12 new operating rooms, 90 private rooms for patients and 300,000 square feet of new space.

The new Ellis Fischel Cancer Center will take up two floors in the complex and replace an aging facility in north Columbia.

The complex is expected to be complete in late 2012.
Construction begins on new cancer center in Columbia

By The Associated Press
September 14, 2010 | 7:40 a.m. CDT

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