Poppy poster winners

Several Illinois Valley students were honored by American Legion Post 70 members for their posters made of poppies. David West of IVHS (photo above left) proudly displays his 1st-place award with Ellie Buell, left, and Laura Warden. LBMS student, Lydia Beeman, (photo above) won first place in her grade division. Timothy Phlaum won top prize and Abigail Robenson (photo left) took second for their poppy posters in the fourth-and fifth-grade division. Both are homeschooled students.

(Photos contributed by Ellie Buell)

Antioxidant rich foods may prevent diabetes

Studies increasingly indicate that a compound of antioxidant rich foods may help prevent insulin-dependent diabetes or extend the period of remissions that are common in the early stages of the disease, scientists said during a professional conference.

Although the exact nutrient mix that is needed has not yet been determined, there is evidence that nutritional therapies may ultimately play an important role in the fight against diabetes, said Tammy Bray, dean of the College of Health and Human Sciences at Oregon State University (OSU) at Corvallis.

Bray spoke today on the latest findings in her research at a conference called "Diet and Optimum Health," sponsored by the Linus Pauling Institute at OSU. She has extensively studied "type one" diabetes, also known as insulin-dependent diabetes, or IDDM, which occurs in children and is a lifelong disease. Children with this disease, whose exact cause is unknown, must take daily insulin shots and monitor their food carefully.

"We know that something triggers the diabetes to emerge," Bray said. "The emergence is marked by an inflammation within the pancreas, which causes it to stop producing insulin. IDDM is a serious disease and in worst cases, when untreated, children can go into a coma and die."

Bray's research program is studying a signal, marked by oxidative stress, that she believes is triggered by environmental factors and causes an attack on the immune system. The manipulation of this signal may help prevent the disease, she said, and may be accomplished by nutritional compounds that can control this "switch."

"Our research suggests that a compound called NFkB is the cellular switch that may be involved in the advancement of IDDM," Bray said. "We want to find out what it is that turns the switch on and off and then the moment that it comes on -- before it is out of control -- we want to be able to shut it off."

"We want to eat a colorful diet, as well as foods that are rich in antioxidants. This could include spinach, carrots, soy, tomatoes and others."

--Tammy Bray, dean of the College of Health and Human Sciences at OSU at Corvallis.

Researchers testing a variety of different compounds and foods in search of the perfect combination have so far determined that food with high levels of antioxidants may help with IDDM.

"We want to eat a colorful diet, as well as foods that are rich in antioxidants," Bray said. "This could include spinach, carrots, soy, tomatoes and others."

When children first develop IDDM, they often go through a "honeymoon period," Bray said, when the diabetes is in remission.

It is possible that a combination of certain foods will increase the length of this honeymoon period and ensure that children with IDDM remain in remission for the greatest amount of time possible. The right compounds may even allow the children's bodies to "self-repair" through the use of the antioxidants, Bray said.

"Our long-term goal, of course, is that children do not get diabetes at all, but if a child does get IDDM we want it to be for only a short time," she said. "And if they are in remission, we want the honeymoon period to last as long as possible."

Although Bray's research is focused on IDDM, she says her work is also applicable to those with type two, or adult-onset diabetes, which ultimately can cause blindness, poor circulation, wounds that don't heal, amputation of limbs and death.

Appropriate nutritional therapies and compounds may be able to reduce the severity of the disease, she said.

While research is continuing, Bray recommends that parents teach their children to eat healthy early, because children develop their sense of taste and preferences at very young ages.

Bray's research is coordinated with OSU's Linus Pauling Institute, which is a national leader in studying the prevention and treatment of human disease by vitamins, micronutrients and phytochemicals, and the role of oxidative and nitrative stress and antioxidants in human health and disease.

Major areas of research encompass heart disease, cancer, aging, neurodegenerative diseases, immune dysfunction and disease caused by exposure to toxins.

Bray's research programs have been supported by major grants from the National Institutes of Health.

Studies show chlorophyllin may reduce liver cancer risk

A group of studies has shown that the compound chlorophyllin has great promise as a way to reduce risk of certain cancers, experts said recently at a national conference on Diet and Optimum Health, sponsored by the Linus Pauling Institute at Oregon State University (OSU), Corvallis.

George Bailey, an OSU professor of environmental and molecular toxicology, said that anti-cancer studies conducted several years ago found that chlorophyllin can block liver cancer in rainbow trout.

Continuing work is outlining the molecular mechanisms and dose response of this compound with rats, mice and human volunteers.

"Chlorophyllin has the unique ability to stick tightly to certain classes of carcinogens," Bailey said. "In the stomach, it can greatly reduce the amount of this kind of carcinogen that gets taken up by the body."

Liver cancer is one of the leading causes of cancer death worldwide, Bailey said.

These findings may be of special importance in the developing world, including parts of Africa, Southeast Asia and China.

In Southeast Asia, liver cancer is the third leading cause of cancer death, caused partly by a prevalence of chronic hepatitis in those areas and large amounts of aflatoxin in the diet.

"Aflatoxin is the most potent of the 50 or so compounds known to cause human cancer worldwide," Bailey said.

"Aflatoxin is found in corn, peanuts and rice that have been stored in damp, moist, and high-temperature areas" he added. "When the grains have been stored in these conditions, a mold begins to grow and the chemical forms."

Within the United States, the Food and Drug Administration and the U.S. Dept. of Agriculture screen peanuts, rice and other grains to ensure that they are aflatoxin-free.

But in the Qidong province in China, one in 10 adults die of liver cancer due to lifelong high aflatoxin exposure and hepatitis infection.

Bailey and colleagues from John Hopkins University have already conducted the first clinical trial of chlorophyllin on humans, a three-month project in this rural region of China.

Their biomarker study showed that chlorophyllin supplements provided a 55 percent reduction in liver DNA damage from aflatoxin exposure in the diet, which they believe in the long term would translate into a similar reduction in liver cancer risk.

Although chlorophyllin has no demonstrated human toxicity, studies using rats found that chlorophyllin increased the risk of colon cancer at the same time it successfully suppressed liver cancer.

Continuing work by another OSU researcher, Rod Dashwood, is seeking to understand the basis of the increase in colon tumors and its significance for human cancer.

"Cancer is not a simple process and it's important to understand both the risks and the benefits of any new approach," Bailey said.

Bailey is working to discover in greater detail how chlorophyllin works to reduce cancer, and whether natural chlorophyll will have the same effect against other carcinogens, such as aflatoxin and components of tobacco smoke.

Definitive results on the research should be available within five years, Bailey said.

States warned about dangers from lead paint

Attorney Gen. Hardy Myers warned customers about the risks of lead paint exposure during repainting and other home renovation work as part of an announcement of a 51 state and other jurisdictions agreement with the National Paint and Coating Association (NPCA).

Oregon is part of a core group of seven states led by the Massachusetts Attorney Gen. that initiated the effort in 2002. The group also includes California, Connecticut, Maine, New Hampshire and New York.

The agreement requires paint manufacturers to affix warning labels on paint cans and provide consumer education and training, alerting consumers to the hazards of lead paint exposure.

After a series of meetings it was decided that the core group of states and dozens of paint companies would negotiate an agreement.

For more information phone (800) 368-5060, (800) 424-5323 or log on to www.epa.gov/lead.

The official state sport of Alaska is dog mushing.