MU ag college announces new lab space with help of $1 million grant

By Ashley Jost

Friday, October 10, 2014 at 11:37 am Comments (1)

With the help of a $1 million Archer Daniels Midland grant, the University of Missouri College of Agriculture, Food and Natural Resources created a laboratory and work space for students and faculty.

The new ADM Center for Agricultural Development, made possible by a partnership between ADM, the agriculture college and the MU College of Engineering, was unveiled by administrators Thursday afternoon. The center is in the agricultural engineering building on the east side of campus.

The repurposed space is broken down into four areas, including a mechanical assembly space, a technology lab for students and faculty, office spaces for students to work on group projects and an instructional area with computer-operated machines and welding equipment. All areas have multimedia equipment available for students to access information or communicate outside of the lab.

Leon Schumacher, professor of agricultural systems management, said construction on the space began last fall and included some extensive renovations of the air-conditioning systems and flooring in some parts of the building in addition to more superficial changes like painting.

Along with the $1 million ADM grant the university received in 2012, Schumacher said the College of Agriculture, Food and Natural Resources contributed some funding for the renovation and equipment. He said the Missouri Department of Elementary and Secondary Education also gave several thousand dollars for welding equipment because it will be used to teach future high school teachers.

Students have been using the new lab space all semester, though it officially opens for reservations from faculty and students groups this week.

A classroom-size technology lab, one of the four spaces, is decked out with computers loaded with computer-aided design systems as well as a 3-D printer, a green-screen space for faculty and students to record lectures and mobile technology.
Marc Strid, director of educational technologies at the agriculture college, said graduate students familiar with the technology will train faculty on how to use the equipment for online and in-person classes.

The goal of the new space is to prepare students for the rapidly changing agriculture industry with hands-on educational opportunities. Hank Foley, MU senior vice chancellor for research and graduate studies, said he hopes this isn’t the end of the relationship between the university and Archer Daniels Midland.

“This is a partnership akin to the kind we need to do more of at the university,” he said.

How binge drinking alters your genes

Posted by Nathan Hurst-Missouri on October 11, 2014

Scientists say binge drinking causes epigenetic changes in histone structures in the liver.

“Epigenetic alterations are changes in genes that are not caused by changes in the DNA sequence or genetic code,” says Shivendra Shukla, a professor at the University of Missouri School of Medicine.

The National Institute on Alcohol Abuse and Alcoholism defines binge drinking as a pattern of drinking that brings a person’s blood alcohol concentration to 0.08 grams percent or above. This typically happens when men consume five or more drinks or women consume four or more drinks over a two-hour period.

“We know that chronic alcohol use is damaging to the liver, but binge drinking amplifies that damage,” says Shukla, lead author of the new study.
Why histones are so important

Histones are proteins that act like a spool to compact and organize the thread-like DNA strands that wrap around them. Histones work to protect the DNA strand and help it function correctly.

Although histone modification does occur naturally, Shukla and his team found that binge drinking results in unnatural modifications to histones. In turn, these changes adversely affect how a person’s genetic code is interpreted and how it is regulated.

“Every response in the body is due to alterations in proteins,” Shukla says. “Binge drinking is an environmental trigger that negatively affects histones by altering the correct binding of DNA. The result is unnecessary replication in the copied structure.

“This initially causes inflammation and damage to the cells as they form, but it is also eventually the cause of more serious diseases such as cirrhosis and cancer.”

Not just the liver

Because the liver is the main metabolic site in the body, it is the first organ to experience damage from binge drinking. But because the liver is responsible for nutrient and drug metabolism and distribution, as well as the production of multiple agents that are needed for the heart, kidney, blood vessels, and brain to function properly, liver damage can affect many other systems in the body.

“It is important to specify that binge drinking should not be associated only with liver damage,” Shukla says. “Binge drinking can create an inflammatory response in the liver that is like a cluster bomb, sending out various damaging signals to other organ systems in the body. If those organs are working at a lower level of function, then a whole host of physiological processes are affected as a consequence of binge drinking.”

Shukla says that excessive alcohol consumption with a binge drinking pattern is emerging as a major public health concern globally. In the US, binge drinking is the most common form of excessive alcohol use—so common in fact, that the Centers for Disease Control and Prevention reports approximately one in six adults binge drinks about four times each month.

“This is not a problem that is going away,” says Shukla. “It is actually growing. More work is needed on the research we are doing, but findings such as these are very promising and may lead to future treatments for alcohol-related liver damage.”

The study was recently published in Hepatology International.
MU, Three Rivers College to benefit from sale of trust assets

Sunday, October 12, 2014 | 4:05 p.m. CDT

BY THE ASSOCIATED PRESS

JEFFERSON CITY — MU and Three Rivers College in Poplar Bluff, Missouri will share more than $1.5 million through an agreement in a mismanaged trust case.

Missouri Attorney General Chris Koster announced Friday that the agreement settled a case involving the estate of James Adams. The Piedmont man left more than 750 acres of farm land and a $700,000 maintenance fund in a trust following his death in 2012. Koster said in a news release that the trustees had a fiduciary duty to preserve the trust's value for charity.

But the agreement said the trustees didn't harvest hundreds of acres of hay at the farm, failed to use more than $100,000 in purchased farm equipment and neglected to retain a bookkeeper to manage the farm's finances. They also failed to file tax returns for the trust and commingled personal and trust funds. The trust's largest expenses were for attorney's fees resulting from court battles among the trustees, the release said.

The trust assets were liquidated Sept. 6 during an auction in Piedmont. Seventy-five percent of the proceeds were awarded to the two schools, with the remainder retained by some of Adams' relatives as compensation for relinquishing their rights.

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The Three Rivers Endowment Trust will receive $772,242 for the Three Rivers Activity Center project located on Three Rivers College's campus in Poplar Bluff. MU will receive $772,243 for its College of Human Environmental Sciences.

"James Adams generously intended that his farm — the legacy of his life's work — would eventually serve a charitable purpose," Koster said in a written statement. "This agreement will benefit thousands of Missourians seeking educational enrichment at these institutions, fulfilling Mr. Adams' wishes."

WHAT OTHERS SAY: Sen. Claire McCaskill's college tour gives sexual violence deserved attention

Saturday, October 11, 2014 | 5:16 p.m. CDT; updated 9:32 p.m. CDT, Saturday, October 11, 2014
BY THE KANSAS CITY STAR

NO MU MENTION

Using her national stature to focus on a troubling issue, U.S. Sen. Claire McCaskill is touring Missouri to discuss how college campuses deal with sexual violence.

Problems abound. Many crimes aren’t reported or properly investigated, which means campuses are not as safe as students may think.

McCaskill earlier this year released a report that said colleges and universities often violate federal law by failing to investigate reported assaults. Staff lack training to properly respond to them, the report said.

The Missouri Democrat will meet with representatives of Avila University, the University of Missouri-Kansas City, other area schools and local law enforcement this week.
At earlier stops, McCaskill has talked about her proposed Campus Accountability and Safety Act, which she hopes can pass Congress in 2015.

It's designed to require schools to improve resources for sexual assault victims, boost training for campus staff, enhance cooperation with law enforcement officials, and put teeth in federal penalties for not aggressively investigating and reporting sexual violence.

These are worthwhile goals to better protect students and hold university officials more accountable for providing safer campuses.

Students and their parents would benefit from these outcomes.

COLUMBIA DAILY TRIBUNE
COLUMBIA, MISSOURI

Anti-apartheid figure to speak at MU

Saturday, October 11, 2014 at 12:00 am Comments (1)

Albie Sachs, human rights activist and former judge on the Constitutional Court of South Africa, will give a lecture titled “Confessions of an Activist Judge” on Monday at the University of Missouri School of Journalism.

Sachs was a prominent figure during the anti-apartheid movement, after which he was appointed to South Africa’s highest court by Nelson Mandela.

Sachs’ lecture is scheduled for 7:30 p.m. Monday in Bush Auditorium of Cornell Hall.

Before the lecture, the MU School of Law is hosting a screening of the documentary film “Soft Vengeance,” which tells the story of Sachs’ fight against apartheid. Sachs and the director, Abby Ginzberg, will answer questions after the film. The screening will be at 3:30 p.m. in Room 7 of Hulston Hall.

Both the screening and the lecture are free and open to the public.
COLUMBIA MISSOURIAN

Alpha Gamma Rho thanks community for support

Friday, October 10, 2014 | 10:07 p.m. CDT; updated 10:17 p.m. CDT, Saturday, October 11, 2014
BY JENNA FEAR

COLUMBIA — In the days following the death of Alpha Gamma Rho fraternity member Cale Boedeker on Sept. 29, compassion from the MU community poured in.

Kayden Guymon, president of MU's Alpha Gamma Rho fraternity, said the Office of Greek Life has shown extensive support, including attending a candlelight vigil held for Boedeker on Sept. 30.

"Greek life as a whole really came out and showed support for us," Guymon said.

Guymon said MU fraternities and sororities contacted Alpha Gamma Rho through notes, letters and phone calls in the days following Boedeker's death. Some of the organizations' messages included flowers and cookies.

"All houses reached out to us in different ways," Grayson Cooper, Alpha Gamma Rho public relations chair, said.

Some Greek organizations gave donations to the fraternity's scholarship, newly renamed the Cale Boedeker Unsung Hero award. The MU College of Agriculture, Food and Natural Resources also sent letters, cards and donated to the scholarship fund.

The award, previously the Unsung Hero award, was renamed in Boedeker's honor shortly after his death. According to the fraternity's website, the scholarship will be given to a member of Alpha Gamma Rho who goes the extra mile for the fraternity.

"Often they do not receive honors or acclaim, because like Cale, they do not seek recognition," Cooper said in an emailed statement. "Rather they continuously go above and beyond in fulfilling the role of brotherhood."
The fraternity also plans to honor Boedeker's memory with a sand volleyball tournament in the spring, which will help raise funds for the scholarship. Boedeker was active on the Alpha Gamma Rho recreational sand volleyball team, and he also participated in a sand volleyball tournament hosted by the College of Agriculture, Food and Natural Resources.

In the emailed statement on behalf of the Alpha Gamma Rho fraternity, Cooper thanked the Columbia community, the MU faculty and staff, the Greek community and the College of Agriculture, Food and Natural Resources for their support following Boedeker's death.

"Our brotherhood has been overwhelmed by the heartfelt support," Cooper said in the email.

COLUMBIA MISSOURIAN

Elderberries, education efforts grow out of USDA grants
Sunday, October 12, 2014 | 6:00 a.m. CDT
BY SIDDARTH VODNALA

COLUMBIA — Call it the ultimate elderberry taste test.

**MU researchers will soon be comparing the flavors of six different types of elderberry juice — with names such as Wylde Wood, Ocoee, York and Adam's II — as a way to help elderberry producers make better juice and command higher prices.**

**The elderberry research is one of four Columbia projects awarded USDA grants to research specialty crops.**

Researchers will taste the juice from the different varieties and compare flavors. They will then sort the juices into groups such as "fruity floral" and "musty dusty."
Terry Durham, who cultivates elderberries at his Eridu Farms near Hartsburg, said elderberries have a wide variety of flavors that need to be identified.

"This is an excellent initiative because we're trying to develop selections that grow well and taste well, and this can help us with that," he said.

**Michele Warmund, a professor in the Division of Plant Sciences at MU, said the research will help identify undesirable or "off" flavors in certain varieties.**

The $18,912 awarded to fund elderberry research is distributed among four local projects focused on specialty crops including fruits, vegetables, tree nuts and nursery crops.

Here's a look at the other specialty crop grants:

**Columbia Farmers Market** was given $12,993 to educate kids about agriculture, soil and specialty crops, market manager Corrina Smith said. Activities will include demonstrations by community organizations such as the Columbia Center for Urban Agriculture and Community Montessori School, along with cooking demonstrations.

There will also be an expansion of current educational programs, Smith said. She cited a recent "soil-making" session to teach children how soil forms in nature.

"We want them to be interested in fresh produce and its journey from the seed to the table," Smith said. "We've been wanting to establish these activities for a long time. These funds will finally help get them off the ground."

**Missouri River Communities Network** received $28,638 to better connect specialty crop growers in the Missouri River valley with organizations that sell the crops such as farmers markets.

Information will be gathered from producers between St. Charles and Independence about their growing practices and willingness to collaborate with other producers on
marketing, Steve Johnson, executive director of Missouri River Communities Network, said. There are also plans to produce a local food map for consumers, he said.

MU received an additional $53,128 to study how wineries and wine trails in other states combine marketing and production efforts. Peter Hofherr, assistant director of the McQuinn Center For Entrepreneurial Leadership at MU, said the idea is to determine whether a similar approach could work in Missouri wineries.

Online tool can help farmers manage risk

By Pat Westhoff

Saturday, October 11, 2014 at 12:00 am

Life is full of risks, and we each respond to those risks in our own ways. What role government should play in helping reduce or manage risks is a common question in policy debates.

University of Missouri employees soon will be choosing among health insurance options. Attending an information session reminded me of how complicated risk management choices can be.

Even though there are only three plans, I found myself torn. Should I stick with my current insurance plan or shift to another that would probably reduce my out-of-pocket costs but also make them less predictable? How much do I value my current health care options?

As a number-crunching economist, I could probably build a spreadsheet that would help me weigh the alternatives.

My choices also will be affected by less quantifiable considerations, such as the memory of the time when my family discovered that a major medical expense was not covered by our existing policy.

The new farm bill also creates new risk management options.
Crop producers no longer will get a fixed payment each year but instead must choose, once for the life of the five-year farm bill, between one policy that pays farmers when prices fall below fixed reference prices and another policy that makes payments when per-acre revenue falls below a benchmark tied to recent prices and yields.

Working with colleagues at Texas A&M University, our institute has built an online tool that farmers can use to weigh these and other risk management options.

As in choosing among health insurance options, there will not be a single choice that will be right for everyone.

Our tool can help farmers understand the possible consequences of their choices, but picking the right option is not simply a matter of identifying the option that is likely to result in the largest federal check.

For example, suppose that expected payouts under the price-based and revenue-based policy options are fairly similar.

Producers who own most of the land that they farm might be worried about the possibility of a long-term bear market in farm commodities and might choose the price-based policy that is specifically designed to offset revenue losses because of such low prices.

In contrast, people who pay cash rent for most of the land they farm might be more worried about an unexpected short-term downturn in prices or yields that would leave them without enough income to cover expenses.

If crop prices stay low for several years, rental rates might also come down, so they might sense less need to protect against a long-term decline in crop prices.

The revenue-based option is geared more toward these producers. It makes payments when revenue falls sufficiently below recent averages, but the payments would decline over time if revenue stays low for several years in a row.

We hope our work helps farmers make more informed decisions, but at the end of the day, they will have to make the choice that they decide is right for them, not the one that we might think they should make based on our analysis.

Pat Westhoff is director of the Food and Agricultural Policy Research Institute at the University of Missouri and a professor of agricultural and applied economics.
Mizzou Botanic Garden a beautiful educational space

By Jan Wiese-Fales

Sunday, October 12, 2014 at 12:00 am

Rather than being a campus with a botanic garden in its midst — a familiar model for universities with robust plant-science programs — Mizzou Botanic Garden is a garden with a campus in its midst.

There are no signs at University of Missouri entrances to tell you that you are entering a botanic garden, and no fees are charged to enter and enjoy the plantings. Visitors won’t find a centralized plant information center, nor will they find a garden gift shop. But a brief stroll almost anywhere on the beautiful MU campus will attest to its botanic garden-ness.

This year, while the University celebrated its 175th anniversary, the Mizzou Botanic Garden, a mere teenager, celebrated its 15th birthday.

Former MU Chancellor Barbara Uehling first championed the idea for the botanical makeover in 1981. That spark ignited a slow burn of support and enthusiastic champions such as Kee Groshong, 38-year vice chancellor of administrative services at MU, who fanned private fundraising flames to make it happen. Mizzou Botanic Garden became a reality in 1999 when former MU Chancellor Richard Wallace “signed on the dotted line,” said landscape services and botanic garden director.

Millier said there are three distinct requirements of a garden that has formalized its status as “botanical.”

First, accession records must be maintained for all plantings. This is an archived list of every plant added to the garden showing the order of its addition, an accession number and detailed information about the plant itself.

Plants displayed in the gardens must be labeled with identification markers. Millier described the organization and undertaking this effort as “continuous” and “a lot of work.” The garden utilizes volunteers to help with the endeavor.
“You must also have an educational program, which is the toughest part for us,” Millier said of the third requirement.

“Most botanic gardens are in the business of attracting people to the garden. They use educational efforts to bring visitors in,” Millier said. “But we have 44,000 visitors every day. It makes” personnel at other gardens’ “heads spin. It’s the mother lode to them.”

However, because the gardens are privately funded, calling attention to the fact the campus is not just another pretty place requires raising awareness to gain support, and educational programs definitely can help in that arena.

This year was a banner year for programming as the garden celebrated the university’s milestone anniversary along with its own. Mizzou Botanic Garden hosted television gardening star P. Allen Smith in April for a series of events, including a lecture on Thomas Jefferson as a gardener. And in August, Peter Hatch, the former director of Jefferson’s gardens at Monticello, lectured on his 30 years of work at the historic 2,400-acre property.

Because many of the visitors to Mizzou Botanic Garden are students who traverse the gardens daily on their way to and from classes, working with faculty to engage students with the plantings is one way to raise awareness. Millier referred to a biology capstone class in which students had to monitor the goings-on in Mizzou’s “Secret Garden” as it awakened from dormancy in the spring.

“Those kids are never going to forget they went to school in a botanic garden,” Millier said, adding that a children’s learning garden south of Curtis Hall allows the campus Child Development Lab to work with some of the youngest to be affected by the garden.

The gardens truly do serve as an educational resource for plant-science courses and also on topics such as sustainability through collaborative projects on storm-water management.

Millier said he is open to collaborations to build support and develop more ways for people to connect to the botanical garden, which features seven special plant collections, which he called “little jewels,” and 11 thematic gardens, descriptions of which are available on the Mizzou Botanic Garden’s website, gardens.missouri.edu. There also is a downloadable map of campus showing where each is located.

Also on the website are downloadable maps of Jesse Hall, Lowry Mall and Memorial Union Tree Trails for self-guided tours, as well as information about becoming a garden member and other ways to support the garden’s efforts.

Printed garden maps are available in the Reynolds Alumni Center, just south of Jesse Hall on Turner Ave.

“This is not just an opportunity to see a pretty campus,” Millier said, “but an opportunity to see what works and what doesn’t work in Mid-Missouri gardens.”
MU College of Education to hold panel on race, inequality

Saturday, October 11, 2014 at 12:00 am

The University of Missouri College of Education is hosting a panel discussion on how teachers and communities can teach about race and inequality.

The discussion will be from 6:30 to 8:30 p.m. Thursday at Reynolds Alumni Center. The event is free and open to the public.

Among the panelists are Alex Cuenca, assistant education professor at Saint Louis University; Terrie Epstein, education professor at Hunter College; Omiunota Ukpokodu, education professor at the University of Missouri-Kansas City; and LaGarrett King, assistant education professor at Clemson University.

A round-table discussion will take place after the panel.

6 days of early voting up for Missouri vote

October 11, 2014 9:31 am • By SUMMER BALLENTINE

JEFFERSON CITY, Mo. (AP) — Voters could have an extra six days to cast ballots during the 2016 presidential election if a proposal to change the Missouri Constitution gets enough support on Election Day.

Touted by Republicans as making voting more accessible and faulted by Democrats as not making it accessible enough, proposed Amendment 6 would allow registered voters to cast a ballot for six days ending the
Wednesday before a general election, not including weekends. Unlike the six-week period of absentee voting in Missouri, residents wouldn't need an excuse to vote — in-person or with mail-in ballots — early.

The catch: Local election offices could hold early voting only if the state agrees to pay for the costs, estimated at close to $2 million the first year and at least $100,000 per election in following years. That has some local clerks worried that they might not get enough state funding and be saddled with expenses. To that end, a state appeals court panel ordered a description of the initiative for the Nov. 4 ballot be changed to add the state-dependent funding.

Currently, 33 states and the District of Columbia allow residents to vote early without an excuse, according to the National Conference of State Legislatures. Republican-controlled legislatures in Ohio and Wisconsin have taken recent steps to curtail early voting by limiting the days it is available.

Missouri's GOP-controlled Legislature began pursuing an early-voting amendment this spring in response to a push by Democratic-aligned groups for a six-week period. That proposal, which failed to get enough signatures to make the ballot, also would have allowed voting on Saturdays and Sundays for the final 21 days before federal or state elections.

Rep. Tony Dugger, a Hartville Republican who sponsored the ballot proposal up for a vote, said if Missourians vote too early, they could miss important information about candidates that sometimes only comes to light closer to the election.

"Six weeks out is a long time to start thinking about voting," Dugger said. "People don't have their minds made up at that point."

Democrats and the American Civil Liberties Union of Missouri have called Amendment 6 a "sham," pointing to its prohibition of early voting on weekends.

More time to vote and greater accessibility typically is considered an advantage for Democrats, who are believed to get greater support from low-income residents who struggle to get time off work or have transportation challenges, ACLU of Missouri Executive Director Jeffrey Mittman said.

But research on the impact of early voting on turnout is mixed. The Early Voting Information Center at Reed College found early voting generally increases voter turnout by 2 to 4 percent, but professors at the University of Wisconsin-Madison reported the opposite, saying it sometimes decreases voter turnout and aides Republicans.

Richard Reuben, a law professor and voting rights expert at the University of Missouri-Columbia, said the initiative wouldn't give voters much more flexibility than what they already have with absentee voting.
"It seems to promise a lot," Reuben said, "but in fact it doesn't really promote anything that for practical proposes isn't there already."

Christian County Clerk Kay Brown said voters should consider that it's "nearly impossible" to change the state constitution once it's amended.

"Right now, it might be appropriate," said Brown, who also is president of the Missouri Association of County Clerks and Election Authorities, "but in 20 years, will that still be something we want to do?"