MU receives $7.6 million for botanical research center

By Michelle Markelz
October 7, 2010 | 6:25 p.m. CDT

COLUMBIA - MU has been chosen as one of five universities in the country to create a botanical research center and received $7.6 million from the National Institutes of Health to do it.

The grant will help a team of MU scientists study the effects of five herbal medicines in animals with the hope that human clinical trials will follow. Flinstones vitamins and flaxseed oil, beeswax and barley — dietary supplements such as these bring in $27 billion each year, according to the Nutrition Business Journal.

The five supplements being studied are:

- Garlic
- Soy
- Elderberry
- Picrorhiza
- Sutherlandia

Dennis Lubahn, a biochemistry and child health professor at MU, is leading the study and is director of the botanical research center, according to a press release. Lubahn said the research is important to legitimize the benefits of supplements people take every day and find new uses for them.

“Eighty percent of the world uses herbal medicine as a primary form of medicine,” Lubahn said. “When it’s not possible to do anything about some disease, people turn to alternatives.”

This is where the supplements come in, Lubahn said.
Many products have not been tested to prove their effectiveness, he said. Unfounded health claims might be made about supplements but are not approved by the Food and Drug Administration. Claims that are true are often too vague, offering only to "promote health," he said.

"It'd be nice to provide some evidence that one dietary supplement might work better than the others," Lubahn said. "So, this (research) would provide evidence for that." Lubahn said Americans are particularly interested in this evidence.

"In America, the mindset is, unless you can tell them how it works, it can't be working," he said.

**Show Me the Science**

The grant will cover research over five MU divisions: the College of Agriculture, Food, and Natural Resources, which will be growing some of the plants used for supplements; the College of Veterinary Medicine, which will provide animals for experiments; the College of Engineering; the College of Arts and Sciences; and the MU School of Medicine.

Lubahn's research will examine the "pathways," or chains of communication, between molecules. When one molecule tells another to do something, the message is passed along. Lubahn explained that if one molecule "yells too loudly," the next molecule is upset and yells to the next molecule, with the end result being a disturbance that causes cancer or another disease.

"What we'd like to do is put a wall between (the molecules) or block it or go around it," Lubahn said.

The process is not that simple in reality. What is more challenging is the hypothesis that scientists need to address two to three pathways at a time to target cancer, which is the latest estimate by the American Association of Cancer Research, according to Lubahn.

Different versions of the same plant can have different potencies and levels of medicinal effectiveness, Lubahn said in a press release, making it beneficial for the center to be able to grow its own plants on site and monitor their characteristics.
"We can grow anything we want, and we can make it do anything we want, practically," Lubahn said.

**Supplementing Columbia**

Lubahn said he expects that the annual $1 million from the grant will extend its benefits beyond the university. He predicted economic improvement in the form of new businesses and increased revenue for Columbia.

Lubahn also said $100,000 will be set aside each year for pilot grants that will be awarded to encourage others to conduct research on medicinal plants and botanicals.

These grant-funded projects could place Missouri in very high national standing among plant researchers, he said. "We could out-compete the east and west coast boys and girls when they're doing research on plants," he said. "The Harvard and Stanford boys and girls don't have farms associated with them."

Chancellor Brady Deaton said he hopes the addition of the botanical research center will make MU a "destination university" for prospective students.

"You can learn the most, and you can do it in the most interesting learning environment," Deaton said.

Robert Churchill, dean of the MU School of Medicine, said that over the 160-year history of the medical school, no single year has ever yielded so much grant money.

"This month alone, we've has received $13 million dollars from a combination of National Institutes of Health grants," he said.
MU wins millions for medicinal plant research

By Janese Silvey

Thursday, October 7, 2010

The University of Missouri has been awarded a $7.6 million grant to establish a botanical research center.

The money, which comes from the National Institutes of Health, will allow a team of researchers to study the properties of plants and herbs to ultimately determine whether dietary supplements are effective.

Specifically, medical, veterinary and agricultural researchers will determine whether several plants — including elderberries, soy and garlic — can prevent or treat prostate cancer, strokes or immune disorders.

Although dietary supplement companies, which often tout the benefits of herbal properties, make up a $25 billion industry in the United States, there’s little research to back up their health claims. That’s because, until about a decade ago, Americans considered herbal medication old-fashioned despite the fact plants are found in most medications, said Dennis Lubahn, principal investigator and center director.

“Our ancestors weren’t dumb. They knew that bush over there would do something for a headache,” he said.

What remains unknown, however, is what within a plant possesses that healing quality and how it works, Lubahn added. “Our research could provide evidence that supports” dietary supplements “are doing something.”

The new Center for Botanical Interaction Studies is one of five being created around the country to research botanical medicines.

At MU, the work will be spread across campus and involve 20 scientists, including Grace Sun, a professor of biochemistry, pathology and anatomical sciences who will study how certain plants might prevent or treat strokes. That work will piggyback research she has already completed showing evidence that grapes can thwart the effects of a stroke.
Because the potency of wild plants varies, the MU research team is cultivating 600 types of soybean seeds to study different concentrations of the plant's compounds and looking at 60 types of elderberries.

In addition to health benefits, research results could lead to economic benefits for Missouri. Elderberries are a fast-growing niche crop common in the state.

During a grant announcement this morning, Chancellor Brady Deaton said the project reflects the interdisciplinary work going on across campus.

Referring to one of the university’s Mizzou Advantage initiatives, Deaton said: “One Health One Medicine could not be reflected any more clearly than in this grant.”

The award also will provide some funds to promote additional research at MU. Plant researchers will be able to apply for $100,000 a year to conduct other preliminary studies of plants and herbs.

Reach Janese Silvey at 573-815-1705 or e-mail jsilvey@columbiatribune.com.
UM may have raises on tap for workers

Projections for 2012 add bump.

By Janese Silvey

Thursday, October 7, 2010

University of Missouri employees just might see their paychecks go up next year.

It sounds optimistic amid reports that the state and university are facing significant budget cuts in fiscal year 2012, but university administrators continue to say they’re committed to finding ways to increase salaries.

Tim Rooney, MU’s budget director, said Chancellor Brady Deaton and President Gary Forsee are “very committed to doing this. ... It’s No. 1 on the list.”

UM System spokeswoman Jennifer Hollingshead this morning confirmed that commitment, saying: “Salary increases are a strategic priority for the university.”

Rooney is preparing 2012 budget scenarios that increase the salary pool by 2 percent, he said during a semiannual general faculty meeting yesterday afternoon. That 2 percent is tacked on to the entire salary budget then doled out to employees based on merit — in other words, employees shouldn’t expect an automatic 2 percent raise.

With associated benefits that come with salary increases, that boost would cost MU about $6.5 million, Rooney told the Tribune afterward.

Next year’s budget is in an infant stage: It will be months before the university knows how much to expect in state funding. Rooney is predicting anywhere from a 5 percent slice in state funding to a deeper cut of 15 percent. That means MU could lose between $10 million and $31 million in state funding.

Tuition increases might offset some of that loss, but it’s also too early to plug those numbers in a budget. The UM System can increase in-state tuition by the consumer price index — expected to be no more than 1.5 percent by the end of the year — without special permission.

But if administrators want to boost tuition higher, they’ll need interim Missouri Higher Education Commissioner David Russell to give permission or else face a fine equal to 5 percent of the UM System’s state allocation.
Tuition increases likely won’t cover all of the state cuts and salary increases, so Rooney said giving pay raises would require budget reductions elsewhere on campus.

"On one hand we need to do something" with pay, he said. "It’s just been too long, and we’re getting further and further behind. On the other hand, there are costs associated with it, which means bigger budget reductions somewhere else."

Leona Rubin, chairwoman of the MU Faculty Council, said she’s worried about those potential cuts.

"Unfortunately, salary increases are “going to mean cuts from other places in order to do that,” she said. "And no one will be happy if it involves releasing people to do it.”

University salaries have been frozen since 2008. The system’s Board of Curators has set aside funding both years for pay increases in certain circumstances, however. Professors advancing from assistant to associate or associate to full, for instance, received raises that come with those promotions. In a handful of cases, pay raises have gone to help retain professors who were offered positions elsewhere.

Reach Janese Silvey at 573-815-1705 or e-mail jsilvey@columbiatribune.com.
COLUMBIA MISSOURIAN

Missouri Technology Expo highlighted local technologies and research

By Waqas Naeem
October 7, 2010 | 9:45 p.m. CDT

COLUMBIA – Science and business came together under one roof Thursday at the Missouri Technology Expo 2010.

The Expo, held at MU's Christopher S. Bond Life Sciences Center, attracted a crowd of nearly 300 scientists, researchers, entrepreneurs and investors. Ninety-six organizations registered for the event, the first of its kind in Missouri, with 28 groups setting up booths, according to organizer Bandhana Katoch.

The Expo was intended to both create awareness about research being done at Missouri universities and to bring academia and industry together. Chris Fender, director of the MU Office of Technology Management and Industry Relations, said the Expo was supposed to inspire investment in local technologies.

"Primarily we wanted to showcase innovations and technological developments that are being done in Missouri," Fender said. "Our aim was to create an interaction between researchers, business people and intellectual property experts."

Commercializing technology

Monsanto Corp. Vice President Stephen Padgette focused on the commercialization of technology in his keynote address. Using agricultural biotechnology as an example, he said all the major companies in that market are supplementing their scientific developments with commercial strategies.
Padgette said 340 million acres of agricultural land worldwide are being cultivated using biotechnology.

The growing need for technology to meet market demands underscores the role of university based research, he said.

According to Monsanto research presented by Padgette, MU is one of the top 16 schools for plant sciences in the world. Padgette said Monsanto would continue collaborating with the university in the future.

"Currently, Dr. Robert Sharp is doing a study on crop drought," Padgette said, hinting at future collaborations. "Water control is a very important issue, so we are really interested in this research."

Six companies that were founded on technologies developed at Missouri universities gave short presentations explaining their work. Some of these start-up companies are run by MU faculty members who bought the licenses to patents on MU research.

In one of four plenary sessions held during the day, patent attorney Dennis Bennett told budding inventors to pay special attention to the commercial aspects of their inventions.

"What is commercially viable? How are you going to make money?" Bennett said. "This is what licensees are interested in."

**Building networks**

During lunch, MU Provost Brian Foster gave a presentation on behalf of Mizzou Advantage about the multimillion dollar grants that could result from creating a structurally sound research network at MU.

"We can be a unique asset to firms that would like to build on the technologies that are being developed here," Foster said.

The Mizzou Advantage program has highlighted five initiatives to develop this network: food, medicine, future media, sustainable energy and management of new technologies.
Wade Foster of Idea Works was promoting a text analytics tool called Veycr that could analyze large digital text files to determine the feelings, sentiments and opinions expressed within. Foster said he believed the Expo would provide his company with networking opportunities.

"There are so many emerging technologies in Missouri," Foster said. "We might just meet some like-minded people. Ideally, we can even find a passionate buyer."

Mohammad Rahmau, financial officer of Green Technologies, a start-up research and consultancy company in Kansas City, said his business is excited about its exposure to a new market in Columbia. He said the company hoped investors at the Expo would find its use of emerging technologies to promote business efficiency interesting.

**Emphasis on entrepreneurship**

The Expo emphasized the development of entrepreneurial skills among researchers and local scientists. Greg Scheller, entrepreneur and co-director of the MU Biodesign and Innovation Program, asked young researchers to join existing start-ups in another plenary session.

"To the young people in the room, now's the time," Scheller said. "You've got nothing to lose."

Scheller said becoming a successful entrepreneur was not an easy task.

"You have to go in there with your eyes wide open," he said. "You are gonna have to work hard if you want to succeed."

Nineteen-year-old Jimmy Winkelmann, who founded The South Butt, a T-shirt company, told the audience at another plenary session to be aware that ordinary ideas could lead to extraordinary success.

"You never really know what the next big thing is going to be," he said.

**Marketing the research**

The Expo also featured three one-hour elevator pitch presentation sessions on engineering, life science and biomedical science research. Each researcher was given
four to five minutes to present his or her work and an additional two minutes to respond
to questions. Topics varied from absorbed natural gas storage devices to nanoparticle
microbe cleaners and crop nitrogen improvement techniques.

A panel of three judges chose a winner from each category. The winners were awarded
$500 each. The winners were:

- **Engineering** – Venumadhav Korampally for his research on organosilicate
  nanoparticles and their application in various fields such as electronics
  manufacturing and textile production.
- **Life Sciences** – Severin Stevenson for his collagen-based invention, Dermelle,
  that promotes tissue regeneration and reduces signs of aging.
- **Biomedical** – Luis Jimenez for his creation of a better workflow for categorizing
  plant seed proteins.

**Opportunities and public response**

Keshab Gangopadhyay, president of NANOS Technologies and NEMS/MEMS Works,
said he was looking forward to the opportunities the Expo might bring for researchers.

“It is encouraging and very good for the city,” he said. “I’m very hopeful that an
opportunity will be there for at least one or two products to be taken up by the investors.
Hopefully, the Expo will create jobs for the state.”

Danielle Lee of Science and Citizens for Purpose and Exploration said the Expo helped
her organization communicate with MU and potential business partners. Her group
links Missouri communities to science and technology resources through scholarships
and educational and work opportunities at universities and businesses.

Representatives at the Mizzou Advantage booth were also satisfied with the response.
Administrative assistant LeAnne Stewart said they used the Expo to spread awareness
about their program.

“(The) public has been really excited about it,” Stewart said. “We were able to reach out
to people, especially those who had heard about Mizzou Advantage but didn’t know
what it was.”
New Canine Cancer Drug Could Save Lives

Posted by Ryan O'Meara on October 8, 2010 in Dog News | 0 Comment

A cancer drug that benefits people may soon benefit man’s best friend.

Kim Selting, assistant teaching professor of oncology at the MU College of Veterinary Medicine, is the principal investigator in a study that examines the efficacy of Attaxol™ in dogs with naturally occurring cancer. Attaxol™ was developed, and is produced, by CritiTech, a Lawrence, Kan. drug development company.

Kim Selting, assistant teaching professor of oncology at the MU College of Veterinary Medicine.

"Cancer is one of the most common causes of death in dogs," Selting said. "This study is important because most chemotherapy drugs available to people can be used in dogs, except for the highly successful taxanes that can keep cancer from proliferating throughout the body. The Attaxol™ formulation is built specifically for dogs and could allow taxanes to be used by veterinarians."

MU veterinarians will conduct the clinical part of the study and assess cancer response in the dogs involved in the study. Data from an earlier safety study was used to establish a starting dose, and this second study will consist of an escalation phase to determine the optimal dose, followed by an extended treatment. CritiTech scientists will analyze blood samples to determine plasma levels of the drug during the course of treatment. Enrollment of dogs in the study is set to start in mid October, and it is anticipated that the study will take about two years to complete.

The Scott Endowed Program in Veterinary Oncology at MU is one of the largest veterinary oncology programs in the country and actively initiates and participates in clinical trials, as well as provides routine treatment of animals with cancer, including chemotherapy, cancer surgery and radiation therapy.

"We are excited about our continued collaboration with the University of Missouri College of Veterinary Medicine and the commercial opportunity to use CritiTech's line-particle drug technology in the veterinary field," said Sam Campbell, CritiTech president and chairman.
The Morris Animal Foundation provided funding for the study with a two-year grant. Also participating in the study are Carolyn Henry, professor of veterinary oncology and director of the Scott Endowed Program; Sandra Axiak, assistant professor in veterinary medicine and surgery, and Charles Decedue, senior research fellow at CritiTech.
The diversity class students still wait for

The push for a diversity general education class requirement started six years ago.

By Zachary Murdock

Published Oct. 8, 2010

This is the first installment in a series about the diversity general education requirement. The next two parts will be published consecutively.

It's been at least four semesters since Cha'Toyya Sewell began advocating for a diversity general education class requirement. This December, Sewell will graduate and, like many of her predecessors and peers, will never see it become reality.

In her time at MU, the former Foul' Front co-chairwoman worked side-by-side with the Chancellor's Diversity Initiative, the Office of the Provost and Chancellor Brady Deaton to discuss the proposition of a requirement.

"It's always been that it's going to happen soon," Sewell said. "But it hasn't happened yet."

Ten years ago, with 3,391 minority students enrolled and 1,500 minority faculty on staff, MU administration decided diversity on campus was important enough to study. The university implemented the Campus Climate Study, which was designed to gauge campus perceptions about acceptance for underrepresented groups on campus. The study resulted in more than 100 recommendations, one of which was for a general education class requirement focused on diversity issues.

It was endorsed by several minority student organizations and recommended by a task force chaired by Roger Worthington, a former faculty fellow and current chief diversity officer.

After much research, debate and a racially charged incident on campus, the proposed requirement still sits in a Faculty Council committee, waiting for committee approval. That approval would send it to Faculty Council, who would discuss it and disseminate the proposal to all campus faculty. Finally, a faculty forum would be necessary to make it official.

"There are complications to get it done quickly," Sewell said. "But it shouldn't have taken this long."
MU looks at diversity

Over the past decade, MU has taken steps forward to address diversity issues on campus, including student enrollment, minority retention rates and the amount of minority faculty and administrators. Since 1999, students, faculty and administrators have worked together to identify the most important areas surrounding MU diversity and to create a framework for action.

In 1981, a federal mandate required MU to increase African-American enrollment to equal the proportion of black Missouri residents, according to a report from the Campus Climate and Training Task Force. At that time, that would mean an increase from 3.3 percent to 10.9 percent. MU has never met that goal.

In 1994, the report said, nearly 100 students from the Legion of Black Collegians, the Hispanic-American Leadership Organization, From the Four Directions, the Asian Students in America, the Women's Center and the Triangle Coalition held a protest designed to highlight diversity issues on campus and present university administrators with demands.

But it wasn't until the fall of 2001 that MU began the Campus Climate Study, a five-phase, multi-faceted attempt to identify attitudes about diversity on campus from non-academic student services, students and faculty. The first four phases of the study were conducted from 2001 to 2002 and gathered data surrounding perceptions of and quality of services for underrepresented groups on campus, as well as types of harassment experienced by members of the MU community.

In March 2004, an MU Campus Climate Research Team composed of faculty and administrators presented the findings of phases two through four at a meeting between the chancellor and Provost's offices.

A model that went nowhere

Separate from the study, former Four Front co-chairwoman Jackie Cook-Eberle, now Jackie Gold, approached Worthington, the head of the Multicultural Center, and other faculty about researching potential options for a diversity course requirement.

Multicultural Center Assistant Director Pablo Mendoza helped Cook-Eberle and a team of students research diversity course requirements around the nation, he said. They studied the American Studies course requirement at University of California-Berkeley and the Intergroup Relations (IGR) program at the University of Michigan, among others.

By showing a DVD from the University of Michigan, Cook-Eberle spurred faculty and the Multicultural Research Center at the College of Education to have one of the graduate students develop a program modeled after IGR, Mendoza said.

"Subsequent to that, there have been on-again and off-again efforts to do an IGR-type program here at MU through the College of Education," he said.
But the IGR program has never been adopted at MU. The program would require all students to take a diversity course as part of general education, adding to the number of hours required for a degree. Worthington said a similar program had been proposed before the College of Education model.

"It was already a model that had been rejected in the past," Worthington said. "It was just clear that it wasn't a viable approach for MU."

A difficult situation

In 2005, the Campus Climate Study completed its fifth and final phase, which involved the study of 13 focus groups and six individual interviews to reach beyond quantifying the phenomena in question and to develop a broader interpretation of the findings of the earlier phases, according to the Campus Climate Study Phase 5 report.

The report lists more than 100 recommendations and represents a variety of concrete proposals as well as strategic ideas. The task force report, though, admits some recommendations might take time.

"In realistic terms, the responses to these recommendations can be swift for some and gradual for others," the report stated.

Immediately, some recommendations did become reality, including the creation of the Chancellor's Diversity Initiative, a mandate requiring every department to write diversity mission statements and Worthington's appointment as chief diversity officer.

Although the diversity general education requirement quickly gained traction with some minority student groups, it spent two years in limbo, caught in debates of where and how to include it, before Faculty Council picked it up as part of a review of the general education architecture.

Deputy Chancellor Mike Middleton explained that though proposals existed, it took a collection of efforts and circumstances to put the issue to a Faculty Council review.

"I think proposals were advanced to do that," Middleton said. "It's sort of the stars aligning and several situations coming together that allowed this proposal to get formally before the faculty committees."

Although timelines have consistently been extended throughout the development of the requirement, Middleton said the Faculty Council decision is an important step forward for the university.

"My inclination would be to say that this needs to be resolved within the next six months or the administration will impose its view on the campus," Middleton said. "But the administration does not impose its view on the campus. That's inconsistent with the way we govern the university. So being unable to say that, and unwilling to say that, if the timeline is not met, I think by definition it has to be extended. It's a difficult situation."
Faculty from programs deemed 'low-producing' speak up

The 75 programs must submit written appeals to the Department of Higher Education by Oct. 21.

By Stephanie Ebbs

Published Oct. 8, 2010

In its meeting this week, Faculty Council discussed the results of a list published by the Coordinating Board for Higher Education which contained 75 degree programs at MU deemed "low-producing."

The board defines a "low-producing" program as one with less than 10 graduates from a bachelor's degree program, less than five graduates from a master's program and less than three from the PhD program.

Faculty Council Chairwoman Leona Rubin said every four-year university in Missouri received a list of "low-producing" programs and that the goal of this is to make higher education in Missouri more efficient and cost-effective.

"Ten percent of university funding comes from the state," said Victoria Johnson, MU American Association of University Professors vice president. "(MU) generates the other 90 percent."

As a result of the list's release, defenses must be written for each department explaining why it produces so few graduates and submitted to the Department of Higher Education, Rubin said. After these justifications are written and presented, Faculty Council will also review whether changes are necessary in each of these programs. Members of the council are still concerned about the rights of faculty in these departments.

"Sometimes faculty go out of their way to do something good, either from a teaching perspective or research, and we end up getting punished for it," Department of Mathematics professor Stephen Montgomery-Smith said.

Several members of departments targeted in the list have expressed disapproval of the proposed process. Nicole Monnier, a professor in the Department of Romance Languages and Literatures, said writing the justification requires assembling a lot of data and that the deadline of Oct. 21 is "offensive" and unreasonable.
"Things have stopped in my department over the past three days because we have to gather this information," Monnier said.

Rubin said the move to cut departments and programs isn’t meant to remove faculty positions.

"This isn’t about faculty lines or staff lines or anything else," Rubin said. "It’s about reevaluating programs."

The single criteria in determining which departments made the list was another cause of concern.

"The list they’ve given us is just not a good place to start," Montgomery-Smith said. "The criterion just don’t make any sense at all."

Using only the number of graduates from each program does not take into account the total number of students enrolled or the number of faculty that department has, both of which have direct influence of the number of graduates from that program.

Another significant point of discussion was the recent UM system Board of Curators meeting, held in Springfield at the Discovery Center. At this meeting, student and faculty representatives were invited and able to converse with the curators in a more informal setting.

Betsy Rodriguez, UM system vice president for human resources, spoke to the board about faculty benefits. The benefits program is under review, as the UM system is hoping to make it more cost-effective. Most faculty members indicated in a survey they would like an increase in salary.

"If we’re ever going to come up with an increase in salary, we’re going have to come up with the money someplace else," Rubin said.

Rubin said the review hasn’t made progress since Rodriguez spoke to Faculty Council on Sept. 16 and the presentation was mostly informational.

Both of the main issues discussed at this week’s meeting will continue to appear on the agenda.
Editorial: Deadline for departments facing cuts unreasonable

Published Oct. 8, 2010

On Monday the Coordinating Board for the Department of Higher Education published a list of MU departments that, according to its requirements, should be under consideration for elimination.

The department decided it would like written defenses for the existence and functioning levels of the departments by Oct. 21. Professors and graduate students in these departments are juggling a lot already but now have to drop everything and pile on the clerical work of justifications with the veiled threat of being fired under them.

It's been stated that neither the Department of Higher Education nor the university has any intention of firing these faculty members. So is this just to stress the hell out of them? Saying you have no intent to fire these professors doesn't exactly mask the part where your actions directly result in the loss of their job. The whole purpose of this departmental examination and fat-trimming is fiscal efficiency, and it seems to us that the Department of Higher Education is going about it rather cavalier.

Our suggestion to the university is to consider the option of bringing in outside staff or offering incentives to graduate students for putting in overtime while working on these "defense packets" on which their department, and likely their job, depends. Although it seems a little ironic for a financially struggling department to outsource for help, disrupting your current work and then reaping no benefits later is a waste of time. No matter how much work a department puts into its proposal now, it still stands the chance of being eliminated in the end.

Maybe we should just have the faculty members list-fight for the preservation of their departments. A free-for-all cage match mixed with a competition in feats of strength, a la "American Gladiators" circa 1989. The current situation isn't much more reasonable.