MU faculty vote down diversity requirement

By Janese Silvey

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A proposal to require future University of Missouri students to take at least one diversity-intensive course during their college careers narrowly failed in a faculty election this week. A total of 232 faculty members voted against the requirement, while 210 voted for it. Ballots were sent to 1,200 faculty members.

MU’s Faculty Council has been discussing a diversity requirement for years as part of a review of general education requirements, and the council gave the plan its stamp of approval in March. Under the proposal, students would not have had to take three additional credit hours; rather, they could have used existing courses to double as diversity-intensive classes.

MU Faculty Council Chairwoman Leona Rubin blamed the defeat on miscommunication.

“Faculty Council did not do a good enough job of selling it,” she said. “Clearly, we did not dot our Is and cross our Ts well enough or effectively communicate it to faculty at large.”

In a statement, Chancellor Brady Deaton said he was disappointed. “It is not clear why the initiative to add a diversity intensive course requirement to our curriculum was defeated,” he said. “I suspect that it was due to a misunderstanding and/or that faculty members felt they did not have sufficient information concerning processes involved with classifying courses as ‘diversity intensive.’”

The devil could have been in the details. Originally, Faculty Council prepared a list of some 150 sample courses that likely would have fit the “DI” bill. Even though it was just a sampling, the list confused some professors.

Furthermore, the council did not have a concrete plan in place to approve classes to fulfill the “DI” requirement. The idea was to establish a committee to review courses to double as DI credits, but details beyond that hadn’t been hashed out.

“Faculty are very particular about processes,” Rubin said. “And that’s in the students’ best interest.”
Rubin was drafting an email to send to students yesterday afternoon explaining the vote. Above all, she said, she hopes they don't take away any sort of message that faculty members at MU don't value diversity. "Faculty absolutely cares about it," she said.

The vote comes on the heels of two racially charged incidents on campus. In February, during Black History Month, a freshman allegedly painted a racial slur on a campus statue, and last February, two students pleaded guilty to lining cotton balls outside of the Gaines/Oldham Black Culture Center.

Although Rubin said the class was being considered before those incidents and was a separate issue, she's concerned about the timing. "We're worried about the perception of the university," she said. "It would be inaccurate and unfair to think that's who we are, because we are not."

Earlier this semester, students, administrators and employees launched a "One Mizzou" campaign to show support for diversity on campus. "This theme symbolizes the core values of our university, — respect, responsibility, discovery and excellence — nurtures diversity and celebrates our unity as an international family," Deaton said.

Rubin plans to bring the issue back to faculty members next school year but first will informally survey faculty members about their specific concerns.

Deaton said he, too, wants to see the requirement proposal come back.

"The University of Missouri remains committed to assuring that MU's students are given the opportunity to observe and critically analyze the diverse human experience within a climate of respect, inclusiveness and civility, thus preparing them to competently function in a diverse and global society," he said. "The incorporation of a diversity intensive course requirement into our curriculum is critical to obtaining this objective."
COLUMBIA MISSOURIAN

MU general faculty rejects diversity course proposal

By Bridget Kapp
May 13, 2011 | 7:33 p.m. CDT

COLUMBIA — A proposal for a required diversity intensive course at MU hit a bump in its road to approval.

This week, MU general faculty turned down the proposal for the requirement by a slim margin of 232 to 210 votes. Twenty-three faculty members abstained, and votes were submitted by mail.

The proposal would have added one three credit-hour course as a diversity requirement to the general education curriculum. The course would have had two main objectives:

- Understanding differing social groups.
- Exploring social inequities broadly defined to include class, race, age, ethnicities, disabilities, genders, veterans, rural and urban communities, economic and/or resource disparities, indigenous cultures, etc.

The faculty council approved the proposal in March, but it had to gain approval from the general faculty to proceed.

Faculty Council Chair Leona Rubin said she knew some of the faculty had concerns about the issue, either because they wanted more specific details on approving diversity-intensive courses or because they already had diversity courses built into their curricula.

"I do think it was a rejection of the proposal, not the creation of a diversity course," Rubin said. "We just have to do a better job with the proposal and get some of the details in there — actually describe how the approval process will work."
MU chemistry professor John Adams agreed. Adams is the former chair of the university's General Education Task Force, which made the original recommendation to the council.

"I would hope that no one necessarily takes it as opposition to the notion of some sort of diversity or multicultural requirement simply because people were opposed to the mechanism for implementing that," Adams said.

MU Chancellor Brady Deaton made a statement Friday saying he suspected teachers did not have enough specific information to approve the proposal. Despite the rejection, Deaton said in the prepared statement that a diversity course requirement is critical to giving students the opportunity to "observe and critically analyze the diverse human experience within a climate of respect."

"I was disappointed to learn that the faculty narrowly defeated the addition of a diversity intensive course requirement," Deaton said in the statement. "However, I remain certain our faculty are as committed as I to supporting diversity on our campus."

John Petrocik, professor and chair of MU's political science department, said he was surprised the measure failed, despite some of his colleagues' thoughts that it was a very open-ended commitment.

"I did think it would pass, despite the concerns that were expressed," Petrocik said.

Rubin says the council now needs to "go back to the drawing board" to make revisions to the requirement.

Although not all of the council members will be able to attend meetings in June and July, Rubin said she expects the process to keep moving during the summer. She said she hopes to have a new proposal approved by faculty by the end of the fall 2011 semester.

"I think it's a matter of crafting all of the details and trying to identify the real holdup for the faculty, and see if we can fix it in a way that doesn't compromise the educational opportunities," Rubin said.
Financial aid lags behind rising college costs

BY TIM BARKER • tbarker@post-dispatch.com > 314-340-8350 | Posted: Monday, May 16, 2011 12:25 am

With high school graduation less than a month away, Angelina Eutimio is still looking for $7,000.

That's how much money the 18-year-old from Dittmer needs to fill the gap between her financial aid and the cost of a year at the University of Missouri-Columbia.

Eutimio plans to pursue a degree in education, with the eventual goal of becoming a high school principal. Maybe even a superintendent. She's hoping to find a few more scholarships to help her get there. But in the end, she figures there's a lot of borrowing in her future.

"Everyone worries about taking out loans," Eutimio said. "I know it's going to be hard to pay it all back, but I'll make it work."

Such is life for students faced with today's higher education dynamic: The price of school rises every year; financial aid doesn't keep pace.

To get a sense of how this plays out on college campuses, the Post-Dispatch examined several universities in the bistate region to see how students with the highest level of need are being affected.

The paper looked at the gap between financial aid and the cost of schooling for a freshman. Aid included all need-based grants and a part-time work-study job. The costs included tuition, books, housing, food, transportation and miscellaneous expenses. At most of the schools, that gap grew considerably over the last five years.

Consider the case of a freshman entering Mizzou in 2006 who qualified for the maximum level of grant and work-study aid. That student would have needed to come up with another $7,270 through loans, scholarships or a second job. For a freshman headed toward Mizzou this fall, that gap has grown to an estimated $12,724.

Among others, the gap at the University of Missouri-St. Louis has grown to $15,388, up from $13,232. And at Southern Illinois University Edwardsville, it has grown to $6,019, up from $2,361.

It's a troubling trend in the eyes of college finance experts, who fear the cost of a degree may already be too high for some students. And there's no reason to think the trend will reverse itself.
Even now, the government is talking about cutting Pell Grants — a key funding tool for low-income students. And most states are slashing higher education spending as they grapple with budget woes. Missouri, for example, is planning to cut more than 5 percent from its higher education budget next year.

"The trend is going to get worse," said Mark Kantrowitz, financial aid expert and publisher of FinAid.org. "The gap this year is going to be growing faster than ever before."

The cuts have been even more severe for schools like the Missouri University of Science and Technology in Rolla, where enrollment has been boosted in recent years because of a pair of federal aid programs aimed at attracting low-income students to math and science fields. Both programs were cut during recent federal belt-tightening, meaning a loss of nearly $10,000 for the neediest students pursuing degrees such as engineering.

Kantrowitz and others worry about the impact such cuts will have on students from families lacking substantial resources.

They see more students like Melisa Betts, 23, of St. Louis, who will graduate from Mizzou in December with a degree in architectural studies. She has no complaints about her choice of schools, but it's not really where she wanted to go.

"My first choice was actually Texas, but that would have been way more expensive," Betts said.

Rising costs are forcing students like Betts to alter their thinking and goals. Some will be forced to shift to second and third choices. Some may end up at two-year schools or skip college altogether.

"There are more students who will end up at two-year institutions, not because it's the best fit for them, but because it's all they can afford," said Faith Sandler, executive director of the Scholarship Foundation of St. Louis.

It's a marked change from the 1990s, when students could count on federal and state aid to offset a higher percentage of college costs. That was a time when low-income students could make it through college largely on the strength of a Pell Grant and state aid, said Terri Harfst, interim director of financial aid at Southern Illinois University Carbondale.

The college is one of the few in the region that has actually been able to narrow the gap between financial aid and the cost of college from 2006 to 2011. They have done it through institutional aid — or tuition discounting for the neediest students.

Still, the impact of rising costs are felt throughout the student body. As costs have risen, so, too, has the amount of money that families with moderate incomes are expected to contribute to their kids' schooling. A family with an income of $40,000 to $60,000, for example, might be asked to pitch in $6,000 a year.

"Most people are in the position where they don't have that kind of liquidity," Harfst said.
And that, invariably, means loans.

Jessica Cox, 27, isn't exactly a traditional college student. With a 4-year-old daughter and a history that includes an unproductive stay at a local for-profit college, Cox has been forced to borrow heavily to stay on track as she graduated this month from UMSL with a degree in criminology.

The ink has yet to dry on her diploma — and already she's thinking about the prospects of repaying the $60,000 to $70,000 worth of loans she'll take with her.

"Oh, yeah. It troubles me," Cox said. "That's like half a house."

A report last year by the Project on Student Debt showed that 2009 graduates carried an average of $24,000 in debt, the highest level ever. Three years earlier, the same group estimated student debt at just over $21,000.

Even as students face the prospect of rising costs, schools are doing what they can to offset the financial hardships brought on by tough economic times.

Washington University and the University of Illinois at Urbana-Champaign are among some 60 schools nationally that have made pledges to reduce student debt with substantial institutional aid offerings to needy students.

St. Louis University has increased its institutional aid budget from $51 million to $77 million over the last five years, providing as much as $22,400 in need-based aid through its SLU Grant. The university has also established an emergency scholarship fund and an internal student loan program to help current students who find themselves with unexpected financial troubles — a parent's job loss, for example.

"For students to afford a SLU education, the institution has to be willing to support that," said Cari Wickliffe, director of student financial services.

There has been a similar push at Mizzou in recent years, with the school's financial aid budget increasing from $31.7 million in 2006 to an estimated $43.2 million next year. That fund includes some $2.7 million set aside from the recently approved tuition increase to help students with financial needs, said Jim Brooks, director of student financial aid at the University of Missouri-Columbia.

Still, from 2006 to 2010, the percentage of students borrowing money increased from 46 percent to 52 percent.

But while no one in the financial aid community thinks students have it easy today, Brooks stops well short of proclaiming a crisis in Columbia.

"I've not had any Missouri residents say we are priced out of what they can afford," Brooks said.
If not, it's just a matter of time, some financial experts say.

Kevin Walker is chief executive officer at SimpleTuition, a Web-based planning site. He has been studying the financial trends on the nation's campuses for years. He's surprised that enrollment has been skyrocketing in spite of an ever-worsening financial equation.

"At some point, it's got to be too expensive," Walker said. "I keep thinking this is going to be the year that we reach the tipping point. We have to be close."
Is Missouri safe?

By Henry J. Waters III

Saturday, May 14, 2011

Surprise! For the first time in history, a member institution has been kicked out of the Association of American Universities.

This elite fraternity includes 62 land grant universities — or it did until Nebraska was voted out by a majority of 44 late last month. It was one of the oldest members, admitted at the same time as the University of Missouri in 1909. MU Chancellor Brady Deaton would not say how he voted but admitted he had strong words for his peers before the vote and now says the decision “concerns all of us.”

AAU institutions are noted primarily for research activities. MU Faculty Council Chairwoman Leona Rubin worries about the growing influence of outside grantors. “We always worry we’re sort of turning over our peer evaluation to financial sources,” she said. “We’ve relinquished control to granting agencies to decide what’s important.”

Presumably this situation threatens institutions like UM and Nebraska with relatively small public research budgets more than the better endowed, which includes most other AAU members.

At this moment, Nebraska’s circumstance is particularly interesting. At the very time it is admitted into the now-misnamed Big Ten athletic conference by officials who said the institution’s AAU status was “vital,” now the conference says loss of that membership is meaningless. Apparently Nebraska’s athletic prowess both on the field and in the television ratings counts for more. Money talks.

Chancellor Deaton regards the action of the AAU with alarm, fearing MU might face a similar fate one day. “We need the support of the Board of Curators, the public, the governor and the legislature to ensure we have the right resources to remain a strong, active and leading member of the AAU,” he said.

Nebraska Chancellor Harvey Perlman says the AAU criteria are flawed. A majority of members do not think so, and Deaton is worried. Out here in the street, we are not able to adequately evaluate those criteria, but we do know — or should learn — that continuing AAU inclusion is very important to the welfare of our flagship campus. It would be helpful if we could learn more...
about just what it takes so we’d know with more precision what sort of support to pursue. In particular, how do our bona fides compare with Nebraska’s?

HJW III

He writes the worst English that I have ever encountered. It reminds me of tattered washing on the line; it reminds me of stale bean soup, of college yells, of dogs barking idiotically through endless nights. It is so bad that a sort of grandeur creeps into it.

— H.L. MENCKEN ON WARREN G. HARDING
Grads get spotlight speakers

Sheryl Crow, scientist share inspiring words.

Grammy-award winning singer Sheryl Crow urged those graduating with honors yesterday at the University of Missouri to seize every opportunity and believe anything is possible.

“Infinite possibilities — that’s the take-away,” she said.

Crow and scientist Ian Wilmut were among five people who received honorary doctorates from MU during commencement activities this weekend. They received theirs during a morning Honors Convocation, which recognized more than 1,200 students. And the graduates, along with their families and guests, were treated to words of wisdom from both.

Crow, originally from Kennett, earned a bachelor’s degree in music education from MU in 1984. She spent two years teaching elementary school music in the St. Louis area, where she also sang in a band, before picking up and moving to Los Angeles. She was a backup singer for Michael Jackson before eventually getting her own record deal. A breast-cancer survivor, Crow now uses her fame and finances to help fund cancer research.

Her success, Crow said, was the result of hard work, perseverance and “a little luck.”

Now that she’s an honorary “doctor,” she joked that her band members are asking whether she can prescribe medication and her 4-year-old son has compared to her Dr. Seuss.

Crow used Twitter yesterday to tell the world she was “so very proud” to receive the honorary doctorate.

Wilmut — best known for his research that led to the cloning of the sheep, Dolly, in 1996, and was knighted by Queen Elizabeth II in 2008 — also said he was honored to receive the recognition. Calling it a “fantastic university,” Wilmut said MU “is held in very high regard with the scientists I’ve worked with.”

He used his remarks to remind today’s youths that they’re fortunate to live in a society where diseases such as small pox no longer claim the lives of children. Other countries, he said, aren’t so fortunate.

Although the United States still deals with other ailments such as diabetes and multiple sclerosis, new opportunities for treatment and prevention are coming, he said, in part because of advances in stem cell research.
Wilmut challenged graduates to support that cause by either finding new medical breakthroughs or being part of a supportive general public.

Although they had different styles, the honors graduation speakers shared a theme: Yesterday's graduates likely have no idea what the future holds, but they should be ready to embrace it when it comes.

Or, as Steve Owens quipped, borrowing from one of Crow’s songs: “Everyday is a winding road.” Owens is the UM System’s general counsel who’s serving as interim system president.

“Take it from all of us, including me,” he said. “You never know where the road may lead.”

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More than 1,200 students graduate with honors from MU

By Caitlyn Crawford
May 14, 2011 | 2:43 p.m. CDT

COLUMBIA — **Sheryl Crow was a speaker Saturday morning at MU’s Honors Convocation, but she wasn't the only one given star treatment.**

Students graduating with honors from their respective schools and colleges were walked to their seats by a mentor of their choice. This practice is specific to the honors ceremony and reinforces the idea that this is one day that is all about them.

"This is his big day," said Jacqueline Cook of her son Daniel Cook. "It's time for him to move on and start experiencing life. We're so proud."

The Honors Ceremony began at 8:30 a.m. at Mizzou Arena.

"I'm just looking forward to starting the rest of my life," said elementary education graduate Victoria Davies. "But I'm not nervous. I'm more excited than anything. I've been waiting for this."

Chancellor Brady Deaton opened by urging the Honors Program's 1,227 graduates to "dream big, be determined and to never forget the values you've learned at Mizzou."

"It's so weird that people are actually getting jobs," said health sciences graduate Elizabeth Heeb. "Like, real jobs."

"I came into Mizzou knowing no one," said health sciences graduate Laura Benoy. "But now I think about all the people I'm going to miss. I've made a family here."

For education graduate Amanda Litteken, college flew by. "My mom always tells me that life goes faster as you get older," Litteken said. "She's right."
Crow, who was awarded an honorary doctorate of humane letters, began her speech with lessons from a bumper sticker.

She said that a while back, she was sitting in Los Angeles traffic wondering what she would say to graduates who had their whole lives ahead of them, and then she saw it: "Go out on a limb — isn't that where the fruit is?"

"If you take nothing else from me standing up here today, remember these two words: infinite possibility. Because that's what you all have," Crow said.

Sir Ian Wilmut was awarded an honorary doctorate in science. Wilmut, who directs the Medical Research Council's Center for Regenerative Medicine, is a pioneer in genetic engineering and produced the famous first cloned sheep "Dolly."

He drew a round of applause when he talked about how it is now possible to eradicate childhood diseases across the world. With that in mind, he urged students to achieve more than they think they can.
McCaskill tells graduates not to be afraid of failure

Ryan Martin doesn’t have a job yet, but now that he’s armed with a degree in hotel and restaurant management, he’s got a plan.

“Ideally, I want to own my own restaurant,” Martin said yesterday before graduating from the College of Agriculture, Food and Natural Resources at the University of Missouri. “I like people. I love food. And I like filling people’s bellies.”

An hour later, it was almost as though keynote commencement speaker U.S. Sen. Claire McCaskill, D-Mo., was speaking directly to him. Or to Kimberlie Kroencke, who’s also looking for job that leads to owning a restaurant. Or to Kelsey Kell, another currently out-of-work college grad who’d like to run a coffee shop someday. “I’m passionate about coffee,” she said.

When the three are ready to take the plunge and start their own businesses, “don’t be afraid to take a risk,” McCaskill said, “and don’t be afraid to fail.”

She knows from experience. McCaskill, an MU alumna, had a goal to become Missouri’s first female governor. She tried in 2004 and defeated sitting Gov. Bob Holden in a primary but ultimately lost to Republican Matt Blunt.

“I’ve had failure,” she said. “Big-time public failure. … I did it, and I got beat.”

After a while, she said, she picked herself up and, of course, went on to get elected to the U.S. Senate.

McCaskill urged students to find work they look forward to doing, and if they find themselves in a position they don’t enjoy, to look around for something else.

Kell already has lived that lesson. She came to MU four years ago with a plan to earn an education degree and become a teacher. She quickly found out it wasn’t the career for her and began pursuing event planning. That didn’t pan out, either, but it led to her hotel and restaurant management degree.

Karana Southard is passionate about agricultural policy and hopes to couple her new bachelor’s degree in agricultural economics with a master’s in public affairs from MU. She wants to someday work for the U.S. Department of Agriculture and make decisions that affect food and the economy.
Southard said her work at MU has given her a new perspective at the grocery store, where she better understands what factors go into food prices.

"Now when I hear about a drought in Florida, I understand why orange juice prices are going up," she said. "I have a better understanding of the world we live in."

Yesterday, the College of Agriculture, Food and Natural Resources graduated 326 students from 11 different departments.

"You're stewards of our state's No. 1 industry," McCaskill said. "Families, including my family, rely on you to be the producers and scientists who oversee this enormous operation."

Reach Janese Silvey at 573-815-1705 or e-mail jsilvey@columbiatribune.com.
Health care jobs await MU grads

Nursing students feeling optimistic.

By Janese Silvey

Columbia Daily Tribune Saturday, May 14, 2011

Louise Crider and Kelley Hale didn’t just get jobs before they graduated from the University of Missouri; they got jobs they wanted. And the two friends happened to land jobs working the same shift on the same floor at the same hospital.

The two were among 204 MU students to graduate from the Sinclair School of Nursing yesterday, which included students expected to complete their degrees in July. MU is graduating more than 5,600 students this weekend, with commencement exercises continuing today and tomorrow.

Crider and Hale went through the traditional four-year bachelor’s degree program, spending two years doing clinical work.

For Hale, her four years at MU confirmed what she already suspected: She loves helping people. Even though she came to MU for the nursing program, the past four years has deepened that passion, she said.

“Being one-on-one with patients is one of the greatest jobs in the world,” she said.

The two graduates begin duties in June at Missouri Baptist Medical Center in St. Louis, where they will work the night shift on the surgical floor.

MU’s nursing program has prepared them well, Hal Williamson, vice chancellor of MU’s Health Care, said during commencement at Jesse Auditorium. “The new graduates have learned well and are prepared to go out and change the world,” he said.

The majority of nursing graduates have jobs, said Dean Judith Fitzgerald Miller, reporting that 12 of them will work for the university’s health care system.

They’re likely good-paying jobs, too. Just in time for graduation, MU yesterday released results of a new destination study that showed graduates in nursing, other health professions, business and engineering earned the highest average salaries. That’s from survey data reported by
working MU alumni who graduated between the fall 2009 and spring 2010. Engineering graduates are averaging the most, $53,900, while nurses are earning an average of $42,100, the survey showed.

Crider and Hale aren’t in it for the money, although Crider admitted it’s nice to be in a profession with plenty of job options. She began her MU career planning to become an occupational therapist but switched because nurses, she said, get to enjoy a multitude of jobs. In addition to caring for patients, nurses get to teach, explain and do a little bit of everything else, she said.

Plus, “you’re helping someone through the darkest times in their lives, and hopefully you make it at least a little bearable.”
COLUMBIA MISSOURIAN

MU School of Law honors new graduates

By Michael Davis
May 15, 2011 | 6:02 p.m. CDT

COLUMBIA — A crowd filled with family and friends applauded as 133 graduates from the MU School of Law entered Jesse Auditorium on Sunday afternoon for their commencement.

"This law school has asked much of you, and you have all risen to the challenge," said Dean Lawrence Dessem.

He thanked the graduates for their hard work and dedication, and said he was proud to recognize them now as colleagues.

Dessem quoted Ralph Waldo Emerson's poem "Success" as an inspirational message to the graduates: "To know even one life has breathed easier because you have lived; This is to have succeeded."

Although graduate Jessica Adams called the law school experience at MU "hard," she said, "You learn to love it, because if you didn't, you would quit."

Adams said the people at MU were "fantastic."

"It's not cutthroat like it is at other schools, which was important to me," she said.

Adams said she plans to head back to her hometown of Nixa and work at a real estate firm in Branson.

After graduating, Charles Hanford said he will take a class to study for the bar exam in two months. He said he hopes to practice patent law in his hometown of St. Louis, but given the current job market, Hanford said he will go where he can.
Missouri Attorney General Chris Koster served as Sunday's commencement speaker. Koster graduated from the School of Law in 1991.

"To return two decades later to offer the commencement remarks is a true honor," he said.

Koster urged the graduates not to worry about the scarce market for legal jobs, saying the careers of lawyers are "unpredictable endeavors" with "unforeseen turns" that "lead to progress."

"You're going to find that you have made a great choice to be a lawyer," Koster said, calling the profession "the cornerstone of the modern world."

Koster told the crowd about his 2007 decision to change his political affiliation from Republican to Democrat in the Missouri Senate, a decision that he said ostracized him from many of his close friends in the legislature.

"When I made the decision to change parties, it was an explosive moment in my life," Koster said.

Koster ended his speech by saying that achievement as a lawyer extends beyond the classroom. "By far the greatest predictor of success is something they can't put into books — will," he said.

Dessem ended the ceremony by offering a last bit of congratulation to the students.

"This has always been a great law school, but it got better today because we now count you as graduates," Dessem said.
COLUMBIA MISSOURIAN

MU College of Arts and Science graduates 1,277 students

By Michael Davis
May 14, 2011 | 9:51 p.m. CDT

COLUMBIA — Maureen Coughlin and Lela Danille Payne met early in their college experience while participating in a coed service fraternity together.

"I think we have blossomed into a nice little friendship," Payne said.

After Saturday night's College of Arts and Science commencement in the Hearnes Center, both are going their separate ways.

Payne is heading to Colorado to take a job in backpacking and whitewater rafting. Later, she hopes to join the Peace Corps. Coughlin said she hopes to visit Ireland soon to conduct research on Peace Studies, her emphasis area at MU.

Coughlin said she worries about missing her friends and staying in touch.

James Bjerke, who received his bachelor's degree in biological sciences Saturday night, said he will miss the people he met at MU as well, but he "is looking forward to being a grown up."

"I loved undergrad," Brian Thomas Gavin, who graduated with honors in chemistry, said. "I won't miss some of the coursework, but I will miss some of the people."

To open the ceremony, Arts and Science Dean Michael O'Brien introduced Chancellor Brady Deaton to the packed crowd.

Deaton acknowledged the importance of an Arts and Science degree, telling the crowd that three of his children went through the college and have led successful lives.

Deaton said the coursework the graduates participated in "instilled and sharpened" an "openness to learning."
"You've really just begun the process of learning," Deaton said. "It's a lifetime process."

Deaton urged the graduates to "stretch" their talents, "take risks" and "take the values learned at Missouri with you."

"Dream big. Do not set limits on your capabilities," Deaton said.

Gov. Jay Nixon, the commencement speaker, told the graduates their diplomas represent the fulfillment of the sacrifices their family and friends made to get them to this point.

Nixon said to honor that sacrifice, the graduates should do their best to make a positive impact as citizens.

"A humanities education is a magnificent gift," Nixon said. "A Mizzou education is a blueprint for a much grander structure." He told the students to fill the "cathedral of the mind" with "dreams and big ideas."

"The capacity to learn is infinite," Nixon said. "Never stop learning."

Nixon concluded his speech by telling the graduates the education they received at MU prepared them to "become global citizens."

"The future is in your hands," Nixon said.
COLUMBIA MISSOURIAN

College of Agriculture, Food and Natural Resources sends off more than 300 graduates

By Caitlyn Crawford  
May 14, 2011 | 6:16 p.m. CDT

COLUMBIA — In a waiting room not too far from Hearnes Center's main auditorium, before the ceremony began, seniors posed for pictures, accepted congratulations and chatted with friends and family as undergraduates for the very last time.

"This is so unreal," said Rebecca Bunton, an agriculture business management graduate. "I feel like I just got here yesterday."

"My best friend and I have gone to school together for 15 years, and this will be the last time we get to graduate together," said Jackie Fry, a hotel and restaurant management graduate. "I'm taken back by how fast it went. I can still remember my freshman year, and now I'm about to walk across the stage."

The ceremony for the College of Agriculture, Food, and Natural Resources began at 3 p.m. at Hearnes Center. The college read off a list of 326 graduates this year.

The Dohrmans have watched two children of the family graduate from MU within the past four years, and the youngest just finished his freshman year at MU. John Dorhman, father of Megan Dorhman, said his daughter is ready to be out in the real world, but he knows she will miss college.

"She told us in the car earlier that graduating in four years is like leaving a party at 10:30," John Dorhman said.

Donna Register, a grandmother of a graduate, was smiling from ear to ear, awaiting the commencement where her grandson would become an "official adult."
"Today is a proud day to be a grandparent," she said.

Thomas Payne, vice chancellor and dean of the college, told students, "This isn't the end." He urged graduates to keep investing in themselves and others.

"Remember people first," Payne said. "You can never go wrong. Your parents invested in you, and that's the reason you're able to be here today."

Payne also warned students about the dangers of "being too serious."

"You can be serious, but take time to play," Payne said. "Don't be so serious that you forget to enjoy your life."

Jana Haley, president of CAFNR Student Council, announced the outstanding senior award, which went to graduate Samantha Wilkerson.

U.S. Sen. Claire McCaskill was next to speak.

"I love this place," McCaskill said. "I love this university. I could tell you some stories about my time here, but that probably wouldn't be good for my line of work."

Next, she offered some of her own advice. McCaskill encouraged graduates to make sure they always loved what they did and never to settle for a job they weren't excited to get up for every day.

"I'm going to miss having the option to decide whether or not to get up and go to class in the morning," said Kaley Cobb, an agriculture business management and animal science graduate. "Now we have to get up and go to work whether we feel like it or not."

"I'm going to miss going to school for 15 hours a week when I'm working 40 hours a week on the job," said Aaron Gramlich, an agriculture business management graduate. "That is going to be quite the change."

"I don't know if I'm ready for the real world," Gramlich said. "Only time will tell, I guess." McCaskill also insisted that students should take risks and that failure is a good thing. She added, "You should never underestimate the power of confidence."

"Believe in yourself, or no one else will," she said.
COLUMBIA MISSOURIAN

MU School of Journalism sends off nearly 400 graduates

By Caitlyn Crawford
May 13, 2011 | 8:59 p.m. CDT

COLUMBIA — A band played selections from "The Sound of Music" as nearly 400 graduates from the MU School of Journalism adjusted their caps and tassels Friday evening at Mizzou Arena.

"It's a mix of excitement and nervousness for me right now," said Dan Cornfield, a graduate of the school's radio and television program. "But I'm looking forward to the future."

Jan Hicks, a mother of one of the graduates, began to tear up.

"She's our only one," she said. "We're going to miss her."

Hicks' daughter is headed to an internship with Betsey Johnson apparel in New York at the end of May.

Associate Dean Brian Brooks opened by jokingly saying that in his 37 years of teaching journalism at MU, this was his favorite graduating class.

Next to speak was the master of ceremonies, Alex Rozier, who introduced student speaker Kyle Stokes. Stokes told graduates when they say they want to make a difference, they should realize they have been doing so all along at MU.

"We don't have bright futures, we have bright presents," Stokes said.

Guest speaker Eduardo Ulibarri Bilbao, Costa Rica's ambassador to the United Nations and master's degree recipient from the School of Journalism, instructed graduates to "never cease learning." He said life is the continuance of education and if one tries hard enough, he or she can succeed.
"I'm looking forward to living my life and excited about what I can accomplish," said strategic communications graduate Whittley Jones. "I'm just that much closer to doing what I want and am passionate about."

"This still doesn't feel real," said Brittany Martensen, another strategic communications graduate. "I almost started crying when I put my gown on today. I can't believe four years is already gone like that. But I'm ready. Even though I'm really nervous right now, I'm ready."
MU College of Business commencement speakers emphasize passion over salary

By Michael Davis
May 13, 2011 | 6:02 p.m. CDT

COLUMBIA — As commencement speaker Edward Rapp stood at the podium in front of 695 MU College of Business graduates in Hearnes Center on Friday, he found himself in an unlikely but oddly familiar position.

"When I went to Missouri, I always dreamed of playing in Hearnes, but I never thought it would be like this," Rapp, a Missouri graduate, said.

Rapp, group president and CFO of Caterpillar Inc., echoed the concerns of today's graduates quickly moving into a business world fraught with uncertainty.

"Yes, there are challenges, but you are not the first group of college graduates to go through it," Rapp said. "The future is not inherent, it is created."

To avoid complacency, Rapp said the graduates should find what they have a passion for, make it a job and it will never become work.

"If you have to choose between passion or money, I would choose passion," he said. "The most successful people are the ones that did what they loved."

Rapp also urged the graduates to "strike a balance" between work and a personal life. "If you do not work on your personal life, like you work on your professional life, then your life will suffer," he said.

The family he has created with his wife is the greatest joy in his life, Rapp said.

The graduates should recognize the people around them for the guidance they have provided, he said.
"If you are like me, you did not get here on your own," he said. "I would strongly recommend that you reach out to (family and friends) to tell them how much they mean to you."

Rapp ended his address with a simple statement on the way graduates should live their lives: "Do it once, do it right, and do it with no regrets."

Ben Pepper, a graduating senior selected by his fellow students to speak, quoted Warren Buffett, chairman of Berkshire Hathaway and one of the richest people in the world, in his remarks.

Pepper quoted Buffett as saying: "Without passion, you don't have energy. Without energy, you don't have anything."

Pepper, a Kansas City native, told his fellow graduates to "find your passion and follow it."

"If you have the faith to take the journey, you will be rewarded," Pepper said. "Every day, more and more people like us are making their impact on society."

To close his address, Pepper put a clever spin on Buffett's quote.

"Without energy, you cannot be a Tiger. And therefore, success is inevitable."

Joan Gabel, dean of the Business College, said success may come to graduates very differently.

"Success is a very individual thing," Gabel said. "You will all progress at different speeds and different paths. Challenges yield opportunity."
Expectant fathers stressed differently

COLUMBIA, Mo., May 13 (UPI) -- U.S. researchers say the stress of pregnancy uniquely affects the health of expectant fathers as it does expectant mothers, except in different ways.

Mansoo Yu, assistant professor at University of Missouri's Public Health Program, says the stress related to pregnancy affects the health of expectant fathers, which in turn, influences the health of expectant mothers and their infants.

The study found men process pregnancy-related issues -- such as family change and feeling overwhelmed -- as financial stressors, but women consider these emotional stressors. Men play an important role in supporting and caring for pregnant women, Yu said.

"Too often, men are treated as observers of the pregnancy process," Yu said in a statement. "Acknowledging and addressing the emotional well-being of men as well as women is recommended. Providing prenatal care for expectant fathers can encourage men to have a proactive role in pregnancy, which will allow for better maternal and infant health outcomes."

Men receive more emotional support from their partners, while women received tangible support -- such as help with tasks or care.

"Understanding these differences will help practitioners provide better advice and services for expectant parents," Yu said. "For example, men could write budgets to alleviate financial stress and women could seek counseling to understand emotional stressors."

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Read more: http://www.upi.com/Health_News/2011/05/13/Expectant-fathers-stressed-differently/UPI-22161305336987/#lxzz1MWMPagyU
DADS ‘NEED PREGNANCY CARE’

Anxiety in fathers influences the health of both mother and child

Saturday May 14, 2011

By Sarah L'Orange

DADS should get pre-natal care as well as mums because having a baby is just as stressful for them, according to a study.

Researchers found anxiety in fathers influences the health of both mother and child.

Researchers at the US University of Missouri Dr ManSoo Yu found men handle the related issues the same way they do financial stress, whereas women deal with it emotionally.

He said: “Too often, men are treated as observers of the pregnancy process. Acknowledging and addressing the emotional well-being of men as well as women is recommended. Providing pre-natal care for expectant fathers can encourage men to have a proactive role in pregnancy, which will allow for better maternal and infant health outcomes.”

Dr Yu studied his participants’ profile by giving a questionnaire normally only for expectant mothers to measure stress, support of their partner and self-esteem.

Mental distress in pregnant women, caused by anxiety, lack of social support or low self-esteem, is associated with poor infant health.
MU engineer teams up on solar project

Technology can take in more light.

By Janese Silvey

A University of Missouri researcher is among a team of scientists developing a solar power-collecting material they hope to commercialize within five years.

Patrick Pinhero, an associate professor in MU's Chemical Engineering Department, along with his former team at the Idaho National Laboratory, has developed a thin, moldable sheet of small antennas, or nanoantennas, that collect solar cells more efficiently than traditional solar panels.

Once they figure out how to best convert those solar cells into energy, they envision a skin-like plastic film that could cover and power electronic devices and vehicles or be used to heat homes by covering roof shingles. The proposed technology is so revolutionary, Pinhero said, researchers likely haven't thought of all the potential applications.

"This can be a true game-changer," he said. "The market estimates on what this could mean if we're successful are astounding."

The solar sheets capture more than 90 percent of available light, compared with the roughly 20 percent collected by today's solar panels. That's because the tiny antennas can absorb energy in the infrared part of the spectrum, which is outside the range visible to the eye.

Additionally, researchers are figuring out a way to capture the excess heat from industrial processes, such as coal-fired plants, and existing solar farms to recycle as new energy.

The next step is to deem how best to convert that collected heat and light into energy that can be stored and used. That's where Garret Moddel, a professor in the Department of Electrical, Computer and Energy Engineering at the University of Colorado, comes in.

Moddel has developed a high-speed diode aimed to convert light waves much more quickly than the diodes found in household outlets. The goal is to find a way to integrate those diodes into the sheet material.

The team is securing funding from the Department of Energy and private investors to move forward with the project.
Initially, the team hopes to develop a material that works using an outside source of heat, and early applications will likely be for military use.

For instance, rather than a soldier carrying around a heavy battery pack, he could carry a solar sheet and use fuel to make a flame to produce energy from it, Moddel said. Solar energy in a vehicle using this material also is possible if it were to make use of wasted heat from exhaust pipes.

"The early applications need that heat source," he said, noting that it allows for conversion at lower frequency.

Other military applications could include enhanced imaging equipment that would let troops detect contraband or objects on individuals from longer distances than current technologies allow, Pinhero said, and new ways to implement security at airports.

To ultimately get products using this technology mass-marketed, the research team is working with Dennis Slafer, a former scientist for Polaroid who is now president of MicroContinuum Inc., a company out of Cambridge, Mass.

"The goal of Dr. Pinhero’s and the teams’ work is to develop a roll-based manufacturing process that can produce this novel nanoantenna energy harvesting film in high volumes, and very inexpensively," Slafer said in an email.

A study on the design and manufacturing process was published in the Journal of Solar Energy Engineering.

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Suspected gunman known for jailbreaks

STAFF AND WIRE REPORTS

The last time he ran from the law, Cody Willcoxson managed to elude capture for three years after leading a nine-inmate jailbreak in rural Oklahoma.

A Rolla police officer searches cars Thursday. Willcoxson was charged Thursday with assaulting an officer, resisting arrest and armed criminal action.

A decade later, his latest legal run-in ended yesterday with an arrest. But it came only after a four-hour, 40-mile manhunt that included an interstate shootout and the shutdown of a Missouri college campus where he crashed his car.

“He had a propensity to escape jail. He was very good at it,” said Mike Shambaugh, police chief in the northeast Oklahoma town of Jay, recalling three jail escapes by the now 31-year-old Willcoxson. “He was the poster child for always trying to escape. ... It seemed like he was always getting out.”

Willcoxson, who now lives in southwest Missouri, was charged yesterday with assaulting an officer, resisting arrest and armed criminal action. More charges were expected.

The Missouri University of Science & Technology campus in Rolla was locked down for four hours yesterday after a gunman attempting to elude authorities sought an escape route through a campus building.

Law enforcement officers took the suspect, Willcoxson, into custody just before 1 p.m. after a pursuit that ended on Highway 63 near Edgar Springs. After being treated for a gunshot wound, Willcoxson was being held at the Phelps County Jail with bond set at $1 million.

Police also found crystal methamphetamine in Willcoxson’s car, Rolla police Chief Mark Kearse said.

Willcoxson was pursued by police through downtown Rolla when he allegedly failed to stop at a pedestrian walkway near the Havener student center on campus just before 9 a.m. That walkway was previously a road, but now the street and pedestrian area are separated by a metal block that’s supposed to prevent cars from going through.

“He plowed right through it and continued until his car, I guess, died between the Havener Center and McNutt Hall,” Missouri S&T spokesman Andrew Careaga said.
That's when Willcoxson ran into McNutt, climbed some stairs and exited out a north door, leaving a trail of tiny blood droplets, Careaga said.

The semester is over at Missouri S&T, so most of the roughly 7,200 students have gone home for the summer. Careaga estimated there are about 60 students still living in residential halls.

The tie to Missouri S&T is coincidental: Willcoxson has never been a student there. He just happened to land on campus after a police chase that began about a half-hour earlier some 30 miles from campus at Fort Leonard Wood. That's where Rolla police said Willcoxson attempted to enter a gate at the Army base with an AK-47 at about 8:30 a.m. After being questioned by military police, Willcoxson fled on Interstate 44.

Post commander Col. Charles Williams said Willcoxson was not targeting the military installation but got lost amid highway construction before turning into the fort.

St. Robert police Chief Curtis Curenton said officers had been on the interstate for a couple of miles when the shooting began. After police set up spike strips on Interstate 44, Willcoxson got off at a Rolla exit and allegedly began shooting at Rolla police officers and Phelps County sheriff's deputies who joined in the pursuit. At some point, Willcoxson apparently was shot in the arm or hand.

Kearse said Willcoxson fired dozens of shots at him and other officers, reloading the assault rifle as he drove.

"He stuck his AK out and probably shot at least 15 to 25 rounds at cars behind us," Kearse said. "I can't believe nobody was hit with the way he was shooting out the windows."

After Willcoxson stopped at McNutt Hall, officers found his weapon near the university's replica of Stonehenge at the northwest edge of campus.

Several minutes later, Willcoxson allegedly broke into a home, demanded car keys and stole a 2003 Ford. He fled the area and led police on a chase that involved more than 150 officers, Rolla Mayor Bill Jenks said.

A decade ago, Willcoxson was among nine inmates who attacked a jailer and fled on foot from the Delaware County Jail in Oklahoma. He had escaped previously, and authorities suspected him of masterminding the jailbreak.

During the escape, a prisoner attacked the jailer, stole his keys, kicked in the door to the sheriff's office and stole a .22-caliber rifle before all nine slipped out the side door of the courthouse, the Tulsa World reported at the time.

In light of yesterday's events, Missouri S&T administrators will analyze how communications were handled during the lockdown, Careaga said.
At first glance, though, he said mass communications seemed to work. In addition to posting information on its website, the campus sent 8,705 email, text and phone messages to all faculty, staff and students, as well as additional parties who sign up for those alerts.

Reach Janese Silvey at 573-815-1705 or e-mail jsilvey@columbiatribune.com.
MU employee accused of stalking

Fulton police suspect a University of Missouri employee is responsible for sending 358 threatening and harassing emails to a person within a 90-minute period last month.

Charles Fay

Fulton police said Columbia resident Charles W. Fay, 26, of 809 E. Green Meadows Road, an office support staffer in the university’s College of Agriculture, Food and Natural Resources, allegedly sent the emails April from his work computer. The victim is a Fulton resident and known to Fay, police said. Lt. A.L. Cook said the department would not disclose what type of relationship the two shared.

Police were unaware of any prior threats Fay made to the victim and said the alleged onslaught of harassment did not include life-threatening statements.

Fay was arrested Wednesday on suspicion of stalking and was released on a summons. He had not been charged by this morning.
Student suspected of statutory rape

A 21-year-old University of Missouri student is suspected of the statutory rape of a 14-year-old girl between January and March of this year.

Clayton Harris

Columbia police arrested Clayton J. Harris of 805 Hunt Ave. on suspicion of second-degree statutory rape, Officer Latisha Stroer said. Harris allegedly had intercourse with the victim on multiple occasions at his residence.

Although the incidents are alleged to have occurred at his apartment, the suspect has listed an address in Elsberry. He was released from the Boone County Jail on a $4,500 bond.
Curator debacle is just a game

By Ken Midkiff

To determine how far the leadership of the Missouri General Assembly will go to get its way, it is not necessary to look farther than Columbia.

It seems that, in a bit of a snit that Gov. Jay Nixon didn’t nominate someone to a state board, the Senate president wouldn’t even allow the Senate Gubernatorial Committee to consider Columbia attorney Craig Van Matre’s appointment to the University of Missouri Board of Curators.

A bit of background: The governor nominates members to various state boards and commissions. Most of these have provisions for Democrat and Republican seats. Note the key word is “nominates.” The Senate must confirm the nominations, similar to what the U.S. Senate does in its “advise and consent” role for presidential nominations.

Until the state Senate confirms a nominee, that person is in limbo. If a person is not confirmed in the legislative session, the name must be withdrawn from consideration to be nominated in the next session. That is what Gov. Nixon did, and, no doubt, Van Matre will be appointed to the Board of Curators as a “recess appointment.” All that means is he will serve until the Senate confirms or rejects him next year.

In case there’s a bit of confusion — after all, why should I support the nomination of Van Matre, a person who usually represents various developers and other land rapers — let me hasten to add I have always found Van Matre to be open and honest. To be sure, his views and mine often clash, but I have nothing but respect for him and believe he would make a very good curator. If nothing else, maybe it will prevent him from other mischief.

But his nomination has been pushed into the ditch by somewhat shabby politics. “If you don’t appoint my guy, your guy won’t even be considered” was essentially the message from the Senate president.

Fortunately, Gov. Nixon held his ground and refused to nominate the Senate president’s friend.

Welcome to the world of politics, Craig.

Speaking of politics, about the time today’s issue of the Tribune is plopped on your lawn or left on your doorstep, the General Assembly will have adjourned or will soon adjourn. A few years ago, it was possible to set back the clocks, so all high-priority bills would be passed. Those days are gone, and now, promptly at 6 p.m., the Missouri House and Senate close up shop.
But, as usual, there will be many bills that pass the last day of the legislative session. Among those expected to be “Truly Agreed To and Finally Passed” — to use legislator speak — are several Big Brother-type bills — mandating drug-testing, putting more restrictions on abortions and voter ID, and at least one bill that protects one agribusiness.

It will be up to Gov. Nixon to sort out the wheat from the chaff, to sign those he agrees with and to veto those he doesn’t like or that run contrary to an existing statute or the state constitution.

Sometime in the next few weeks, there will be media releases that tell us what the governor did. Until then, his arm will be twisted by those in favor of some measure and by those opposed to it.
MU: 'The big daddy on the block'

By Janese Silvey, Campus Chatter blog

Posted May 14, 2011 at 6:36 p.m.

Donald Cupps became a University of Missouri System curator last week when the Senate OK'd his nomination at the 11th hour.

He attended his first official university event Saturday when he briefly addressed the College of Agriculture, Food and Natural Resources commencement.

There, he got an early glimpse of some of the mentality on the flagship campus of the four-campus system.

While introducing Cupps, CAFNR Dean Tom Payne briefly explained to the audience how the system works. It has four campuses, but MU is the "overshadowing" one, Payne said. Mizzou is "big daddy on the block. Most of the system's resources -- well, not most, all of them -- should come here."

I'd be fair, Payne is kinda known for being a kidder, and I've got a feeling some of his jokes get lost in translation. The first time I met him face to face, he joked about using the Tribune to start fires. Later, after seeing my defenses going up, he assured me he was just joshing.

And, of course, his comments about "big daddy" Mizzou got laughs.

But, as those of us who pay attention to the system know, it's a campus-eat-campus world out there, or at least within the UM System.

Missouri University of Science and Technology Chancellor Jack Carney even changed the name of UM-Rolla mostly to better reflect the school's mission but also to get away from the notion that it's a branch of MU. "People thought we were a branch campus of Columbia — which is extremely irritating, by the way," he told me last month.

I wouldn't go so far as to say there's fighting among the campuses, but there are definitely differing views. In March during a presidential advisory committee meeting (the citizen group helping with the UM presidential search), the campus claws could be seen. Kent Peaslee, a curators' teaching professor at Rolla, said a system president should not be a glorified chancellor (although he didn't say it, no doubt he was referring to a glorified MU chancellor) but instead a president should understand how unique each campus is.
UM-St. Louis and Kansas City representatives weren't as interested in that "distinct campus" goal. They do research on their campuses just like MU and Missouri S&T, some said, and they're not interested in being secondary citizens to MU.

Payne yesterday referred to Mizzou as the "matriarch of matriarchs."

Welcome to the Board of Curators, Mr. Cupps.
The Internet

Can you trust it?

By Henry J. Waters III

Everyone with the slightest interest in politics is constantly regaled with provocative stuff on the Internet carefully created and chosen to alarm viewers and readers. Most must be taken lightly or even with disdain.

A recent example that made the news involved a video posted by right-wing critic Andrew Breitbart showing grossly manipulated excerpts of online presentations made by instructors at the University of Missouri-St. Louis and the University of Missouri-Kansas City who seemed to advocate labor union violence.

The Breitbart version was circulated by conservatives eager to believe the worst about unions, professors and other devils targeted on Breitbart’s Big Government website.

Certainly, in this column lovingly devoted to free speech principles, I am not saying Breitbart has no right to criticize the professors, but he should not misrepresent what they do or say. In reaction to his latest post, university officials in both cities had to correct the record by showing more fully the content and context of the collaborative online labor studies presentations.

If Breitbart had fairly represented the content of the course, any subsequent criticism would have been fair enough. Instead, he edited their videos to distort what the instructors said.

At the end of the day, perversely gotten benefit has come from the Breitbart foray into dissembling. The universities were prompted to evaluate, comment on and justify the labor studies course. Too bad it stemmed from a false premise. Too bad it won’t discredit Breitbart in the eyes of his faithful followers who like his conclusions regardless of their validity.

The larger lesson is one we all are learning daily: Be skeptical of material on the Internet. It’s a ubiquitous medium subject to misuse by anybody any time for any purpose without oversight or careful editing or attention to fact or any of the other safeguards and assurances inherent in the very idea of “mainstream” journalism.

Please pardon this blatant self-promotion.

HJW III
Small science, big results

By Jacob Barker

Columbia Daily Tribune Saturday, May 14, 2011

University of Missouri spinoff Nanoparticle Biochem Inc. is no stranger to success. The researchers behind the company put a notch in their belt in December, when they announced a partnership with Indian pharmaceutical company Shasun to commercialize a cancer treatment using gold nanoparticles.

The science of nanotechnology is one that holds the potential to touch and change almost everything, from engineering to antibiotics to everyday household items. And Nanoparticle Biochem Inc., or NBI, formed in 2004 and staffed by some of the premier researchers in the nanotechnology field, is moving from cancer treatments to consumer and safety products that hit close to home and have the potential for mass production.

The researchers have the technology. It’s been tested in the lab and the field. They’ve gotten independent verification of their results, they said. Now, they’re hunting for capital.

“If you drop a truckload of money off in our driveway, we’re off,” said NBI President and Chief Executive Officer Henry White.

It’s not that there hasn’t been interest. NBI’s team of five researchers, three of whom also work for the university, said it has developed breakthrough technology that marries deep science with green principles and can be produced and sold globally. That has gotten the researchers plenty of meetings with potential investors. But the company’s members, Kattesh Katti and Raghuraman Kannan, radiology professors in the MU School of Medicine, along with Kavita Katti, Anandhi Upendran and White, want their technology to stay local.

So they’re looking for the right kind of investment, the kind that would allow them to scale up to a mass-production level in the Columbia area, providing not just high-tech research jobs but blue-collar factory employment as well.

“We do have a real interest to set up the manufacturing base here in Columbia,” Kattesh Katti said. “It is a technology developed in Columbia, and we would like to see how the local region can benefit.”
Their current project, if it does stay local, holds the potential to significantly alter how people clean their homes, how hospitals sterilize their facilities and how governments respond to natural disasters. And, they say, the possibilities for the platform technology they have developed will only grow as research continues.

“This has global implications,” Katti said. “This is not a big company. But the technological reach is quite apparent here.”

Research into nanotechnology has exploded in the past 10 to 15 years. With the development and proliferation of lower-cost and better electron microscopes, researchers have been able to more accurately measure and experiment with nanoparticles — clumps of thousands of molecules that show up as little more than a speck compared to the size of a cell. With the advances in instruments, “I can clearly pinpoint I’ve created a nanoparticle,” Kannan said. “It’s kind of opened a floodgate in this area.”

The nanotechnology field is an exciting one for researchers because the smaller the particles, the more total surface area within a mixture. The more surface area, the more potential there is for chemical reactions between the nanoparticles and whatever substance they target, lowering the total concentrations needed to produce a reaction.

Furthermore, at the nano scale, the properties of various compounds change with size. Researchers can build a bigger nanoparticle that has completely different chemical properties than a smaller particle, even if it’s made with the same base element.

In the case of NBL it is working with antimicrobial nano products. One of the researchers’ early experiments looked at how particular nanoparticles reacted with black mold. Experiments the group conducted showed mold could not grow on surfaces treated with their nanoparticle and that the nanoparticle would kill existing mold — 100 percent of it when treated with a simple water solution containing their nanoparticles.

And the researchers say the product is safe, both environmentally and around humans, because it reacts with only the mold. Whereas traditional bleach can kill mold, too, it leaves behind harmful residue and vapors that react with more than its target. Kannan said. “The concentration of nanoparticles that we used to kill mold is really insignificant,” Kannan said. “That’s where the nanotechnology comes into the picture. Each nanoparticle can hold lots of these antimicrobial molecules.”

Katti was quick to point out other researchers already have developed similar antimicrobial nanoparticles. The novelty in this discovery, he said, is the platform technology: a base nanoparticle that can be tweaked to react with different microbes and fungi.
That got the researchers thinking about even deadlier bacteria. One of the most feared types of bacteria is methicillin-resistant staphylococcus aureus, or MRSA. MRSAs quickly develop resistance to antibiotics, and new products must constantly be developed to treat them. A 2008 study from the Centers for Disease Control and Prevention estimated 15,249 people died of MRSA infections that year, and a 2007 CDC study found those who developed an MRSA infection in a hospital saw the cost and length of their stay nearly double.

“That’s why I say the MRSA is the Holy Grail,” Katti said. “We’ve tried to see whether our agent is active against those bacteria that have developed resistance to traditional antibiotics. And the results have come out very stellar, actually.”

The nanoparticle used by NBI combines both a new, potent antibiotic with a unique delivery system. The result is 100 percent destruction of MRSAs and other antibiotic-resistant bacteria, Karman said, noting the results have been confirmed independently in labs around the world.

The potential uses for NBI’s anti-microbial nanoparticle are many. The team envisions its technology being applied to global health and hygiene, not just hospitals and homes. For instance, Katti said, the threat of bacterial infection rises precipitously after catastrophes such as floods or tsunamis, with stagnant water and corpses serving as breeding grounds for deadly microbes. The researchers believe their nanoparticles are safe enough to treat large geographic areas to prevent the spread of germs that compound the misery caused by natural disasters.

“We strongly believe that our technology can be adapted for mass applications,” Katti said.

Further, their nanoparticle delivery system provides a benefit that traditional chemical agents don’t: The tiny particles can pierce what are known as biofilms, protective shields bacteria build on the outer layer of their colonies.

The green film on stagnant water, for instance, acts as a biofilm, protecting the colonies of bacteria underneath it. Usually, chemical agents are unable to pierce the films, killing only the top layer of microbes. Upendran said nanoparticles act differently. “The colonies of bacteria under the film would be destroyed by this,” she said.

The five team members of NBI believe their nanotechnology is a breakthrough and that it is ready to begin its march to the marketplace. “There are no hitches in the manufacturing process,” Katti said. Kannan added it will be possible to move relatively quickly toward producing millions of gallons of the nanoparticle.

“It’s pretty straightforward to produce,” Katti said. “We have already established the commercial feasibility in terms of scale up. This is not a laboratory curiosity anymore. It is very close to product lines. And not just one product — antibacterial agents are required in multitudes of applications. So it is ready for all of them.”
Already, NBI is in conversations with Regional Economic Development Inc. and investors, including local ones. REDI Chairman Dave Griggs said he is a carpet salesman, not a scientist, but he has been overwhelmed by the "amazing" potential of NBI's technology. "I don't even know how to truly describe what I think the potential might be," Griggs said.

Bob Churchill, dean of the MU School of Medicine, said the university is incredibly lucky to have scientists of the NBI team's caliber. Some of the most renowned research institutions in the world have tried to poach them, he said.

"They're not just good or pretty good," Churchill said. "They're really good."

As they continue their research in nanotechnology, "there's all sorts of applications for product development and drug development down the line," Churchill said.

The first step for NBI, though, is to jump through the regulatory hurdles to begin bringing its products to market. To start the approval process through the Environmental Protection Agency, the company needs more startup capital. In the meantime, the researchers have patents working their way through the system, both domestically and abroad, and they are working with the regulatory agencies of other nations. They estimate the EPA review process will take around 18 months, but the approval processes in other countries vary significantly, they said.

The team believes its tests show the technology is environmentally harmless and that regulatory approval will be granted. Katti, who has been referred to as the "father of green nanotechnology" by Nobel Prize Laureate Norman Borlaug and has won international acclaim for his development of environmentally compatible gold and silver nanoparticles, said NBI's antimicrobial nanotechnology is produced using a new process that neutralizes unwanted environmental effects.

That would be a big breakthrough for the technology. Todd Kuiken, a policy analyst with the Project on Emerging Nanotechnologies through the Science and Technology Innovation Program in Washington, D.C., said there are lingering concerns about the environmental and health effects of nanomaterials.

Silver nanoparticles, which commonly are used as antimicrobial agents, are especially concerning, he said. Some studies already have linked them with adverse health effects, and those in the field are unsure how they will react with the environment, he said.

"You have to incorporate the way they actually manufacture the materials," Kuiken said. "A lot of these nanomaterials have a not-so-green manufacturing process."

The team at NBI, though, said it has tested the products on animals and determined they are nontoxic. The researchers' process for developing the particles, they said, is clean and
environmentally friendly. "We would not launch a product without making sure it is not harmful to the environment," Upendran said.

Katti, who isn't shy about expressing his desire to advance green technology using the new science, said not only are the end products safe, the manufacturing process also is clean. "This is not to be confused with a regular chemical company with chimneys and fumes going off," Katti said.

Rob Duncan, MU's vice chancellor for research, said the researchers' advances in green nanochemistry are very exciting and hold the potential for big gains for Mid-Missouri's economy.

"He really gets it," Duncan said of Katti. "He's advancing green science while advancing economic development."

But to get to the point of a manufacturing facility, the company needs to find the right investor. White estimated the company would need several million dollars to bring the product to market, and plenty of groups have shown interest in the scientists' discoveries. But the team wants to keep production local. If an investor group is from Singapore or India or California, it likely would want to set up the manufacturing facility there, Katti said.

"We get what we needed, like cash flow for developing the product and putting the product in the market," Katti said. "But that doesn't create jobs locally."

That kind of commitment to the local economy was on display during REDI's quarterly membership breakfast last month, when Katti told the packed auditorium about his desire to grow the company here to demonstrate to the world Columbia's commitment to sustainability.

"I would be more inclined to setting the base up here in Columbia and shipping all over the world," Katti said then. "That would be real economic development."

Regardless, the assets at the university and some of the NBI team's faculty positions at MU mean the research and development part of the business would remain local even if production ends up going elsewhere, Katti said. NBI already is exploring expanding its research operation from a five-member team housed in a university building to one that has its own quarters and more staff.

"It's very clear that the R&D center is here and will always be here," White said. "And, to the extent that you really market the product, you've got to have some contact between production and R&D."

Economic development officials could score a big win if they can meet the company's needs, helping create jobs for all education levels. Although it's too early to tell whether NBI's production can start locally, economic development officials are exploring how they can help
make it so. Commercializing the research performed at the university in a way that benefits the regional economy is one of the most important tasks REDI has, Griggs said.

"The important part here is that we truly have a gold mine of intellectual research going on on campus, and every day we get a little closer to getting the pieces in place to take advantage of that," he said.