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Law experts debate label of 'hate crime'

Actual threat may be hard to prove.

By **JANESE SILVEY**

A panel of University of Missouri law professors agreed yesterday that "hate crime" sentencing provisions might be too harsh for an MU freshman suspected of painting a racist word on campus property last weekend.

Christina Wells, a law professor who specializes in free speech, suggested the university might be better off creating opportunities for students to share differing points of view. Wells joined three colleagues for a panel discussion on hate crimes yesterday at the MU School of Law.

Benjamin Elliott was arrested on suspicion of second-degree property damage after MU police linked him to racist graffiti painted Saturday on a statue outside of Hatch Hall. Typically, that would be a misdemeanor charge, but hate crime sentencing provisions attached to the charge bump it to a Class D felony.

Such a charge would require the state to prove that the action caused harm, not just offense, law Professor Frank Bowman said.

Although threats and intimidating speech aren't protected by the First Amendment, Wells said, offensive speech is. Because the racial slur was written on public property, she said, it might be difficult to prove the writer was specifically threatening anyone.

That doesn't mean there weren't victims, though, said David Mitchell, an associate law professor. Along with black students at Hatch Hall and their parents who likely now question the safety of their home, all blacks at MU are victims because they're made to feel unwelcome, Mitchell said. Additionally, white students are victimized because the act casts suspicion on them, he said.

Mitchell agreed, though, that he is not sure a felony charge resulting in jail time is the right punishment.

Wells suggested the act could be the catalyst for difficult conversations.

The incident "is so horrifying our first instinct is to punish," she said. "And that's understandable. It's a slap in the face. But let's examine that instinct to punish. Is that the best way to deal with it as a society? ... I'm not saying he shouldn't be punished, but maybe it's better to start a dialogue."

Bowman used his time on the panel to present a history of race in Boone County, once the third-largest slaveholding county in the state. City founders including James Rollins and William Switzler were among slaveholders here, he said.

When an audience member expressed concern about those men's names gracing public streets and buildings, though, Bowman warned that there's usually more to a story. Both men were pro-Union, he explained, and played a significant role in keeping Missouri from joining the South.

The bottom line is people are complicated, Bowman said. "Even 19-year-old idiots who spray-paint are, in their own way, complicated."

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Diversity course debate continues

MU graffiti fuels discussion again.

By **JANESE SILVEY**

4:32 February 10, 2011

Taking a class embedded with lessons in diversity won't stop hateful drunken students from creating racist displays on campus in the future, and most **University of Missouri faculty members** understand that.

What "diversity-intensive" courses would do, however, is expose students to other points of view in hopes that they will become better equipped to work and live in a global society after graduation.

That was the general consensus of an MU Faculty Council discussion yesterday about the idea of tacking a diversity class onto general education requirements. The discussion has been going on for years, and the council has yet to vote on the proposal.

"Diversity-intensive" courses would be patterned after MU's current slate of "writing-intensive" courses. The plan would not add extra hours to a student's course load. Rather, it would identify existing classes that teach diversity and stamp them with the "DI" label to make sure all undergraduates take at least one.

The goal is to get students to "think critically and challenge stereotypes," said Victoria Johnson, an associate sociology professor. "Recent incidents indicate we're not doing a good enough job at that."

Last weekend, MU freshman Benjamin Elliott was arrested on suspicion of spray-painting a racist slur on public property outside of Hatch Hall. A year ago, two MU students pleaded guilty to a littering charge after lining cotton balls outside the Gaines/Oldham Black Culture Center.

April Langley, interim associate director of the black studies program on campus, stressed, though, that diversity spans well beyond learning about any one race or culture. Diversity-intensive courses, she said, could include rural sociology, genetics and a wide array of subjects.

Although Johnson presented a sample list of classes to prove MU has enough for all students to take at least one diversity-intensive course, a separate committee would be charged with evaluating which courses fit the bill.

The MU Faculty Council would then approve a final list of "DI" classes.

Not everyone was on board with the idea of making students take a diversity class. Xiaoguang Ni, an economics professor, said he is more worried about students not taking enough math and science courses.

"The cotton ball issue was appalling," he said but added it's just as appalling that his students can't divide fractions or calculate other problems he called "fourth-grade stuff."

"We're not producing students for the high-skilled group," he said. "That's a big hole we need to plug. The way to eliminate inequality is to make people who are underprivileged more skilled."

Ni also questioned whether the diversity course would fulfill its purpose if students studied their own cultures. He challenged whether female students taking women's studies courses would be learning anything about diversity.

"What do white men learn from white man studies?" Langley challenged.

Several professors said they support diversity courses as part of the university's mission to provide students with a liberal, 21st-century education.

"I do not believe diversity-intensive courses will take care of the kinds of problems we've seen over the past couple of years," said Harry Tyrer, a computer and electrical engineering professor. "But I believe my students are going to be in a globe dealing with global issues."

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COLUMBIA MISSOURIAN

COLUMN: Zero patience left for MU's flimsy 'zero-tolerance' policy

By Anne Christnovich

February 18, 2011 | 2:02 p.m. CST

I want to thank the people who are advocating for mandatory diversity classes at MU. As your peer and fellow Tiger, you have my full support, and I hope this is a change we see in the near future.

I also want to thank the leaders of the Legion of Black Collegians, the Columbia branch of the NAACP and everyone else who was offended by what our fellow students have done. There are many who chose to be calm and composed in the face of these infuriating acts of ignorance.

The immediate response from students painting signs that say "one love" and "peace," instead of displaying anger and hatred, is truly inspiring.

I just wish I could feel the same way.

The latest race-related vandalism at MU has convinced me it's going to take a lot more than diversity classes to fix MU's crumbling reputation of "zero tolerance" for hate crimes.

Like many students, I was angry, appalled and embarrassed by the barbaric use of symbolic speech last February when cotton balls were scattered in front of the Gaines/Oldham Black Culture Center.

After Zachary Tucker and Sean Fitzgerald were arrested and charged with the crime, I experienced a range of emotions while the university and the legal system decided what to do with them.

At first, I was relieved when they were apprehended, and I was hungry for justice. I believed they should have been prosecuted to the utmost of the law's ability. Expulsion, fines, hate-crime charges — throw the book at them.

Heck, if they were sentenced to wear the letter R made from cotton balls on their shirts for the rest of their lives, I would not have batted an eye.

After some time, I calmed down a bit, and, as a result, I softened. As I thought about it, I made an effort to put my emotions aside and look at the situation more objectively. I tried to put myself in the shoes of their parents, friends or siblings.

Maybe, I reasoned, just maybe, those two kids (and I use the word purposely) really did just get blackout drunk and made an incredibly unfortunate decision.

Maybe they didn't mean to send a deeply condescending message to our school's black population. The fact that it was on the Black Culture Center's lawn and happened during Black History Month could have been a terrible coincidence.

I even went so far as to feel a little sympathy for the guys. If they were expelled and charged with a hate crime — and I was sure they would be — it could effectively ruin their lives.

How far could they go in a career before their criminal records would hold them back? Could they pursue a long-term relationship without disclosing this part of their past?

I guess the university softened, too. Apparently, MU decided 80 hours of community service and a laughable "littering" charge did a sufficient job of reflecting its "zero-tolerance" policy.

But alas, another February and another hate crime.

This time, student Benjamin Elliott admitted he spray-painted a direct insult about Black History Month outside Hatch Hall.

Again, alcohol was cited as the accomplice.

Again, the administration sent a mass e-mail apologizing and promising the "zero-tolerance" policy would patch everything up.

I'll believe it when I see it.

If anything, the recent incident has only proved last year's application of the "zero-tolerance" policy is just as responsible for the painted slur as the guy holding the spray paint.

Last year, MU chose to protect two warped, thoughtless students rather than speak up for the thousands of students who were offended and targeted by what has become universally known as "the cotton-ball incident."

I hate to be the "what iffer," but I can't help wondering whether I would be writing this column today if the vandals had been slapped last year with a "zero-tolerance" policy.

Enough is enough. The university has no choice but to treat this recent act of racism as a prelude to what I fear may become an annual event.

If the first instance hadn't taught me a few lessons, the softer part of me might hold onto the possibility that Elliott isn't as monstrous as his admitted drunken actions make him out to be.

But why risk it? MU can't afford to take that chance again.

It's no secret MU lacks diversity. In this area, I think mandatory classes would be quite eye-opening to a lot of incoming and continuing students.

I think it would be even more meaningful if these classes could cite the outcome of the recent incident as an example of the real, hard consequences of such crimes. I can only hope to see these classes materialize before I leave MU.

For the record, I was reporting for the *Missourian* at the time of the "cotton ball incident," but I didn't cover the story. I am still at the *Missourian* and I am not covering the recent incident either.

Right now, I am writing this column about how I feel as a student at MU.

Call me an idealist, but I still have an expectation MU administrators will begin to do a better job of upholding the reputations of the best of us — not the worst.

Anne Christnovich is a senior at MU and currently reports for the Missouriian's public safety beat.



Climate is discussed at lecture

Federal science official has warning on global warming.

Despite an abundance of snow and frigid temperatures this winter, William Brinkman, director of the Office of Science at the U.S. Department of Energy and a University of Missouri alumnus, says global warming is a serious problem that needs to be addressed.

Yesterday, Brinkman presented a lecture "Science and Energy" to the public at MU's physics building to discuss climate change and alternative energy sources.

Although the lecture was mainly attended by scientists, engineers and students, Brinkman said it's important for the general public to hear this message and move toward change.

"The general public talks about being innovative and keeping the country at the forefront of the world, and we need to be at the forefront of the energy world," he said. "The public has to say that innovation has been the driving force for the American economy and needs to continue to be."

Brinkman illustrated climate change and related issues, such as a surplus of carbon dioxide emission that comes from fossil fuel energy sources, with charts and graphs to emphasize the facts behind these issues before talking about potential solutions.

He discussed the possibilities of clean energy sources such as biofuels, fuels that are derived from organic waste material or fusion energy, or power generated by nuclear fusion reactions.

Using solar fuels and power also is a key step, he said, though it might be difficult to get Americans to convert to these alternative forms of energy, especially solar energy, because of a significantly increased cost.

"We need to find a way to bring the price of solar energy down," he said. "That would make a huge difference."

One audience member asked how scientists can make the general public more aware of the energy situation, especially those who are skeptical of the concept of climate change.

"Whether they believe or not, I don't know how to say it in a more forceful way," Brinkman answered. He did, however, say that more public conversations help increase awareness.

Joseph Schaeperkoetter, a graduate student studying alternative energy who attended the lecture, said communicating with the public and raising awareness about energy issues are always obstacles for scientists and researchers in their field.

“It’s one of the hardest things we have to do, and it is a challenge we face,” he said.

Tyler Rash, also a graduate student studying alternative energy, said he thinks government pressure or mandates will be the only effective method to bring about a significant change in America’s energy use.

Both students, however, agreed that the lecture was a good first step in raising public awareness.

“Events like this definitely help,” Schaeperkoetter said.

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Australian researcher talks end of Y chromosome

What would the world be like without men?

Generations ago, this might have been an impossible question to answer for many in the industrialized world. But as social progress equalizes the gap between the sexes, the global economy increasingly favors brains over brawn, and as technological advances redefine human reproduction, this scenario becomes less fantastical.

And, in what might be an unsettling thought for men everywhere, the key genetic ingredient to their manhood — the Y chromosome — is shriveling as human evolution trudges forward.

Within 5 million years, researchers predict, the chromosome could disappear altogether, explained Jenny Graves, **a professor of biological sciences at the Australian National University. Graves presented her lecture “Weird Animals, Sex and the Future of Men” yesterday at Saturday Morning Science, a weekly program presented at the Christopher S. Bond Life Sciences Center on the University of Missouri campus.** Attendees filled nearly all 250 seats in Monsanto Auditorium.

In human cells, there are 23 pairs of chromosomes, the last of which is the sex chromosome pairing — which determines sex. Women have two identical X chromosomes, while men have one X chromosome paired up with what is now a puny Y chromosome.

Many have grown up with the notion that the Y chromosome is “small” but “macho,” Graves said, flexing her bicep for emphasis. But in reality, she said, the chromosome is a “wimp” — it’s highly susceptible to mutation, degradations, and deletions of the genes that make up the chromosome. The chromosome once was an equal to the X chromosome. But as the generations have passed, the Y has become a “sad relic of its former self,” Graves said.

When the Y chromosome fades away, Graves said, there are two possible outcomes for humankind. Because males are needed to propagate the species, humans could die out. Or, she said, human sex chromosomes could evolve on a similar path as a species of vole found in Eastern Europe: Sex chromosomes for males and females would be the same, and gender distinction would be expressed in a different gene in the chromosome.

This outcome, she said, could result in different species of humans in the very distant future, if they haven’t already become extinct. “I don’t know what is the scarier thought,” she said.

Graves also discussed her research into the genetics of unusual animals, such as the platypus. Not quite a duck, not quite a mammal, and not quite a snake, these animals' sex chromosomes are a "chain" of 10 pairings of X and Y chromosomes.

Graves said she has been giving lectures on this topic for about a decade, and the fact that the Y chromosome is in decline is nothing new. But, she said, the lecture still surprises some members of her audiences. One of her speaking dates had been billed by its organizers as having feminist overtones. "I'm really not a feminist," Graves said. "I really represent what I see."

Paula McSteen, an MU biology professor in attendance at yesterday's lecture, said she had seen an earlier rendition of the lecture on Thursday.

"I do think that the women in the audience enjoyed it more than the men," she said.

McSteen sat with fellow MU professor Joe Polacco, who said he doesn't feel threatened by the notion that the Y chromosome is slowly fading from our genes.

"It is what it is," he said. But, he said, he did feel envy for the male platypus, which gets to carry venom.

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COLUMBIA MISSOURIAN

Missouri veterans sue MU over tuition benefit

By The Associated Press

February 18, 2011 | 9:40 a.m. CST

COLUMBIA — A lawsuit filed by five Missouri veterans accuses the University of Missouri System of misapplying a state tuition benefit.

At issue is a state law that caps tuition at \$50 per credit hour for certain veterans. The Columbia Daily Tribune reported that the law says the discount should kick in after other federal and state aid is applied.

The question is how universities should apply that other financial aid. The lawsuit says the institutions are using it to pay for tuition before capping classes at the \$50 limit. The lawsuit says those dollars should be spread across the entire cost of college.

Southeast Missouri State, University of Missouri-St. Louis and Moberly Area Community College are also named in the lawsuit, according to the Columbia Daily Tribune.

ST. LOUIS POST-DISPATCH

Lawsuit says UM misapplying veterans' benefit

Posted: Friday, February 18, 2011 11:24 am

Five Missouri veterans have filed a lawsuit accusing the University of Missouri-Columbia and three other schools of misapplying a state tuition benefit.

At issue is the Missouri Returning Heroes' Education Act, a 3-year-old state law that caps tuition at \$50 per credit hour for veterans who have served in combat since 2001. The law says the discount should start after all other federal and state aid is applied.

The question raised in the lawsuit is how universities should apply that other financial aid. The institutions now are using it to pay for tuition before capping classes at the \$50 limit.

The veterans' lawsuit says the money should be applied to the entire cost of attending college. Diverting all aid to pay for tuition "damages Missouri combat veterans because it strips them of aid to pay for room and board, living expenses, books and supplies and transportation," the lawsuit says.

The lawsuit was filed this month in St. Louis County Circuit Court against the University of Missouri-Columbia, as well as the University of Missouri-St. Louis, Moberly Area Community College and Southeast Missouri State. Two of the veterans attend the University of Missouri-Columbia. The other three plaintiffs are single students from each of the other colleges.

They're also representing all other Missouri combat veterans who qualify for the tuition cap under class-action status, according to The Columbia Daily Tribune.

Nikki Krawitz, vice president of finance for the University of Missouri system, said in a statement that the university system uses the methodology recommended by the Department of Higher Education when applying the tuition cap.

Moberly Area Community College did not immediately return a call Friday seeking comment.

ST. LOUIS POST-DISPATCH

College endowments bouncing back

BY TIM BARKER tbarker@post-dispatch.com > 314-340-8350 | Posted: Monday, February 21, 2011 12:10 am

MU mention page 2

Bolstered by solid investments and the improving generosity of boosters, university endowments here and across the nation reported stronger gains last year.

Nationwide, endowments grew by an average of 8.4 percent, according to a recent study of 850 endowments by the National Association of College and University Business Officers and the Commonfund Institute.

But they still have a long way to go before recovering from recession-related losses. Some observers say that could take several more years.

"The typical endowment is still down 10 (percent) to 15 percent from where it was in 2008," said Ken Redd, director of research and policy analysis for the business officers group.

The area's largest endowment belongs to Washington University, which reported growth of nearly 10 percent, bringing it to \$4.47 billion. Still, the 17th largest endowment in the study remains well off the \$5.66 billion WU reported in summer of 2007. And considering that it accounts for 11 percent of the university's annual revenue, it's not surprising the still-shrunken endowment was cited as a contributing factor in the school's latest tuition increase.

"We did tighten our belt these last couple of years," said Barbara Feiner, the university's vice chancellor for finance. "It affects our ability to fund things at the level we would like to."

For Washington University and other schools, these endowments often represent a significant source of money that's used for everything from scholarships to professorships to new academic buildings. Most of the money — often 85 percent or 90 percent — is dedicated to very specific purposes, dictated by those who gave it.

Schools and their foundations have responded in a variety of ways to the endowment declines. In some instances, they've been able to cut back on discretionary spending. But often they've been forced to increase the so-called spend rate — the percentage of the endowment that goes to scholarships and other obligations.

As an endowment shrinks, administrators are forced to spend a larger percentage each year to maintain funding levels. According to the study, the national spend rate was 4.5 percent — though institutions with endowments larger than \$500 million spent an average of 5.6 to 5.7 percent.

Among them was the Principia Corporation, which supports both the college in Elsau and the pre-K to grade 12 school in Town and Country.

Principia ended the 2010 fiscal year with an endowment of \$607 million, up 14.7 percent from the previous year. Three years ago, the endowment peaked at \$780 million.

With only 1,100 students, the college is forced to rely heavily on its foundation. School leaders have delayed capital projects during the economic downturn, but they've also been forced to push the spend rate to 7 percent — well above the foundation's desired target of 5 percent, said Howard Berner Jr., Principia's chief investment officer.

"We were getting close a couple of years ago," Berner said.

It's a challenge that faces many schools in the region and across the country. And there's more at play than simply trying to make more money than you spend, said Bill Jarvis, managing director of the Commonfund Institute.

"The real task is keeping up with inflation," Jarvis said.

Otherwise, a donor's gift could lose its ability to generate enough money for its intended purpose.

Still, there's little evidence that foundations are rushing to make up that lost ground through changes in investment strategies. But they are making adjustments.

The University of Missouri system has removed some volatility from its portfolio by cutting some of its U.S. equities. The endowment ended the 2010 fiscal year with \$975 million, up 10.6 percent from 2009, but still off from the \$1.05 billion it reported in mid 2007.

And while the system has always re-evaluated its investment mix every two to three years, officials have been looking at it more frequently now, said Nikki Krawitz, the system's vice president of finance.

Given the nature of an endowment — intended to last forever — administrators can afford to take a conservative approach when it comes to making decisions about changing investments, she said.

"We can go through an entire market cycle and allow the endowment to recover, which isn't always the case with an individual investor," Krawitz said.

The national report also suggests that giving is on the rebound, with fewer schools reporting a decline in gifts and more reporting an increase.

That's worked in favor of schools such as the University of Illinois and its campuses in Urbana, Springfield and Chicago. The university is in the midst of a \$2.25 billion capital campaign that started well before recession struck.

Despite the obstacles the recession has presented, the campaign had nearly reached the \$2.1 billion mark by the first of the year. Some \$800 million is earmarked for the foundation, which ended the 2010 fiscal year at \$1.3 billion.

Clearly, donors are still willing to support favored causes, said Don Kojich, an associate vice president with the University of Illinois Foundation.

"Very few institutions have gone through a capital campaign during the worst economic period since the Great Depression," Kojich said.

While the national study looked only at higher education, other local endowments are sharing the same experiences.

Among them is the Mary Institute and St. Louis Country Day School, which is supported by an endowment that topped \$91 million in 2007. After falling to \$62.5 million in 2009, the fund rebounded to \$71.8 million last year, said Lisa Lyle, head of school.

That's forced cutbacks for the school, which draws 10 percent of its operating budget from the endowment.

"That's the downside of having such a large endowment," Lyle said.



Kids stretch imaginations

Workshop has students ready.

College student Christa Ziegler sat at a table with 9-year-old Coban Porter yesterday as the youngster read aloud a poem he wrote during a writing workshop titled, "How do you Figure?"

Ziegler made small suggestions — such as adding a comma or checking the spelling of a word — but mostly encouraged Coban and praised his creative writing.

"My dad, the giraffe ... is as strong as a brick wall and smarter than a calculator," Coban's poem reads.

The writing exercise asked students to use metaphors in a poem about someone in their family. It was one of several that students in grades 2-6 completed throughout the day at the Missouri Writing Project's elementary conference held at the University of Missouri. Other exercises encouraged them to use alliteration or develop a story around a simple every day object, such as a shoe.

Danielle Johnson, youth program coordinator for the Missouri Writing Project, said hosting workshops such as "How do you Figure?" gives students the chance to work on specific writing skills on a more in-depth level than they do in their classrooms. "As more and more state and national standards are put on education, there is a higher emphasis on student test scores, and there is less and less creative writing being done at public schools," Johnson said.

Many of the 35 students who attended the workshop came from Columbia Public Schools, which, like many districts, is struggling to bring up test scores. Other students were home-schooled or came from Columbia Catholic School, Sturgeon or other nearby school districts.

Coban and his brother Michael, 12, are home-schooled. Michael said he had written some poems before attending the conference, but yesterday's lessons taught him some new techniques.

"I learned how to create a poem and how to use metaphors and personification," he said.

He used those skills to write poems about football and his basketball shoes, and he said he plans to write more poems in the future.

Ziegler, who is in her third year of MU's education program and plans to teach high school English, said the workshop served as a learning experience for her.

“It definitely takes a lot more patience to work with younger kids; they’re still trying to grasp the basic concepts,” she said.

Ziegler says she plans to help with a similar conference for middle school-aged students in March. The Missouri Writing Project hosts middle school and high school conferences every year. Johnson says 100 to 150 students attend the high school conference annually and 300 to 350 attend the middle school conference.

She anticipates the elementary conference, which was held for the first time in November, will start to grow soon, and she said several students attended both the November and February conferences.

Eric Cornelius sent his 8-year-old daughter Kelli to both. “She had fun the first time, so we decided to send her again,” he said.

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Time well spent

As a medical researcher working in North Carolina in the 1980s, Kenneth Gruber made a curious discovery.

One of Gruber's instruments includes a stereotaxic, which holds the patient's head as a drug is precisely directed to the patient's central nervous system. Gruber has moved his startup, Tensive Controls, to Columbia.

He became aware that nearly every organism — from the lowliest mollusk to the most complicated human — has a strange on/off switch, a primordial control hidden deeply in DNA capable of influencing the cardiovascular system.

For the most part, the "switch" remains turned off, which is a good thing because humans suffer horrible side effects when it's activated.

"We don't understand the reason these systems are there," Gruber said. "As an academician, you'd love to investigate."

Although he likely won't ever fully examine every aspect of that discovery, he has been able to find a commercial application for some of what he learned. In 2009, he launched the biotech company Tensive Controls, a startup he relocated last month from North Carolina to Columbia.

He arrived in the midst of a 10-inch Missouri snowstorm.

After that faltering start, he is now ensconced in the University of Missouri Life Science Business Incubator at Monsanto Place and feels he has the resources he needs to take Tensive Controls to the next level.

Gruber made his original discovery while studying the human body's central melanocortin system. Melanocortin is the name given to a type of hormone produced by the pituitary gland in the brain; a hormone is a molecule that travels in the blood to tissues, where it binds to specific receptors, causing changes to occur.

Back then, Gruber's research was science for science's sake. "It had no immediate medical interest. It was interesting, but there are a lot of interesting things that have no application commercially," he said.

Gruber — who earned his doctorate in medical science from New York University in 1974 — has spent his career working as an academic researcher. He taught doctors for several years as a medical school professor and served as a branch chief at the National Institutes of Health between 1992 and 2001.

After his stint at the NIH, he left to continue his academic research at California Polytechnic University as an administrator. “I began to see that the melanocortin field had changed a lot since I left,” he said.

Melanocortin first got its name because scientists were aware it controlled pigmentation. They were not yet aware these hormones regulate an array of physiologic processes.

“The pigmentation of melanocortins is one way to control body temperature in cold-blooded animals,” Gruber explained. “Warm-blooded animals control their body temperature by metabolism.”

But sometimes when animals are very, very sick, their metabolism rages out of control. When this happens to a human body, it manifests itself as cachexia, a wasting syndrome characterized by loss of weight, muscle atrophy, fatigue, weakness and significant loss of appetite. Even when a patient consumes more calories, lean body mass will be lost.

Cachexia is seen in patients with cancer, AIDS, chronic obstructive lung disease, congestive heart failure, tuberculosis and influenza. A healthy body searches for stores of energy first in its fat cells before it starts to rob muscles and organs for fuel. The body of a person suffering with cachexia doesn't care where the fuel comes from: The body cannibalizes itself at a cellular level. (This is called catabolism; it's the opposite of metabolism.)

Gruber compared cachexia to a house on fire.

“Your metabolism is running out of fuel, and it's like you are pulling out the wooden studs to keep the body's temperature up,” he said. “It can get so extreme that a person can develop the symptoms of Kwashiorkor — a starvation disease — even if they are trying to get supplemental nutrition.”

Gruber said some people die from cachexia before they succumb to cancer.

Donald Doll, a professor of clinical medicine at MU, sees a number of patients suffering cancer of the head and neck. Treatment can make it too painful to swallow, and often doctors turn to feeding tubes. But he said there's no magic bullet that controls cachexia, and the existing treatments “haven't been good.”

“If you have a treatable cancer, controlling cachexia would allow the patient to tolerate radiation or chemotherapy long enough for the treatment to work,” he said.

In the years since he left the field, Gruber watched many of his peers introduce drugs aimed at metabolism control.

“There have been many, many attempts to bring melanocortin drugs to market, but they failed in animal trials, and they failed in clinical trials,” he said.

Why?

Although researchers were successful at controlling the body’s metabolism, they were unable to prevent the deleterious cardiovascular side effects. And without that, the drugs were useless because even minimal degradations to the heart and lungs worsen over time.

Most researchers assumed the cardiovascular effects were part and parcel of the metabolic ones.

Gruber believes he is one of the first scientists to realize that assumption was wrong.

“Making melanocortin drugs has been tried before, but no one has tried — no one has our advantage — in understanding the cardiovascular effects could be separated from the metabolic ones. That was work that I had done years ago, but I hadn’t figured out until just recently how to make a drug to do it,” he said.

Once he realized he and his colleagues had the ability to develop a drug based on his previous work, he formed Tensive Controls. “In the same year, we got provisional patent protection for our technology,” he said.

The company has three other equity-owners: Daniel Marks, a pediatric endocrinologist at Oregon Health Sciences University; Laszlo Prokai, a chemist at University of North Texas Health Sciences Center; and Michael Callahan, an expert in cardiovascular physiology and pharmacology at Wake Forest University School of Medicine.

Callahan remembers the day Gruber asked him to join him because it was Christmas 2008. “We had dinner and retired to the living room to talk about it,” he said.

He was easily persuaded to join Gruber’s team. He said scientists spend their days working on “pie in the sky” ideas.

“You hope some day your work will be important and interesting,” he said. “This is closer than any number of things I’ve ever done to really impacting people’s lives.”

Gruber is convinced he has developed a drug that acts like a brake on a person’s metabolism without affecting their cardiovascular system.

Now he has to prove his work to the federal government. Attempts to bring similar drugs to the market have failed at least 20 times.

“The FDA wants to have absolute evidence there’s nothing affecting the cardiovascular system in any way,” he said.

He said small animal tests done by Tensive Controls revealed the drug performed “exactly as we predicted.”

“We stimulated appetite and began to restore lean body mass in a rat,” he said.

Once he formed the company, he searched for a suitable business incubator. He settled upon Wake Forest University in North Carolina, but the move didn’t work out, and he spent only six months there.

“We were told we would have full access to the animal facilities, and they took that promise back,” he said.

Instead of fighting that turn of events, Gruber contacted the MU Life Science Business Incubator.

“I sent” incubator CEO and President “Jake Halliday an e-mail, and within two to three hours, I had a positive response,” he said.

Halliday contacted Gerald Meininger, director of the Dalton Cardiovascular Research Center, who felt Gruber’s research meshed well with the center’s mission, particularly its expertise in cardiovascular pharmacology.

“It’s terribly exciting whenever you can translate basic research findings into something that will be able to help patients,” Meininger said.

Callahan said the move to Columbia is fortuitous because the Dalton Center scientists are world experts. “I don’t know what forces were at work, but whatever it was, it feels like something was guiding us” to Columbia, he said.

When Gruber contacted the National Cancer Institute about the success he was seeing with his small-animal trials, the first question the institute’s officials asked him was: “What are your plans for large animals?”

They were pleased to hear he was planning to conduct some experiments on companion animals, in coordination with the MU College of Veterinary Medicine, he said.

Gruber already has received \$200,000 in Phase I NIH grants to do his work and \$100,000 from the Patient Protection and Affordable Care Act of 2010. He is in the process of applying for Phase II grants, which he hopes will provide \$2 million more.

He also will need private investment dollars to keep moving forward. “We’re getting him ready to present to the Centennial Investors,” Halliday said.

Gruber acknowledged that launching Tensive Controls — a startup with myriad challenges ahead — was a big gamble from his previous safe career as researcher and administrator. After all, those posts came with prestige and healthy salaries.

So, why do it?

He said it wasn't for the money. "I could be riding my bike around Europe right now, visiting the Hermitage," he said.

Instead, he is lured by the possibility of building a legacy for himself.

"At some point in your life, you realize you have more money than time," he said. "It's not about how you're going to spend your money, but how will you spend your time? How do you want to be remembered? I thought I could cure a few diseases."

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