



MU News Bureau

Daily Clips Packet

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University of Missouri researchers move closer to curing 2 fatal diseases

Story generated by MU News Bureau release: [MU researcher closes in on pathways involved in ALS disease](#)

By Waverly Colville

Two University of Missouri researchers have made major steps in the fight against two chronic, fatal diseases.

MU School of Medicine researcher Dongsheng Duan, who used gene therapy to prevent muscular dystrophy in dogs in 2015, is giving the research to a clinic to test on humans with muscular dystrophy.

Muscular dystrophy is caused by a gene mutation that interferes with the production of the protein dystrophin. Without dystrophin, muscles become weak and die. Eventually, the disease attacks the heart and lung muscles, which stop working.

However, the gene therapy could allow a way to replace this mutation with an engineered gene. Dystrophin is difficult to replace because of its large size, so Duan and his team created a microgene called microdystrophin, also known as SGT-001.

“This has been tried for the last 30 years, so many people are working on that,” Duan said. “The importance is my group identified a piece that is essential, that is critical for disease development so we developed a new microgene. It has a unique piece which results in better protection of this disease.”

Solid Biosciences is the company that will lead the clinical trials in the United States. The trials will study the safety and efficacy of the microdystrophin in patients with muscular dystrophy.

In the Dalton Cardiovascular Research Center, investigator and bioengineering professor Singhua Ding has experimented with an enzyme in his ALS research.

ALS, also known as Lou Gehrig’s disease, is a motor neuron disease that leads to muscle atrophy, paralysis and death. The NAMPT enzyme in the brain became the target of Ding’s study.

“If we’re targeting this pathway, it may help delay this disease,” Ding said. “I think the discovery is pretty exciting and we need to further study this in humans.”

Ding and his team observed that mice lacking the enzyme showed many symptoms found among humans with ALS, including weight loss, hypothermia, motor neuron degeneration and motor function deficits.

The team treated the mice with a molecule called nicotinamide mononucleotide (NMN) which substitutes the missing NAMPT enzyme. The mice had restored motor function and expanded their life span.

Sherrie Hanneman, the director of communications of the Mid-America Chapter of the ALS Association, said the organization has seen the university's research.

"We were very impressed with this research," Hanneman said. "The research team said it sounded really promising and that they should apply for a grant through our organization."

MISSOURIAN

[GUEST COMMENTARY: UM System should practice what it preaches with land sale](#)

By Peter H. Raven

Should universities practice what they teach?

Having moved to the beautiful state of Missouri some 46 years ago, I have been deeply impressed with what nature has to offer here to all of our citizens. **I was able to deepen my knowledge of the state while serving as a member of the Board of Curators from 1985 to 1990, and to realize what our fine university system has to offer in so many ways to all of the people of Missouri.**

As the population of our state and country increase steadily, however, we are going to have to learn to live in peace with our countryside and to build our urban areas in compact yet sustainable ways: there is simply not enough land to keep growing outward forever since we need agricultural and forestry lands to feed us and supply our other needs and nature to refresh our spirits.

I understand that it is now being proposed that a large housing development be built on land owned by the university that is adjacent to the Busch Memorial and Weldon Spring conservation areas, a largely undeveloped, forested area just west of Chesterfield in St. Charles County. Along with the nearby conservation areas, it forms a really significant place at the edge of the St. Louis

metropolitan region. It is a wonderful asset for the whole community and one that I argue should be preserved for future generations.

St. Louis has sprawled out into the countryside much more rapidly than its population has grown, and has one of the lowest housing densities near an urban area anywhere in the nation. The trouble with continually making decisions to develop wild land is that they are essentially irreversible: once gone, nature cannot really be restored to what it was. We conserve it by developing rationally, not by simply taking the next available piece away from what's left. With the population within St. Louis city limits now at approximately 316,000, down from 857,000 in 1950 and thousands of vacant lots and houses in a formerly flourishing area, it hardly seems the time to take away another piece of our existing natural areas in order to add a few hundred more conventionally packed houses.

For these reasons, I hope that the UM System Board of Curators will find it possible to turn away from this development project. Obviously, I understand that in times like these it is necessary to have funds to run the university properly and keep it the kind of asset it ought to be for all of our citizens. Nonetheless, it would be a great time for the curators to lead, as we have on so many important issues in the past, and do something of lasting value for all of our citizens for the long run. There must be creative ways to zone any development on this property so that it isn't simply a scattered group of houses on steep and beautiful bluffs overlooking the Missouri River and the Katy Trail.

As a curator, I fairly often found it necessary to act in ways that extended beyond the immediate, ones that involved the maintenance of lasting values for which we were the caretakers. To me, this is such a problem, one that would benefit from additional thought before considering any development at this very special place.

Pat Jones, who with her late husband, Ted, created the Katy Trail, one of our state's great natural assets, recently wrote in a letter to the St. Louis Post-Dispatch that with this proposed land sale, the university "no longer practices what it teaches." I would agree strongly with that assessment and I encourage the curators to develop a kinder plan for dealing with this beautiful and natural property.

Best wishes to all for a most successful, and sustainable, New Year!

Peter Raven is a member of the Pontifical Academy of Sciences at the Vatican and a trustee of the National Geographic Society in Washington, D.C.

ST. LOUIS POST-DISPATCH

Title IX report complete after SLU basketball players were accused of sexual assault. What now?

By Ashley Jost and Stu Durando

ST. LOUIS • An attorney for several St. Louis University basketball players who were accused of sexually assaulting three women in September says he has reviewed the final report from the school's investigation.

Attorney Scott Rosenblum received the report involving his clients after it was generated through SLU's Title IX process.

Meanwhile, the university has stayed mum on the issue, pointing to federal student privacy laws. President Fred Pestello has given two updates, one in the days after the women's accusations and another on Dec. 4.

Rosenblum represents three of the four men who were accused of sexually assaulting the women in an on-campus apartment Sept. 24. Another attorney, John Rogers, is representing the fourth man. No other details of the alleged assault have been released.

It was unclear whether the parties involved have met with a SLU hearing officer or if the hearing officer has made a decision in the case after reviewing the investigation report and recommendation done by an outside counsel.

When asked via email whether his clients would need to file an appeal, Rosenblum said he was "considering all options."

The Title IX process runs concurrently to a separate, ongoing investigation by St. Louis police, which was still considered to be an open case as of Wednesday.

Rogers told the Post-Dispatch in September that he would "be shocked if charges are pursued by the circuit attorney's office."

Title IX, the federal sex discrimination law, gives colleges guidance on handling cases of sexual violence, harassment and other discriminatory practices. The process is often misunderstood, while critics argue such investigations should be left to police.

Three players — Adonys Henriquez, Jermaine Bishop and Ty Graves — have not played in the team's first 13 games or been allowed in the arena during games. The university has not

commented on their absences. All have participated in practice throughout the season, and two have traveled with the team on two road trips. The fourth accused player has not missed a game.

Title IX at SLU

Until this fall, the policies at universities nationwide relied on guidance provided by the U.S. Department of Education from then-President Barack Obama's administration.

New Education Secretary Betsy DeVos and her team rolled back that guidance in September, two days before the alleged assault involving the four SLU basketball players.

That includes guidance that schools should adhere to a 60-day time frame to investigate and decide on cases involving sex discrimination, including sexual violence.

SLU Title IX Coordinator Anna Kratky told the Post-Dispatch in late October that SLU sticks as close to the previous 60-day recommendation as possible. Complicated cases take more time, she said. The 60-day mark for the case involving the SLU basketball players was in late November.

Kratky, a former sex crimes prosecutor for the city, is convinced that SLU's processes are, in many ways, the gold standard.

When a student files a Title IX complaint, alleging any number of things covered by the federal discrimination law, SLU has a full-time investigator who collects evidence and interviews those involved and witnesses.

Depending on how complex a case is, the university sometimes uses a Philadelphia-based law firm, Cozen O'Connor, to help with Title IX investigations. That's not uncommon among colleges amid uncertain times for the federal law.

The university brought the firm in for the investigation involving the basketball players.

After the review, the investigator writes a report with a recommendation. After a comment period for changes on that report, both parties meet separately with a hearing officer who ultimately decides whether the accused person or people are responsible and issues a sanction if it's deemed warranted.

There's an opportunity to appeal, which Kratky said most people use, in which a three-person board reviews the paper trail of the case and makes a final decision.

Looking to improve

It's impossible to know how many Title IX reports have been filed with SLU.

Even if the private institution shared such information, Kratky said that the numbers aren't indicative of what's happening on campus. Sometimes, a student reports an assault that happened months or years ago so they can get help with counseling.

The best public information available to indicate issues such as this are Clery reports, which are federally mandated logs of certain crimes that create a threat to the campus.

According to SLU's Clery report, there were 12 reported rapes on campus in 2016, 10 in 2015 and four in 2014. More than 12,000 students are enrolled at SLU. For comparison, with more than 15,000 students on campus, Washington University reported 36 rapes on campus in 2016, 11 in 2015 and 15 in 2014; and the University of Missouri-Columbia, with about 32,000 students, reported 19 in 2016, 12 in 2015 and six in 2014.

"Numbers going up sounds like a bad thing, because it sounds like there are all of these things going on on campus, when really it's that students are feeling empowered to come forward, seek help and get support," Kratky said. "They know where their resources are and frankly, they trust the school not to brush this under the rug."

Pestello recently announced the university's first climate survey to gauge how students feel about issues on campus, saying he was concerned about sexual misconduct there.

There's also an ongoing discussion about prevention at SLU, similar to campuses nationwide. Pestello recently announced an annual, required online training for students.

Kent Porterfield, SLU's vice president for student development, said: "I think we do as much as any campus I know, but we're always looking for a way to have an impact. Touching all of the bases isn't what this is about, it's about preventing misconduct to occur in the first place."

MISSOURIAN

[SANDY DAVIDSON: With net neutrality, free speech and free market collide](#)

By Sandy Davidson

Thanks to the FCC's tossing net neutrality on Dec. 14, we can no longer take for granted our ability to exeleutherostomize over the internet.

Yes, I just learned that word "exeleutherostomize," so like a dog with a new chew toy, I'm playing with this word. It means "to speak out freely," according to the Oxford English Dictionary. Exeleutherostomize has 18 letters, so it takes up 18 spaces. "To speak out freely" takes up 19 spaces, so exeleutherostomize saves a little print space, but I digress.

What's happened

Let's get into the weeds about what's happening at the FCC. Yes, it's political, in part. FCC Chair Ajit Pai, a Republican, was appointed as one of the five FCC members by President Obama in 2012, after Senate majority leader Mitch McConnell recommended Pai. Then President Trump appointed Pai as chair. Federal law says the president appoints commissioners and the Senate confirms them for staggered 5-year terms, and not more than three commissioners may belong to the same political party.

Pai doesn't like net neutrality, but that didn't matter so long as he was in the political minority of the 3-2 FCC. But now the 3-2 split has flipped. Pai became the head of the Republican majority, and some sacred cows were up for slaughter.

On the legal front, here's part of what happened: In 2014, in *Verizon v. FCC*, the U.S. Court of Appeals for the District of Columbia Circuit struck down the way the FCC was doing business. The court said, "...we are confronted with a Federal Communications Commission effort to compel broadband providers to treat all Internet traffic the same regardless of source — or to require, as it is popularly known, 'net neutrality.'"

Here's the problem: The FCC had categorized broadband providers as "information services" under Title I of the Communications Act of 1934, which only permits light regulation of information services. But the FCC was treating broadband providers like they were "common carriers" (think transmission services such as telephone companies) with heavier regulation than could be done under Title I. Common carriers fall under Title II of the Act. Thus the FCC was guilty of miscategorization by classifying broadband providers as Title I "information services" while regulating them more heavily, as if they were Title II "common carriers."

So the federal court in its 2014 decision struck down two parts of the FCC's regulatory scheme — the anti-discrimination and anti-blocking rules.

The solution? The FCC, in its 2015 Open Internet Order, categorized broadband carriers as common carriers under Title II, so then the FCC could legally impose its anti-discrimination and anti-blocking rules on broadband providers.

Changes under Trump

Then Trump got elected, and the earth shook at the FCC. Pai and his Republican FCC majority decided to take categorization of broadband providers back to the way it was before 2015 — back to classifying broadband providers as information services. Furthermore, the FCC will follow the light-touch regulation required by law for information services, which means no anti-discrimination or anti-blocking rules. And so, on that fateful day, Dec. 14, net neutrality ceased to be law.

Net neutrality had been — and still is — a sacred cow for people who want equal access for their voices to be heard over the internet. They want to be able to exeleutherostomize over the internet. We could call these folks "exeleutherostomizers," or maybe not. How about "exels"? And now exels fear that the internet will be divided up into fast lanes and slow lanes, and that some voices will be discriminated against or maybe even blocked altogether.

That's just a bunch of scare-mongering, Pai and his followers would say. It's the kind of "the sky is falling" mentality that impedes progress. In this case, it's progress for the internet that's being impaired by the exels' wild-eyed fear of an internet that's littered with barriers to, or even outright blockades of, internet access.

It won't happen, Pai and his followers say. Why not? Basically because the free market won't let it happen. The companies that provide us with internet service compete for our business, and now they're free to come up with new models that will enhance and advance the internet.

Pai and his followers believe in the power of the free market to unleash innovation. They could be called "free marketers" — or maybe Pai-ites or even Pai-in-the-sky-ites, if you're opposed to their views. They want the internet to be free from government regulations, such as net neutrality, that in their viewpoint have stood in the way of the internet's progress. Their views arguably follow the philosophy of Ayn Rand, made famous in her novel "Atlas Shrugged": Just unleash the Titans, and they'll create a better world for us all.

Now there are at least two things upon which exels and Pai-ites probably agree — that the internet's infrastructure is an important part of our country's infrastructure and that high-speed internet access needs to expand into more parts of the country.

A big question is this: Who do you trust more to do this expansion? The government with all of its regulations? Or businesses with their profit motives? Hm-m-m-m: The government or big business? Now that's a dismal choice. Exels choose government. Pai-ites choose big business.

The FCC made its choice, and the Pai-ites won. But don't count the exels out yet. Challenges to the FCC's Dec. 14 decision seem a virtual certainty — exels v. Pai-ites, with net neutrality and the ability to exeleutherostomize at stake.

Will Pai's view unleash free-market innovation — or unleash a "box of Pandoras," to quote the late, great Yogi Berra? I'm not sure anybody really knows.

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