MU, city forge partnership with Chinese district

Researcher's ties open door.

By Jacob Barker

Thanks to a University of Missouri researcher's ties to China, Columbia and MU hosted representatives from the technology and industrial district of Wujin to forge what they hope is a relationship that leads to mutual economic growth.

"I believe through our sincere cooperation, our future will be very bright," Bin Zhou, director of the Wujin district, said through an interpreter.

Zhou and other Chinese government officials and leaders of Chinese venture capital firm SummitView Capital were in Columbia today to announce an investment in Nanova Inc., a medical device company founded by researchers in MU's College of Engineering. At the same time, the Wujin representatives signed a memorandum of understanding with Columbia and MU, pledging to work together on future research, trade and economic development opportunities.

During a ceremony where every sentence had to be translated from English to Chinese, and vice versa, Columbia Mayor Bob McDavid told the city's guests about the film "Casablanca."

"The movie ends with the two protagonists walking into the fog saying, 'This is the start of a beautiful friendship,'" McDavid said, pausing while his words were translated. "And so that will be with Wujin and Columbia, Mo."

The ceremony, which drew U.S. Rep. Vicky Hartzler, R-Mo., and Jason Hall, the deputy director of the Missouri Department of Economic Development, came about because of an investment agreement between the founders of Nanova and SummitView Capital.

Hao Li, an associate professor of engineering at MU, founded Nanova several years ago. It makes medical devices, including a dental "plasma brush" that cleans and disinfects cavities before fillings. Clinical trials began on the device last year, and Li said it is still several years away from coming to market. Another orthopedic product should be ready within a year, he said.
SummitView will invest $6 million into the company and create a joint venture with Nanova. They will assist with bringing the products to market in both the United States and China, Li said. "They can leverage a lot of resources," he said. "They can cover the marketing part."

Wujin is one of the districts in the city of Changzhou, about 113 miles west of Shanghai. SummitView has offices in both cities, and its interest in Nanova led representatives of the firm and Wujin to Columbia. "Nanova is not the first company we invest in in the States, but it is the first company we invest in in the state of Missouri," SummitView representative Jianyue Pan said.

In an exchange of formal presentations, representatives from Wujin shared information about their district and province, while McDavid, Hall and MU Deputy Chancellor Michael Middleton shared information about the city, state and university. McDavid and other locals had dinner with the Chinese delegation last night, and a lunch was expected to follow.
COLUMBIA MISSOURIAN

Columbia, MU partner with Chinese investors to develop and market biomedical devices

By GH Lindsey
March 26, 2013 | 8:50 p.m. CDT

COLUMBIA — Chinese investors are backing an MU research start-up that wants to market medical innovations, including a dental tool that painlessly cleans cavities, plasma-coated coronary stents and super-strong bone implant materials.

A Chinese firm announced Tuesday that it will invest $6 million in Nanova Inc., a local high-tech biomaterials firm started by MU engineering faculty that designs, patents and sells medical devices.

The investors from Changzhou, China, as well as MU and Columbia officials, have forged a collaboration to foster economic growth for both regions. The Chinese company, Summitview Capital, will help commercialize Nanova's products.

Nanova was founded on the MU campus in 2005 to design groundbreaking orthopedic, dental, cardiovascular and other devices for niche markets. The company has been focused on research and development and now wants to bring its products to a wide market.

Initially, Nanova was funded by the National Science Foundation and the National Institutes of Health while mechanical and aerospace engineers at MU developed the medical and dental products. The investment from Summitview Capital is intended to help turn their research into a viable commercial enterprise.

The MU research team includes Hao Li, a founder of Nanova and associate professor of engineering at MU; Qingsong Yu, associate professor of mechanical and aerospace engineering; and Meng Chen, chief scientist from Nanova Inc.

“We want to be a bridge between the United States and China,” Li said.
Among the most promising products is the cold plasma dental brush, which uses chemical reactions to disinfect and clean cavities for fillings in 30 seconds.

Clinical trials on the dental plasma brush are expected to be completed this June, according to clinicaltrials.gov, which tracks public and private studies on a wide range of diseases and conditions.

The brush uses plasma to painlessly repair teeth with longer-lasting bonding material, according to the researchers. Certain types of cavities have a short restoration period, causing fillings to fall out. The brush modifies the tooth to allow the filling to better adhere to the surface.

After the clinical trials are completed and reviewed, the next step would be to produce and distribute the products in both China and America.

In 2011, China was Missouri’s third-largest destination for exports, purchasing $1.2 billion in Missouri-made goods, according to the Missouri Department of Economic Development.

The Chinese visitors said Tuesday they were impressed with MU and Columbia.

“The academic atmosphere at the university gives me great hope for the future of our collaboration,” said Bin Zhou, speaking through a translator on behalf of the Chinese delegation.

Zhou said he looked forward to seeing the collaboration benefit both cities.

“Through our sincere cooperation, our futures will be very bright.”

Supervising editor is Jeanne Abbott.
Early math skills key to adult abilities

MU study tracks CPS students.

Tuesday, March 26, 2013 at 2:00 pm

WASHINGTON (AP) — We know a lot about how babies learn to talk and youngsters learn to read. Now scientists are unraveling the earliest building blocks of math — and what children know about numbers as they begin first grade seems to play a big role in how well they do everyday calculations later on.

The findings have specialists considering steps that parents might take to spur math abilities, just like they do to try to raise a good reader.

This isn't only about trying to improve the nation's math scores and attract kids to become engineers. It's far more basic.

Consider: How rapidly can you calculate a tip? Do the fractions to double a recipe? Know how many quarters and dimes the cashier should hand back as your change?

About one in five adults in the United States lacks the math competence expected of a middle-schooler, meaning they have trouble with those ordinary tasks and aren't qualified for many of today's jobs.

"It's not just can you do well in school; it's how well can you do in your life," said Kathy Mann Koepke of the National Institutes of Health, which is funding much of this research into math cognition.

A new study shows trouble can start early.

University of Missouri researchers tested 180 seventh-graders. Those who lagged behind their peers in a test of core math skills needed to function as adults were the same kids who had had the least number sense or fluency way back when they started first grade.

"The gap they started with, they don't close it," said David Geary, a cognitive psychologist who leads the study that is tracking children from kindergarten to high school in Columbia Public Schools. "They're not catching up" to the kids who started ahead.
If first grade sounds pretty young to be predicting math ability, well, no one expects tots to be scribbling sums. But this number sense, or what Geary more precisely terms "number system knowledge," turns out to be a fundamental skill that students continually build on, much more than the simple ability to count.

What's involved? Understanding that numbers represent different quantities — that three dots is the same as the numeral "3" or the word "three." Grasping magnitude — that 23 is bigger than 17. Getting the concept that numbers can be broken into parts — that 5 is the same as 2 and 3, or 4 and 1. Showing on a number line that the difference between 10 and 12 is the same as the difference between 20 and 22.

While schools tend to focus on math problems around third grade and math learning disabilities often are diagnosed by fifth grade, the new findings suggest "the need to intervene is much earlier than we ever used to think," she added.

Exactly how to intervene still is being studied, sure to be a topic when NIH brings experts together this spring to assess what's known about math cognition.

But Geary sees a strong parallel with reading. Scientists have long known preschoolers who know the names of letters and can better distinguish what sounds those letters make go on to read more easily.

Likewise for math, "kids need to know number words' early on, he said.

NIH's Mann Koepke agreed and offers some tips:

PDon't teach your toddler to count solely by reciting numbers. Attach numbers to a noun — "Here are five crayons: One crayon, two crayons ..." or say, "I need to buy two yogurts" as you pick them from the store shelf.

PTalk about distance: How many steps to your ball? The swing is farther away; it takes more steps.

PDescribe shapes: The ellipse is round like a circle but flatter.

PAs they grow, show children how math is part of daily life.
Couple thanks University Hospital staff for care

By Jodie Jackson Jr.

Any of Kay Bonzelaar's injuries could have been enough to disable or kill her. All 24 ribs were broken, some in two places. Her pelvis was fractured, her spleen was ruptured, her liver lacerated and multiple arteries had been severed.

University Hospital acute care/trauma surgeon Chris Nelson was the first to reach Kay when she and her husband, Jack, arrived at the hospital's trauma center by helicopter July 18 after the retired Michigan couple's motorcycle crash at Osage Beach.

A tourniquet applied by EMS workers controlled the bleeding from the severed arteries in Kay's leg. Nelson discovered an even greater life-threatening injury. Kay's diaphragm was ruptured, and her abdominal organs had moved into her chest cavity.

Within seconds of arriving in the trauma bay, her heart quit beating and Nelson quickly opened her chest cavity — an emergency or resuscitative thoracotomy — to move the abdominal organs back into her abdomen.

Simultaneously, Nelson massaged Kay's heart, and it started beating again.

Yesterday, on their way back to Michigan from vacationing in Florida, Kay and Jack Bonzelaar returned to University Hospital, this time as visitors to thank the medical professionals who saved their lives. Kay choked up when she saw Tara Powell, the registered nurse who answered her family's questions day or night.

"It's so wonderful to hug you," Powell told Kay. "Bless your heart." Other staff members took turns hugging Kay, 62, and Jack, 73, as Nelson quietly entered the area. Kay turned to see him and cried as she hugged the doctor.

"Thank you. You put me back together," she said through the tears.

"It wasn't just me," he said. "I was just one part. Everybody helped. You're the reason we do this. To see you up walking around is the best part."
The Bonzelaars live in Holland, Mich. They were spending the day with fellow motorcycle enthusiasts in Osage Beach on July 18 — two days before their seventh wedding anniversary — when Jack and Kay's Harley-Davidson Heritage Softail crashed, apparently the result of a tire catching on loose gravel on a freshly-oiled road.

Neither remembers the accident. Kay doesn't remember anything that happened over the next three weeks.

Jack awoke from the accident with four broken ribs, multiple fractures to his left hip and a collapsed lung. He also underwent multiple surgeries. He was released to Rusk Rehabilitation Center for physical therapy and recovery after a week in the surgical intensive care unit.

Repairing Kay's injuries, however, was more complicated. Nelson said a patient with that amount of trauma had a 1 percent chance to survive. But by the time Jack completed physical rehabilitation three weeks later, Kay was discharged to a facility in her home state for several more weeks until she could begin physical rehabilitation.

Within two months, Jack was back on a motorcycle.

"I started riding when I was 13. This is the first serious accident I've had," he said. "I can't explain it. And I can't let it stop me. I have another 20 years to go."

Kay is optimistic she'll also ride again.

"When I get to a point where a bump doesn't kill my insides, I might try again," she said.

Kay also credits God for her survival and remarkable recovery.

"I think God had a hand in it, too," Nelson said, adding that from the EMS, the helicopter staff, nurses, doctors and follow-up care in Michigan, "the entire system worked."

Jack also choked up, thanking Nelson for saving his wife. And he also credited a higher power.

"The man upstairs took care of us," he said. "From the start, it was all the right people in all the right places."
COACHES SURVIVE SHOW-CAUSE ORDERS

MU MENTION P. 2

Few words are less welcome to college basketball coaches than "show cause," shorthand for the NCAA penalty designed to keep those sanctioned for misconduct at one school from quickly jumping to another campus.

Yet an Associated Press review of infractions cases since 2000 found that show-cause orders tend to have a sharply uneven impact.

Of the 44 former men's basketball coaches given show-cause orders since 2000, at least 25 found other basketball jobs, usually after the orders expired. Some remained involved with big-time programs, while others labored in obscurity at junior colleges, high schools or AAU programs. A few have found second acts in the NBA or as TV analysts.

Head coaches hit with show-cause orders tend to fare far better than the assistants deemed complicit in their misdeeds, the AP found.

Take former Tennessee coach Bruce Pearl. A three-year, show-cause order in August 2011 for lying to NCAA investigators about improperly hosting recruits at his home didn't keep him from joining ESPN as a college basketball analyst little more than a year later. That was after a stint at Sirius Radio.

Former Pearl assistant Steve Forbes, who was handed a one-year order, is head coach at Northwest Florida State College. His top assistant is Jason Shay, who also left Tennessee with a one-year show cause. Tony Jones, a third Pearl assistant who received a one-year order, is a preps coach in Alcoa, Tenn.

Washington State assistant Ray Lopes joined the Cougars in May 2012 after a pair of show-cause orders given to him for making hundreds of impermissible recruiting phone calls _ first at Oklahoma from 1995 to 2002 under Kelvin Sampson, and then again as Fresno State's head coach several years later.

"Many, many doors were shut on me out of fear, because of the show-cause tag on my resume," said Lopes, who started his climb back to the college ranks as an associate coach in the NBA D-League. "I was basically not worth taking a chance on, even though I had developed a pretty good reputation. None of that seemed to matter ... I almost gave up hope."

Under the penalty, schools that want to hire coaches with active show-cause orders essentially must prove to the NCAA that the rule-breaker has made amends. If not, any broader sanctions levied against the offender's former school can carry over to the new employer.
Former New Mexico State assistant Fletcher Cockrell left coaching for law school after receiving a 10-year order in 2001. The NCAA found that former Aggies coach Neil McCarthy agreed to hire Cockrell from Jones County Community College in Mississippi if he steered two of his JUCO players to Las Cruces. The NCAA also found Cockrell guilty of academic fraud by providing test answers to the two players.

"I'm doing quite well," said Cockrell, now a Houston attorney. "I'm OK, trust me."

So is Sampson, who is now an NBA assistant with the Houston Rockets following previous jobs with the Milwaukee Bucks and San Antonio Spurs. He declined to comment for this story.

The punishment has a long history. According to the NCAA, the University of Nebraska-Omaha received the first show-cause penalty in April 1963 _ an institutional penalty after the football team played in an unsanctioned postseason game. A decade later, the NCAA handed down what appears to be its first show-cause penalty against an individual, when the athletic director at what was then known as Bloomsburg State College in Pennsylvania was found to have improperly raised scholarship money from outside boosters.

Show-cause orders are more prevalent now, with the NCAA issuing more than 100 overall since 2000, covering sports from football and basketball to baseball, soccer, swimming, golf, rugby and rowing. Ten such orders were handed down in three of the past five years, with the penalties' duration ranging from two months to 10 years.

And coaches aren't the only ones hit. Recent show-cause orders have been issued against tutors, volunteer coaches, graduate assistants, secretaries, athletic directors, compliance officers, faculty athletic representatives and directors of operations.

The NCAA was unable to provide more detailed statistics that could further help assess the impact of show-cause orders, including the number of times its Committee on Infractions has heard requests from show-cause coaches to work elsewhere _ as well as the number of times such requests were allowed or denied.

Rod Uphoff, a member of the infractions committee since 2009, said NCAA punishments tend to mirror the criminal justice system, where judges consider a range of penalties depending on the severity of the violation and the history of the offender.

"Sometimes, with youthful assistant coaches who seem to be operating under the (influence) of a head coach, the committee may be more sympathetic than with an assistant coach who's been around for 20 years and ought to know the rules better," he said.

Uphoff, a University of Missouri law professor, said the committee employs show-cause orders not to run off unscrupulous coaches, but to put future employers on notice.

"They need to ensure that there are safeguards in place so that this person won't be tempted to violate the rules in the future," he said. Uphoff added that he couldn't recall a single case during his tenure of a show-cause employee or a prospective new boss petitioning the committee for another chance.
Of course, programs outside NCAA oversight don’t need to seek such permission. Former Radford coach Brad Greenberg got a job in June 2012 leading Maccabi Haifa, a pro basketball team in Israel, mere months after receiving a five-year show cause order for misleading NCAA investigators looking into improper benefits for athletes.

Two Greenberg assistants coach high school teams in Virginia and Florida. His former director of basketball operations coaches at a Virginia military academy. Each received two-year orders.

Others, however, struggle to recover from show-cause orders, years after the penalties expire.

Twelve years after receiving a three-year order for reportedly watching recruits during a pickup game, former Buffalo coach Tim Cohane is suing the NCAA in federal court over what he calls a botched investigation in which his former players were threatened with losing their scholarships if they didn’t incriminate their former coach.

Cohane is now associate head coach at Roger Williams University in Rhode Island, a Division III school. He’s also an adjunct law professor whose online faculty bio says he attended law school to “be able to represent student-athletes and coaches against the (NCAA).”

Kent State coach Rob Senderoff, a former Sampson assistant at Indiana, successfully petitioned the infractions committee in November 2008 to allow his hiring as an assistant at the school where he had previously spent four years despite a three-year show cause order for his role in the impermissible phone calls case.

Former Kent State athletic director Laing Kennedy, now retired, joined Senderoff at the committee hearing in a show of support. Kennedy’s successor then hired Senderoff as head coach in 2011.

Like Lopes, Senderoff acknowledged his mistakes — though both pointed out that the NCAA in January agreed to allow coaches to make unlimited calls and send as many text messages as they want to recruits who have completed their sophomore year of high school. The association now plans to reconsider those changes in response to a swift backlash from some football coaches and athletic directors, including those in the Big Ten.

"I certainly am in the minority," Senderoff said. "I do think you can survive and bounce back from it. I don’t know if I would have been able to go to another place. I’m more than grateful. I understand how fortunate I am."
House rejects Democrats’ attempt to save Medicaid expansion

Dems try to return bill to committee.

By Rudi Keller

JEFFERSON CITY — Missouri House Democrats opened Tuesday’s budget debate by challenging the entire spending plan submitted by the Republican-dominated Budget Committee because it did not include money to expand Medicaid.

On a 47-110 vote, the House turned down an attempt by Rep. Jeff Roorda, D-Barnhart, to send the first bill debated, to pay the public debt, back to the committee. Roorda said he wanted the entire $24.8 billion spending plan sent back for more work.

House rules require budget amendments that increase spending to be offset by amendments cutting another program. Medicaid expansion would be paid in full for the first three years by federal funds, but the rules do not make distinctions between amendments spending state tax revenue and those addressing federal aid.

"There is work that needs to be done on this budget," Roorda said. "We can't start from scratch. It is a challenge that can't be overcome on the House floor."

Not all Democrats supported the effort. Rep. Chris Kelly, D-Columbia, called the budget a bipartisan spending plan that should not be held up over the Medicaid issue.

Gov. Jay Nixon submitted a $25.7 billion budget that included almost $900 million for Medicaid expansion. The House general revenue budget of $8.3 billion, however, is only $5 million below Nixon's plan.

Under Medicaid expansion, about 300,000 low-income Missourians earning up to 138 percent of the federal poverty level would be eligible for health care coverage. The largest group would be healthy adults younger than 65.
The bills given first-round approval by the Tribune's deadline today paid the state debt and funded public education. The House halted debate for lunch during discussion of the higher education budget.

**Under the House spending plan, the University of Missouri is slated to receive $404.2 million, an increase of about $6 million over this year's appropriation. Nixon had recommended $411 million, or $13 million more than lawmakers allocated last year.**

All attempts to amend the budget this morning were defeated. The House considered a $300,000 cut to the Public School Charter Commission, sponsored by Rep. Margo McNeil, D-Florissant. It also defeated attempts by Republicans to block funding for the national Common Core Standards initiative and to cut administrative spending in the Department of Elementary and Secondary Education.

Rep. Kurt Bahr, R-St. Charles, said he didn't want state tax money to be used to support Common Core Standards. The program is an Obama administration initiative designed to replace the much-criticized No Child Left Behind law.

McNeil defended the program. "I think it is a wise approach to compare our students to other states and nations."

The House will spend much of the rest of the week completing its work on the budget. House Budget Chairman Rick Stream, R-Kirkwood, said he expects debate will finish Thursday morning.
Republicans defeat Medicaid budget amendments

By Rudi Keller

JEFFERSON CITY – Solid Republican opposition Tuesday blocked an attempt by Democrats to put more than $900 million into the budget for the coming year to pay for Medicaid expansion.

On almost identical votes, only one Republican – Rep. Chris Molendorp, R-Belton – joined 49 Democrats to support amendments to the budgets for the departments of Social Services, Mental Health and Health and Senior Services.

At the end of a day of debate, with most of the time spent on Medicaid, the House approved the $24.8 billion spending plan for the budget year that begins July 1. The House is expected to hold final votes Thursday.

“We all know that Medicaid is the signature issue of this body, of both chambers this year. We are talking about 24,000 jobs, an $8 billion investment and providing 300,000 Missourians with access to health care,” Democratic leader Jake Hummel of St. Louis said. “These are federal funds, which is our money that we send up to Washington which is supposed to come back to our state. We need to do it because it is right for job creation, it is right for the citizens of our state.”

On successive amendments, more than 100 Republicans voted to oppose expansion. They argued that it was too expensive and that heavy federal debt and large annual deficits mean the promise of complete federal funding won't be kept.

The argument that Missouri could walk away from the program if the promised federal aid dries up is not realistic, said Rep. Caleb Rowden, R-Columbia.

“I don't think it is a good decision to give health care to people for three years and yank it out from under them because we cannot do our job,” Rowden said. “I do not think we can take on that task because we have been bullied and backed into a corner by the federal government.”
The debate was the longest and most heated of the daylong effort to pass the budget. The budget allocates $404.2 million to the University of Missouri, an increase of $6 million over this year's appropriation.

That amount is about $6 million less than Gov. Jay Nixon proposed in his budget. The money was cut because Medicaid expansion would create savings available for other state government operations if enacted.
Another report has concluded that the financial model for higher education is broken. The difference this time is that the report calls on both state lawmakers and campuses to share in the burden of fixing the problems.

The National Association of State Budget Officers, a nonpartisan group of state-government officials, released its analysis of higher-education finance on Wednesday, along with several broad policy suggestions. The Bill & Melinda Gates Foundation paid for the report and helped cover the cost of convening more than 40 state budget officers at two meetings to discuss how states could use the budget process to achieve better results from higher education.

State budget officers often identify higher education as one of the greatest challenges for state government, said Scott D. Pattison, the association’s executive director.

As in several other reports, the state budget officers found that the way states and colleges pay for higher education is unsustainable: Costs of higher education have grown too far and too fast; state appropriations are and will continue to be limited; and the steady growth of enrollment is expected to continue.

Many of the policy suggestions are also not surprising, including rewarding colleges for meeting performance benchmarks on retention and graduation.

But several suggestions would require much more openness and cooperation between states and colleges—in particular, ending the tuition set-aside that most institutions use to pay for need-based financial aid. In this case, some states would need to increase need-based grants to
students so that the colleges could set tuition without having to include help for low-income students. Ending the set-aside practice could, the report says, help colleges lower the sticker price of tuition and lessen the confusion among students and families about how much it will actually cost to attend.

More difficult for colleges is the report’s call to end the practice of paying for small upper-level and graduate-level courses with what are essentially the profits of large and less-expensive lower-level courses. That could allow more colleges to focus on undergraduate retention and completion. Most students who drop out of college do so after their freshman year.

The report also presents some recommendations that will be difficult for state lawmakers, such as providing some stability in higher-education appropriations, including increasing support for institutions in return for limiting the growth in tuition.

Mr. Pattison says both sides will have to compromise. “What we’re hoping to do with the report is create some dialogue,” he said. “We think change is essential.”