Five questions for Joseph Tanner[1]

Tanner on an EVA, or extra-vehicular activity, more commonly referred to as a spacewalk. Home page photo: In this favorite souvenir of Tanner's, he is silhouetted with the Earth, sun and the Hubble Space Telescope.

Tanner as NASA astronaut.

Joe Tanner grew up in the '60s when "nearly everyone was enamored with the space race and would have loved to have been on one of those rockets with the heroes who were doing that." At the time, Tanner didn't think he could be a "superhero," as the media referred to them, but the seed had been planted.

Tanner studied mechanical engineering at the University of Illinois, and just before he graduated, he found himself looking at recruiting posters for the Navy. His father had gotten him interested in flying, and he would borrow his father's airplane so that he could log enough hours to earn his pilot's license. At the same time, he began interviewing for engineering jobs.

"I decided I would be an engineer later and go fly airplanes" instead, Tanner said. "I got my pilot's license the day before I joined the military at age 23 and a half. I got my license on a Sunday and shipped out with the Navy on Monday."

A Navy squadron mate was one of the 35 original astronauts selected for the space shuttle program. As the pair talked about the program, Tanner decided to do everything he could to become an astronaut.

After 11 year as a Navy pilot, he became a NASA pilot in 1984. Then in 1992, he realized his goal of becoming an astronaut and over the years, was chosen for four space shuttle flights. In 2008, he retired from NASA and began looking for other opportunities. He had always loved the college environment and applied for a position at the University of Colorado-Boulder. He and his wife owned property near Telluride and planned to retire there someday, so working for the university has been the perfect transition from government life to pre-retirement. Tanner is a senior instructor in aerospace engineering sciences and directs a graduate and Ph.D. student project course.

1. You began working for NASA as a pilot. What was one of your favorite memories from that job?

Tanner in NASA pilot mode.

I was an aerospace engineer and research pilot, and while we did some research projects on aircraft improvements, mostly I was an instructor for astronauts and other pilots. One of my favorite parts of the job was flying the shuttle training aircraft – a modified Gulfstream II that was a near perfect airborne simulator for the last 30,000 feet of the shuttle's descent and landing. I spent seven years instructing astronaut pilots how to land the shuttle. When I became a shuttle crew member, I actually had more training looks at landing the shuttle than the two pilots did.

I'll always remember a certain shuttle commander who had just finished the last training flight he would have before launching the next day. The training session was over and we were sitting in the airplane. He was getting ready to get out and I had just shut the engines down. He shook my hand and said, "Joe, thanks for helping me, preparing me to land the Space Shuttle." That was really nice to have him say it. There was also nothing like joining up with the shuttle when it was descending to the Earth, at 20,000 feet, and flying down with it.

2. You were a Mission Specialist for four shuttle flights. What was your role on each of the flights and how did you feel when the shuttles were retired?

The first mission (aboard Atlantis) studied the atmosphere around Earth. We were looking at the chemical composition of the middle atmosphere, and also looking at the ozone hole and following it as it broke up in the late Antarctic winter. We studied the energy from the sun, and energy absorbed by our atmosphere. It was the perfect first mission because

I got a chance to look out the window and enjoy the view -- and realize where I really was -- without the burden of a packed schedule.

The other three missions were really packed with activities, including extra-vehicular activity (EVA), or spacewalking, as the media calls it. We didn't have much of a chance to look out the window to ponder Earth as it went by.

On the second mission (Discovery), we went to the Hubble Space Telescope and made repairs and upgrades. The third and fourth missions were for the International Space Station. We brought up modules for and installed electrical power on the space station.

The second flight included my first EVA. They didn't let everyone touch the Hubble Space Telescope -- only 14 or so people in the world who have done it, and I got to be one of those. It was a double treat, my first EVA and the Hubble. It was hard work, stressful because you didn't want to make mistakes. The labor is physical and hard on your hands and tiring, but it's a good kind of tired.

My third mission (Endeavour) was my first to the Space Station, and our crew was the first to join up with the station while there were people inside. We were able to open the hatches and see where they lived and spend some time with them. They were filming an IMAX movie, "Space Station," and I got to film three of the scenes. I'm actually in one of them. It wasn't a very prominent role, however, but it was really cool.

On my last mission (Atlantis), we were the first to restart the assembly of the Space Station after the Columbia accident. We had lots of "firsts," which makes it interesting for the crew.

People ask me which mission is my favorite; right now I like the third. Maybe it's because I just finished celebrating my 13-year anniversary of it. I semi-celebrate each mission as it comes and goes over the months. This one launched on the 30th of November and landed on Dec. 10.

I miss a lot, but not everything about NASA. I definitely miss the people and the aircraft. I absolutely miss space flying, but you can't do that forever. I was sad to see the shuttle go. It was like an old friend. I'm a huge shuttle fan. I don't think we'll have in my lifetime a space vehicle as capable as the shuttle was the day it last flew. But it had two major design flaws that couldn't be reconciled with the amount of money we would want to put into it. The flaws had been there from Day One and we really couldn't do anything about them.

3. What are your responsibilities at CU and what do you hope your students take from your lectures/classes?

I coordinate and teach a course called Graduate Projects in Aerospace Engineering. It's a hands-on course for master's and Ph.D. candidates in the aerospace department, but we also encourage students from the electrical engineering, computer science and mechanical engineering departments to join us. It's a great way to teach interdisciplinary teamwork. The two-semester course is a pathway to graduation rather than doing a thesis for aerospace engineering sciences students. The projects we do are quite sophisticated, and one, which took years to complete – about 65 students worked on it – is a satellite that is still in orbit producing data. The overall goal of the course is to teach grad students about the design process, how to work in teams of eight or so people, and how to coordinate their efforts with the constraints of budgets, schedules, and design reviews. It's all the things they will do when they get out into the industry. The feedback we get is that the program is very successful.

The reason I'm here is for the students. They often ask me why I came here and I say, "I came for you." I feel like it's a privilege for me to get a chance to give back some of what I have been given. I wasn't a particularly good student or a dedicated student. I focused more on athletics than I did on my studies, but I managed to squeak by with a mechanical engineering degree. But here's my chance to come back and pass on some of the lessons I've learned to the generation I hope will lead us into the future, not only in space exploration, but in general as members of this world community. There are a lot of students here who would love to have the career path I did. If I can do anything to help them along, then I'm more than willing to do it and I take great pleasure in it.

4. What are some hobbies or activities you enjoy outside of work?

Well, I just finished building a house on that property near Telluride. It's where my wife and I will spend Christmas this year. I had a building contractor, but they allowed me to be part of the crew. I had worked construction in 1980 when my wife and I had just gotten married and we lived in Summit County for a few years. But this time I was able to participate in the design process for a house and then take it from the first shovelful of dirt to the final inspection. Most of the work was done in the summer, so I was there every day with my tool belt on – I have the scars to prove it. It was just a blast. In my leisure time, when I find some, I love being in nature, hiking, camping. Like everyone else here, I enjoy skiing and I climb a few mountains now and again. I have grandchildren now and definitely enjoy being with them. I love my two sons and cherish the chances I get to be with them.

I also enjoy working on my two vintage cars – a 1971 Datsun 240Z that I actually drive to school on good weather days, and a 1973 Chevy Corvette. And my son and I rebuilt a 1969 Camaro as a father/son project, but that's his car.

5. Do you have a favorite item or memento in your office?

I have several. First are the pictures of my wife and kids, which are way more important than anything else. I have in a place of real prominence the pilot wings I was awarded in 1973 when I finished naval flight school. Those are framed. My dad pinned them on me, so that makes them doubly important.

I didn't know it at the time, but a good friend of mine -- a civilian swim coach who I helped by swimming with the team (I had been a collegiate athlete) -- managed to get that pair of wings and have them engraved on the back and then gave them to the Navy to give to me.

Right above that in another position of honor is a picture that Greg Harbaugh took of me on my second mission with the Hubble Space Telescope and the Earth and Sun in the background. It's quite the popular picture. There's a gift given to me by the workers at Kennedy Space Center. I spent three-and-a-half years working down there as a member of the crew that would strap the astronauts into the Space Shuttle. We were also the first to come into vehicle after it landed and get them out. It was a great job and we all loved doing it.

I had all this stuff from NASA just sitting in boxes. I didn't want to populate the house with an "I love me wall;" I didn't want to do that to my wife, so we have almost nothing related to space in our house. It's all here in my office.

Joe Tanner with six of the seven University of Colorado students who were honored with Aviation Week's "Tomorrow's Engineering Leaders: The Twenty20s" awards, which recognize the nation's top 20 students in STEM (science, technology, engineering and math).

Phishing successfully targets employee pay[6]

A recent phishing email incident on a University of Colorado campus that led to stolen pay highlights just how crucial it is to take precautions to protect your personal information online.

Last month, CU Denver employees received an email asking them to confirm their employee credentials by clicking on a link that led to a fraudulent website resembling the CU employee portal. Criminals stole credentials entered on this site and used them to alter employees' direct deposit allocations, thus stealing their pay.

Law enforcement is working with CU to investigate these crimes, and the university also is working with those affected by the scam. This was not a security breach of CU's systems; unfortunately, it was the result of a few individuals who fell prey to a malicious email by entering their employee login information into a fraudulent website.

To help ensure the security of your personal employee information, you may now only access the employee portal while on a CU campus or an affiliate campus (Children's Hospital Colorado, National Jewish, University of Colorado Hospital, University Corporation for Atmospheric Research and University Physicians Inc.). You also can access the

portal by connecting to your campus' virtual private network (VPN).

CU and universities in general are attractive phishing targets because they traditionally have been more open information-sharing environments, says Chirag Joshi, assistant information security officer in CU's Office of the President. Online directories and Google searches give anyone with an Internet connection access to employees' phone numbers, and email and campus addresses. This highlights the need to remain alert and security conscious, he says.

Tips to help you spot this and other types of phishing email attacks:
Be on the lookout for account-change alerts. Whenever employees change their direct deposit information, CU's Employee Services team notifies them via email. If you receive this email and have **not** altered your preferences, contact the Employee Services payroll team immediately at **303-860-4200, option 2, or at employeeservices@cu.edu**[7]. **Check your paystub.** You can always check your electronic paystub, available within the employee portal, five business days before each payday. The sooner you discover and report an error, the more likely false transactions can be stopped. Remember that **CU will never ask you to submit personal or confidential information via email**. **Look at the address in the "From" field of the email**. While the sender may claim to represent CU, if the address in the "From" field doesn't contain "cu.edu," chances are good the email is deceptive. **Read between the lines**. Does the email in question read like anything the university has sent you? Many phishing emails are hastily written and contain noticeable grammatical errors. **Do not click on Web links in emails**. Instead, open a Web browser and type in the address you wish to visit. If you ever doubt the legitimacy of an email claiming to be from CU, contact your campus IT helpdesk, or call the sender to confirm he/she emailed you. If you do click on a Web link in an email, **always look at Web address in your browser's address bar**. CU Web addresses generally contain "colorado.edu," "cu.edu" and "ucdenver.edu." **Educate yourself on phishing.** Find helpful information, including current and past issues of the Office of Information Security's monthly email, at **https://www.cu.edu/ois**[8].

Faculty Council approves APS changes[9]

The CU Faculty Council voted to approve proposed changes to two Administrative Policy Statements (APS) during the council's Dec. 5 meeting at 1800 Grant St.

The two are:
APS 1019, which outlines program review procedures; minor changes are being made for ease of understanding. APS 1026, which defines the roles and responsibilities of department chairs; the minor changes include some rewording, for instance, "mentoring" students rather than "counseling" them.
Once approved by President Bruce Benson, the revisions would take effect Jan. 1.

To see the drafts and justifications, click here.[10]

The council also advanced a slate of APS changes that amend references to "service" to say "leadership and service."

"We're just trying to recognize leadership as something that people do at the university – and recognize it in a very public way in the APSs," said Chair Melinda Piket-May.

The affected policy statements: 1003, 1004, 1006, 1008, 1011, 1021, 1022, 1024 and 1026.

The council's next meeting is scheduled for noon to 3 p.m. Jan. 23 at 1800 Grant St.

Leeds: Positive, broad-based job growth forecast for Colorado in 2014[11]

Outlook presentation draws gathering of business leaders

Tom Zwirlein, finance professor in the College of Business at UCCS, speaks during Monday's Colorado Business Economic Outlook Forum. (Photo: Michele McKinney/University of Colorado)

Tom Zwirlein, finance professor in the College of Business at UCCS, speaks during Monday's Colorado Business Economic Outlook Forum. (Photo: Michele McKinney/University of Colorado)

By Jay Dedrick

Monday's presentation of the 49th annual Colorado Business Economic Outlook was the centerpiece of a forum presented by Noble Energy. The event drew an audience of more than 700 to the Denver Marriott City Center.

Leeds Business School Dean **David Ikenberry** was on hand, as well as **Richard Wobbekind,** executive director of the Leeds School's Business Research Division, and **Patty Silverstein** with Development Research Partners; the two led the audience through highlights of the 2014 report.

Doug Suttles, president and CEO of Encana, delivered a keynote address focusing on the oil and gas development that ties his company to the state – and that fuels much of the state's economy.

The half-day event also included a trio of breakout sessions that brought business leaders together with members of the University of Colorado community.

Brian Lewandowski of the Leeds School moderated "Fires, Floods and Drought: Assessing the Impacts," a panel that included **Tom Zwirlein,** finance professor in the College of Business at the University of Colorado Colorado Springs. Leeds' **Sherm Miller** moderated another panel, "From the Great Recession to a Great Real Estate Boom." "NAFTA 20 Years Out" rounded out the afternoon of sessions presented by the Colorado Lending Source.

The event concluded with a networking reception co-presented by the CU Executive MBA Program, the Colorado Brewers Guild and the Colorado Wine Industry Development Board.

Colorado will continue on the road to recovery and add a variety of jobs in 2014 across almost all business sectors following a positive year in 2013, according to economist Richard Wobbekind of the University of Colorado Boulder's Leeds School of Business.

Wobbekind's announcement was part of the 49th annual Colorado Business Economic Outlook Forum, delivered Monday by the Business Research Division of the Leeds School and presented by Noble Energy at the Denver Marriott City Center.

The comprehensive outlook report for 2014[13] features forecasts and trends for 13 business sectors prepared by more than 100 key business, government and industry professionals.

"With Colorado's skilled workforce, high-tech diversified economy, relatively low cost of doing business, global economic access and exceptional quality of life, the state is poised for long-term economic growth," Wobbekind wrote in the outlook. Wobbekind is the executive director of the Leeds School's Business Research Division.

Overall, the forecast calls for a gain of 61,300 jobs in 2014, compared with a gain of about 66,900 jobs this year. All sectors of the Colorado economy are predicted to grow in 2014 with the exception of the information sector, which includes publishing and telecommunications.

Colorado is expected to be in the top five states for job growth in 2014 with workers added in both goods- and services-

producing sectors.

The strongest sector for projected job growth in Colorado in 2014 is the professional and business services sector, which is expected to add 14,200 jobs or grow by 3.8 percent.

“Colorado has strategic advantages in the professional and business services sector given the highly educated workforce, innovative spirit and small business base that we have in the state,” Wobbekind said. “If national-level political and fiscal uncertainty subsides, we may see even stronger growth in this sector than what we’re currently projecting.”

Other leading job growth sectors for 2014 include the construction sector, which is expected to add 11,000 jobs or grow by 8.7 percent; and the trade, transportation and utilities sector, which is expected to add 9,100 jobs or grow by 2.2 percent.

Though it was one of the greatest casualties of the recession, the construction sector has exhibited strong growth in recent years in values, permits and employment, according to Wobbekind.

Total value of construction is expected to reach the second highest level in the past decade, rising by 14.8 percent in 2014 with the largest increase due to residential construction. Total housing permits are expected to grow by 17.5 percent with gains in both single- and multifamily units.

The trade, transportation and utilities sector is the largest provider of jobs in Colorado. It includes everything from wholesale and retail trade to a variety of transportation features such as Denver International Airport and gas pipelines, as well as utilities.

DIA is expected to record more than 52 million passengers in 2014. Retail sales in the state are anticipated to rise by 5 percent in 2014, up from 4.2 percent growth in 2013.

Colorado’s unemployment rate is expected to remain below 7 percent in 2014, which is comparatively better than the national unemployment rate.

Commenting on the overall forecast, Wobbekind said, “After the deep recession we encountered as a state and a nation, it is really a relief to be reporting strong positive job growth in Colorado.”

Risks to economic growth nationally include sequestration, the debt limit, government shutdown, Federal Reserve policy and health care reform, according to the outlook.

Colorado’s population is the seventh-fastest growing in the country by percentage and the ninth-fastest growing in the country by number of residents. The state’s population is projected to grow by 1.7 percent to nearly 5.4 million people.

To view the entire economic outlook for Colorado in 2014, including an overview of each of the state’s major economic sectors, visit http://leeds.colorado.edu/BRD[14].

Tenure list: December 2013[15]

At its meeting last week at CU Denver, the Board of Regents approved tenure for six faculty members across the system.

University of Colorado Boulder
Jennifer Fluri, Geography, effective Aug. 18, 2014 **Don Grant,** Sociology, effective Jan. 6, 2014 **Joel Hartter,** Environmental Studies, effective Jan. 6, 2014
University of Colorado Denver l Anschutz Medical Campus

Keith Guzik, Sociology, effective Jan. 1, 2014 **Carlos Hipolito-Delgado,** Education & Human Development, effective Dec. 4, 2013 **John Welton,** Nursing, effective Dec. 4, 2013

Students, campuses taking steps to reduce student debt[16]

Despite – or because of – higher tuition, University of Colorado students and the campuses are taking steps to reduce student debt.

Todd Saliman, vice president and chief financial officer, reported on the topic to the Board of Regents at its meeting last week at CU Denver.

In 2012, the number of CU-Boulder undergraduate students in the $32,000-and-below annual income category applying for financial aid totaled 3,253, compared to 3,208 in 2013. Also, more students who applied for student loans opted not to use them. For example, CU-Boulder students in the same income category who did not use loans -- despite being eligible -- was 1,087 in 2012; that number rose to 1,219 in 2013.

The numbers are consistent across the CU-Boulder, UCCS and CU Denver campuses, flattening somewhat in the middle- to higher-middle income categories.

The number of students applying for financial aid has dropped the past year at all three institutions.

Resident undergrads applying for financial aid:
2012 2013 CU-Boulder 5,341 5,208 UCCS 1,089 859 CU Denver 1,154 979
Saliman said steps students are taking to minimize student debt include:
Living with parents Living with multiple roommates Using alternative transportation Cutting back on personal expenses Remaining on parents' insurance plan Earning college credit in high school or competency testing
Other means:
Part-time work College savings plans Parent/Private loans Credit cards
The institutions also are taking steps to help minimize student debt, Saliman said.

Chancellor Don Elliman said about 90 percent of CU Denver's students work while going to school to keep costs down. "If you are working while going to college, the temptation to live high off the hog is not there," he said.

Chancellor Phil DiStefano said CU-Boulder students are counseled on money management during orientation and throughout their first year.

"But we need to follow up with them to see how it's working," he said. "I do think we could do a better job following up after the first year."

Chancellor Pam Shockley-Zalabak said UCCS provides loan counseling, which has been a factor in reducing the student loan default rate.

"If you take a 10-year trajectory, we have lowered that default rate," she said. "They were never high, but they're at an all-time low now."

The 3.8 percent loan default rate at CU is substantially lower than state and national averages, which are 10.4 percent and 10 percent respectively.

In other business at last week's Board of Regents meeting:
Saliman reported that Gov. Hickenlooper's suggested $60 million in funding for higher education operating budgets is good news for CU, which would likely receive more than $16 million of that amount. The governor's proposal represents an 11 percent increase for higher education. The only two construction projects in the governor's budget request benefit CU: the Auraria Library, shared by CU Denver, and a visual and performing arts building at UCCS. The

board approved three new degree programs: doctor of psychology in school psychology at CU Denver, and two at CU-Boulder, master of science in supply chain management and master of science in real estate.
Jay Dedrick contributed to this report.

Professor's two worlds both ripe for 'paradigm shift'[17]

Christopher Braider

The director of CU-Boulder's journalism program has won a prestigious national award for challenging the "presumed centrality" of René Descartes' groundbreaking theory of mind in 17th century French culture.

So why is the head of an evolving journalism program producing iconoclastic scholarship on a seminal figure of the age of rationalism and the Scientific Revolution?

Christopher Braider is both professor of French and comparative literature and also director of Journalism and Mass Communication at the University of Colorado Boulder. He suggests that both disciplines are ripe for a "paradigm shift."

Braider has won the 21st annual Aldo and Jeanne Scaglione Prize for French and Francophone Literary Studies, the Modern Language Association announced this month.

Braider was recognized for his book "The Matter of Mind: Reason and Experience in the Age of Descartes," published by the University of Toronto Press.

The prize is awarded annually for an outstanding scholarly work in its field written by a member of the association.

The award committee's citation states that Braider's book offers readers a "paradigm-shifting, vigorous rereading of canonical 17th-century works of French literature, drama, philosophy, theology and painting."

"Christopher Braider's study displays an admirable grasp of the complexity of canonical texts and their ability to continuously offer up interpretative possibilities that withstand attempts at definitive appropriations by even the strongest theoretical frameworks," the committee continued.

Braider describes his work as a close examination of an issue with which scholars grapple. "Students of 17th-century European literature, philosophy and art have long understood that Descartes' dualist doctrine of self, and the theory of knowledge and mind that underwrites it, raised as many problems as it solved."

Descartes is famous for stating "cogito ergo sum" — "I think; therefore I am" — a proposition said to be fundamental to Western philosophy. His "Cartesianism" viewed mind and body as separate and emphasized reason as the basis of the natural sciences.

By sharply distinguishing body and mind and making that distinction the foundation for thinking about the nature of reality, "Descartes fostered the mental autonomy and detachment needed to subject the otherwise overwhelming sprawl of empirical experience to rational analysis."

But that absolute distinction can't be maintained, Braider contends. Mental phenomena are "inextricably engaged in the body that houses them and in the world to which the body itself belongs." Further, though Descartes' present-day historical and deconstructionist critics assume that Descartes' rationalism permeated 17th-century art, literature and thought, most of Descartes' contemporaries were as aware of its weaknesses as later commentators are.

"This leads me to be the first to argue in a systematic way that our whole picture of 17th-century culture is wrong," Braider said. "Though there were indeed 'Cartesians' in the period, they were far less representative than we

suppose."

Viewing the culture in that light "invites us to return to, say, the comedies of Molière, the paintings of Poussin or the theological speculations of Pascal in an entirely new light, discovering rich alternatives we habitually overlook."

"To the extent that the 17th century was far more productively anti-metaphysical than we realize, we cast the spell we congratulate ourselves for breaking," Braider continued. "The time has come to move on in a more responsible (and less judgmental) way—and the Scaglione Prize committee seems to agree!"

Braider earned his bachelor's and doctorate from Trinity College, Dublin, receiving the doctorate in French in 1982. Following 10 years on the faculty at Harvard University, he moved to CU-Boulder in 1992.

Braider has led CU-Boulder Journalism and Mass Communication since 2011. During his tenure, the program has implemented a "Journalism Plus" curriculum that requires journalism majors to take the equivalent of a double major in a second field, thus increasing their breadth of knowledge and experience.

He also directs Media, Communication and Information, where he is charged with spearheading a proposal to create a new College of Media, Communication and Information.

The new college would include seven academic departments focused on the principles and practice of using digital technology in all realms of mass and interpersonal communication.

Braider leaves it to his colleagues to say whether his academic background has helped him as a journalism-program administrator. "But if it has, I think it's because it has taught me to balance faithful attention to particulars with the ability to see the whole."

The Modern Language Association of America has nearly 30,000 members in 100 countries and works to strengthen the study and teaching of languages and literature.

The Aldo and Jeanne Scaglione Prize for French and Francophone Literary Studies, awarded under the auspices of the MLA's Committee on Honors and Awards, was presented for the first time in 1992.

The Scaglione Prize is one of 16 awards that will be presented on Jan. 11 during the association's annual convention in Chicago.

Researchers: From common colds to deadly lung diseases, one protein plays key role[19]

An international team of researchers has zeroed in on a protein that plays a key role in many lung-related ailments, from seasonal coughing and hacking to more serious diseases such as MRSA infections and cystic fibrosis.

The finding advances knowledge about this range of illnesses and may point the way to eventually being able to prevent infections such as MRSA.

The key protein is called MUC5B. It's one of two sugar-rich proteins, with similar molecular structure, that are found in the mucus that normally and helpfully coats airway surfaces in the nose and lung. The other is MUC5AC.

"We knew these two proteins are associated with diseases in which the body produces too much mucus, such as cystic fibrosis, asthma, pulmonary fibrosis and COPD," said researcher Chris Evans, Ph.D., an associate professor in the University of Colorado School of Medicine. "We also knew that many patients with asthma or COPD have as much as 95 percent less MUC5B in their lungs than healthy individuals, so we wanted to see if one of these is the bad player in chronic lung diseases."

The researchers compared mice that lacked one or the other of the proteins. The animals without MUC5B got sick. Those that lacked MUC5AC were fine.

The findings, in a paper co-authored by Evans, other CU faculty members and researchers from several other states as well as Mexico and England, were reported today in the journal Nature[20].

The paper also noted that the immune systems of the mice without Muc5b failed over time. That made the mice more vulnerable to infections including the MRSA "superbug," a major source of infections in hospitals and in the community, especially in people whose immune systems are compromised, such as cancer patients.

That has interesting implications for anyone with a runny nose.

"Getting rid of your mucus may make you more comfortable and may help patients with chronic lung diseases," Evans said. "But if you block it too effectively, this actually could be harmful in the long run. If a treatment gets rid of MUC5B, it may make people more vulnerable to additional infections."

An oddity of the proteins being examined is that they are encoded in a part of the human genome that is highly variable. Some 20 percent of the population carries a DNA mutation that makes them produce about 30 times more MUC5B than normal.

More research is needed to learn whether people with that mutation are more or less susceptible to infections, including MRSA, said Evans, who is in the CU medical school's Division of Pulmonary Sciences and Critical Care Medicine. It's also unclear what's happening at a molecular level that allows MUC5B to help control certain infections.

"Knowing the key role of MUC5B allows us now to focus on how the protein works and, we hope, to find ways to help patients with these diseases," Evans said.

Economist: Smartphone users value their privacy, are willing to pay for it[21]

[22]
Average smartphone users are willing to pay up to $5 extra for a typical application—or "app"—that won't monitor their locations, contact lists and other personal information, a study conducted by two economists at the University of Colorado Boulder has found.

The researchers believe theirs is the first economic study to gauge the monetary value smartphone users place on privacy. That value is measured in consumers' "willingness to pay" for five different kinds of digital anonymity.

The economists' team surveyed 1,726 people in seven cities nationwide and found a "representative consumer" was willing to pay $2.28 to conceal browser history, $4.05 to conceal contact lists, $1.19 to conceal personal locations, $1.75 to conceal the phone's ID number, and $3.58 to conceal the contents of text messages.

More experienced users — those who use their smartphones continually and for many purposes — are willing to pay more than less-experienced users to conceal their contact lists and text messages. Young people are willing to pay less to protect all five kinds of privacy, the researchers found.

And consumers of all types are willing to pay $2.12 to eliminate advertising on apps.

The study, "The Value of Online Privacy," was published online this fall in Social Science Research Network. Associate professor Scott J. Savage and professor Donald M. Waldman are co-authors and CU-Boulder economists whose research includes the study of pricing and valuation.

In recent years, news reports have variously suggested that people do or do not value their privacy. But those reports

were not based on data, Savage and Waldman noted.

“There’s minimal research, and even the work that’s done is not in economics. It’s done in the area of computer science, which looks at privacy differently,” Savage said. And while smartphone users might relinquish personal data, that doesn’t mean they don’t value privacy, the economists said.

Full disclosure of how apps use personal information, “similar to the labeling of food contents in grocery stores,” could benefit both consumers and app developers, they write.

The smartphone is an ideal lens on privacy because it’s easy to see which kinds of privacy—or “permissions”—people give up, Waldman said.

Users grant privacy permissions as a condition of using apps, which are burgeoning. Apps for iPhone, Android and Windows smartphones will be downloaded an estimated 5 billion times in the next year.

The price of most general-purpose consumer apps ranges from free to $6, though some highly specialized apps used for medical purposes and the like could cost $500 to $1,000.

Smartphone apps can save time, and consumers, knowingly or unknowingly, generally trade some personal information for the benefit.

Those who download a weather app might allow the app to monitor their phones’ location. That way, users can retrieve local weather information anywhere, anytime without having to consult a newspaper or telephone hotline. Savvy users can reap such benefits across a range of apps.

App developers should give consumers clear information and choices about privacy, the economists said. “If consumers know what’s going on, they can make informed choices and pick apps to fit their preferences; it’s way better than any regulation or government interfering in the market that it knows very little about,” Savage said.

“They value their privacy, so if you present them with different menus of stuff, they’re going to respond and make, we hope, rational choices,” Waldman said.

In many cases, users who give up personal information have a good reason for doing so—because, for instance, they want to find the nearest coffee shop, and an app can provide that information only when it knows where the phone is.

However, many apps gather personal data unnecessary for the proper functioning of the app. And that has implications.

“Just think about it,” Waldman said. “If someone knows every app you’ve got on your phone and knows how you use it, and have other information on your location and browser history, they have a pretty good picture of who you are.”

The surveys were done in summer 2013 in Atlanta, Chicago, Denver, Philadelphia, Portland, Salt Lake City and San Diego.

The work was funded by the Engine Research Foundation, a nonprofit organization in San Francisco concerned with startup firms and public policy.

More on this story will appear in Colorado Arts & Sciences Magazine at http://artsandsciences.colorado.edu/magazine [23].

CU Denver’s largest-ever scholarship initiative fosters student success regardless of background[24]

Raul Cardenas, associate vice chancellor for Student Affairs, announces the 1,000 More scholarship initiative at CU Denver.

One thousand more.

CU Denver's goal of fostering student success regardless of background is behind our largest-ever scholarship initiative.

Raul Cardenas[26], Ph.D., associate vice chancellor for Student Affairs, announced the 1,000 More scholarship initiative[27] at the annual campus showcase luncheon on Friday. CU Denver hopes to provide financial support for 1,000 more students every year, and triple private support for scholarships by 2020.

Cardenas said Colorado spends less than half today on higher education than it did 13 years ago. The reduction of state support has been especially significant at CU Denver, where more than 60 percent of our undergraduate students have financial need.

"Most CU Denver students already have the critical elements for success -- they're coming in with academic ability, they're coming in with a strong work ethic, they're coming in with dreams," Cardenas said. "We really need private support to help our students realize those dreams."

The students CU Denver serves are diverse -- a third of them are students of color -- and "look like the state," Cardenas said. Of the record 1,157 freshmen enrolled this fall[28], a third are first-generation college students and a third of them are low-income.

"But while our enrollment has climbed, state financial support has declined," he said.

Both need-based and merit-based scholarships are priorities during 1,000 More, as well as scholarships for international students, study abroad opportunities, transfer students, and graduate students. CU Denver, which recently launched "Learn with Purpose."[29] its first-ever comprehensive advertising campaign, awards more master's degrees than any public higher-education institution in the state.

"It would be so tremendous if we can give students that additional resource and that additional opportunity for success," Cardenas said.

By 2020, CU Denver's goal is to be awarding students $6 million in scholarships from private philanthropy. Watch a video about how scholarships have helped current CU Denver students achieve their dreams here[30].

Matt Wasserman, vice chancellor for development at CU Denver, said scholarship support holds the key for much of what CU Denver wants to accomplish. "It creates better opportunities and a better future for our students, it grows our campus by increasing enrollment and allowing us to recruit the best and brightest, and it leads to positive impact on our community."

Kelly Cronin[31], vice president for advancement for the University of Colorado, said the university is "taking fundraising to new heights" at all four of its campuses. "You are all here because clearly you care -- whether you're a donor or an advocate or a friend of the campus," she said. "We're so grateful for all that you do."

The showcase event, in the newly renovated second floor of the College of Architecture and Planning[32], included presentations by Mark Safty[33], new Timothy E. Wirth Chair in Sustainable Development, and Robin Shandas[34], Ph.D., founder and chair of the Department of Bioengineering and professor of pediatrics and surgery.

Wirth Chair in Sustainable Development

Safty said sustainability is a "word that makes people feel right," and is, at its core, an ethical ideal. "It's an ethical concept of how we should live, develop, work, travel, eat and dispose of our waste," he said. "It's a series of ethical

considerations that need to be understood and taught."

The Wirth Chair in Sustainable Development[35], established in 1993 and housed within the School of Public Affairs [36], seeks donations in order to continue the teaching and outreach that has defined the Chair since its endowment by former U.S. Sen. Tim Wirth. For students, the program wants to create transformative opportunities, "light candles of inspiration," and create subsequent action, Safty said.

"We can foresee in the next couple of years sponsorship and program needs in the range of about $250,000," he said. "Our larger goal in the next two years is we'd like to double the size of the endowment created by Sen. Wirth and continue his legacy in his name to become a state and local leader in the field of sustainability."

Department of Bioengineering

Shandas explained how CU Denver's innovative Bioengineering Department[37] came about. He began developing the program seven years ago after he kept hearing students say, "Do you have a bioengineering program here?" CU Denver started with a graduate program in 2010, and this year matriculated its first class of undergraduate students (27).

The closest similar programs are in Salt Lake City to the west and St. Louis to the east.

"I thought there was a really good opportunity to capture, both within Colorado and the Rocky Mountain Region, a group of students who could stay here and contribute to bioengineering," Shandas said. "Our mission is to improve human health through the application of engineering principles, ideas, methods and inventions."

Shandas said CU Denver's program is one of the most competitive bioengineering programs available. It's a field that offers high-paying and plentiful employment opportunities to graduates.

"This program attracts very, very bright students, but we'd love to have scholarships for these students and really entice the best and brightest to come here and study," he said. "There is substantial opportunity to really build this program."

UCCS, CU leaders make push for City for Champions[38]

CU Regent Kyle Hybl speaks at a Wednesday meeting of the Colorado Economic Development Commission. President Bruce Benson followed with his remarks.

A bevy of UCCS faculty and staff joined top CU and Colorado Springs community leaders Dec. 4 to show support for the City for Champions proposal to a state Economic Development Commission.

A dozen UCCS representatives including Chancellor Pam Shockley-Zalabak; Mary Coussons-Read, provost; Brian Burnett, senior executive vice chancellor, Administration and Finance; Martin Wood, vice chancellor, University Advancement; and Venkat Reddy, dean, College of Business; joined with CU President Bruce Benson and CU Regent Kyle Hybl in supporting the $250 million Colorado Springs development plan. That plan includes a downtown stadium, an Olympic museum, an Air Force Academy Visitor Center and a sports medicine clinic at UCCS.

The UCCS and CU contingents joined leaders of Colorado Springs and El Paso County municipal government as well as leaders of the U.S. Air Force Academy, the U.S. Olympic Committee and El Pomar Foundation at a daylong hearing in downtown Denver of the Economic Development Commission. The groups advocated for $120.5 million in economic development funds to fund the projects. The group presented a video showing community support and youth members of the Colorado Springs Conservatory also sang in support. The proposal seeks money through the Regional Tourism Act which gives large projects a percentage of the sales tax generated during the next 30 years.

Shockley-Zalabak presented the business case for the overall project and details of the UCCS proposal.

“Colorado Springs was founded in part on mining and medical tourism – tuberculosis,” Shockley-Zalabak told the nine-member commission. “City for Champions is the modern day branding of our community with its many natural assets as a destination for the country bringing hundreds of thousands of visitors to our community.”

A large portion of the presentations, questions from the commissioners, and statements by those who oppose the project, focused on estimated numbers of visitors the projects will bring to Colorado Springs and how much money those people will spend while visiting.

Shockley-Zalabak focused her comments on the UCCS Sports Medicine and Performance Center which would be located on North Nevada Avenue, adjacent to the new Lane Center for Academic Health Sciences. She cited the growth of UCCS, faculty strength in research and training, previous faculty ties to USOC and collaboration with the CU School of Medicine as a way to bring new medical expertise and patients to Colorado Springs.

“Without this opportunity, the Sports Medicine and Performance Center will remain in our master plan,” Shockley-Zalabak said. “But it is not reasonably anticipated to be developed within the foreseeable future. City for Champions opportunities will be delayed and squandered. The opportunity is now.”

The Sports and Medicine Center would work with Olympic athletes, wounded service members, professional athletes and many others in a clinic-style arrangement. When estimating patient visits to the center, UCCS officials looked at similar centers in San Antonio, Texas; Philadelphia; Pittsburgh; and Bryn Mawr, Penn.

“The combination of medical services with our faculty who currently work with Olympic, professional, wounded warrior and Para-Olympians is unique in Colorado and the nation,” Shockley-Zalabak said.

Funding

The City of Colorado Springs, the applicant for the RTA funding, believes it should receive $120.5 million or 14.2 percent of the estimated sales tax generated by the projects during the next 30 years. The rest would go to the State of Colorado. If the commission doesn’t approve funding for the project, the state will receive no monies, proponents argued, and the projects likely won’t be built.

Many questions Wednesday focused on how the balance of the $250 million project would be raised if the state provided the requested $120.5. For the UCCS project, some revenues would be derived from clinic revenue and from either CU or the State of Colorado’s capital construction budget. Other projects would be funded through donations, the sale of bonds, or from revenues generated by activity such as parking fees.

Timeline

The commission is expected to announce later this month if it will fund the City for Champions project and at what level.

See a video of the project: http://youtu.be/DydC-LH9w48[40]

Fox takes leadership role in procurement association[41]

Fox

Michael Fox, Procurement Service Centers’ strategic procurement director, recently became president of the National

Association of Educational Procurement (NAEP) Rocky Mountain Region.

NAEP is a nonprofit, professional association primarily dedicated to serving higher education purchasing officers in the United States and Canada. NAEP's mission is to facilitate the development, exchange, and practice of effective and ethical procurement principles and techniques at institutions of higher education and associated communities. It does this through continuing education, networking, public information, and advocacy.

The NAEP Rocky Mountain Region covers Colorado, Idaho, Montana, New Mexico, and Wyoming, as well as Alberta and Saskatchewan, Canada.

System Staff Council plays Santa for military families[43]

Mrs. Claus greets children at the System Staff Council reception for families from Aurora's Buckley Air Force Base. (Photo: Cathy Beuten/University of Colorado)

CU System Staff Council on Friday hosted more than 100 children and parents from Aurora's Buckley Air Force Base at a holiday party at Denver's Warwick Hotel. The gathering was the third-annual community outreach effort by the council, which collected toys from staff members at system administration at 1800 Grant St., Denver.

Santa and Mrs. Claus were joined by CU-Boulder mascot Chip and CU Denver mascot Milo in greeting the families and posing for photos. When the kids weren't opening presents, they crafted tree ornaments and colored with crayons. The toy drive focused on benefiting children whose parents are deployed away from home this holiday season.

For a photo gallery from the event, click here[45].

Holder tapped for Peace Corps volunteer[46]

Holder

Curt Holder, a professor in the Department of Geography and Environmental Studies at UCCS, will be a Peace Corps Response Volunteer in El Salvador beginning in January.

Holder will serve as an environmental community mobilization specialist and work closely with communities, governmental organizations and universities to promote sustainability of the cloud forest and the conservation and restoration of lakes in the region. He will live in Metapan, Santa Ana, El Salvador near the borders of Guatemala and Honduras, an area that is home to the last remaining intact primary forest.

"It should be an interesting and rewarding experience," Holder said. "I look forward to returning to Latin America. I am certain that my experience in El Salvador will open many research opportunities and create research funding opportunities for UCCS."

Holder said he plans regular Facebook updates and photos during his Peace Corps response.

Ferguson honored for school board commitment[48]

Jeff Ferguson[49]
, professor in the College of Business at UCCS, was recently honored with the Colorado Association of School Board's McGuffey Award in recognition of his service to the Lewis-Palmer Board of Education.

Ferguson served on the Lewis Palmer Board of Education for more than 20 years, including 10 years as its president. He served as a board member from 1987 to 2003 and from 2009 to 2013. He was recognized for his service at the Nov. 14 board meeting, the end of his term.

The CASB McGuffey Award is given to honor school board members who "bring committed and passionate service." This is Ferguson's second McGuffey Award.

Laird speaks at National Women's History Museum[50]

[51]
Pamela Laird, professor and chair of history, College of Liberal Arts and Sciences at CU Denver, recently gave a talk at the National Women's History Museum in Washington, D.C. The series was called, "Making a Business of Change: American Women in Business."

Currently, Laird is focusing her efforts on the consequences of civil rights legislation on the corporate world, and the effects of "self-made success." Laird also was awarded the University of Colorado Denver Faculty Mentor of the Year Award in May 2013.

Dropping names ...[52]

Finkelstein

Cooney

Shelby

Gabriel Finkelstein, associate professor of history in the College of Liberal Arts and Sciences at CU Denver, had two recent blog posts discussing his book, "Emil du Bois-Reymond: Neuroscience, Self, and Society in Nineteenth-Century Germany." The first is a Question and Answer article that the MIT Press posted, and the second appears on John

Horgan's Scientific American blog. In addition, Finkelstein has been appointed host of New Books in German Studies, which is a podcast channel on The New Books Network, an academic internet talk show. … UCCS welcomed 10 new faculty and staff in November. They are: **Russell Saunkeah**, executive chef and associate director, Administration and Finance; **Sapphira Mize**, administrative assistant, Admissions and Records; **Nancy Stovall**, administrative assistant, Admissions and Records; **Deborah Preston**, administrative assistant, Admissions and Records; **Lindsay Knell**, administrative assistant, School of Public Affairs; **Julia Bullock**, library technician, Kraemer Family Library; **Angela Kozlowski**, general merchandise buyer, bookstore; **Kolby Stallings**, administrative assistant, Admissions and Records; **Valerie Quarles**, administrative assistant, College of Letters, Arts and Sciences; and **Jeanne Durr**, executive director, Human Resources. … **Teresa Cooney**, professor and chair of sociology at the College of Liberal Arts and Sciences at CU Denver, is co-authoring a chapter, "Caregiving for an ex-husband: Exploring precipitating factors and relational outcomes," (Proulx, C. M., Cooney, T. M., Benson, J. J., & Snyder-Rivas, L. A. (2013). It will appear in, P. Neff Claster and S. Blair's (Eds.) "Contemporary Perspectives in Family Research" (pp. 369-397). Bingley, UK: Emerald Publishing. The annual publication exclusively enlists authors who lead in family research. … **Candice Shelby**, associate professor of philosophy at CU Denver's College of Liberal Arts and Sciences, presented the paper, "A Different Way to Think about Addiction," at the 67th annual meeting of the Mountain-Plains Philosophy Conference, at the Air Force Academy in Colorado Springs in October. … **Karen Gorton**, at CU Denver's College of Nursing, recently co-presented "Academic Transitional Issues: Moving from Associate Degree to Baccalaureate Degree Nursing Programs" at the Professional Nurse Educators Group (PNEG) conference outside Kansas City. … **Marilyn Krajicek**, also at the College of Nursing, received the 2013 Dr. Susan Aronson Award from the Early Education and Childcare section of the American Academy of Pediatrics during the AAP Conference and Exhibition in Orlando, Fla., held in October.

Call for proposals: 2014-15 President's Teaching and Learning Collaborative[56]

The President's Teaching and Learning Collaborative, CU's Scholarship of Teaching and Learning Program, is calling for research proposals for 2014-15.

Central to the work of the Collaborative is creating and publishing scholarship in teaching and learning that contributes both to theory and effective teaching practice in and across disciplines. To this end, each Faculty Researcher designs and undertakes an investigation aimed at deepening understanding of disciplinary pedagogy and related to an important issue in learning.

Faculty from all disciplines are invited to become investigators in CU's President's Teaching and Learning Collaborative (PTLC), now beginning its ninth year and establishing its 2014-15 cohort of Faculty Researchers. Faculty Researchers design, carry out, and publish research on a particular aspect of learning in a specific course. Each investigator is supported by a Coach and short seminars in how to do education research. Faculty researchers will receive funding totaling $1,550 for their research that may include a student research assistant and travel to present one's research.

All application materials must be submitted electronically to elizabeth.lawrence@colorado.edu[57] by May 16, 2014. Complete details are posted at: http://www.colorado.edu/ptsp/ptlc/PTLC_Call.html[58]

Three CU employees win iPads in Financial IQ Challenge[59]

[60]
More than 2,800 University of Colorado employees tested their financial IQs in November, but only three are taking home more than the knowledge they gained as a result.

Cynthia Clark, Randy Knutsen and Stephanie Vetter won name-brand tablet computers in the random drawing of employees who participated in the CU/TIAA-CREF Financial IQ Challenge. The three increased their odds of winning by completing all 15, five-question sessions — each of which earned them an entry into the drawing.

“I’m thrilled about the (tablet). I’m just stunned,” said Clark, a graduate program assistant in CU-Boulder’s Department of Linguistics. She took the quiz without realizing there was an additional incentive.

“I would have taken the quiz anyway,” she said. “I just thought it was a fun thing to challenge myself with every day.”

The quiz, designed to help employees assess and improve their knowledge of everything from taxes to retirement, kept participants on their feet with questions that became progressively more challenging, said Vetter, a senior professional research assistant in CU Anschutz’s Department of Psychiatry.

Instead of penalizing participants for wrong answers, however, Vetter said the quiz offered thorough explanations of the correct responses and links to explore topics in more depth.

Quiz participants scored an average of 73 out of 100 points, with about 44 percent of participants completing all 75 questions. Men scored a full 11 percentage points higher than women, at 78.33 and 67.44 respectively. And with few exceptions, results showed the older the employee, the better the score. (The 25-34 age bracket scored lowest.)

Knutsen, an instructor at Anschutz’s School of Pharmacy who said he was surprised by how well he did on the quiz, credits at least some of his performance to his work with a professional financial planner.

While the quiz has ended, Clark said it’s given her a lot to think about, particularly when it comes to retirement. At 61, she said retirement may be on the horizon, and the quiz revealed that she has much to learn in that area.

“There are things you deal with every day, like interest rates,” Clark said. Retirement, on the other hand, requires long-term focus, she noted.

Keep your financial IQ strong by brushing up on retirement and dozens of other financial topics through free financial books[61], available in the CU employee portal. Look for one-on-one counseling sessions with CU retirement-plan sponsors on your campus. (Next event: CU-Boulder, 10 a.m. – 4 p.m. Wednesday, December 18[62])

Fall 2013 Creating Futures magazine now available[63]

[64]
The 40-page Fall 2013 issue of Creating Futures magazine, produced by the CU Office of Advancement, tells stories of philanthropy throughout the University of Colorado, and celebrates the conclusion of CU’s $1.5 billion Creating Futures fundraising campaign with a special Campaign Wrap. Feature subjects in the magazine (viewable either in zMags format[64] or via PDF[65]) include:
The Jake Jabs Center for Entrepreneurship at **CU Denver**, bolstered now with a $10 million gift from furniture entrepreneur Jake Jabs[66]The Earth Microbiome Project, whose foundational work at **CU-Boulder** is enhanced by two major grants earlier this year[67]Expanded veteran health and trauma initiatives at **UCCS**, thanks to a $2 million gift from Lyda Hill[68]A major bequest by a New Mexico professor drawn to CU by the caliber of the **Anschutz Medical Campus**’s molecular biology program[69]
The biannual magazine was developed in 2011 to tell stories underlying the Creating Futures campaign—which began in 2006 to enhance learning and teaching, discovery and innovation, community and culture, and health and wellness throughout the University of Colorado. The campaign’s conclusion was announced Nov. 21, with more than 400,000 gifts and more than $1.521 billion in private support since its inception.

Print copies of the magazine may be obtained at most main CU Advancement offices, or by emailing this link[70].

Take the CU Connections survey for a chance at Buffs basketball tickets, prize package[71]

How can we make CU Connections better? We'd like you to tell us.

CU Connections is the news and information website that keeps you connected to other faculty and staff across the University of Colorado system.

As a member of CU's faculty or staff, you're invited to take our brief readership survey – and help shape CU Connections in the future.

Simply share your opinions and you'll be entered into a drawing for a CU gift basket that includes two tickets to an upcoming CU Buffs men's basketball game.

The survey takes less than 5 minutes; click here to begin[72].

Your input means a lot.

CU Connections holiday publication schedule: No new issues Dec. 26, Jan. 2[73]

CU Connections will not publish new issues on Dec. 26 and Jan. 2.

The final new issue before the winter holiday break will appear Thursday, Dec. 19; deadline for submissions is noon Friday, Dec. 13. Deadline for submissions for the Jan. 9 issue is noon Friday, Jan. 3.

Over the holidays, the website will be updated with news should events warrant.

Links
[1] https://connections.cu.edu/stories/five-questions-joseph-tanner[2] https://connections.cu.edu/file/5qtannertoppng[3] https://connections.cu.edu/file/5qtannerpng[4] https://connections.cu.edu/file/5qtannercockpitpng[5] https://connections.cu.edu/file/5qtannergrouppng[6] https://connections.cu.edu/stories/phishing-successfully-targets-employee-pay[7] mailto:employeeservices@cu.edu[8] https://www.cu.edu/ois[9] https://connections.cu.edu/stories/faculty-council-approves-aps-changes[10] https://www.cu.edu/policies/aps-under-review.html[11] https://connections.cu.edu/stories/leeds-positive-broad-based-job-growth-forecast-colorado-2014[12] https://connections.cu.edu/file/leedssidepng[13] http://leeds.colorado.edu/brd#overview[14] http://ucolorado.pr-optout.com/Tracking.aspx?Data=HHL%3d%3e1%3c5%40%26JDG%3c95%3a473%3b%26SDG%3c90%3a.&RE=MC&RI=4100720&Preview=False&DistributionActionID=8755&Action=Follow+Link[15] https://connections.cu.edu/stories/tenure-list-december-2013[16] https://connections.cu.edu/stories/students-campuses-taking-steps-reduce-student-debt[17] https://connections.cu.edu/stories/professor%E2%80%99s-two-worlds-both-

ripe-%E2%80%98paradigm-shift%E2%80%99[18] https://connections.cu.edu/file/braiderawardpng[19]
https://connections.cu.edu/stories/researchers-common-colds-deadly-lung-diseases-one-protein-plays-key-role[20]
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p://www.ucdenver.edu/academics/colleges/SPA/BuechnerInstitute/Centers/WirthChair/people/Pages/default.aspx[34] http://www.ucdenver.edu/academics/colleges/Engineering/Programs/bioengineering/FacultyandStaff/Pages/RobinShandas.aspx[35]
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https://connections.cu.edu/stories/three-cu-employees-win-ipads-financial-iq-challenge[60]
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