Regents talk tuition increase cap, but delay decision[1]

A resolution that sought to cap the University of Colorado's in-state tuition at no more than 4 percent for the 2011-2012 fiscal year was tabled indefinitely after discussion at today's special meeting of the Board of Regents.

Under the proposed measure, sponsored by four of the nine regents, the recommended tuition for the year would remain constant, but if the need arose because of cuts in state funding, the increase in tuition would not rise above 4 percent.

Regents pushing for a cap were Jim Geddes, R-Sedalia; Tom Lucero, R-Berthoud; Monisha Merchant, D-Lakewood; and Joe Neguse, D-Boulder. The four voted against tabling the measure, but the remaining five regents said the proposal was premature and voted accordingly.

The university filed financial accountability plans Oct. 1 with the Colorado Commission on Higher Education saying it wants the option of seeking a 9.5 percent increase for fiscal year 2011-2012. Under a new law passed this year, CU and other state higher education institutions are required to file the plans if they are considering increases above 9 percent. Colleges and universities do not have to alert the CCHE if they are considering increases of 9 percent or below.

The rates requested are not set in stone. CU likely won't set a tuition level until next spring.

Many institutions asked for tuition hikes because the amount of funding from the state for next year and beyond is uncertain, and one worst-case scenario suggested funding could be trimmed by as much as 50 percent.

The state cut $50 million in funding from CU's budget in fiscal year 2008-09 and an additional $71 million in 2009-2010. Although much of the funding gap was filled by $121 million in American Reinvestment and Recover Act dollars, those funds will not be available for the 2011-2012 fiscal year.

As the state's unemployment level hovers at 8.2 percent, the burden of paying for college has shifted from parents to students, Merchant said.

"I agree that a college education is one of the best investments an individual can make in her life and it is also an incredible investment for the people of Colorado," she said. "For every dollar that we as Colorado taxpayers invest in the University of Colorado, the return on our investment is $40."

She added that over the years, students have been asked to pay higher tuition and student fees to cover construction and degree-specific costs and shortfalls in state funding. "We can't ask our students to bear the burden anymore."

Regent Geddes said more funding options should be explored. He said savings might come from the operational budget, a 10 percent reduction in financial aid, and/or salary reductions. Because of the economic duress students are experiencing, it is "not the time to increase tuition rates," he said.

But Regent Michael Carrigan, D-Denver, said it is too early to decide on tuition levels now, long before state funding for higher education has been determined.

"We all want to avoid tuition increases," said CU system spokesman Ken McConnellogue. "But we believe that it is premature to limit a key revenue option before knowing what our state funding will be. We worry that it could have unintended consequences of diminishing quality and financial aid and student services."

State funding for resident students at CU has declined by about $2,700, and tuition increases make up only 20 percent of the decline.

In-state tuition for a majority of students attending CU — undergraduates enrolled in the College of Arts and Sciences — is $7,018. Under the regents' proposal, tuition would increase by no more than $281. If tuition is increased by 9.5 percent, the cost of tuition would be $7,685 (an increase of $667).

Representatives of faculty, staff and student groups said the proposal was introduced so quickly they did not have a chance to discuss the proposal with constituents.

"Obviously we are not setting tuition rates today," Neguse said. "What you are seeing ... is several regents who have come to the conclusion that we can no longer put the cost on the backs of our students."

Neguse said all the regents share the same concern when it comes to quality of education at CU. "But at the end of the day, cost matters, and I certainly am reluctant to support the kind of tuition increases that the board has approved in the past."

For fiscal year 2009-2010, tuition for full-time CU students was increased 8.8 percent. The cost is still considered low compared to peer universities.

The Colorado Commission on Higher Education will review the financial plans submitted by colleges and universities and make decisions in December.

Moore named provost at CU-Boulder[2]

Russell L. Moore

Russell L. Moore, who has served as interim provost at the University of Colorado Boulder since July, today was named provost and executive vice chancellor for academic affairs by Chancellor Philip P. DiStefano.

DiStefano today sought the approval of the CU Board of Regents to waive a national search for the provost.

"This appointment is supported by both the Council of Deans and the Executive Committee of the Boulder Faculty Assembly, and is designed to provide stable campus leadership over the next few years," DiStefano said.

"I am pleased that we have turned to a respected scholar and one of our ablest administrators to lead the academic mission at CU-Boulder. Russ has been an outstanding researcher, teacher and member of our esteemed faculty, and has shown a remarkable ability to lead, manage and inspire our academic community. I believe he will make an outstanding provost."

The appointment is effective today and ends no later than Oct. 12, 2013. Moore has been serving as interim provost since July 1; prior to that, he was interim vice chancellor for research from May 2009 to June 30, 2010.

"I am honored by this appointment and by the confidence of Chancellor DiStefano," Moore said. "I am honored to be a part of a leadership team that is taking CU-Boulder to amazing new heights under the Flagship 2030 Strategic Plan, and I look forward to working with the various sectors of our community to achieve new successes for our students and our university."

Before the interim vice chancellor for research appointment, Moore served as associate vice chancellor for research (2006-09). He also served as chair of kinesiology and applied physiology (now integrative physiology) from 1994 to 2001, and was an assistant professor (1984-86), associate professor (1993-96) and then full professor (1996-present) in that department.

Moore holds an adjunct professorship in medicine (cardiology) at the University of Colorado's Anschutz Medical Campus at the University of Colorado Denver. He also was an assistant and associate professor (1986-91) in the

departments of medicine, cellular and molecular physiology at the Pennsylvania State University College of Medicine in Hershey, Pa. He also did postdoctoral work at the University of Texas Health Science Center in Dallas (1981-84).

He earned a bachelor of science degree in biochemistry from the University of California at Davis in 1976, and a master's degree (1978) and doctorate (1982) in physiology from Washington State University in Pullman, Wash.

Jones to lead information security for system[4]

Dan Jones

Dan Jones, director of information technology (IT) security for the University of Colorado Boulder, has been named interim chief information security officer for the CU system. In his new dual role, Jones will coordinate IT security efforts with system and the campuses.

Leonard Dinegar, senior vice president and chief of staff, said Jones will work closely with campus security principals to protect private data pertaining to students, patients, faculty and staff, and will present reports to the IT Governance Board, the president's leadership team and, as necessary, to the Board of Regents and/or its audit committee.

"Dan has many years of expertise in the IT security industry and will be an integral member of system's information security team," Dinegar said.

The evolution of the new position began five years ago, Dinegar said, when the campuses were just beginning to build strong infrastructure for information security. At that point, there was a great need for a full-time centralized information security post at the system level.

The strengthening of those functions at the campuses, combined with budget cuts, led to the decision to no longer have a full-time position at the system level. Dinegar said groups on all campuses were consulted before pursuing the new arrangement, and that approval was unanimous.

"This is a tremendous opportunity that will better allow for shared development of effective information security practices," Jones said. "There is much good work being done on each campus to protect university information resources and there needs to be someone to coordinate and provide support to those efforts. Likewise, as we are making investments in security technology, we should be coordinating so as to ensure we are making the most efficient use of university resources."

Jones notes that his new role is getting under way during National Cyber Security Awareness Month[6]; more information is available at this online resource library[7].

Though Jones still will be based in Boulder, he will work at 1800 Grant St. in Denver one day each week (Tuesday) as a part of his systemwide role.

"While many have indicated that having an individual with campus experience will be beneficial in the chief information security officer role, there are advantages to spending time at the system offices," Jones said. "This will further help me keep in tune with critical university functions, allowing me to adjust our security efforts as needed. Ultimately, the information security program exists to support the mission of the university. If our security efforts are not in harmony with the institution's goals, the security program cannot succeed."

Five questions for Gregory Plett[8]

UCCS Associate Professor Gregory Plett enjoys climbing Colorado's 14ers; he reached his fifth and most recent summit at Mount Huron this summer.

As a new generation of cars moves its way from the conceptual phase to showrooms, a University of Colorado at Colorado Springs professor is right in the middle of the research.

Gregory Plett, Ph.D., currently is working with students, University of Michigan faculty and General Motors engineers to design a battery that will power future electric vehicles. Plett, an associate professor in the department of electrical and computer engineering, received a $750,000 grant to fund research efforts to help develop a battery devoid of the kinks that have so far stalled efforts to make an economically viable power source.

He came to the University of Colorado in 1998. Before then, he earned his bachelor's degree in engineering in computer systems engineering from Carleton University in Ottawa, Canada, and his master's degree and doctorate in electrical engineering from Stanford University.

— Cynthia Pasquale

1. How did you become part of the battery design team and what is your role in the research?

Through a series of events that I could not have orchestrated, even had I thought to attempt it. In 2001, our department had a visit from Dr. Dan Rivers, the president and CEO of Compact Power Inc. (CPI), who wanted to see if there was any interest in working on battery design for hybrid electric vehicles. I took him up on the offer.

My research background is in adaptive control systems, which at first seemed very different from the problems encountered in battery pack design. There were, however, some control problems relating to proper battery management, and I started working on these problems for CPI during the summer of 2001.

A hybrid or electric vehicle needs to know two things about the battery state: how much energy is presently available, and how much power is presently available. The energy estimate is like the gas gauge in a standard automobile. It is needed to answer the question, "How far can I drive?" The power estimate tells you how quickly you can remove that energy from the battery without causing damage. It answers questions like, "How quickly may I accelerate?" Both of these estimates require knowing the present internal state of all of the battery cells, in particular, the state-of-charge of all cells in the battery pack (with 0 percent being "empty" and 100 percent being "full"). That's the problem that I focused on, and I was fortunate to be at the right place at the right time to make and publish some contributions that have yet to be exceeded.

In 2005, CPI moved to Detroit to be closer to the Big Three automakers, hoping to attract their business. (Dr. Rivers stayed in Colorado to form a new company; Dr. Prabhakar Patil became the new CEO of CPI.) The move turned out to be a good idea: The GM/Chevy Volt that will be released later this year uses a battery pack design that was co-engineered in the early stages with CPI, and uses battery cells from CPI's parent company, LG Chem of Korea.

In 2009, the University of Michigan and General Motors kicked off a joint program: The GM/UM Advanced Battery Coalition for Drivetrains (ABCD). This joint research effort is designed to get the best available technology into battery electrochemical/materials design and into battery management design to accelerate the launch of the electric drivetrain in a big way. The UM principal investigator for this project is Dr. Ann Marie Sastry, and she has assembled an amazing team of researchers in this field. The research aims to understand batteries from the molecular level all the way up to the vehicle scale, and to leverage that understanding to control battery design and operation to extend battery lifetime. If we can do that, we can build cars that are less expensive up front (because they don't need to be over-designed to compensate for our present ignorance) and are less expensive in the long term (because the battery pack will last the

lifetime of the vehicle, never needing replacement).

Dr. Sastry knows Dr. Patil very well. On his recommendation, she gave me a call, told me about the ABCD project, and asked whether I would be interested in joining.

2. It seems to have taken a long time to develop an electric car. Why is that?

From the consumer's point of view, expense and "range anxiety" are the main problems. Both of these boil down to the battery. The battery is presently the most expensive component of the electric drivetrain, and there are worries that it won't last the life of the vehicle (lead acid batteries used in standard vehicles tend to last only about three years or so). It's also expensive to put a very large battery pack in a vehicle for large range (and technically challenging to fast-charge a battery in a way that doesn't cause it to age prematurely). So, from an engineering perspective, if we can fix the battery problem, then we have addressed the issue.

Previous battery technologies couldn't answer these issues, but present lithium ion batteries designed for automotive application have life expectancy of between 10 and 15 years. And, we hope to extend this further, using better battery and control design. So, the lifetime issue is manageable. Battery costs are expected to drop precipitously as soon as we start mass-producing large cells for vehicles, so that will also become less of an issue. Range-extended electric vehicles (like the GM/Chevy Volt) are a kind of hybrid vehicle that can drive about 40 miles on battery power alone, and then up to about 300 miles on gasoline power, so range is not an issue either.

So, I think we're at the cusp of something new.

There are several reasons to move away from gas-powered forms of transportation. From a national security standpoint, it is a good idea to reduce our dependence on foreign oil; from an environmental standpoint, it is a good idea to wean our transportation needs from fossil fuels, and electric vehicles allow this as a possibility. But, honestly, vehicles with electric drivetrain are a lot of fun! Electric motors operate differently from gasoline or diesel engines – they have full acceleration right from zero speed; no need to rev the engine. They also have much greater range of speed, so no transmission is needed (only a simple fixed-gear system). There's much less that can break on an electric vehicle – no oil changes, no tuneups, no transmission. All around, it's a much better way to drive, if we can figure out the battery problem.

3. What other types of research have you done in the past?

I have worked mostly in adaptive controls of one type or another. During my sabbatical, I worked for Dr. Daniel Pack at the United States Air Force Academy designing sensor fusion systems to localize "bad guys" using sensor information from autonomous unmanned aerial vehicles.

4. How did you come to be at UCCS and why did you choose this career path?

I was born in Ottawa, Canada, and grew up mostly in Ontario. As a senior in high school, I was selected to participate in a program called Shad Valley, a four-week summer enrichment program that included an internship at a local technology company, Bell Northern Research (BNR). I worked with BNR throughout my undergraduate degree program in computer systems engineering, and for one year after graduation.

BNR did applied research in the telecommunications area, and consequently hired some really smart people. I had the problem that I couldn't understand what my colleagues discussed over lunch! So, I decided I had better go to graduate school. When I was there, I searched for a research group to participate in. I approached the faculty member who did research in telecommunications, but he had no openings. I approached a different faculty member, Dr. Bernard Widrow, who taught adaptive systems and neural networks (which I thought were pretty cool), but he had no openings either. I knew that if I volunteered for either, and did decent work, I would likely be picked up whenever a position opened up, but which to choose? I could choose the one I knew something about (telecommunications), or the one I thought looked like more fun (adaptive systems). I chose the fun one. No regrets.

I chose an academic career because I saw the most opportunity in it to build up other people. Research is great, and it

would be fun to develop a bunch of shiny widgets for some company, but it's nothing like the possibility of helping the next generation of engineers succeed.

I teach courses mostly in control systems: how do we control robots, automobiles, aircraft, batteries and so forth. My favorite part of the job involves anything creative. I especially enjoy creating new courses, and have created more than one new course, on average, each year I have been at UCCS. My least favorite part of the job is anything mundane and routine. I don't much care for grading, so I hire that out whenever possible!

5. What do you like to do when you are not thinking about adaptive systems and batteries?

I'm very much a homebody. I enjoy watching movies with my wife and three daughters on our home entertainment center. We have a weekly family night where we order take-out food and eat dinner with a movie.

When I feel a little more inspired, I work on home improvement projects and build furniture. My most recent project was to build two end tables of my own design from redwood recycled from a former deck, and leftover slate tile from when we finished our basement a few years ago.

My family and I are also very involved in a local church, where I teach an adult Sunday morning class. We're presently studying what Apostle Paul writes regarding constructive interpersonal relationships.

President's Teaching Scholars Program nominations due soon[10]

The President's Teaching Scholars Program's (PTSP) 2011 call for nominations[11] continues through Nov. 12.

University of Colorado President Bruce D. Benson solicits nominations of faculty for the designation, a lifetime appointment. The title of CU President's Teaching Scholar represents the university's highest recognition of excellence in and active commitment to learning and teaching as well as active and substantial contributions to scholarly work in one's discipline or, in the case of a less senior scholar, indications of path-breaking contributions to his or her field. Chancellors, deans, departments and other faculty nominators are encouraged to nominate candidates for this designation and commitment; self-nominations will not be accepted.

All tenured faculty members throughout the CU system are eligible to be nominated. Clinical Teaching Track (CTT) faculty members who hold the rank of associate professor or professor are eligible to be nominated, as are tenure-track faculty members in the School of Medicine who hold the rank of associate professor or professor. The President's Teaching Scholar designation is not an end-of-career-at-CU award, but rather membership in an active society of scholars and teachers involved in outreach to faculty peers. The Selection Committee will evaluate applications based on past achievements and on furthering the goals of the President's Teaching Scholars Program.

Those appointed as Teaching Scholars will receive a $3,000 stipend for each of the first two years; a one-time teaching development fund of $2,000; and an addition of $2,000 to the base salary beginning the third year.

More information is posted at http://www.colorado.edu/ptsp/[12]. Questions: Meg Clarke, ftep@colorado.edu[13] or 303-492-4985.

Election season brings guideline reminder[14]

With Election Day approaching on Nov. 2, the University of Colorado is reminding employees of guidelines regarding political campaign-related activity and expression. Here is a summary of those guidelines, based on state and federal laws and CU policies.

Campaign-Related Activities – Summary and Guidelines

General prohibitions
The Fair Campaign Practices Act, aka Campaign Reform Act, generally prohibits public entities, including institutions of higher education, from expending any public moneys from any source for contributions to a campaign for elected office, or to urge electors to vote in favor or against any ballot issue or referred measure. The term "public moneys" is broadly construed, and includes in-kind contributions such as services or nonmonetary resources. The secretary of state may investigate any complaint from any person.
Specific guidance for university employees
Employees may not engage in any activity during working hours designed to urge electors to vote for or against any campaign issues, which include campaigns for public office, statewide campaign issues or referred measures, and local campaign issues or levies. Employees wishing to participate in a campaign activity should take personal leave. Employees may not use office supplies or equipment – including computers, telephones, printers or facsimile machines – to create materials urging electors to vote for or against a campaign issue. Employees may not use their university e-mail accounts to urge electors to vote for or against a campaign issue, or to forward materials that urge electors to vote for or against a campaign issue. Employees may not use university websites to urge electors to vote for or against a campaign issue.
Special rules for faculty members
Most faculty members do not have personal leave. Also, many faculty members are not on contract during the summer. Accordingly, faculty members may engage in advocacy activities related to a campaign issue during months in which they are not on contract, or during the school year in accordance with applicable department or campus policies on use of personal time. However, faculty members should avoid the appearance of impropriety by clarifying whenever possible that such activities are being conducted on personal time and not on behalf of or at the request of the university. Faculty members remain subject to other limitations on the use of state resources, including university e-mail, even if using personal time.
Activities allowed

University employees may provide information in response to questions posed in the ordinary course of their duties, even if the information provided relates to a ballot issue, so long as the question was not solicited by a state employee. The Board of Regents may pass a resolution adopting an advocacy position related to a ballot issue. The resolution may be distributed by any normal and customary means and in response to a question. Policy-makers such as the president and chancellors may adopt an opinion related to a ballot issue and spend up to $50 publicizing that opinion. If such an opinion is adopted, it may be communicated in response to a question. Employees may use personal time to engage in any advocacy activities, provided that they do not use state resources. As a general rule, employees should always make it clear that they are taking personal time and that they are not speaking on behalf of the university. The university may allow access to its meeting facilities for political expression as public forums or limited public forums. So long as access is not restricted based on viewpoint — i.e., so long as there is equal access to advocates on all sides of an issue — the resource is not being used for advocacy. The university may allow a meeting room to be used by an advocacy group, so long as the same or similar space is available to any opposing advocacy group. Forums offered to provide information about a ballot issue should include both sides of the ballot issue. However, student advocacy groups may invite a candidate to speak without inviting opposing candidates, so long as other student advocacy groups are afforded the same opportunities to invite opposing candidates to speak. The university may set additional reasonable time, place and manner restrictions on these activities. Included, the following rules are advisable: Attendance must be open to the public or to all students. A disclaimer must be made on any printed materials and/or at the event that the university does not endorse the candidate, and that any opposing candidate or advocacy group will be offered a similar opportunity to speak.

President's Employee of the Year to be recognized next week[15]

Lisa Affleck of Payroll & Benefit Services has been named the President's Employee of the Year for system administration. She will receive a plaque and $1,000 prize from President Bruce D. Benson at a ceremony and reception at 3 p.m. Oct. 22 in the Fifth Floor Conference Room at 1800 Grant St.

The award is given in recognition and appreciation of exceptional job performance. Affleck was chosen from a field of six nominees; the five runners-up also will be recognized at next week's event, where they will receive honorary certificates. They are: Leo Balaban, University Information Services (UIS), desktop support at 1800 Grant St.; Katie Goodwin, University Counsel; Lindsay (Polak) Lennox, Tech Transfer Office; Tyler May, UIS; and Denise Nakamichi, Office of the President, budget and finance.

Next week's ceremony also will recognize employees who are reaching landmark years of service to the university.

Anyone wishing to attend is asked to RSVP to Ashley Mohr by e-mailing Ashley.Mohr@cu.edu[16].

Boulder faculty to be recognized at Fall Convocation[17]

The fifth annual Fall Convocation Awards Ceremony: Awards and Presentations Celebrating Faculty and Student Achievements is set for 1:30 p.m. Friday, Oct. 15, in the Old Main Chapel on the University of Colorado Boulder campus.

The ceremony will include welcoming remarks from Chancellor Philip P. DiStefano, followed by recognition of this year's faculty receiving tenure and promotion, a presentation of this year's Provost's Faculty and Student Achievement Awards, the presentation of the Student Affairs Faculty Award and a reception in the Heritage Center (Old Main, third floor).

Fall Convocation events also will include panels with topics such as "Experimental Art, a Tradition at CU," a panel discussion organized by Professor Daniel Boord, 10 a.m.; "America's Longest Wars: Vietnam, Iraq and Afghanistan," a lecture by Professor Robert D. Schulzinger, 11 a.m.; and "Why is Facebook Important to Your Student (and You)?," a panel discussion organized by Professor Andrew Calabrese, 3 p.m. All panels will be in the Old Main Chapel.

More details are available here[18].

Energy conservation program at CU-Boulder achieves savings[19]

Conservation efforts at three University of Colorado Boulder buildings cut campus energy use by 645,000 kilowatt-hours, reducing carbon dioxide emissions by more than 1 million pounds and saving nearly $65,000 in utility costs during the 2009-10 fiscal year.

The savings, achieved at Norlin Library, the Hellems Arts and Sciences Building and the Mathematics Building, were encouraged under CU-Boulder's Buff Energy Star program, which provides building proctors with reduction goals, tracking tools and models to encourage occupants to participate in resource conservation practices.
"Energy conservation is good for the environment and the university's bottom line," said Moe Tabrizi, CU's energy

conservation officer. "The Buff Energy Star program shows communities within buildings, and the campus as a whole, that the simplest strategies, such as turning off unnecessary lights or equipment, can have a great impact."

The Buff Energy Star program has contributed to CU-Boulder's 23 percent slash in campuswide energy use and overall stabilization of greenhouse gas emissions since 2005, despite a 14 percent growth in campus facilities. The findings were reported last month in a carbon inventory filed with the American College and University Presidents' Climate Commitment, of which CU-Boulder has been a signatory since 2006.

To be considered for Buff Energy Star status, building proctors must complete an energy audit, take action based on the audit, post energy and water conservation educational materials and show a 5 percent energy reduction over the prior fiscal year.

The building proctors being recognized this year for qualifying their buildings for Buff Energy Star status are John Culshaw of Norlin Library, David Nicoll of the Hellems Arts and Sciences Building and Donna Maes of the Mathematics Building. Each will receive a one-time $1,000 bonus from CU-Boulder Vice Chancellor for Administration Frank Bruno.

Specific energy-saving actions that were implemented by the building proctors include turning off lights not in use, enabling power-management features on computers and other office equipment, relying more on daylight and reporting energy waste to the campus conservation hotline.

Through the Buff Energy Star program, a total of 2.9 million kilowatt hours of energy and more than $300,000 have been saved since 2004. Total reduction of carbon dioxide emissions amount to more than 4.5 million pounds, according to Tabrizi.

The current Buff Energy Star cycle began in July 2010 and will run through June 2011. To enter a CU-Boulder campus building in the program, contact Moe Tabrizi via campus mail at UCB 453 or via e-mail atmoe.tabrizi@colorado.edu[20].

To learn more about energy conservation on the CU-Boulder campus and the Buff Energy Star program visitwww.colorado.edu/conservation[21]. To report campus energy waste, call 303-735-6202 or e-mailenergyconservationhotline@fm.colorado.edu[22].

Gravity Run to send racers downhill[23]

The Small Business Development Center (SBDC) at the University of Colorado Colorado Springs is hosting a 5K/10K fun run, the first Small Business Gravity run, on Oct. 30.

Event proceeds will benefit the SBDC, a nonprofit organization dedicated to supporting small business in El Paso and Teller counties through free counseling and low-cost training workshops.

Dubbed the Gravity Run because the course is all downhill, the race begins at 9 a.m. at the SBDC Building on the UCCS campus and ends at the Mr. Biggs Event Center, 5825 Mark Dabling Blvd. Racers are encouraged to wear Halloween costumes.

Registration is $25 per racer, or $70 for teams of three. Online registration closes at 10 p.m. Oct. 27.

UCCS faculty, staff and students may register by calling 719-255-3844.

More details are available here[24].

School of Medicine faculty dominate magazine's Top Docs list[25]

[26]
Editor's note: An earlier version of this story indicated only 63 physicians from the Anschutz Medical Campus were included on the 5280 list; the story did not state that the 63 are the physicians on staff at the University of Colorado Hospital.

The University of Colorado School of Medicine is home to the majority of Denver's Top Docs as selected in the annual survey by 5280 Magazine. Faculty and clinical volunteers with theUniversity of Colorado School of Medicine[27] accounted for 183 out of the 295 physicians named in the survey.

View the Top Docs 2010 list from 5280 Magazine.[28] (PDF)

Physicians with the School of Medicine and its research program partner with local, affiliated hospitals including University of Colorado Hospital, The Children's Hospital, National Jewish Health, the Veteran's Administration Health Center (Denver) and Denver Health, treating patients at every age and with various health conditions.

School of Medicine physicians and the clinical volunteers instruct the next generation of caregivers. School of Medicine physicians need to be innovative, staying ahead of the latest research and becoming aware of the best ways to treat diseases. The faculty educate and train 1,700 medical professionals each year including medical students, residents and fellows, physical therapists, and child health associates/physician assistants. They also bring innovative research to the bedside of patients so they can receive the most advanced new treatments and therapies.

For the past 17 years, 5280 has compiled the listings for the top doctors in the Denver metro-area. The physicians ranked in the Top Doctors 2010represent 80 different specialties chosen from a list approved by the American Board of Medical Specialties. Individual physicians are nominated by their peers as the magazine worked with the Colorado Board of Medical Examiners to invite more than 8,500 doctors to participate in the survey. It listed a variety of specialties and asked the doctors who they would trust to treat them or a member of their family in each of the 80 categories.

Hubble astronomy team uncovers evidence of early heated universe[29]

Illustration courtesy Hubble Space Telescope Science Institute/NASA

If you think global warming is bad, think again. A mere 11 billion years ago, the entire universe underwent what might be called universal warming. The consequence of the early heating was that fierce blasts of radiation from voracious black holes stunted the growth of some small galaxies for a stretch of 500 million years.

That is the conclusion of a team of astronomers – led by the University of Colorado Boulder – who used the new capabilities of NASA's Hubble Space Telescope to probe the invisible, remote universe.

Using the newly installed Cosmic Origins Spectrograph, or COS, the team identified an era from 11.7 to 11.3 billion years ago when the universe stripped electrons off from primeval helium atoms – a process called ionization. This process heated intergalactic gas and inhibited it from gravitationally collapsing to form new generations of stars in

some small galaxies. The lowest-mass galaxies were not even able to hold onto their gas, and it escaped back into intergalactic space.

CU-Boulder Professor Michael Shull of the astrophysical and planetary sciences department and his team were able to find the telltale helium spectral absorption lines in the ultraviolet light from a quasar – the brilliant core of an active galaxy. The quasar beacon shines light through intervening clouds of otherwise invisible gas, like a headlight shining through a fog. The beam allows for a core-sample probe of the clouds of gas interspersed between galaxies in the early universe.

The universe went through an initial heat wave over 13 billion years ago when energy from early massive stars ionized cold interstellar hydrogen from the Big Bang. This time period is called the Reionization Epoch because the hydrogen nuclei were originally in an ionized state shortly after the Big Bang, said Shull, also a faculty member at CU-Boulder's Center for Astrophysics and Space Astronomy, or CASA.

A paper on the subject will be published in the Oct. 20 issue of The Astrophysical Journal. Co-authors included CASA Research Associate Kevin France, CASA Research Associate Charles Danforth, CASA postdoctoral researcher Britton Smith and Jason Tumlinson of the Space Telescope Science Institute in Baltimore.

But the Hubble data indicated it would take another 2 billion years before the universe produced sources of ultraviolet radiation with enough energy to do the heavy lifting and reionize the primeval helium that also was cooked up in the Big Bang.

This radiation didn't come from stars, but rather from quasars, Shull said. The epoch when the helium was being reionized corresponds to a transitory time in the universe's history when quasars were most abundant.

The universe was a rambunctious place back then, Shull said. Galaxies frequently collided and this engorged supermassive black holes in the cores of galaxies with gas falling in. The black holes furiously converted some of the gravitational energy of this mass to powerful far-ultraviolet radiation that would blaze out of galaxies. This heated the intergalactic helium from 18,000 degrees Fahrenheit to nearly 40,000 degrees.

After the helium was reionized in the universe, intergalactic gas again cooled down and dwarf galaxies could resume normal assembly. "I imagine quite a few more dwarf galaxies may have formed if helium reionization had not taken place," Shull said.

So far Shull and his team only have one sightline from Hubble to measure the helium transition, but the COS science team plans to use Hubble to look in other directions to see if the helium reionization uniformly took place across the universe.

The $70 million COS instrument, inserted during the final Hubble servicing mission in May 2009, was designed by a team from CU-Boulder led by Professor James Green and was built primarily by Ball Aerospace and Technology Corp. of Boulder.

Students to lead 9/11 monument design[31]

Now housed in a laboratory at the University of Colorado at Colorado Springs, an 8-foot-long reminder of one of the most tragic events in U.S. history will be unveiled in a campus ceremony Friday, Oct. 15.

At 12:15 p.m. at El Pomar Center Plaza on the UCCS campus, ownership of the twisted, 750-pound steel beam that once helped support one of the twin towers of New York's World Trade Center will be transferred to Air Force Colonel Russell "Rusty" Wilson of Cheyenne Mountain Air Station by Don Addy, president of the National Homeland Defense

Foundation.

UCCS administrative and student leaders will participate in the ceremony and explain the university's role in designing a monument incorporating the beam for permanent display at the Cheyenne Mountain Air Station and a companion piece for the UCCS campus.

For several weeks, a four-person senior engineering student design team has examined the beam, testing its integrity, taking measurements and calculating structures needed to safely support it. The team will work with Peter Gorder, associate professor of engineering, and other students to complete a design for submission to the National Homeland Defense Foundation, which will commission the monument's creation.

"The 9/11 attacks were a defining moment for our country and, in particular, the generation that is currently students at UCCS," Gorder said. "The task the design team will have is to form a larger design committee to engage artists, consultants and many others to help with the creation of something truly monumental."

The skills of mechanical engineers in safely positioning 750 pounds of steel and preserving it from further corrosion are two examples of where engineering expertise is needed. Blending safety and preservation with creativity and design is the essence of entrepreneurship, Gorder said, making the project a perfect capstone project for seniors.

UCCS and area high school students who participate in ROTC programs will form a color guard to present U.S. and Colorado flags and the UCCS Young Republican Club plans to decorate a nearby area known as the West Lawn with 2,977 American flags in memory of those killed in the 9/11 attacks.

Addy secured the beam and contacted UCCS about working with the foundation and Cheyenne Mountain officials to design the monument.

At the event, Gorder will introduce the student design team and call for assistance from the campus as the team begins its work. The beam will remain on campus until November and will be on display in the observation windows of SENG A311. By April, the team hopes to submit final designs for a monument to the foundation, which intends to commission its construction and have it unveiled Sept. 11, 2011.

"This is an incredible opportunity to preserve a piece of our nation's history," Gorder said. "As few campus citizens will have the opportunity to view the Cheyenne Mountain 9/11 Memorial Exhibit once it is installed, my goal, in addition to helping the students create a design of which we are all proud, is to have a companion piece to the Cheyenne Mountain exhibit find a permanent home on our campus."

STEMapalooza offers tools, options for a brighter future[32]

[33]
Three years running and STEMapalooza is stronger than ever as the Oct. 8-9 STEM showcase welcomed more than 11, 000 students and adults, including more than 8,000 on the first day. In an effort to put STEM (Science, Technology, Engineering and Math) in the spotlight, exhibitors from all over the state came to display the latest innovations and engage students. Each student was able to participate in hands-on activities, including video-game creation, examining the "Jungle Lady's" creatures, microscopic exploration and planetarium domes.

"We came last year and the kids loved it," said Angela Hadaway, the leader of an after-school program at Trinidad Middle School. Through MESA Colorado (Mathematics, Engineering, Science Achievement), a group of students at Trinidad Middle School are able to participate in a program that allows further exploration of STEM. These students made the trip from Trinidad to participate in STEMapalooza, staying the night at a local Boys and Girls Club facility. Haley Dove, an eighth-grader at Trinidad Middle School and a second-year STEMapalooza attendee, enjoyed viewing

and participating in science projects.

Noah Sartori, another student at Trinidad Middle School, was taken by the robotics display. The exhibit was a collaborative effort through the Robotics Group with UC Denver, Colorado FIRSTRobotics and other schools.

"I really lik everything at STEMapalooza, but my favorite was all the robot stuff. It was so cool!" Sartori said.

Found roaming around the event was UC Denver Chancellor Jerry Wartgow. "This is fantastic!" he said. "The event has really grown and developed, and the kids love it." Wartgow looks forward to seeing the positive impact events such as STEMapalooza will make on students across the state, as well as on the next generation work force and economy in Colorado.

Many participating UC Denver program members were pleased with the success of the annual event. Donna Long, an exhibitor for the University of Colorado College of Nursing, volunteered at a booth that allowed participants to listen to a healthy heart and learn what it meant to keep your heart healthy.

"It's exciting to see kids who want to learn," Long said. "And this event is a great way to reach out and improve public relations for us. With the large number of home-schooled children and teachers that attended, it really helps us show how much we care about future generations."

School of Medicine doctors to provide AIDS care education in Africa[34]

The HIV epidemic continues to grow, especially in Africa where it has orphaned millions of children and decimated entire communities. In this environment, funding to train African health care providers is critical.

The U.S. Department of Health and Human Services is partnering with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) to invest $130 million over five years to transform African medical education and dramatically increase the number of practicing health care workers. The University of Colorado School of Medicine will receive $1.9 million in federal grant funding to support this work. Funding from the NIH grant will enable CU faculty to travel to Zimbabwe to train medical students about HIV.

The Medical Education Partnership Initiative (MEPI) will award grants directly to African institutions in a dozen countries; the African institutions will work in partnership with U.S. medical schools and universities. The initiative will form a network of approximately 30 regional partners, country health and education ministries, and more than 20 U.S. collaborators.

The University of Colorado School of Medicine will collaborate with the University of Zimbabwe College of Health Sciences. The Colorado-Zimbabwe collaboration, called the Novel Education Clinical Trainees and Researchers (NECTAR), will improve medical student HIV education in Zimbabwe.

Thomas Campbell, M.D., professor of medicine, is the principal investigator for CU. Eva Aagaard, director of the Academy of Medical Educators; Lucy Bradley-Springer, director of the Mountain Plains AIDS Education and Training Center; Suzanne Brandenburg, director of the Internal Medicine Residency Program; and Nancy Madinger, director of the Infectious Diseases Fellowship Program at the CU School of Medicine will work with Campbell to administer and implement the program. Bonnie Walters, executive director of the evaluation center in the School of Education and Human Development, and her colleagues will monitor the impact of NECTAR on medical education in Zimbabwe.

"The University of Colorado is widely recognized for the outstanding teachers and clinicians among our faculty," Campbell said. "It is very exciting that we will now have this opportunity to share our teaching skills with our Zimbabwean colleagues to help them improve medical education in Zimbabwe."

As NECTAR is implemented, interested UC faculty from diverse areas of medicine will have opportunities to participate in activities at the University of Zimbabwe, including lecturing, bedside teaching and clinical and research mentorship.

"We must dramatically transform African medical education to increase the number of qualified care providers available and develop the scientific expertise needed for research and innovation," said Ambassador Eric Goosby, U.S. Global AIDS Coordinator at the State Department. "By engaging country health and education ministries, MEPI will strengthen national plans to improve medical instruction and bolster the overall health care delivery systems. As we transition PEPFAR-supported HIV efforts from an emergency response to a more sustainable effort, we need to develop the expertise necessary for evidence-based decision making on the local level. This expertise will empower countries to lead health programs and fulfill their responsibility for the health of their people."

Eleven programmatic awards, largely funded by PEPFAR, will expand and enhance medical education and research training in the field of HIV. Eight smaller, non-HIV awards, funded by the NIH Director's Common Fund, with additional support from several NIH institutes, will help develop expertise in topics such as maternal and child health, cardiovascular diseases, cancer, mental health, surgery and emergency medicine. Through NECTAR, UC faculty will support PEPFAR goals to train and retain 140,000 new health care workers and improve the capacity of partner countries to deliver primary health care.

"HRSA's decades of experience working in HIV/AIDS through the Ryan White HIV/AIDS Program have highlighted the critical need for enhanced medical education and training to provide quality care to people affected by HIV/AIDS in rural and underserved communities. We are proud to collaborate with PEPFAR and NIH to advance medical education in Africa through this initiative, as well as continue supporting the ongoing care and treatment and health system strengthening activities," said Mary K. Wakefield, Ph.D., R.N., HRSA administrator.

Symposium to showcase CU's research enterprise[35]

A program slated for Friday, Oct. 15, will showcase and highlight the impact of the University of Colorado Denver's research enterprise on society, clinical practice, the economy and the environment, emphasizing applied, translational and commercial aspects.

"Celebrate Scientific Entrepreneurship: UC Denver Symposium on Advancing Entrepreneurship and Technology Development" will assemble a distinguished group of translational scientists and clinicians, faculty entrepreneurs and members of the business community to discuss and celebrate efforts at the University of Colorado Denver.

Scheduled for 7:30 a.m. to 1 p.m. on the Anschutz Medical Campus (L18-2001 Bridge & L28-1102 Lecture Hall), the retreat will serve as a way to take time out and share some of the success stories and impacts of UC Denver research with lawmakers, the business community and other key stakeholders, and focus attention on faculty entrepreneurs who have seen their research put to use to make a difference.

More information and a draft agenda are posted here[36].

Anschutz researcher co-recipient of $2.4 million grant[37]

Restrepo

The National Institutes of Health (NIH) recently awarded nearly $2.4 million to University of Colorado Anschutz Medical Campus researcher **Diego Restrepo,** and Elba Serrano of New Mexico State University Las Cruces, to help them prepare minority students and those with disabilities for careers in neuroscience.

"We are partnering with two undergraduate programs, one at New Mexico State University, and the other at the UC Denver downtown campus," said Restrepo, professor of cell and developmental biology and co-director of the School of Medicine's Center for NeuroScience. "This grant is very important because the number of disabled and minority Ph.D. students is small in general and those in neuroscience even smaller."

Restrepo and Serrano will share the $2.39 million grant along with **Sondra Bland** at the UC Denver downtown campus. The money will support undergraduates from both universities, home to a widely diverse student body. Along with serving as a student "pipeline" to the Center for NeuroScience, UC Denver will provide seminars, mentoring, enhanced curricula and hands-on research experience.

The NIH issued grants totaling $10.3 million over the next five years for five programs targeting minorities studying neuroscience. The funding is part of NIH's Blueprint for Enhancing Neuroscience Diversity Through Undergraduate Research Education Experiences. It connects research universities to institutions with neuroscience students from traditionally underrepresented groups.

"By forming strong collaborations between institutions, these programs will maximize the impact of limited resources while fostering participation and diversity in neuroscience research," said neurobiologist Alberto Rivera-Rentas, Ph.D., who oversees training programs at NIH's National Institute of General Medical Sciences. "We expect that these partnerships will serve as models for future NIH initiatives designed to increase diversity in the biomedical workforce."

According to Restrepo, the Anschutz Medical Campus has one of the best-funded neuroscience programs in the Rocky Mountain West with $27 million so far in NIH research grants. But he stressed the need for more diversity.

In 2005, African Americans, Latinos and Native Americans accounted for 31 percent of the population between the ages of 18 and 24. But a survey of neuroscience departments that year showed that these groups made up just 12 percent of pre-doctoral students, 8 percent of post-doctoral students and 4 percent of neuroscience faculty.

Krugman appointed to national commission[39]

Krugman

Richard Krugman, M.D., vice chancellor for health affairs at the University of Colorado Denver and dean of the CU School of Medicine, joins a group of 15 other professionals in health care to be appointed to the new National Health Care Workforce Commission.

Gene L. Dodaro, acting comptroller general of the United States and head of the U.S. Government Accountability Office, announced the appointments last week.

"(The) appointees bring impressive expertise and professional credentials to their role of advising policymakers on ways to improve the health care work force which is so essential to ensuring the health and safety of the American people," Dodaro said.

The Patient Protection and Affordable Care Act created the commission to serve as a national resource for Congress,

the president, and states and localities; to communicate and coordinate with federal departments; to develop and commission evaluations of education and training activities; to identify barriers to improved coordination at the federal, state and local levels and recommend ways to address them; and to encourage innovations that address population needs, changing technology and other environmental factors.

Krugman was the first director of the Colorado Area Health Education Center program and played a key role in starting rural health education and physician assistant training programs in Colorado. He is a professor of pediatrics and chairs the Special Interest Group on Health Care Education and the Oral Health Initiative at the Institute of Medicine. He formerly chaired the Council of Deans of the Association of American Medical Colleges and the U.S. Advisory Board on Child Abuse and Neglect. He received an A.B. degree from Princeton University and an M.D. from New York University.

Professor to receive honor from National Cancer Institute[41]

Horwitz

Kate Horwitz, Ph.D., of the department of medicine, division of endocrinology, metabolism and diabetes at the University of Colorado School of Medicine, will receive the 10th Rosalind E. Franklin Award[43] for women in science from the National Cancer Institute.

The prize honors the commitment of women in cancer research and is given in tribute to Dr. Franklin, who played a critical role in the discovery of the DNA double helix. Horwitz is a Distinguished Professor whose work focuses on women's ovarian hormones and their role in breast cancer.

Nurses honored for 'extraordinary care'[44]

DAISY Award winner Clare Cull (second from right) with (from left) Neuro ICU manager Kathi Waite, Chief Nursing Officer Carolyn Sanders and President and President and CEO Bruce Schroffel.

Two nurses – one inpatient, the other outpatient – recently received the University of Colorado Hospital's DAISY Award for Extraordinary Nurses.

The DAISY (Diseases Attacking the Immune System) Foundation[46], based in Glen Ellen, Calif., established the award in 2000 to honor extraordinary care extended by a provider to a patient or family.

Clare Cull, R.N., a clinical nurse in the Neuro Intensive Care Unit, received the award for the compassionate care she provided a critically ill patient and his family. In nominating Cull for the award, her nurse manager, Kathi Waite, R.N., M.S., C.C.R.N., related comments she received from another nurse about the kindness and sympathy Cull extended to the patient's family as he lay "at death's door."

On Mother's Day, Cull again helped to console the patient's mother, helping her through the day and a difficult emotional time. Cull's actions "evidence her extraordinary caring and compassion for this family and all others she comes into contact with," Waite wrote in her nomination. "She truly exemplifies that for which UCH and the DAISY

Award stand."

Nancy Gavi, R.N., a clinical nurse who has worked in the Internal Medicine Clinic in the Anschutz Outpatient Pavilion for 13 years, received her DAISY for the assistance she provided a patient suffering from severe schizophrenia.

After she learned that the constant aches and pains the patient complained of were likely the result of having no bed to sleep in, Gavi offered him a bed her family wasn't using. She got sheets for the bed and, with the help of her husband, carried it up two flights of stairs, then set it up. The good deed would have gone unnoticed but for the fact Steve Ross, M.D., who practices at the clinic, saw a phone note from the patient thanking Gavi.

In nominating Gavi for the award, Ross and Internal Medicine Practice Manager Robin Pettigrew wrote, "Needless to say, the patient was exceedingly grateful, and now seems to be able to manage his pain with just Ibuprofen. ... All in all, this would have been an outstanding good deed for any patient, but it is especially amazing for a difficult patient."

Chief Nursing Officer and Vice President of Patient Services Carolyn Sanders, R.N., Ph.D., was on hand at both ceremonies to present the awards to Cull and Gavi. Each received a certificate and a small, hand-carved statue made by the Shona tribe in Zimbabwe and purchased by the DAISY Foundation.

Dropping names ...[47]

Glicken

Anita Glicken, MSW, associate dean for physician assistant studies at the University of Colorado School of Medicine, has been asked to serve on the executive committee of the National Interprofessional Initiative on Oral Health. The rest of the group consists of a dentist, family medicine doctor and funders. Their charge is to set funding priorities for the group which represents a partnership with philanthropy and health education.

Coolidge

... **Fred Coolidge,** professor of psychology at the University of Colorado at Colorado Springs, was featured in the WNYC nationally syndicated radio program "Radio Lab,"[50] where he explained his theory of hypnic jerks[51], the scientific term given to the sudden jerk that often accompany the beginning of the human sleep cycle.

Online courses a click away at SkillSoft[52]

Employees have access to a large number of online courses through SkillSoft, the employee online learning center. Whether you need to complete a required custom online course or have professional development goals, SkillSoft will meet your learning needs.

Accessing SkillSoft is only a click away – just follow these instructions:
Log in to the myCU Portal (http://my.cu.edu[53]) (Note: Employees on the Boulder campus must log in to SkillSoft via

CU Connect.) Click the MY.TRAINING tab Click, "Click here for SkillSoft – CU Learning Center... Online and Instructor Led Training (ILT)" After SkillSoft opens, Click "Catalog" Click "CU Courses" for a topic menu Click the topic folder that applies Click [Launch] for the course you wish to complete
The completion grade you receive from the online course reports into SkillSoft immediately. Go to the My Progress option and look under the Completed tab. Training completions take an additional three to four business days to report into your My.Training Summary in the myCU Portal. For User Guides, go to the Employee Learning and Development website at: www.cu.edu/eld[54].

Links
[1] https://connections.cu.edu/stories/regents-talk-tuition-increase-cap-delay-decision[2] https://connections.cu.edu/stories/moore-named-provost-cu-boulder[3] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/moore1.jpg[4] https://connections.cu.edu/stories/jones-lead-information-security-system[5] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/jones.jpg[6] http://www.staysafeonline.org/cybersecurity-awareness-month/about-ncsam-2010[7] https://wiki.internet2.edu/confluence/display/itsg2/Cybersecurity+Awareness+Resource+Library[8] https://connections.cu.edu/stories/five-questions-gregory-plett[9] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/5q-page-2.jpg[10] https://connections.cu.edu/stories/presidents-teaching-scholars-program-nominations-due-soon[11] http://www.colorado.edu/ptsp/documents/PTSP2011Call.pdf[12] http://www.colorado.edu/ptsp/[13] mailto:ftep@colorado.edu[14] https://connections.cu.edu/stories/election-season-brings-guideline-reminder[15] https://connections.cu.edu/stories/presidents-employee-year-be-recognized-next-week [16] mailto:Ashley.Mohr@cu.edu[17] https://connections.cu.edu/stories/boulder-faculty-be-recognized-fall-convocation [18] https://facultyaffairs.colorado.edu/events/2010-fall-convocation[19] https://connections.cu.edu/stories/energy-conservation-program-cu-boulder-achieves-savings[20] mailto:moe.tabrizi@colorado.edu[21] http://www.colorado.edu/conservation[22] mailto:energyconservationhotline@fm.colorado.edu[23] https://connections.cu.edu/stories/gravity-run-send-racers-downhill[24] http://cssbdc.org/site/content/view/45/27/[25] https://connections.cu.edu/stories/school-medicine-faculty-dominate-magazines-top-docs-list[26] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/5280.jpg[27] http://www.ucdenver.edu/academics/colleges/medicalschool/Pages/somWelcome.aspx[28] http://www.ucdenver.edu/about/newsroom/newsreleases/Documents/5280TopDocs/5280TopDocs2010.pdf[29] https://connections.cu.edu/stories/hubble-astronomy-team-uncovers-evidence-early-heated-universe[30] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/campus-ucb-univ.jpg[31] https://connections.cu.edu/stories/students-lead-911-monument-design[32] https://connections.cu.edu/stories/stemapalooza-offers-tools-options-brighter-future[33] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/campus-ucd2.jpg[34] https://connections.cu.edu/stories/school-medicine-doctors-provide-aids-care-education-africa[35] https://connections.cu.edu/stories/symposium-showcase-cus-research-enterprise[36] https://www.cu.edu/techtransfer/about/educationalseminars/2010/UCDenver_Sci_Showcase.html[37] https://connections.cu.edu/people/anschutz-researcher-co-recipient-24-million-grant[38] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_restrepo.jpg[39] https://connections.cu.edu/people/krugman-appointed-national-commission[40] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_krugman.jpg[41] https://connections.cu.edu/people/professor-receive-honor-national-cancer-institute[42] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_horwitz.jpg[43] https://ccrod.cancer.gov/confluence/display/CCRWSA/Rosalind+E.+Franklin+Award[44] https://connections.cu.edu/people/nurses-honored-extraordinary-care[45] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_daisy.jpg[46] http://www.daisyfoundation.org/[47] https://connections.cu.edu/people/dropping-names-22[48] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_glicken.jpg[49]

https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_coolidge.jpg[50]
http://www.radiolab.org/2010/sep/20/[51] http://www.radiolab.org/2010/sep/20/still-hanging/[52]
https://connections.cu.edu/stories/online-courses-click-away-skillsoft[53] http://my.cu.edu/[54] https://www.cu.edu/eld