Five questions for Cheryl Krause-Parello[1]
[2]
It has been one year since Cheryl Krause-Parello, Ph.D., R.N., arrived at the University of Colorado College of Nursing at the CU Anschutz Medical Campus. During this time she has developed a health research initiative for veterans – Canines Providing Assistance to Wounded Warriors, or C-P.A.W.W. – which investigates, in part, the beneficial effects that dogs have on their human companions. The roots of her research, however, began years ago.
Her family owned a pharmacy – her grandfather and father were pharmacists – and an aunt, with whom she was emotionally close, was a nurse. She decided to follow in her aunt's footsteps. While pursuing her master's degree, she worked at a high school and wrote her thesis on teen pregnancy. When she applied to Rutgers University's Ph.D., program, she planned to build on her master's work.

But the summer before Rutgers classes started, she had an epiphany. She remembered that her academic adviser told her that she needed to find a topic that she was passionate about in order to construct a successful dissertation. While lying in the sun, looking down at her beloved dachshund, Samantha, she thought, "You are the one who is going to get me through my Ph.D. program."
[3]

C-P.A.W.W. joins with community partners who provide support for our military, advance evidence-based practice protocols in military-related clinical settings and promote the delivery of culturally-congruent and competent care for the military members.

On the web:
C-P.A.W.W. website[3]Support C-P.A.W.W.[4]
She went to the library and began pulling hard copies of articles on pets and pet therapy. The librarians helped with her quest, but the documentation was limited to baseline research. She was determined to find something. When September rolled around and classes started, she told her adviser that she was going to switch her dissertation topic and research something about human-animal interaction.

"I found a dissertation team that understood where I was trying to go and supported me through it. I love animals and I knew the wonderful emotions I felt when I was with my dog, especially when I was going through stressful times. I knew there was something there; I just didn't know what it was."

Her dissertation examined how companion animals (dogs and cats) affected loneliness, social support and well-being in older adults. Over the past five years, Krause-Parello expanded her research to include "human-animal interaction and stress biomarkers in vulnerable populations including military veterans and children of alleged sexual abuse." Long-term, Krause-Parello hopes to find ways to use canines to moderate the effects of post-traumatic stress disorder (PTSD) on returning active-duty military members and veterans.

A few years ago, she considered moving to a more research-oriented institution and always wanted to work with her Rutgers dissertation chair and mentor, Linda Flynn. Flynn had recently accepted a position at the University of Colorado and Krause-Parello thought the move would make it impossible to work with her mentor and friend. When Krause-Parello received a call from Flynn asking if she would be interested in interviewing for a CU position, it was something she had to consider.

"I kept saying, 'It's so far,' and my husband said, 'It's too far,' but I thought if it worked out, I would have the opportunity to work with my mentor. So I interviewed and it was an amazing three-day experience. My dean, Sarah Thompson, was fantastic and supportive of my ideas of developing and creating a veteran and military health initiative at CU."

As Krause-Parello works to advance the health and well-being of members of the armed forces, an 8-foot American flag hangs in her CU office. "It stands for everything I'm trying to do."

1. How did your research population move from the elderly to veterans and those in the armed forces?

Cheryl Krause-Parello with Waffle, a companion dog working with veterans at the Denver VA.

My husband is a Marine veteran and a retired New York City detective. Basically, my study population changed around the time of 9/11. My husband was involved in rescue and recovery after the tragedy. I wanted to do something to help, but I wasn't sure what I could do. I was too old to serve, but I wanted to give back somehow. What better way to try to give back than to blend my passion for research on canines with veterans and wounded warriors.

2. Do other animals – cats, for instance – provide the same healing assistance as dogs? What is it that animals provide? Can humans provide the same support?

The type of animal depends on the person. It's really about reciprocal relationships. Everyone is different and everyone's preference is different, whether it's about the breed or the species. If you have that connection with an animal, regardless of what kind of animal it is, it can be beneficial to both parties.

My colleague, Dr. Michael Rice, and I are developing a theory around this. We're calling this a "relational certainty," a term that was coined based on available literature and from talking with people about their human-animal bond. A relationship with a companion animal is nonjudgmental. The animal is something to care for, but there is also reciprocity to the relationship: In other words, caretaking is bilateral – it works both ways.

The relationship provides a sense of social support and is also a coping mechanism. Say you have a bad day at work. When you get home, you are greeted by your companion animal, maybe a cat's purrs or a dog wagging their tail and it melts away all the stress you had. Or you walk around the park with your dog and you both get exercise.

I think it is different with other humans. It's the unconditional, nonjudgmental piece of the animal-human relationship that is really important. It doesn't matter what happened in your day or your world. Once you are with the animal, your world and their world integrate, almost in a silo, and nothing else really matters. It's very powerful. I'm not saying everything is perfect, but I do think there is a distinct difference from what another human provides. Obviously, humans are social creatures, as are many domesticated animals. They instinctively become part of your pack!

3. C-P.A.W.W. is a year old now. How has the program progressed?

With any kind of startup initiative it takes time to build relationships and we're still building them. But the program has been well-received as almost a hub for this area of research. A lot of people from other universities are reaching out to me. We want C-P.A.W.W. to be a resource for veterans and the military population who are looking for a service dog, service dog trainer, or a companion dog.

We've partnered nicely with key organizations. A couple of those include the Pets for Vets; Prison Trained K-9 Companion Program (PTKCP), where inmates train dogs for the community; Warrior Canine Connection; and Freedom Service Dogs.

We have a research project going on now with the VA in Denver. They have a facility dog – her name is Waffle – who has been specially trained and accompanies Dr. Elizabeth Holman, a therapist who visits veterans who have been admitted to palliative care. This is the first study conducted there using Waffle to see if she will make a difference in veterans' stress indicators. We're measuring salivary alpha-amylase, cortisol, immunoglobulin A, blood pressure and pulse. The vets visit with Dr. Holman and Waffle for 20 minutes and by measuring these stress indicators, we will see if Waffle makes a difference. When we're finished, we offer to take a picture of the vets with Waffle. The way they embrace their pictures afterward is so touching. We plan to wrap up our research in the next six months and get those results out to the community.

We're also getting ready to submit a grant for research regarding protective factors for impulsivity. We plan to conduct focus groups with student veterans to determine the role that companion animals play in reducing impulsivity.

In addition, we're seeking approval to conduct research through one-on-one interviews with veterans who have service dogs to determine what service dogs mean to those individuals.

And we'll soon be starting our research with wounded warriors who have been diagnosed with PTSD and/or traumatic brain injury (TBI) in the outpatient setting at Walter Reed National Military Medical Center.

4. What are some of your future goals?

I really would like to see more support around the issue of obtaining service dogs for veterans in need. It's important that service dogs are looked at as a therapeutic intervention that is reimbursable through the military. And of course, I want to conduct more research to support this premise. One of my concerns is there's not a lot of funding available to support this kind of work. However, we at C-P.A.W.W. were so fortunate to receive a gift from the Anschutz Foundation to build our program. My goal is to continue to conduct research in this area so we can provide the empirical evidence to support change in public policy regarding the benefits of service dogs and companion animals for our military.

5. Have you been able to enjoy Colorado and Denver during your year here?

My husband is still in New Jersey with my two dogs (yes, both rescue dachshunds) and I try to get home as much as possible. I keep very busy here. Besides my research I do triathlons, and so I do a lot of training for that and work out almost every day. I've done zip lining and snowshoeing, which is something I hadn't done before. I've gone skiing and taken many train rides, including the Pikes Peak Cog Railway. I'm an avid horseback rider and have all my gear ready to go in my closet, so I must go on a trail ride soon.

I live downtown and everything is in walking distance so I've really been able to take advantage of the city lifestyle, from going to the theater to watching the Broncos. I love the Broncos and Peyton Manning. Even though I grew up in New Jersey, I've always loved Peyton and followed him throughout his career. I must confess that I was a Colts fan before a Bronco fan; I even went to games in Indianapolis so I'm definitely not a groupie!

Boulder businessman's gift sparks $2 million CU Opera endowment[6]

Paul Eklund, left, Opera Director Leigh Holman and Dean of the College of Music Robert S. Shay. (Photo: Patrick Campbell/University of Colorado)

Longtime Boulder resident Paul N. Eklund has made a transformative gift to the opera program at the College of Music at the University of Colorado Boulder that, combined with additional university commitments, establishes a $2 million endowment for the program, to be renamed the Eklund Family Opera Program in honor of the gift.

"Paul's investment is a bold statement that says, 'The arts are important,'" said Leigh Holman, director of CU Opera. "In this crazy world we live in, when everyone is on their iPhones and not connecting as much, the arts still bring people together."

Funding from the endowment will help support the three full productions a year, an opera scenes program for students and CU NOW, a program in which students work directly with new composers. The endowment will also enable the program to provide the most professional experiences possible for students.

The timing of Eklund's gift coincides with the start of the 2014-15 CU opera season CU Opera, which opens 7:30 p.m. Friday and continues through Oct. 26 with the Gilbert and Sullivan classic The Pirates of Penzance at Macky Auditorium, and continues with full productions of Cosi fan tutte (March 13-15, 2015) and L'incoronazione di Poppea (April 23-26, 2015).

Robert Shay, dean of the CU-Boulder College of Music, noted that "opera has flourished through the centuries because of its unique abilities to bring various art forms together and comment on the world, but its success

has always depended on patrons like Paul, who have the vision to strengthen a program for the current generation and ensure its viability for many years to come. Students, faculty and community members will all reap the benefits of Paul's inspiring generosity."

The Eklund Family Opera Program is the third program in the College of Music to be endowed within the past two years. It joins the Ritter Family Classical Guitar Program and the Thompson Jazz Studies Program as the only named programs at CU-Boulder. Having named programs helps with recruitment, Holman says, because it signifies the stability of the program to prospective faculty and students.

When Eklund was a 7-year-old growing up in San Diego, his mother began taking him to outdoor opera productions at the Starlight Theatre. "It inspired me," he said. "I remember the singing, the emotions they had. I liked that."

Eklund didn't make music central to his life until he went to a recent CU Opera production of La Boheme. "I was so impressed," Eklund said. "It is like a rebirth. … I started listening to opera singers. Music is a constant now, and it makes for a fuller life."

The endowed program will enable CU Opera to continue high-quality work and take more artistic risks. "When we are pressured to fill a huge house like Macky [Auditorium], it is better to be able to choose a piece that is right for the students here, as opposed to solely what will sell tickets," Holman said. "We can also take risks from a design standpoint, do more innovative things with technology and keep up with the changing tide in theater."

Eklund named the program to honor family members who share a similar exposure to and love for music, he says.

Because the program is endowed, Eklund said, "CU Opera will have a consistent income stream on an annual basis … and it will continue beyond my life. I want it to flourish and be ongoing. … I want to have it available for people who may not have been exposed to it. I want it for our culture here in Boulder. I also know its students will make the world a better place."

CU Opera has been designated a Program of Excellence by the Colorado Commission on Higher Education. Students from the CU Opera program have won top awards in the National Opera Association Collegiate Scenes competition three out of the last four seasons. In addition to several fully staged and costumed operas and musicals each season, student performance opportunities include an annual student-directed opera scenes program as well as CU NOW, which showcases modern American operas.

Since its founding in 1920, the CU-Boulder College of Music has earned a reputation not only for preparing students for successful careers in music but also for providing them with an outstanding liberal arts education. With 350 undergraduate and 200 graduate students, the college features a 6-to-1 student-to-faculty ratio. Faculty members include respected performers, composers, educators and scholars who take a deep and lasting interest in their students. With seven degree plans and more than 23 fields of study, programs cover virtually all areas of music. Passionate supporters of the college have established 111 endowments, including two endowed chairs, 10 faculty endowments and more than 75 endowed scholarships.

Study of retirement plan vendors nears completion[8]

The committee reviewing retirement plan vendors is expected to formally recommend to university officials this month which firms ranked highest in categories that include experience, technological capabilities, customer service and educational resources.

Deserae Frisk, chair of the University of Colorado Staff Council, gave members an update on the project[9] during the governance group's regular monthly meeting Oct. 16 at the CU Anschutz Medical Campus.

The committee – composed of 12 current or retired faculty, staff and administration members – has been analyzing

proposals from vendors since August.

The university has two retirement options: a mandatory savings plan for faculty and university staff, which has three vendors; and an additional plan, with eight vendors, that is optional for all employees. The university's options have not been reviewed for more than two decades, according to CU officials, who want to ensure that vendors are providing the best rates, educational opportunities and return on investment.

Future vendors for the retirement plans will be chosen once the top-ranking firms are determined.

At the meeting, council members also discussed:
The possibility that staff and exempt professional councils will be blended at UCCS, and whether the Denver and Anschutz campuses will have one, instead of two, councils; Ways to promote University of Colorado Staff Council through events, media outlets and internal communications; and Issuing a call for Service Excellence Awards nominations before the end of the year in order to allow time for candidate review and selection. Awardees will be honored at this year's all-staff conference in early April.

Nurse helps homeless adolescents, prepares future public health leaders[10]

[11]

Scott Harpin, Ph.D., rarely hears back from the young people he works with at the Urban Peak shelter. And maybe that is a good thing.

"If they're not going back to the shelter, we hope that their situation has improved, and maybe that means success," said Harpin, assistant professor, College of Nursing[12] at the University of Colorado Anschutz Medical Campus[13].

Harpin's research focuses on the health outcomes of vulnerable adolescent and young adult populations. His association with Urban Peak[14], an organization dedicated to serving homeless youth in the Denver metro area and Colorado Springs, began in 2012 thanks to introductions by colleagues at the university, including Christine Gilroy, M.D., in the School of Medicine[15].

"The opportunity to work with the shelter was right up my alley," Harpin said. For a decade, he had worked as an intake nurse at St. Joseph's Home for Children—a stepping stone between home and foster care—in Minneapolis, Minn.

As he enters his fourth year at CU Anschutz, Harpin's passion for his community-engaged research is clear.

"All my training has been in adolescent development and adolescent resiliency, trying to get kids on a pathway of health and wellness," he said. "If they've had bad things happen to them, I want to figure out how we intervene on their cycle of trauma, abuse, and poverty, and offer a better trajectory in life."

The 'upstream' approach

Harpin does not look for specific illnesses or issues when first meeting adolescents. "I look for whatever is 'upstream,'" he explained. "I'm public health trained, so I'm always thinking about prevention and those multiple layers—like their environment, education, and family of origin—that impact where they are today."

The children and young adults seen by Harpin are not usually sick, but they have often been traumatized in other ways.

"My program of research has been to look at their mental health and to provide brief interventions, so they can get control of whatever tough situation that they are in—hoping they don't return to risky behaviors or a traumatic environment," he said.

A Community Engagement grant through the Colorado Clinical and Translational Sciences Institute has enabled Harpin to partner with Urban Peak to improve the shelter's screening process and train lay people to carry out those brief

interventions. Their goal is to screen all 250 runaway youths who are admitted each year to the Urban Peak shelter for mental health distress and provide tailored interventions for their most pressing concerns. He believes it's important to address mental health issues in this population because his research revealed what he describes as "incredible" rates of suicide and self-harm.

"It's vital to get these kids safe and off the street," he said. "But it's also critical that we address the depression, the anxiety, or in the most extreme cases, keep them from hurting or killing themselves to give them a chance."

Future health leaders

In fall 2014, Harpin began to develop future public health leaders as a lead faculty member on a unique dual degree being offered by the university, among the first program of its kind in the nation. Students in the Doctor of Nursing Practice/Master of Public Health Nursing (DNP/MPH) Dual Degree Program[16] will complete 62 credits, as opposed to the 84 credits that would be required if the two programs were studied separately.

Harpin explains that the students will benefit from an interprofessional classroom environment. Public health, nursing, medical and pharmacy students will sit in on classes with each other.

"We hope to develop public health nurse leaders and administrators," he said. "The students are going to learn both public health care and individual-level care, and will be prepared to lead alongside health care providers with degrees in the field. They will be positioned to influence policy, health care education and impact care for multiple chronic illnesses. They'll fulfill a greatly needed role for advanced-degree prepared nurses with an interdisciplinary education in public health." Harpin hopes that some dual degree graduates will go on to work with many of the vulnerable populations found across Colorado.

National praise

When Harpin presents at conferences, his research receives validation from the leaders in his field and senior faculty from institutions across the country.

"They tell me to keep pushing ahead as this research is important," he said. "It's good to hear that from the same individuals I reference in my papers."

Despite the challenging nature of working with at-risk adolescents, Harpin confesses to finding positive aspects in what can often be difficult situations.

"I like to work with the riskiest, toughest youth," he said. "They often have crazy stories but are usually very open, and they want to learn from me. They yearn for someone to give them a chance, someone who cares about them, and to be a role model in a way."

Even though he may never hear back from the young people he helps at Urban Peak, he believes they are thankful for his help.

"I once had a young woman at Urban Peak tell me she always wanted to be a nurse, and that after spending time with me and our nursing students, that desire was reignited. It was very gratifying to think how my career—first in foster care health, and now improving service delivery through research to runaway youth—may have changed lives like hers."

50th Anniversary update: 'Discovering Place – A UCCS Field Guide' now available[17]

[18]

Tom and Carole Huber did not set out to create a publication to celebrate the 50th anniversary of the founding of UCCS.

Instead, a project intended to celebrate and help preserve the treasures of campus and serve as the core of a course team-taught by the couple, grew into one of the cornerstones of the celebration that officially begins Jan. 1, 2015. The Hubers are co-editors of a project that spans more than 280 pages and involves more than 37 faculty, staff and

students.

“Discovering Place – A UCCS Field Guide” is no coffee table-bound book full of glossy pictures of happy faces. Instead, its pages celebrate the plants, animals, climate and water of the UCCS parcel as well as the people who inhabited the area long before the university. Through words, photographs and drawings, readers can trace the history of the campus from the upper Cretaceous age of 75 million years ago to the strategic plans for the future.

Though vastly different in style and content, the 24 chapters in “Discovering Place” have a common thread.

“People who know a place may come to care about it more deeply. People who care about a place are more likely to take better care of it. And people who take better care of places, one place at a time, are the key to the future of humanity and all living creatures,” Carole Huber said, quoting Robert L. Thayer, a professor emeritus at the University of California, Davis. “This was the inspiration behind the book.”

“Discovering Place” is modeled after a similar publication published by California Polytechnic University-San Luis Obispo. Tom Huber, professor, Department of Geography and Environmental Studies, was inspired by what he saw from Cal Poly and wondered if it was possible to get others to assist and where funds could be found for such an ambitious undertaking.

Both concerns were quickly dispatched.

Chancellor Pam Shockley-Zalabak recognized the potential of the Hubers’ idea and connected the project to the 50th Anniversary. And every faculty member asked to contribute not only agreed to help but did so on deadline.

For more than a year, contributors toiled on their chapters. Both Tom and Carole, senior instructor, Department of Geography and Environmental Studies, served as the project’s editors and set a goal of allowing each chapter to reflect the author’s voice. There was minimal editing.

“I was astonished,” Tom Huber said. “Everybody got their material done on time. That’s often not the reputation that faculty have.”

The contributors list reads like a who’s who of UCCS past and current. It includes current and former Department of Geography and Environmental Studies faculty members Eric Billmeyer, Cerian Gibbes, John Harner, David Havlick, Paddington Hodza and Steve Jennings. That list was extended to include contributions from Department of Visual and Performing Arts faculty Matt Barton, Carol Dass, Pauline Foss, Suzanne MacAulay, Curtis Smith and Glen Whitehead. Mary Jane Sullivan from the Department of Philosophy also contributed as did Jeremy Bono from the Department of Biology and Minette Church, William Arbogast and Roche Lindsay from the Department of Anthropology, Kirsten Ortega from the Department of English and Rebecca Webb from the College of Engineering. Others include provost emerita Margaret Bacon, retired Kraemer Family Library instructors Judith Rice-Jones and Cathy Mundy, Gary Reynolds of Facilities Sevices, Jeff Foster of University Advancement and Perrin Cunningham of the Heller Center for Arts and Humanities. Two students, Sara Santa Cruz and Katelyn Stover, made significant contributions with several other students providing photos and other materials.

Tom and Carole Huber hope the book will serve as both impetus and a guide for campus community members to explore the flora, fauna, wildlife and geography that make the UCCS campus unique. In that way, Carole Huber explained, the words of Cal-Davis’ Thayer can be realized and the campus preserved for the enjoyment of future generations.

The efforts of all of the book’s contributors will be celebrated during a wine and cheese reception scheduled for 4 p.m. to 5:30 p.m. Oct. 30 on the third floor of the Kraemer Family Library. Those interested in attending should confirm attendance by Oct. 27 by emailing to chancellor@uccs.edu[19].

Copies of the book will be available at the event for $19.65. They will be on sale at the UCCS Bookstore after Oct. 30.

CU Denver study exposes bias in transportation system design[20]

[21]
America's streets are designed and evaluated with a an inherent bias toward the needs of motor vehicles, ignoring those of bicyclists, pedestrians, and public transit users, according to a new study co-authored by Wesley Marshall of the University of Colorado Denver[22].

"The most common way to measure transportation performance is with the level-of-service standard," said Marshall, Ph.D., PE, assistant professor of civil engineering at the CU Denver College of Engineering and Applied Science, the top public research university in Denver. "But that measure only tells us about the convenience of driving a car."

Marshall co-wrote the study with Eric Dumbaugh, Ph.D., associate professor at Florida Atlantic University and director of Transportation and Livability for the Center for Urban and Environmental Solutions and Jeffrey Tumlin, owner and director of strategy at NelsonNygaard Consulting Associates in San Francisco.

According to Dumbaugh, many people assume roads are designed with all users in mind when in fact they are dedicated almost entirely to the needs of motor vehicles.

"Transit, bikes, and pedestrians are seen as worthwhile only by how much they reduce delays or increase speeds for motor vehicles," he said. "Regardless of how efficient they may be in moving people."

The study said that the values and interests of a specific means of travel – the personal automobile – dominate the thinking of those who design the nation's transportation systems. And those values may not be the same as those of the communities they serve.

For example, level-of-service or LOS measures focus on traffic congestion and time spent at intersections. They measure the movement of vehicles rather than people so a single passenger car counts as much as 50 people on a bus.

"Cities like Denver have policies promising to 'move people, not cars,' but the typical traffic engineer continues to rely upon performance measures like LOS that favor automobiles," Marshall said. "In most cases, these engineers are well-intentioned and simply following what has long been considered good practice; however, we all need to be more aware of the biases inherent to our typical metrics and harmful implications of continuing to use them."

The study said these standards are based on faulty assumptions including the notion that traffic delays hurt the economy and congestion can be avoided by investment in infrastructure.

In fact, a previous study by Dumbaugh revealed that as per capita traffic delay went up, so did per capita Gross Domestic Product. Every 10 percent increase in traffic delay per person was associated with a 3.4 percent increase in per capita GDP.

That's because traffic congestion is usually a byproduct of a vibrant, economically productive city, the study said.

Marshall said that "actively trying to reduce congestion rarely works." While widening roads offers a temporary fix, it creates additional traffic that simply fills the new capacity.

"The good news is that when cities become more congested, people adapt," Marshall said. "They change travel modes, travel shorter distances, and eventually find places to live that are more location efficient."

The researchers concluded by urging planners and policy makers to move away from faulty measures that result in transportation systems focused entirely on automobiles at the expense of more efficient, healthier modes of travel.

The study was published recently in the Institute of Transportation Engineers Journal. It is available upon request.

NASA'S MAVEN spacecraft watches passing comet and its effects at Mars[23]

[24]

NASA's newest orbiter at Mars, MAVEN, took precautions to avoid harm from a dust-spewing comet that flew near Mars on Sunday and is studying the flyby's effects on the Red Planet's atmosphere, according to University of Colorado Boulder professor Bruce Jakosky, principal investigator on the mission.

The MAVEN, or Mars Atmosphere and Volatile EvolutioN spacecraft, reported back to Earth in good health after about three hours of precautions against a possible collision with high-velocity dust particles released by comet C/2013 A1 Siding Spring.

"We're glad the spacecraft came through, we're excited to complete our observations of how the comet affects Mars, and we're eager to get to our primary science phase," Jakosky said.

MAVEN began orbiting Mars on Sept. 21. The opportunity to study this rare near-collision between a planet and a comet came during the project's commissioning phase. A few weeks of instrument calibration and orbit fine-tuning remain before the start of the primary science phase. Led by CU-Boulder, the MAVEN mission will study the upper atmosphere of Mars and its interaction with the solar wind.

Comet Siding Spring hurtled past Mars at about 125,000 mph, coming within about 87,000 miles of the planet. That is equivalent to about one-third of the distance between Earth and Earth's moon. The closest approach by the comet's nucleus came at about 12:27 p.m. Sunday. The period when dust from the comet was most likely to reach Mars and the orbits of spacecraft around Mars peaked about 100 minutes later.

From about 11:45 a.m. to 1 p.m. MDT, MAVEN kept in a defensive posture to reduce its profile relative to the direction from which the comet's high-velocity dust particles would come. In that "hunkered down" orientation, its main antenna was not facing the right way for transmitting to Earth, so communications were maintained at a low data rate via a secondary antenna. Also, the mission performed a maneuver on Oct. 2 that set its orbit timing so that the spacecraft was behind Mars, relative to the possible dust flow, from about 12:53 p.m. to 2:23 p.m. MDT.

Downlink of data has begun from MAVEN observations of the comet and Mars' atmosphere. Some observations are designed to provide information about the composition of the gases and dust being released by the comet. Others are investigating possible interaction between material from the comet and the atmosphere of Mars.

Three NASA Mars orbiters, two Mars rovers and other telescopes and instruments on Earth and in space are studying comet Siding Spring. The comet is making its first visit this close to the Sun from the outer solar system's Oort Cloud, so the concerted campaign of observations may yield fresh clues to our solar system's earliest days more than 4 billion years ago.

Following the comet flyby, operations teams also have confirmed the good health of NASA's Mars Reconnaissance Orbiter and are assessing the status of NASA's orbiting Mars Odyssey spacecraft.

In addition to leading NASA's MAVEN mission, CU-Boulder provided two science instruments and leads science operations as well as education and public outreach. NASA's Goddard Space Flight Center in Greenbelt, Maryland, manages the MAVEN project and provided two science instruments for the mission. Lockheed Martin of Littleton, Colorado built the spacecraft and is responsible for mission operations.

The University of California at Berkeley's Space Sciences Laboratory also provided four science instruments for the mission. NASA's Jet Propulsion Laboratory in Pasadena, California, provides navigation and Deep Space Network

support, as well as the Electra telecommunications relay hardware and operations.

For more information on the MAVEN mission visit http://lasp.colorado.edu/home/missions-projects/quick-facts-maven/ [25] or http://www.nasa.gov/maven[26].

Hill elected to Institute of Medicine[27]

[28]

James O. Hill, Ph.D., director of the Anschutz Health and Wellness Center, has been elected to the Institute of Medicine (IOM). Election to the IOM is one of the highest honors in health and medicine and recognizes individuals for their outstanding professional achievement and commitment to service.

“I am honored to be elected to the Institute of Medicine,” said Hill. “I have worked throughout my career to improve our understanding of health and wellness and how we can improve our quality of life with that knowledge. This recognition from the IOM will help us raise awareness of the importance of healthy eating, regular physical activity and the right mental approach.”

New IOM members are elected by current active members through a selective process that recognizes individuals who have made major contributions to the advancement of the medical sciences, health care, and public health.

Hill is the author of more than 500 scientific articles and book chapters in the area of obesity. Hill and Holly Wyatt, M.D., were recently the authors of “State of Slim: Fix Your Metabolism and Drop 20 Pounds in 8 Weeks on the Colorado Diet,” and have been conducting State of Slim Group classes at the Anschutz Health and Wellness Center.

Hill is also Anschutz Professor of Pediatrics and Medicine at the University of Colorado School of Medicine, and Director of the Colorado Nutrition Obesity Research Center.

Richard D. Krugman, M.D., dean of the School of Medicine and the University’s vice chancellor of health affairs, who was elected to the IOM in 2005, said Hill’s election recognizes Hill for his leadership and the high quality of his research.

“The University of Colorado School of Medicine is fortunate to have Jim on our faculty,” Krugman said. “His commitment to improving individual and community health through research and education is a shining example for all on our faculty.”

Theodorescu elected to Institute of Medicine[29]

[30]

Dan Theodorescu, M.D., Ph.D., director of the University of Colorado Cancer Center, has been elected to the Institute of Medicine (IOM). Election to the IOM is one of the highest honors in health and medicine and recognizes individuals for their outstanding professional achievement and commitment to service.

“My election to the Institute of Medicine is humbling,” says Theodorescu. “To be recognized by IOM is a great honor

and motivates me even more to find ways to treat this horrible disease."

New IOM members are elected by current active members through a selective process that recognizes individuals who have made major contributions to the advancement of the medical sciences, health care, and public health.

Most recently, Theodorescu was senior author on a paper in the journal NATURE that identified Ral protein activation as a new target in the growth and spread of cancer and developed drug candidates to block its activation. This new class of drugs could have applications in lung, colon and pancreatic cancers.

Theodorescu, a professor of urology and pharmacology at the CU School of Medicine, is also a developer of the COXEN (CO eXpression ExtrapolatioN) bioinformatic principle of personalized therapy assignment in cancer. It is currently being tested in a national clinical trial through SWOG, a cancer research cooperative group, funded through the National Institutes of Health (www.clinicaltrials.gov[31] , NCT02177695).

Richard D. Krugman, M.D., dean of the CU School of Medicine and the University's vice chancellor of health affairs, who was elected to the IOM in 2005, said Theodorescu's election recognizes him for leadership and the high quality of his research.

"Dan is making a difference every day," Krugman said. "Survival rates for those who are diagnosed with advanced cancer are significantly higher at CU Cancer Center compared with national averages and that is because of the excellent care and research provided by Dan and his team."

LeClair named interim director of Medical Student Education[32]

LeClair

Caroline LeClair has been named Interim Director of Medical Student Education for the Department of Family Medicine. A faculty member with the department for more than seven years, LeClair decided to make Colorado her home after completing coursework in osteopathic medicine and a family medicine residency in the Denver area. Previous experience also includes 10 years of direct patient care in a Level II emergency department and seven years of direct patient care at the AF Williams Family Medicine clinic in Stapleton, where she continues to serve as a clinician and lead preceptor.

She has worked with several medical student education programs both within the Department of Family Medicine and the School of Medicine, and currently directs the Rural and Community Care Block, Integrated Longitudinal Medicine Clerkship and the Mentored Scholarly Activity (MSA) project for medical students.

"A crucial goal for me is to lead the department in advising students interested in Family Medicine and educating others about the core values of Family Medicine," says LeClair. LeClair has asked **Deb Seymour** to help advance division efforts in student advising. Seymour will develop a sustainable advising structure to support students interested in family medicine and help educate others about the value of primary care.

Lori Sachau, also has joined the division, working in tandem with LeClair to provide medical students with an exceptional learning experience. A faculty member in educational technology, a registered dietician, and a long-time voice in higher education with more than 19 years leading departments , coordinating curriculum and teaching courses, Sachau is passionate about life-long education and continuous improvement.

Sachau will manage aspects of course events, from course concepts at their inception to the evaluations at course completion. Her expertise in effective design, implementation and assessment is aimed to not only enhance the direction of course offerings, but to also lead new undergraduate educational research activities in the department.

LeClair replaces David Gaspar who is retiring after 15 years of service.

Ghosh begins biostatistics work at Colorado School of Public Health[34]

?**Debashis Ghosh** recently became the new chair of the Department of Biostatistics and Informatics, one of the five departments within the Colorado School of Public Health.

“His experience and leadership will strengthen our campus Comprehensive Cancer Center as well as the school’s participation in the Center for Biomedical Informatics and Personalized Medicine,” said Colorado School of Public Health Dean David Goff.

Ghosh is responsible for planning, managing and implementing the academic, service and research initiatives of the department including collaborations between biostatistics faculty and students, and with the school’s institutional, public and community health research partners in the region. He also is an associate director of the Center for Biomedical Informatics and Personalized Medicine on the Anschutz Medical Campus.

"In virtually all biomedical studies," Ghosh said, "we are collecting more and more data about phenomena where we know less and less. Statistics and Informatics will have a large role to play in how to properly collect, analyze and interpret the data."

He also is seeing additional opportunities for collaboration.

Prior to arriving at CU Anschutz, Ghosh was professor of Statistics and Public Health Sciences at Penn State University where he worked with the Biostatistics and Epidemiology Research Design Group, and he was an affiliate investigator at the Methodology Center and co-director of the Computation, Bioinformatics and Statistics (CBIOS) Training Grant.

Ghosh’s research interests involve two tracks: modeling of genomic data and research methodology in biostatistics. The former has dealt primarily with applications to oncology, and Ghosh was involved with the development of the statistical methods for ONCOMINE, an online data-mining platform used in cancer research and genetics.

He has published more than 150 peer-reviewed articles, commentaries and book chapters in statistical and scientific literature. He is a Fellow of the American Statistical Association and was recently honored with the 2013 Mortimer Spiegelman Award for outstanding early career statistical contributions to public health. Currently, he also serves as chair of the Biostatistical Methods and Research Design (BMRD) Study Section for the National Institutes of Health.

Before he joined Penn State, Ghosh was an assistant and associate professor in the Department of biostatistics at the University of Michigan, and he received his Ph.D. in biostatistics from the University of Washington in 2000.

Watson-Capps, Cech write on corporation-campus research[35]

Jana J. Watson-Capps, an associate director of the BioFrontiers Institute at the University of Colorado Boulder, and **Thomas R. Cech**, professor of chemistry and biochemistry at CU-Boulder and director of the BioFrontiers Institute, have written an article for the journal Nature about the institute, an “interdisciplinary effort to tackle complex biology and forge connections with companies.”

“Faculty members benefit from the influx of corporate expertise. Researchers with industrial experience are often more knowledgeable about high-throughput technology and commercial applications than their academic counterparts. Our biomedical faculty members tell us that they value industry collaborations as a way to apply discoveries in ways that

eventually benefit patients. Students gain real-world experience and opportunities to work at these companies as they expand. Young companies benefit from access to flexible lab space, core facilities, an invigorating research environment and an educated workforce," the pair write.

To read the complete article, visit
http://www.nature.com/news/academia-and-industry-companies-on-campus-1.16127[36]

Groups awarded new patents[37]

Two new patents have been awarded to two groups of researchers from CU Anschutz, CU Denver and CU-Boulder.

One patent is for improved shape memory polymers, a "smart material" used in many next-generation implantable medical devices. The inventors on the patent are **Christopher Bowman**, CU-Boulder, chemical and biological engineering; **Robin Shandas**, CU Denver, bioengineering, and CU Anschutz, Pediatrics; **Devatha Nair**, CU Anschutz, ophthalmology; and former chemical and biological engineering research associate **Neil Cramer**.

U.S. 8,846,777, "Thiol-vinyl and thiol-yne systems for shape memory polymers," was issued on Sept. 30, 2014.

Another collaboration between CU Anschutz and CU-Boulder has resulted in a patent for a technique to non-invasively detect complement-mediated inflammation using nanoparticles. This method could reduce the need for frequent biopsies to diagnose and monitor inflammatory diseases like lupus, rheumatoid arthritis and many others.

This research group was led by **Joshua Thurman**, CU School of Medicine, renal diseases and hypertension, University of Colorado Hospital. The team included CU Anschutz researchers **Natalie Serkova**, School of Medicine, anesthesiology/pharmacology/radiology; **V. Michael Holers**, School of Medicine, rheumatology, Barbara Davis Center; **Conrad Stoldt**, CU-Boulder, mechanical engineering/materials Science and engineering; and former CU-Boulder research assistant **Brian Larsen**.

TTO began prosecuting this patent on behalf of CU in 2009. U.S. 8,840,868, "Non-Invasive Detection of Complement-Mediated Inflammation Using CR2-Targeted Nanoparticles," was issued on Sept. 23, 2014.

Mini-School for Public Affairs and Public Health underway[38]

CU Denver faculty have launched the Mini-School for Public Affairs and Public Health, one of four new Mini-Schools that the CU Denver |Anschutz Graduate School initiated in the last two years. They're modeled after the Mini-Med School that was established 25 years ago.

While the previous Mini-Schools on STEM (two), humanities, and arts and architecture focused on showcasing scholarly activities on the CU Denver campus, the new Mini-School is a cross-campus initiative that serves a broad interest in the general public. Some 194 students are currently registered.

Weekly lectures, which began Oct. 2 and continue through Nov. 20, are understandable to every interested layperson. The Mini-School for Public Affairs and Public Health is free; those who attend at least six classes receive a certificate.

Click here for a list of topics and speakers.[39]

Seating is limited and registration is required. Please register at: https://gswebapps.ucdenver.edu/minipub/register[40]

Mann to speak at event commemorating Sand Creek Massacre[41]

[42]
Henrietta Mann, Ph.D., president of the Cheyenne and Arapaho Tribal College, will speak at “Sweet Medicine: The Waters Still Flow,” an event at CU Denver commemorating the 150th anniversary of Colorado’s Sand Creek Massacre.

All CU faculty, staff and students are invited to attend the free event, set for 11:30 a.m. to 1:30 p.m. Nov. 10 in the Terrace Room (second floor) of the Lawrence Street Center, 1380 Lawrence St. Advance registration is required.[43]

Ava Hamilton (Arapaho), independent documentary producer, will provide an introduction. Lunch, which is provided, will be catered by Tocabe: An Indian Eatery. The event also features an American Indian drum and dance presentation.

For more information and to RSVP, click here: http://whoozin.com/X93-VPW-7YNE[44]. Questions: American Indian Student Services, 303-315-1882.

Links
[1] https://connections.cu.edu/stories/five-questions-cheryl-krause-parello[2]
https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/10/5q_krause-parello.png[3]
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https://connections.cu.edu/file/ptheodorescutoppng[31] http://www.clinicaltrials.gov/[32]

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