To borrow from a Sixties song, what the world needs now is ... Carolina.

That audacious idea was the crux of the challenge Chancellor Holden Thorp gave members of the Innovation Circle, a group of entrepreneurs and scientists Thorp enlisted to help Carolina increase its impact on the state and world.

The idea is not to reinvent the University, Thorp told the group. The University does a good job of making significant advances in knowledge and educating some of the brightest students in the world. It must continue to do that, he said. But it must also do more to turn the ideas that are generated here into real-world solutions by translating new knowledge into practical application.

Carolina community reaches out to people of Haiti

Helping the people of Haiti cope with the mass destruction created by the powerful 7.0-magnitude earthquake that ripped the country apart on Jan. 12, and the fear produced by each aftershock, has opened the hearts of people around the world.

At Carolina, planning for relief efforts began right away.

Chancellor Holden Thorp, in his Jan. 14 e-mail message to the campus community, said many schools and organizations had already begun coming together to respond to the disaster.

The Extended Disaster Relief Committee of the Campus Y, with support from Student Government, began organizing centralized collection resources, and on Jan. 15 more than 150 students, faculty and staff from across campus met to plan a series of on-campus events.

The next day, the committee raised approximately $7,150 for the international humanitarian medical organization Doctors Without Borders at the men’s basketball game against Georgia Tech.
ON THE WEB

CAROLINA FIRSTS
A new initiative launched Jan. 14 with the introduction of Carolina Firsts — to honor the undergraduates who study at Carolina as first-generation college students. Its Web site features interviews with students like senior Ron Bilbao, left, whose parents immigrated to Miami from Venezuela and Colombia.

STREAMING RADIO FROM SFC
Music selections from archival audio collections are now being streamed online. Visitors to the Web site of the Southern Folklife Collection can tune in to channels that feature music in five genres: old-time music, country and bluegrass, folk revival, rhythm, blues and boogie, and the eclectic "SFC Mix."

TALKING SIDEWALKS
A literary magazine produced by Homeless Outreach Poverty Eradication (HOPE) — a committee of the Campus Y — is made up of stories, poems and photos by authors and artists who are experiencing homelessness in the Chapel Hill area. The third edition of Talking Sidewalks is now online.

DJ conference features dance, scholars
A DJ doesn’t just put on a record and sit down. He or she manipulates vinyl records on two turntables while operating knobs and sliders on a mixer, creating new music. Some even scratch records, choosing from among dozens of techniques.

“Many DJs will practice for hours and hours a day,” said Mark Katz, associate professor of music. “They know where on a record a drum solo is just by looking at the record. They can put the needle down on exactly the right groove at exactly the right time.”

Katz is organizing a free public symposium, "The Art and Culture of the DJ," to take place Feb. 18–19 on campus, with scholarly presentations, performances, a dance party — and of course, DJ-ing. The impact of digital technologies on the art will be discussed, as well as a theme best articulated by Katz.

“The underlying concept is that the DJ is a musician and the turntable is a musical instrument,” he said. “I’m a violinist, and when I move a record back and forth under the stylus, I get the same feeling as when I’m drawing the bow across the violin.”

The symposium is part of the CHAT Festival (Collaborations: Humanities, Arts & Technology) Feb. 16–20 at UNC. Festival details and registration information are available at www.chatfestival2010.com. Registration is not required for the music department’s contributions to the festival — those will be free to the public.

The music department events will make up this year’s Festival on the Hill, a mix of presentations and performances about a composer or topic that the department hosts every other year. This year, the DJ symposium will be part of Festival on the Hill, as will performances and discussions of electro-acoustic music Feb. 16–19. For more on electro-acoustic music, see uncnews.unc.edu/content/view/3265/66.

“The Art and Culture of the DJ” will start with an open rehearsal in Gerrard Hall at 7:30 p.m. Feb. 18 by Charanga Carolina, a student ensemble that plays Cuban and salsa music. David Garcia, assistant professor of music at Carolina, directs the group.

Katz commissioned a composition for the symposium by DJ Radar, who is called a turntablist, and composer Raul Yañez, both of Phoenix. The two, who have performed at Carnegie Hall,

Shots and nasal spray offered at H1N1 clinics
Last week, the University for the first time was able to offer to the entire campus community the shot form of the H1N1 vaccine as well as the intranasal spray.

Before, the shot was not widely available and it was critical to have it for people who were pregnant or had certain medical conditions, said Mary Beth Koza, director of the Department of Environment Health and Safety. For those reasons, it was offered previously only through the University Employee Occupational Health Clinic and Campus Health Services.

"Previous quantities and shipment dates were sporadic and limited, and the University was not told when the shipments would arrive or what quantity we would receive," Koza said. "But now that all areas of the country have received the vaccine, and it is plentiful, we can get additional doses as we need them. And that’s great news for our faculty, staff and students."

Although the course of influenza epidemics cannot be predicted accurately, many previous pandemics have had waves, where the virus would resurge.

According to the Centers for Disease Control and Prevention, additional cases, hospitalizations and deaths are expected this season from the H1N1 flu as well as the seasonal flu. Health officials say the best protection is to be vaccinated against both H1N1 and seasonal flu.

"We are also offering the seasonal flu vaccine at the H1N1 clinics because the spring months are traditionally the most active for the seasonal flu," Koza said.

People can simply walk in to any of the following clinics, which will be held from 8:30 a.m. to 5 p.m., or they can make an appointment by going to ehs.unc.edu/ueohc/h1n1flushot.shtml:

- Jan. 27 — Lenoir Hall, inside the Pit entrance; and
- Feb. 10 — Michael Hooker Research Building, lower level atrium;
- Feb. 2 — Lenoir Hall, inside the Pit entrance;
- Feb. 3 — Lenoir Hall, inside the Pit entrance; and
- Feb. 4 — Medical Biomolecular Research Building (MBRB), second floor lobby;
- Feb. 9 — Lenoir Hall, inside the Pit entrance;
- Feb. 10 — Lenoir Hall, inside the Pit entrance; and
- Feb. 11 — Rams Head Dining Hall, lobby.

In addition to the clinics, faculty and staff can get the H1N1 vaccine at the University Employee Occupational Health Clinic by registering for an appointment (Monday, Wednesday, Thursday or Friday) at ehs.unc.edu/ueohc/h1n1flushot.shtml.

Students also can get the H1N1 vaccine at Campus Health Services by calling 986-2281 to schedule an appointment Monday through Friday.

For updates about H1N1, refer to alertcarolina.unc.edu.
Universities continue to grapple with impact of economic crisis

Like virtually every state in the nation, Illinois is grappling with very real consequences of an economic crisis that is entering its second year.

With close to a $5 billion backlog in unpaid bills, the state does not have enough money to meet its constituents’ needs. Since the beginning of July, for instance, the University of Illinois has received only 7 percent of its state appropriations for the year, creating a shortfall of more than $400 million — and growing.

That was the message the university’s interim president, Stanley O. Ikenberry, delivered to the Illinois campus community earlier this month.

Until state leaders could find a way to address the situation, Ikenberry said, the university would implement several short-term measures. These include using $65 million set aside from reserves and budget reductions to be able to meet payroll; incorporating furloughs for faculty and staff — 10 days for administrators and four for faculty and staff who make more than $30,000 — generating about $17 million; freezing all hiring other than to honor prior offers; and assessing the scope of academic programs.

In addition, the administration appointed a work group to recommend reorganization and restructuring, primarily in information technology, purchasing and consolidation of administrative support services.

While the Illinois situation might be extreme, it is not unique.

NORTH CAROLINA

Closer to home, Gov. Beverly Perdue has begun re-examining state government to look for cost savings before she makes her 2010–11 budget proposal to the N.C. General Assembly this spring.

At Carolina, the budget-planning process for next fiscal year started with Bruce Carney, interim executive vice chancellor and provost, asking vice chancellors and deans to detail how their planning for budget cuts aligns with recommendations of the Bain and Co. report.

“If you are reducing layers of administration or consolidating administration across several units, we very much wish to discuss those plans,” Carney said in a Jan. 11 memo. “Simple across-the-board cuts should be avoided, and every effort made to continue current levels of course offerings.”

UNIVERSITY OF CALIFORNIA

California lawmakers plan to call on the federal government to help erase the state’s nearly $20 billion deficit.

Also, Gov. Arnold Schwarzenegger earlier this month revealed a proposal to shift money from prisons to higher education. If passed, the amendment would limit the correctional budget to no more than 7 percent of the state’s general fund and give the university system at least 10 percent, beginning with the 2011–12 fiscal year.

Schwarzenegger’s plan includes $371 million in additional money for UC, significantly less than the $913 million the university system had requested to repair the series of budget cuts it has sustained in the past few years.

If state funding ultimately falls short, UC plans to reduce the number of California resident first-year students enrolled in the 2010-11 academic year by another 2,300 students, for a total 4,600-student reduction over two years.

Among other measures, UC’s proposed 2010–11 budget includes student fee increases of 15 percent for undergraduate and graduate professional students and a goal to end the mandatory furlough/salary reduction plan at the end of August.

UNIVERSITY OF MICHIGAN

As the university begins trimming $100 million from recurring costs over the next three years to try to avoid layoffs, it has asked UM employees for their cost-cutting suggestions.

“Looking ahead to next year, state revenues are projected to fall over $1 billion short of the current year’s expenditures,” said Phil Hanlon, vice provost for academic and budgetary affairs. He said the university was planning for the possibility that higher education appropriations could be one place for the state to cut funding.

Administrators want to identify efficiencies in information technology along with better space utilization and reducing health-care and energy costs. UM annually spends $300 million on IT-related services, almost as much as the $317 million general fund appropriation it receives from the state.

The university has a $1.45 billion general fund budget, which supports the core academic enterprise. State appropriations making up that budget have shrunk from 78 percent in 1960 to 22 percent currently. Tuition and fees, which contributed 20 percent of general fund revenue in 1960, now are expected to make up 65 percent of the general fund.

UNIVERSITY OF VIRGINIA

State general fund appropriations to UVA decreased from 8.2 percent in 2008–09 to 6.9 percent in 2009–10, and university officials expect the budget reduction assessed to schools and departments in fall 2009 to continue in 2010–11.

UVA does not plan to reduce further the 2010–11 targets, but that is contingent upon what actions may be taken in the upcoming legislative session.

Last October, the governor proposed a $19.25 million (total 15 percent) budget reduction, which federal stimulus funding partially offset, lowering the reduction to 8 percent. The governor’s proposed 2010–12 budget temporarily defers the $19.25 million reduction until 2011–12 because of requirements in the American Recovery and Reinvestment Act.

UNIVERSITY OF WASHINGTON

With still-declining tax revenues, university officials anticipate additional cuts in state funding for the upcoming biennium — possibly as much as $20.9 million, or an additional 6.4 percent.

This would follow an unprecedented 26 percent budget cut this biennium, which took state funding back to its 1999 level.

To cope, the university eliminated 850 jobs, primarily among administrators and staff, closed branch libraries and writing centers, froze pay and dramatically reduced faculty hiring.

A 14 percent increase in tuition partially offset the impact of the cuts, continuing a 20-year trend to rely increasingly on tuition to compensate for shrinking state funding. For the first time in school history, administrators said, total revenue from tuition exceeded revenue from state tax dollars.

UW is looking at its business processes, among other efforts, to find ways to gain operating efficiencies.

Scott Kelly, a postdoctoral fellow in genetics, wrote the following story for the Fall 2009 issue of Endeavors, Carolina’s research magazine. It has been excerpted; read the full story at research.unc.edu/endeavors/fall2009/born_to_run.php.

My pace slows as I enter the atrium of my laboratory building. The decision is always the same: elevator or stairs?

“We’re taking the stairs,” my wife says as she accelerates. I lumber behind her up to the fifth floor.

People have always differed in how much they like to move. Mark Twain leaned toward the sedentary: “I am pushing 60, that’s enough exercise for me.” My wife would have had an ally in Marcus Tullius Cicero, Roman orator and philosopher: “It is exercise alone that supports the spirits and keeps the mind in vigor.”

I don’t have a natural love of exercise, but as a physiologist I’m fully aware of the benefits of physical activity. People who engage in regular physical activity have lower rates of coronary heart disease, high blood pressure, stroke, type 2 diabetes, metabolic syndrome, colon cancer, breast cancer and depression. Yet many Americans don’t exercise regularly.

What predisposes some people to exercise while others don’t?

It sounds like a busy playground — the shuffling of a thousand little feet. The air feels sterile, a constant 72°F, accented by fluorescent lights. This is the animal-research facility of [biology professor] Theodore Garland Jr. at the University of California, Riverside. Next door, in a room lined floor-to-ceiling with cages, hundreds of exercise wheels spin as fast as mice can turn them.

Given a wheel, rodents will run. Laboratory mice are no exception, and as with humans, the amount of running that a mouse does is a trait that can be passed down from one generation to the next. For more than 10 years, Garland has been giving mice access to wheels, monitoring how much they voluntarily run and breeding the mice that run the farthest. Some of Garland’s mice now run more than 12 miles a night, every night — three times more than a typical laboratory mouse. These mice are quite literally born to run.

The mice achieve their increased distances mostly by running faster, not for more minutes each night. But these mice...
aren't sprinters; they're built more like mara -

Simpson versus Lance Armstrong. Scientists
research on animal and obesity genetics, investi-
gates exercise, a powerful trait potentially capa-
ble of controlling and preventing obesity. ...  
Variation in complex traits, such as body composition and the predisposition to exer-
cise, are controlled by many factors, genetic and environmental. Individual variation in complex traits can be extreme: Think Homer Simpson versus Lance Armstrong. Scientists have studied complex traits in organisms rang-
ing from humans to fruit flies, but Pomp's ex-
perience and expertise has led him to Gar-
land's exercise-fiend mice.  
Are these mice healthier? Do they live lon-
genetics.  

MICE MARATHONERS from page 3

aren't sprinters; they're built more like mara-
th Phelps has developed, the fact that many mice
run voluntarily, aerobically and for long distances.
That was particularly important to Pomp when
he contacted Garland and envisioned a popu-
lation of mice he could use to discover genes
underlying the predisposition to exercise. ...  
In Pomp's lab, we were ready to see to what extent the new mice differed in the amount
they ran and whether we could find regions of DNA associated with the variation. We’d com-
pleted the breeding. In order to understand the effects of exercise on weight control, we’d
given each mouse an MRI before and after exercise to measure fat and lean mass. 

It took the team over a year to arrive at this
point, but the result was a powerful experi-
mental tool for dissecting and understanding the

genic architecture controlling voluntary
exercise. In our lab mice, voluntary exercise
levels vary widely — some run as little as 1.5 miles a night, and others as much as 17.

The next step: Identify in each mouse regions of DNA associated with particular traits of interest — running distance, running speed, amount of time spent running, change in body mass resulting from running. Within
theses regions of DNA, is there one gene with a very large effect, or many genes with small
effects? Are these genes similar in humans?

What does this mean for weight maintenance, weight loss, obesity?

My wife the busy bee, Scott the sloth ... soon we may know why.

I turn off my computer, push my chair under
my desk, take one look at the elevator — and
promptly head for the stairs.

The University has announced the recipients of the 2010 University Teaching Awards, the

The 21 honorees, selected in nine categories, were recognized during halftime of the Car-
olina-Georgia Tech men’s basketball game Jan. 16. They will be recognized by Chancellor
Holden Thorp at an awards banquet on April 15, paid for with private funds.

The University Committee on Teaching Awards, affiliated with the Office of the Pro-
vost, reviews nominees, collects additional information and recommends nominees to the
cancellor for seven of the nine award categories. A separate committee in the College of
Arts and Sciences chooses the winner of the Sitterson Award, working closely with the cam-
puswide committee. Fellows in the Johnston Scholarship Program nominate and select the
Johnston Award winner and also work with the campuswide committee.

Joe Lowman, from the Department of Psychology in the College of Arts and Sciences,
chaired the committee. Nominations for the awards can be submitted by faculty and stu-
dents at the University.

The Gazette will publish an insert in an upcoming issue that provides more information
about the awards and award winners.

Teaching award winners are:

- Nominee for the Board of Governors’ Award for Excellence in Teaching — Rachel Willis,
  Department of American Studies;

- Mentor Award for Lifetime Achievement — Elizabeth Gibson, School of Law;
- Johnston Excellence Awards — Daniel Wallace, Department of English; Albert K. Harris, Department of Biology;
- University Professor of Distinguished Teaching — Michael Lienesch, Department of
  Political Science; and
- Tannor Awards for Excellence in Undergraduate Teaching by Graduate Teaching Assis-
tants — Stace Treat, Department of Communication Studies; Ben White, Department of
  Political Science; William C. Friday Award for Excellence in Teaching – Donald Hornstein, School of Law;
- Tanner Awards for Excellence in Undergraduate Teaching — Claudio Battaglini, Depart-
  ment of Exercise and Sport Science; Robert Cantwell, Department of American Studies;
  Brian Hogan, Department of Chemistry; Elizabeth Jordan, Department of Psychology;
  Greg Gangi, Institute for the Environment;
- J. Carlyle Sitterson Freshman Teaching Award — Omid Safi, Department of Religious
  Studies; 
- William C. Friday Award for Excellence in Teaching — Donald Hornstein, School of Law;
- Johnston Excellence Awards — Daniel Wallace, Department of English; Albert K. Harris, Department of Biology;
- Mentor Award for Lifetime Achievement — Elizabeth Gibson, School of Law;
- University Professor of Distinguished Teaching — Michael Lienesch, Department of
  Political Science; and
- Tannor Awards for Excellence in Undergraduate Teaching by Graduate Teaching Assis-
tants — Stace Treat, Department of Communication Studies; Ben White, Department of
  Religious Studies; Pablo Maurette, Department of Spanish; Dustin Long, Department of
  Biostatistics; Andrew Pennock, Department of Political Science.
Kenneth P. Strong, an integral part of PlayMakers Repertory Company since 1979 and a professor in the Department of Dramatic Art, died Jan. 12 after a battle with cancer. He was 52.

A Carolina alumnus, Strong earned a bachelor’s degree in 1979 and a master of fine arts degree in 1983. Throughout his career, he was known for his memorable smile, strong determination and intense spirit — both on stage and in the classroom.

In his 30-year career with PlayMakers, Strong had been in more than 50 of the theater’s productions. Most recently he was seen in “Pericles,” “Amadeus” and as the Aviator in PlayMakers’ holiday production of “The Little Prince.” He is also remembered for roles in “Uncle Vanya,” “God’s Man in Texas,” “Art” and “Death of a Salesman” among many others.

Strong also appeared on Broadway in “Inherit the Wind” with George C. Scott, off-Broadway in “Easter,” at Syracuse Stage in “To Kill a Mockingbird,” in the Intiman Theatre’s production of “Streetcar Named Desire,” on television shows such as “Law & Order,” “Matlock,” “In the Heat of the Night” and “Spin City,” and in films such as “Cold Sassy Tree.”

Bo Thorp, artistic director of Cape Fear Regional Theatre and mother of Chancellor Holden Thorp, asked Strong, a Fayetteville native, to found a theatre school. Called the Studio, the school helps teach young people about performance and instills in them a love of the arts.

An on-campus memorial gathering to remember and celebrate Strong was held Jan. 18 in the Paul Green Theatre at the Center for Dramatic Art. Donations may be made in Strong’s name to the Preston Robert Tisch Brain Tumor Center at Duke University Medical Center, DUMC Box 3624, Durham, NC 27710 (snipurl.com/u5c8w).

The Division of Student Affairs honored two “unsung heroes” through its Employee Excellence Awards Program during the group’s winter celebration on Jan. 7. NATA-SHA HARRIS, executive assistant in the Office of the Vice Chancellor for Student Affairs, and TERESA HOLT, secretary in University Career Services, earned the staff recognition.

PLAYMAKERS REPERTORY COMPANY was honored recently with the 2009 Constance Welsh Theatre for Youth Award, presented by the N.C. Theatre Conference. PlayMakers was recognized for its Summer Youth Conservatory, held in collaboration with The ArtsCenter of Carrboro.

PlayMakers also received 20 awards in The Independent Weekly’s Best Live Theater round-up for 2009, including multiple mentions from acting to directing to design, and best production nods for “The Glass Menagerie,” “Opus” and “The Life and Adventures of Nicholas Nickleby.”

The Indy also included “Nickleby” and four other PlayMakers productions in its Best of the Decade list.

In addition, “Nickleby” placed among the Top 10 Chemists of the Decade list.

Pulmonologist ELISABETH POTTS DELLON, assistant professor of pediatrics and clinical assistant professor of medicine, was among four American physicians named as the first recipients of Hastings Center Cunniff-Dixon Physicians Awards for exceptional work in end-of-life care. Dellon received the early physician award and its accompanying $15,000 grant in recognition of her work in with patients with advanced chronic lung disease.

Professor of chemistry and pharmacy, WENBIN LIN has been named among the Top 10 Chemists of the Decade” by the Times Higher Education, a weekly London-based publication. The list ranks chemistry researchers by the number of citations by other researchers per article published.

LAURA GASAWAY, professor of law and associate dean for academic affairs, has been elected to Copyright Clearance Center’s board of directors. The center is the leading provider of copyright licensing solutions.

Nominations due Feb. 11 for C. Knox Massey Awards

Nominations are due on Feb. 11 for this year’s C. Knox Massey Distinguished Service Awards. Bestowed for “unusual, meritorious or superior contribution made by an employee, past or present,” the awards may be given by the chancellor to “any living full-time or part-time employee, whether faculty or staff.”

Nominations may be submitted online (www.unc.edu/masseyawards/nominate).

Letters of nomination also may be sent to: Carolyn Atkins, C. Knox Massey Awards Committee, University Development Office, CB# 6100, 208 West Franklin St. Nominations received after 5 p.m. on Feb. 11 will be considered in 2011.

Because of the signature requirement, nominations and seconds will not be accepted by fax or e-mail.

For complete information, refer to www.unc.edu/masseyawards or contact Atkins (962-1536 or carolyn_atkins@unc.edu).
Researchers discover protein that can change fate of cells from cancer cells to normal cells

What if scientists could figure out a way to erase the genetic instructions that are encoded on cells to change the fate of these cells? What if this would help create stem cells without using embryos or help reprogram cancer cells so they would convert into normal cells?

Yi Zhang, Kenan Distinguished Professor of Biochemistry and Biophysics, has made a discovery that may answer these questions.

Zhang’s team has identified a protein complex that appears to play a major role in erasing epigenetic modifications on sperm DNA. Once those modifications are wiped clean, a blank slate is created, essentially giving embryonic stem cells the necessary means to develop into different cell types—heart cells, skin cells, brain cells.

Zhang said that the protein complex, called elongator, could prove valuable for changing cell fate, in general. For example, scientists might be able to use elongator to remove the epigenetic markers that allow cancer cells to proliferate.

“The implications of such research have always been clear,” Zhang said. “That’s why for years researchers have tried to identify a factor responsible for erasing these epigenetic markers.”

Here is the basic science: The DNA inside each of our cells is exactly the same. Yet, different types of cells—kidney cells, heart cells, skin cells—perform different functions. The ultimate fate of these cells is encoded not just in the DNA, but in a specific pattern of chemical modifications that overlay the DNA structure. These modifications—or epigenetic markers—are carried in our genomes, except when cells change their fate, which is what happens when sperm meets egg. In that case, the makers are completely erased.

To pinpoint elongator’s role in this process, Zhang’s team had to create a way to watch the biological process called DNA methylation, during which different chemical signatures are stamped onto one of the four bases of DNA to produce the characteristic patterns that various cell types need.

Zhang said several scientists had previously identified factors that could perform gene-specific demethylation. But Zhang wanted to find the factor that orchestrated demethylation on a broader scale.

His team started by creating a green fluorescent tag that would indicate when demethylation of the paternal genome had occurred. Then team members sorted through a dozen candidate factors that they thought could play a role in the demethylation process because of their chemical properties and because of the gene expression patterns in the cells formed by the union of sperm and egg.

One by one, Zhang knocked out the genes to see what happened. Only the loss of elongator prevented the paternal genome from turning green, thus implicating the protein as vital to the entire demethylation process. Then Zhang’s group conducted a series of other experiments to confirm their findings, which were published in the January issue of the journal Nature.

Zhang, who is also a Howard Hughes Medical Institute investigator, said his team’s discovery could have more than one implication. If elongator can wipe out epigenetic modifications in sperm cell DNA, then it might be able to wipe out the cancer cell DNA modifications that prevent tumor suppressor genes from becoming activated, allowing cancer to proliferate.

Also, elongator could prove useful in the creation of stem cells, which many scientists consider vital in their pursuit of disease cures.

“Many of the genes that are active in stem cells are not active in adult cells because they are methylated,” he said. If elongator can trigger global demethylation, he added, it could be the critical ingredient that enables scientists to generate stem cells quickly and safely, thus avoiding the ethical concerns of using stem cells from embryos.

Editor’s Note: Yi Zhang received funding from the Howard Hughes Medical Institute and the National Institutes of Health. Co-authors for the “Nature” article were Carolina post-docs Yuki Okada and Kwonho Hong.

UNC Health Care is preparing for the possibility that patients from Haiti could be transferred here for medical care (snipurl.com/u6u02).

The Gillings School of Global Public Health Web site (snipurl.com/u5n9q) includes a list of experts on disaster preparedness and response and many relief efforts in Haiti.

The Haitian government estimates the death toll from the crushing earthquake at 110,000, with up to 2 million people homeless. Helping the survivors rebuild their lives, and their country, requires a massive, ongoing humanitarian effort.

Nadine Faustine-Parker, director of track operations, and her husband are directly affected by the situation in Haiti; both have family and friends there.

On campus, Faustine-Parker, an IAAF Athlete’s Commission member representing the Republic of Haiti, is collaborating with the Olympic committees and foundations in Haiti to collect financial contributions and donated items. Items including blankets, clothing, canned food, water, toothbrushes, energy-boosting candy and footwear can be dropped off on the third floor of the Eddie Smith Field House through the end of February.

Sophomore Caroline Johnson, who donated clothing and food after she heard about the drive through the Facebook group Students Supporting Haiti, agreed to take on the job of spreading the word to her large network of Facebook friends, who in turn, passed the message on to other friends.

Johnson created a Facebook event about this opportunity to contribute, and by all accounts, she said, it has been successful.

“Although the need for monetary donations is most urgent in Haiti right now, not every student can afford to give financially,” Johnson said. “But that shouldn’t stop them from being able to help. That’s why this is such a great opportunity to donate clothing, food, water and medical items to an institution we can trust to deliver them safely.”

Other ongoing or upcoming events include:

- People can drop their spare change in white buckets labeled “Pennies for Haiti” scattered throughout Carrington Hall. See snipurl.com/u5sng for a list of donation sites for the School of Nursing drive, which will benefit the American Red Cross Haiti Relief and Development Fund.
- Members of the campus community can use their PID numbers to donate funds from their expense accounts to support Haiti relief efforts.
- The Kenan-Flagler’s MBA Community Service Committee is supporting several organizations: Yele Haiti, Doctors Without Borders, Clinton Global Initiative, American Red Cross and World Food Programme. The committee plans to solicit matching donations from companies and local businesses. For more information about these organizations and how to donate, refer to snipurl.com/u5sng.
- The student-run Extended Disaster Relief Committee of the Campus Y is accepting donations. Refer to campus.y.unc.edu for information.
- Grad Students for Haiti will host a flea market on Jan. 31 to raise money for Doctors Without Borders.
- The Student Global Health Committee’s annual Global Health Fashion Show Your Love, which will be held on Feb. 11 at 6 p.m. in the Michael Hooker Research Center, will include a silent auction of goods provided by local businesses, with proceeds for Doctors Without Borders working in Haiti.
- Contact Daniel Cothran, danc@unc.edu. For complete information about Carolina’s relief efforts, refer to www.unc.edu/cps/disaster-haiti.htm.

Through last week, graduate and professional students at the Eshelman School of Pharmacy collected money for the Haiti relief fund established by the Campus Y Center for Social Justice committee.

The student-led hunger relief organization Nourish International donated all proceeds from its Hunger Lunch on Jan. 20 to Partners in Health/Zanmi Lasante, an organization with 20 years of experience in Haiti.

“As we have come to expect, the Carolina community has been quick to step up to help in providing relief to our neighbors in Haiti,” said Lynn Blanchard, director of the Carolina Center for Public Service. “What is somewhat different in this instance is the draft disaster response plan Student Government has been working on. In talking about how to respond to disasters, the Extended Disaster Relief student group has pulled together efforts from across campus to try to coordinate one response from many, which I think will be stronger and more sustainable as a result.”

The University’s health experts are integral to Carolina’s relief efforts, both here and in Haiti.
Chancellor Paul Hardin established the GED/ABE Program within Facilities Services more than 20 years ago. Over the years, the program, which allows employees to earn their high school diplomas and expand their job skills, has had many homes — from the basement of the Campus Y to the meeting room in Odum Village to the Employee Forum’s office on Franklin Street, before settling into its current location in the Cheek-Clark Building on West Cameron Avenue.

This month, the program saw another change when the Orange County Literacy Council stepped in to provide on-campus instructors after budget constraints forced Durham Technical Community College to stop doing so.

Ray Doyle, the Facilities Services training specialist who has coordinated the program for the past nine years, talked to the Employee Forum in November about the change — and to reassure forum members about a seamless transition.

“We remain committed not to miss a single beat with our program,” Doyle said.

In recent years, Doyle has seen a gradual shift from employees who need to complete their high school education to qualify for better jobs to employees who are interested in taking the less demanding Adult Basic Education (ABE) classes so they can expand their skills for their current jobs.

Another growing demand is for English as a Second Language classes.

Doyle said the program would continue working closely with Durham Tech to identify employees with special educational needs and refer them to the school’s Learning Center on Franklin Street.

While the Facilities Services program has had its ups and downs over the years, as measured by enrollment numbers and the number of graduates, Doyle said the success of the program stems from the very fact that it exists.

Classes will continue to be offered three days a week (Tuesday, Wednesday and Friday) from 8:15 to 11:15 a.m., Doyle said. That schedule enables employees who finish working the midnight shift as well as dayshift workers to attend the classes. During regular work hours, full-time employees are allowed to attend two 90-minute sessions each week.

Convenience is a major factor in getting people to participate, equal to the comfort that employees feel once they are there, Doyle said. The combination of those two things gets employees to the classes and keeps them coming back, he said.

One person who stands out for Doyle as a testament to the program’s value is a housekeeper whom he befriended and encouraged. The woman started out wanting to get her GED so she could advance to a better, higher-paying job to support her family. In the end, though, her true motivation may have been pride.

The woman struggled mightily, Doyle said. The work did not come easily for her and, in her regular reports to him, she would tell him that she intended to give up. But she never did, at least not for long.

“She was the epitome of determination,” Doyle said. “She was in the GED program for 10 years. She went to class most every week while overcoming the difficulties of working and raising a family. It was tough and you could see how she struggled.”

Not long before she earned her GED, the woman was promoted to acting zone manager, a job that required supervising some 30 housekeepers who cleaned roughly one-third of all on-campus student housing.

After receiving her GED, she was hired as the permanent zone manager, a position she kept until she retired.

The program is tailor-made, Doyle said, for people like her.
EXECUTIVE VICE CHANCELLOR, PROVOST CANDIDATES VISIT CAMPUS

Three candidates for the position of executive vice chancellor and provost have been scheduled to give public lectures and to answer questions about themselves and their views regarding the future of public universities. The talks will be held on the following days:

- Anthony P. Monaco, pro-vice-chancellor for planning and resources at the University of Oxford, will give a public presentation on Jan. 28 from 3 to 4:15 p.m. in Dey Hall’s Toy Lounge;
- Scott L. Zeger, vice provost for research at The Johns Hopkins University, will give a public presentation on Feb. 1 from 3 to 4:15 p.m. in Wilson Library’s Pleasant Assembly Room; and
- Jeffrey S. Vitter, professor of computer science and engineering at Texas A&M University, will give a public presentation on Feb. 4 from 3 to 4:15 p.m. in Dey Hall’s Toy Lounge. Refer to snipurl.com/af5021 to read a short narrative of each candidate’s research and career. Those attending the talks are encouraged to send their impressions to the search committee (inaylor@email.unc.edu).

READINGS

- Jan. 28 — Beth Ann Fennelly will read from her work at the Rainfield Poetry Reading, sponsored by the College of Arts and Sciences, in Wilson Library’s Pea entertainment Assembly Room, 3:30–4:30 p.m.
- Feb. 2 — Charles Price, associate professor of anthropology, will read from his new book “Becoming Rasta: Origins of Rastafari Identity in Jamaica” at the Bull’s Head Bookshop at 3:30 p.m.
- Feb. 4 — Bryant Simon, Carolina alumnus and professor of history at Temple University, will read from his new book “Everything But the Coffee: Learning About America from Starbucks” at the Bull’s Head Bookshop at 3:30 p.m.

DEADLINES TO WATCH

- Submissions are due Feb. 1 of presentations or posters for the 11th annual National Outreach Scholarship Conference, to be hosted by N.C. State Oct. 4–6 at the Raleigh Convention Center. The conference themes encourage authenticity and sustainability as critical components of engaged scholarship. www.outreachscholarship.org
- Nominations are due Feb. 1 for the Carolina Center for Public Service’s Robert and Sallie Brown Gallery, with one award given in each category. Each recipient receives $5,000. Nominations will be accepted through March 1 for University Diversity Awards. The awards recognize significant contributions to the enhancement, support and/or furtherance of diversity on campus and in the community. Nominations will be honored at a spring reception. www.unc.edu/diversity/divaward.html
- The deadline for nominations for the Carolina Women’s Center’s 2010 Women’s Advocacy Awards is March 1. The awards recognize those who have made a substantial contribution to the climate for gender equality on campus as a result of their leadership in advocating for women. All members of the campus community are eligible for the awards, given in three categories: faculty/staff, postdoctoral scholars/professional and graduate students, and undergraduate students. Refer to snipurl.com/4zio for complete information. Nominations may be e-mailed to thebickford@email.unc.edu or dropped off at the center at 215 W. Cameron Ave.

LECTURES, SEMINARS, COLLOQUIA

- Jan. 29 — The Interdisciplinary Program in Cinema, with other campus units, will present a symposium on contemporary global film and media at 10 a.m. in the Nelson Mandela Auditorium of the FedEx Global Education Center. It is titled “Global Moving Images in the Wakes of New Waves.” For information, e-mail imurphy@email.unc.edu.
- Feb. 1 — Talal Asad, distinguished professor of religion at the City University of New York Graduate Center, will give a public lecture at 5 p.m. in Hyde Hall’s University Room titled “Reflections on the Origins of Human Rights.” It will be co-sponsored by the Institute for the Arts and Humanities, the University Program in Cultural Studies and the Department of Religious Studies. iah.unc.edu/calendar/asadlecture
- Feb. 2 — Asad also will participate in “A Colloquium on the Origins of Human Rights” from 10 to 11:30 a.m. in Hyde Hall’s Incubator on the second floor. Readings are available for those who will participate: iah.unc.edu/calendar/asadcolloq.

‘La Sombra y el Espíritu: Women’s Healing Rituals in the Diaspora — The Work of Lucia Mendez and Wendy Phillips’

THE WORK OF TWO INNOVATIVE ARTISTS

— Wendy Phillips, an Atlanta-based photographer, and Lucia Mendez, a painter — will be on display Feb. 4 at 7 p.m. at an opening reception for their exhibit at the Stone Center’s Robert and Sallie Brown Gallery. Both artists’ work involves meditations on rites, rituals and women’s roles as healers. During the opening, Phillips will give a talk and Arturo Lindsay, art professor at Spelman College, will make a special presentation.

Left, “Con los Seres en la Cabeza” by Lucia Mendez, mixed media on canvas.
The work of North Carolina photographer David Blevins features fine art prints of common, rare and newly discovered plants as well as natural landscapes from across the state. They provide a glimpse of what remains of North Carolina’s natural environments on public lands and properties managed by the Nature Conservancy, land trusts, the North Carolina Plant Conservation Program and the North Carolina Botanical Garden. “Remnants” will be shown through Feb. 28 at the Eleanor Smith Pegg Exhibit Hall at the botanical garden. www.blevinsphoto.com

Below, “Bald Cypress, Black River Preserve, The Nature Conservancy.”

**Remnants**

- Feb. 3 – Sandy Carter, IBM Corp.’s vice president for software group channels and a “social media evangelist,” will speak at Hyde Hall’s University Room at 11 a.m. The lecture, sponsored by the Institute for the Arts and Humanities, will be free and open to the public. iah.unc.edu/calendar/carter
- Feb. 4 – The Center for the Study of the American South will host a discussion led by Bryan Simon, author of “Everything But the Coffee: Learning About America from Starbucks.” It will take place at 10 a.m. at the Love House and Hutchins Forum at 410 East Franklin St. R.S.V.P to CSAS@unch.unc.edu or call 962-5665.
- Feb. 4 – The Office of Technology Development’s next Carolina Innovations Seminar will be held from 3:30 to 4:30 p.m. in 1001 Kerr Hall with the topic “Biomaterials and Biotechnology: From the Discovery of the First Angiogenesis Inhibitors to the Development of Controlled Drug Delivery Systems and the Foundation of Tissue Engineering.” It will be presented by Robert Langer, David H. Koch Institute Professor at MIT. snipurl.com/eea30
- Feb. 5–6 – The Program in the Humanities and Human Values will offer a seminar at the School of Government titled “From Slavery to Freedom: African American History and Culture,” co-sponsored by the N.C. Civic Education Consortium. Registration is required, with fee. adventuresinideas.unc.edu
- Feb. 11 – Rob Watson, ECOTECH International chair, CEO and chief scientist and the “Founding Father of LEED,” will discuss the future of green building from 5:30 to 6:30 p.m. at the Kenan-Flagler Business School’s Koury Auditorium. R.S.V.P to cse@unc.edu.
- Feb. 22 – Marilyn Chow, vice president for patient care services at Kaiser Permanente, will deliver the 2010 Ethnic Minority Visiting Scholar Lecture at the School of Nursing’s Fox Auditorium in Carrington Hall. The 3 p.m. talk will be titled “Designing the Future of Acute Care Models.” R.S.V.P. to jcsummer@email.unc.edu.

**VISITORS’ CENTER TO BE COLLECTION SITE FOR TABLE DONATIONS**

The UNC Visitors’ Center will team up with TABLE (www.tableinc.org) in February to serve as a collection site for food for needy school children. Missy Julian Fox, Visitors’ Center director, became familiar with TABLE’s “Backpack Buddies” through a program the center offers schools to introduce upper elementary and middle school children to the concept of college — “designed to inspire and motivate kids to set their goals on a college degree,” Fox said.

“We found out that TABLE Inc. coordinates Backpack Buddies in our area and we wanted to help,” she said. “Especially in the month of love and Valentines, please share your heart and help us collect for TABLE.”

Participating children in the backpack program receive loaner backpacks on Fridays filled with healthy food for the weekend. They return the backpacks to school on Mondays to be picked up and refilled by TABLE volunteers for the next weekend.

In addition to donations of money, food items that are requested include the following canned goods: tuna, chicken, chicken vegetable soup, beef stew, corn, green beans and carrots, spaghetti with meatballs and ravioli, and fruit and nonperishable fruit cups.

Other requested foods include: peanut butter, Pop-Tarts, fresh bread, noodles dishes such as ramen noodles and macaroni and cheese, animal- and graham crackers, shelf-stable chocolate milk boxes, juice boxes, pudding cups, microwave popcorn, raisins and trail mix, packaged snacks, low-fat granola bars and fresh apples.

**WORLDS COLLIDE WHEN CHAT FESTIVAL BEGINS FEB. 16**

The Institute for the Arts and Humanities will present a series of performances, discussions, exhibitions and workshops Feb. 16–20 as part of the Collaborations: Humanities, Arts & Technology Festival, known as CHAT. The events will showcase the way digital technologies are transforming the practices of the arts and humanities, including how we learn, think, know, teach and express ourselves.

For complete information and to register, see www.chatfestival2010.com.

**WOMEN’S CENTER ANNOUNCES FACULTY SCHOLARS**

Mimi Chapman, associate professor of social work, and Sahar Amer, professor of Asian studies, will be the Carolina Women’s Center Faculty Scholars for the fall 2010 and spring 2011 semesters respectively. Chapman will be engaged in a project titled “Gang Affiliation Among Middle School New Immigrant Latinas in Siler City.” Amer will explore the status of lesbianism in the contemporary Arab world.

**ATHLETICS DEPARTMENT’S FAMILY DAYS RETURN IN FEBRUARY**

The athletics department’s Faculty/Staff Family Days events resume in February, including free game tickets, conversations with coaches and meet-and-greet sessions with student athletes. The first event will be Women’s Tennis on Feb. 6 at the site for North Carolina’s natural environments on public lands and properties managed by the Nature Conservancy, land trusts, the North Carolina Plant Conservation Program and the North Carolina Botanical Garden. “Remnants” will be shown through Feb. 28 at the Eleanor Smith Pegg Exhibit Hall at the botanical garden. www.blevinsphoto.com
Donald Shaw, Kenan Professor of Journalism and Mass Communication, lives in metaph. A Carolina faculty member for more than four decades, Shaw describes his attraction to academics that way. “There’s a part of me that always wants to share experience, and a part of me that always wants to learn experience,” he said. “So if you come to me and you’re a ripe orange with a lot of experience, you have to be very careful I don’t suck you dry. I’m very likely to do so with questions.”

Shaw, now 73, explained that he was always expected to be a scholar. After studying for two years at Mars Hill College, he finished his undergraduate degree at UNC and stayed another year to earn a master’s degree in journalism.

After a two-year stint in Asheville, first with the Asheville Citizen, then with the Asheville Times, he went back to school.

“I loved journalism so much that my wife felt if I stayed another year I just wouldn’t go back,” Shaw said. “She knew I had that long-term interest in doing journalism, so she suggested I go back and earn my Ph.D.”

After he earned his doctorate at the University of Wisconsin in 1966, Shaw came back to Carolina to teach.

Two years later, Shaw, with fellow faculty member Maxwell McCombs, articulated the theoretical concept of agenda setting in a groundbreaking study on the 1968 presidential elections. The resulting article, “The Agenda-Setting Function of Mass Media,” shaped the rest of Shaw’s career.

“Agenda setting is that the press doesn’t tell us what to think, but what to think about,” he said. “We discovered that there was a strong correlation between issues that the press was talking about collectively and the issues reflected in the voters. In fact, the correlation was quite high. You could almost predict what the public was going to say by reading what the newspapers were saying.”

McCombs devised the study when he was teaching at UCLA, based largely on his observation that conversation was focused on stories from the newspaper. Upon arriving at UNC, McCombs pitched his idea to Shaw.

“He suggested that we work on this together because I had done content analysis and he had done survey research,” Shaw said, “so we put the two together.”

Even before McCombs approached Shaw, though, the concept had been incubating. “Several years ago I was going through and cleaning out some notes,” Shaw said, “and I found that researcher Bernard Cohen was a lecturer in my graduate class at Wisconsin. I had written down that day, ‘The press doesn’t tell us what to think, but what to think about.’”

Shaw and McCombs validated their hypothesis with a door-to-door survey in Chapel Hill. Graduate students helped interview 99 people in-depth about their perceptions on the top issues of the day and their use of media.

“The same study would not be possible today because Chapel Hill is no longer the same small chummy village it was then, Shaw said.

When Shaw first submitted the study results as a scholarly paper, it was rejected. Then the academic journal “Public Opinion Quarterly” agreed to print a rewritten version of the article, from which thousands of other studies have drawn.

“The other day I checked on Google Scholar, and ‘The Agenda-Setting Function of Mass Media’ was the first result,” Shaw said. “It had about 125,000 articles cite it.”

Currently Shaw is continuing his research on the relationship between agendas and the media with a study on the 2008 election, but with a slightly different concept: agenda melding.

“We think that audiences take various kinds of media and issues in the media, and they meld them together in a way that is comfortable for them,” Shaw said. “Audiences are creating narratives and pictures of the world not totally influenced by the media because they have attitudes and values of their own.”

Shaw hopes to publish the study next spring in scholarly articles and then as a book. He retired from his full-time faculty position this

The results will help the University understand how the library is being used to support the University’s mission of education, research and public service. For more information, contact Kevin Maynor in the Office of the Vice Chancellor for Research and Economic Development (kevin_maynor@unc.edu or 962-4453).

A new exhibit at Wilson Library, “Eighty Years of Looking Back and Moving Forward: The Southern Historical Collections, 1930–2010,” will be on view through April 20 on the fourth floor in the Wilson Special Collections Library.

PITTSBORO STREET STREET CLOSED

Work to replace the steam tunnel serving campus will require the closure of the right lane of Pittsboro Street in the half-block between the Carolina Inn entrance and McCauley Street for the next 18 months. Adjacent traffic signals will be timed to compensate for the lane closure but delays and congestion are expected, especially during peak periods.
As a major research university, Carolina will continue to produce basic knowledge. In addition, though, Thorp wants to infuse faculty and students with the idea that they have the talent and freedom to seek solutions and answers to the planet’s daunting problems. Then they have to be empowered and compelled to turn those ideas into action.

“I tell people I am not trying to turn every unit of the University into the business school just because I am talking about innovation,” Thorp said.

“What I am trying to do is to convince people that the University can have impact without having to make either/or choices about whether we are an applied science university or whether we are a liberal arts university or a university that does basic research as opposed to applied research. We are trying to give everybody the opportunity to participate.”

Thorp said encouraging a culture that allows faculty and students to unlock their creative potential is the most important contribution he could make as chancellor.

That culture already exists in parts of the campus, he said, but the goal is for the innovative spirit to permeate the University, from the hard sciences to the liberal arts.

Thorp has formed a faculty committee to provide input to the Innovation Circle and make sure their recommendations are in sync with faculty priorities. Members of the committee are:

- Richard Boucher, William Rand Kenan distinguished professor in the School of Medicine and director of the Cystic Fibrosis Pulmonary Research and Treatment Center;
- McKay Coble, faculty chair and professor of design and chair of the Department of Dramatic Art;
- Joe DeSimone, Chancellor’s Eminent Professor of Chemistry in the College of Arts and Sciences;
- Stephen Frye, research professor in the Eshelman School of Pharmacy;
- Arvind Malhotra, associate professor in the Kenan-Flagler Business School;
- Eta Pisano, vice dean of the School of Medicine, director of the Translational and Clinical Science Institute and director of the Biomedical Research Imaging Center; and
- Geoff Sayre-McCord, chair of the Department of Philosophy.

**COMPREHENSIVE ROADMAP**

Thorp told Innovation Circle members that Carolina needed a comprehensive roadmap to be able to institutionalize its commitment to tackling the world’s great challenges through innovation and entrepreneurship. Their charge, he said, was to help write it.

The roadmap, in part, is a series of questions that have to be answered, such as identifying existing strengths and overcoming obstacles. Perhaps the biggest challenge will be how to incorporate innovation and entrepreneurship into the University’s three-part teaching, research and service mission, Thorp told the group.

“We are asking you to help us figure out how to bridge all these disparate things we are talking about,” he said. “We are going to keep the liberal arts and the business school. We are going to do basic research and applied research. We are going to do social entrepreneurship and create businesses. In order to do all that, we have to have some new ways of thinking about how we do that, and that is why we asked you to come here.”

Helping Thorp lead this effort are Lowry Caudill and Judith Cone.

Caudill, an adjunct faculty member and co-founder of Magellan Laboratories Inc., chairs the Innovation Circle. Cone, a Kauffman Foundation senior fellow and former vice president, joined Carolina last August as special assistant to the chancellor for innovation and entrepreneurship.

Innovation Circle members include University trustees Philip Clay, Alston Gardner and Sallie Shuping-Russell; Rye Barcott, founder of Carolina for Kibera; Neal Hunter, co-founder and executive chair of Cree Inc.; Brent Jones, managing director of Northgate Capital; Jason Kilar, CEO of Hulu LLC; Richard Krasno, executive director of the William R. Kenan Jr. Charitable Trust; Jonathan Reckford, CEO of Habitat for Humanity; and Matthew Szulik, retired CEO of Red Hat.

**TRANSFORMING KNOWLEDGE**

Caudill said the initiative must go beyond the narrower confines of technology transfer in which an entrepreneurial scientist transfers know-how and discoveries into a private-sector enterprise that spurs jobs and adds to the tax base.

“We are talking about something different,” Caudill said. “We are talking about taking our new knowledge and the University transforming it for societal benefit in an intentional and systematic way.”

In a time of economic crisis, war and severe budget constraints, federal and state governments are looking at their investments in universities and are expecting them to do more with less, Cone said.

The goal of the Innovation Circle, she said, is to help the University find a way to meet this demand. The mission is to strengthen a culture that nurtures individuals’ creative potential and supports their efforts to translate ideas into innovations that will benefit society.

“The dream is that at UNC the beliefs, attitudes, processes and resources are aligned toward not only academic excellence, but toward ever more bold ideas translated into practical value,” Cone said.

Thorp laid out this new vision for Carolina during University Day last year.

During the next four months, Innovation Circle members will learn about other organizations and universities. They will make site visits to Stanford and MIT as part of their continuing analysis of Carolina. The information-gathering process also will include interviews and small group meetings.

Work will continue on drafts of the roadmap through the summer and Thorp will talk about the final roadmap in his University Day address on Oct. 12.

At this week’s Board of Trustees meeting, members will discuss innovation and entrepreneurship at Carolina and the upcoming work of the Innovation Circle.

For additional information about Innovation @ Carolina, including a full list of Innovation Circle members, refer to innovation.unc.edu.

**Editor’s Note: The Gazette will highlight the work of the innovation and entrepreneurship faculty committee in an upcoming article.**
It is not part of his title, but Daniel Arneman sees himself as an accountant, a carbon accountant to be exact, charged with the exhaustive task of creating and maintaining a balance sheet of campus assets and liabilities.

His objective, as the University’s greenhouse gas emissions specialist, is not to help keep the University in the black or keep it out of the red. Rather, it is to compile and measure the plethora of data needed to make the case for why the University must go green and think green in almost everything it does.

On one side of the ledger are the campus carbon emissions—the liabilities racked up day after day, year after year by some 28,000 students and 12,500 faculty and staff members.

On the other side of the ledger is the University’s Climate Action Plan, the most powerful asset at the University’s disposal to reduce and eventually eliminate what Arneman refers to as the “invisible contributors” to global climate change.

MEETING THE PLEDGE

The plan is both an extension to and expression of the pledge that the University made in 2006 when Chancellor Emeritus James Moeser signed the American College and University Presidents Climate Commitment (ACUPCC). The pledge calls for Carolina to become climate neutral—meaning no net greenhouse gas emissions—by 2050.

The plan allows the University to fulfill the ACUPCC’s pledge to establish an inventory of the University’s greenhouse gas emissions, which covers everything from the power consumed within buildings to the gasoline and diesel burned by its vehicular fleet to the impact of wastewater treatment, solid waste and refrigerant leaks from chillers and air conditioners.

Daily commuter activity by employees and students, as well as airplane travel, is also accounted for, he said.

Arneman said he developed the action plan so it would reveal the story behind the numbers. Each chart and graphic is a chapter in the unfolding story that adds background and context for the challenges that lie ahead.

“The purpose of the plan is to condense a complex data set into something that is bite-sized and manageable for the employees and students on campus to follow,” he said. “I want to make carbon emissions visible so that people can track our progress.”

FOCUSBING ON SCIENCE

The other great asset already in place is Arneman himself—and the bundle of expertise and passion he brings to the task.

In January 2008, he was recruited by the University’s Energy Services Department to lead the effort to achieve climate neutrality soon after he received his Ph.D. in physiology from Carolina.

Arneman’s leap from physiology to a career in carbon footprint reduction may have begun in graduate school when he studied biomimicry, a field that looks to nature for inspiration in technological innovations.

The Eastgate Building in Zimbabwe, with a design inspired by termite mounds, is a great example of biomimicry, and its vast potential, Arneman said. By borrowing its design from natural structures, the Eastgate Building uses 90 percent less energy than a traditional office building and contains no air-conditioning equipment.

Although biomimicry is not in the University’s immediate playbook, Arneman points to Carolina’s early and ongoing commitment to design new buildings to meet Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council as evidence of the University’s seriousness about the pledge. Under LEED standards, new University buildings are being designed to use 30 percent less energy than the national standard.

Arneman said he approaches his work more as a scientist than an advocate, which means keeping emotion out of the equation as much as possible.

In the various talks he has given about his work, he sometimes mentions how overwhelmed he felt after seeing Al Gore’s movie “An Inconvenient Truth.”

“Gore wanted to cause a transition in the culture and he chose to do it by describing a desperate situation—by making the problem seem as big as it possibly could be,” Arneman said.

“But fear, by itself, can be paralyzing.”

Instead, he thinks it is as important to show the step-by-step things people can do on a daily basis as it is to harp on the enormity of the task.

“As Henry Ford said, ‘There are no big problems, there are just a lot of little problems,’” Arneman said.

EXPLODING OPTIONS

Of course, the coal-powered co-generation plant on Cameron Avenue could be considered a big problem for a guy whose job is to steer the University away from carbon emissions.

Since 1890, when the first electrical outlets were placed in Person Hall, Carolina has burned coal to generate power. Today, railroad coal cars still rumble through Carrboro on their way to the University’s coal-powered co-generation plant.

The facility generates and distributes steam to the campus and UNC Hospitals through about 40 miles of steam pipes and 10 miles of chilled water pipes. The plant also generates about one-third of the University’s electricity using three boilers and a 32-megawatt generator.

The good news is that Carolina’s co-generation facility, by capturing steam, is able to produce almost twice as much energy from a pound of coal as a traditional coal-fired generating plant can.

The bad news—in the context of reaching the goal to become carbon neutral—is that it still burns coal and that has to change in the years ahead for the University to meet its goal of reaching carbon neutrality by mid-century.

University experts are looking into viable alternatives and have already explored a host of possible fuel substitutes for coal, from torrefied wood to algae oil. And groundbreaking research conducted on campus will help lead the way to energy solutions not yet imagined.

For instance, the Energy Services Department has begun a project to capture methane gas from the local landfill to serve as a potential source of power for the satellite campus on Carolina North.

And since fall 2007, the University has worked with consultants to explore the feasibility of renewable energy sources—from wind power to plasma gasification of solid waste—at both Carolina North and the original campus.

Arneman advises: “Never assume that what looks green is green. Instead, you should work to understand the process and the system because you will very often be surprised.”

Some students, for instance, have suggested to Arneman that all vehicles in the University fleet be switched to hybrids. That sounds good, he said, but the fleet is only a small portion of the campus carbon footprint, and that money would be better invested elsewhere.

One of the hard numbers from Arneman’s inventory is that 90 percent of the University’s carbon footprint comes from the energy consumed in heating, cooling and powering buildings.

University administrators enacted an energy policy to reduce the campus heating and air-conditioning systems and control building temperatures, which has reaped tangible savings.

Arneman’s ledger book, it was also a decision that brought the University one big step in the right direction toward a worthy goal.

To read more about the University’s Climate Action Plan, refer to www.climate.unc.edu/portfolio.