FROM THE CHANCELLOR

UT Knoxville is striving to become a Top 25 public research university in the next 10 years. It’s an ambitious goal, but one that will deliver great dividends.

Former Governor Phil Bredesen challenged us to this goal during his final term. Yet, our Top 25 quest is much more than a race to the finish. It’s not about the bragging rights. It’s not even about the ranking or the numbers.

It’s about the journey to become a better university—for our students, for our community, and for our state.

Regardless of where we end up on the ranking charts, the improvements we make will increase the quality and value of our education, further develop our strengths in research, expand our contribution to economic growth and development, and strengthen the state’s flagship campus for the benefit of all Tennesseans.

Matt Murray, research professor and assistant director of UT’s Center for Business and Economic Research, published a report called “Education Crossroads.” His research made it clear that investing in improved education has great payoffs for all of us.

“Regions with a better educated population tend to have higher levels of per capita income, lower unemployment rates, a larger labor force, and lower incidence of poverty. Education matters to both workers and communities,” Matt wrote. “People with more education tend to live better lifestyles. For example, they smoke less, exercise more often, have a lower incidence of diabetes and live longer. More education also translates into greater economic security for the family, including higher home ownership and personal savings rates and a higher likelihood of having private health insurance.”

As you’ll read in the following report, exciting things are happening that will help move us forward in each of these areas. Just as we’ll all reap the benefits of a better UT, we all play a role in moving the university forward.

Our administrators, faculty and staff are working diligently to recruit, retain, and graduate the best and brightest undergraduate and graduate students in Tennessee and beyond. We are constantly looking for innovative ways to teach, mentor, and inspire tomorrow’s leaders. We are also actively seeking grant monies that will help our faculty, staff, and students do cutting-edge research that results in products and processes that will make our lives better.

Despite the tough economy, we must make our case with lawmakers and others to provide the monetary support to hire and keep top-notch faculty and provide our students with state-of-the-art facilities and technology.

As our Top 25 journey continues, we’ll keep you posted about our progress.

This is an exciting time to be part of the UT Knoxville community. Thank you for all you do—and will do—to make our university the very best it can be for all of us.

Chancellor Jimmy G. Cheek
The University of Tennessee, Knoxville
Her grandparents are from Sparta—that’s Greece, not Tennessee—and she and her sister are the first in her family to go to college. She has degrees from two top 25 public research universities: Rutgers and the Ohio State University (“They taught us well up there,” she explains, referring to the emphatic “the”). She came to the University of Tennessee in 1996, after 16 years at Kansas State University, and has been here ever since, first as a department head and then as an associate dean in the College of Agricultural Sciences and Natural Resources. In August, Chancellor Jimmy Cheek tapped her to head up UT Knoxville’s Top 25 initiative. Her name is Mary Albrecht.

“I suspect I got this job because I tend to take big things apart, then try to make something out of all the little pieces,” Albrecht says. “It’s what I did as an associate dean: I deconstruct jigsaw puzzles.”

As a limited-appointment associate vice chancellor in charge of the Top 25 project, Albrecht has thousands of puzzle pieces to put together during the next three years. “Obviously, we can’t become a top 25 university in three years,” she says. “However, if we can put together the pieces that will allow us to steadily move up the ladder toward the top 25, we can get there. That’s my job.”

Initially, she’ll be answering a number of questions: How do we make the university the best it can be for the state of Tennessee? What are schools in the top 25 doing that make them so successful? What were the lessons they learned, and how can we apply those lessons here? What will it cost? Where will the funds come from? There will be others, of course—many, more specific questions—but these give Albrecht a start.

During the next six months, she’ll be working with Provost Susan Martin and task forces developing detailed plans for what UT Knoxville needs to do. Becoming a top 25 university is a goal for the decade, and to reach that goal, UT Knoxville has developed a strategic plan, Vol Vision 2015, which has five strategic priorities to focus on during the next five years:

• Retain and graduate a diverse body of well-educated undergraduate students.
• Increase the number and diversity of graduate students.
• Strengthen capacity and productivity in research, scholarship, and creative activity.
• Attract and retain stellar faculty and staff.
• Continually improve the resource base.

Fulfilling these priorities will help UT Knoxville approach its Top 25 goal. The result will be better-educated citizens and more research dollars spilling over into the economy. “If we begin doing the things that it takes to become a top 25 school, we’ll be a better institution and Tennessee will be a better state,” Albrecht says. “That’s the bottom line.”

Deconstructing the jigsaw puzzle

MARY ALBRECHT PIECES TOGETHER UT’S GOAL FOR THE TOP 25
Retain and graduate a diverse body of well-educated undergraduate students

Over 40 percent of incoming freshmen have high-school grade point averages of 4.0, which is above the average among Top 25 universities. The problem, however, is that last year, 14 percent of freshmen dropped out before their second year. And to complicate matters even more, about 40 percent of the freshmen in recent years have not yet graduated six years after entering college. By 2015, we hope to have at least a 90-percent retention rate among freshmen, with at least 68 percent of them graduating by the end of their sixth year.
Every day, Cara Turski, Lena Pound, and Liz Morrow tend to experiments in Dr. Steven Wilhelm’s microbiology laboratory. These three undergraduate researchers—and scores of other undergraduates in labs across the UT Knoxville campus—are the ones who will make the crucial scientific breakthroughs of the future. “These students are working beyond the textbooks. The type of work they are doing will be in the textbooks 10 years from now,” Wilhelm says. In 2010, the office of Research supported 188 students through its summer research internship program. Wilhelm and hundreds of other dedicated faculty members mentor undergraduates undertaking research and creative activities. Wilhelm has worked with more than 50 undergraduate and graduate research assistants, primarily on microbial interactions in aquatic ecosystems. These students seek to understand the microbial components of freshwater and marine food webs, the cycle of trace metals in aquatic systems, and the effect of viruses on plankton.

“Learn to do by doing” RESEARCH ENHANCES THE UNDERGRADUATE EXPERIENCE

There’s an old Boy Scout adage, “Learn to do by doing,” and that describes undergraduate research. Being a flagship institution, we offer experiences at a state-of-the-art level. This creates opportunities for students to engage at the cutting edge of science.

There’s an old Boy Scout adage, “Learn to do by doing,” and that describes undergraduate research. Being a flagship institution, we offer experiences at a state-of-the-art level. This creates opportunities for students to engage at the cutting edge of science.

Turski was a senior at Farragut High School when she participated in UT’s Pre-collegiate Scholars program and joined Wilhelm’s lab. While she was in middle school, a biology film sparked her interest in virology, and her 2010 summer research project focused on isolating viruses for Crocosphaera watsonii, a significant nitrogen-fixing bacterium in marine environments. “UT is so huge it can be overwhelming,” Turski says. “This lab has given me a community I belong to…. I have more people as resources, and it makes me work harder.”

Morrow joined the lab as a UT senior after she met Wilhelm during Microbiology 495. She asked for his advice as she pursued a physician assistant degree, and he recommended laboratory research to complement her clinical work. Her summer project focused on Microcystis, a cyanobacterium that can be a serious nuisance in lakes. “This is a close-knit group,” Morrow says. “It’s given me a sense of persistence and a new perspective as I learn through others.”

Pound came to the lab as a volunteer during the spring semester of her freshman year. Her summer project focused on creating fluorescently labeled virus particles to help analyze viral infections. She had been admitted to the Coast Guard Academy during the summer of 2009 but was injured during boot camp and had to delay her enrollment for a year. She says that working in Wilhelm’s lab helped her decide to stay at UT. “I realize that this is an awesome opportunity, and I want to gain this experience,” Pound says. “Working in the lab has enhanced my view of UT…. It’s a very supportive environment.”

Wilhelm encourages students to get involved in undergraduate research as soon as possible, and he encourages fellow faculty members to engage freshmen and sophomores in research and creative endeavors. “There’s an old Boy Scout adage, ‘Learn to do by doing,’” Wilhelm says. “Being a flagship institution, we offer experiences at a state-of-the-art level. This creates opportunities for students to engage at the cutting edge of science. It provides experiences they can’t get elsewhere.”

Engaging undergrads RESEARCH & LEARNING COMMUNITIES DRAW UT STUDENTS

Student engagement is key to student success. From a student’s first semester all the way to graduation, UT Knoxville offers numerous engagement opportunities, including research and learning communities.

Research. The UT Office of Research supports initiatives to expand undergraduate research and creative opportunities in several ways, including Research Week, scheduled for March 27-31, 2011; Pursuit, an academic journal published by UT undergraduates; EUReCA, an annual poster competition scheduled for March 30-31, 2011; and “Posters at the Capitol,” an annual event at the Tennessee State Capitol.

Living Learning Communities. In addition to laboratory communities across campus, UT Knoxville offers seven freshman Residence Hall Living Learning Communities in engineering, architecture and design, agricultural sciences and natural resources, public policy, leadership, and business. While living together, these students have the opportunity to take classes together, study together, and participate in cultural and educational programs, intramurals, and community events.

Dr. Steven Wilhelm
Professor of Microbiology

3 2 0 1 1 C H A N N E L L O R ’ S R E P O R T
With a new state-of-the-art business building and advanced digital learning tools, the College of Business Administration is already helping UT Knoxville become a top 25 public research university. UT Knoxville has set a six-year graduation rate goal of 75 percent and a retention rate goal of 90 percent as part of its Top 25 strategy. The College of Business Administration has cleared the first hurdle and is virtually on top of the second one.

“The college’s six-year graduation rate has averaged 85 percent,” says Fred Pierce, director of the college’s undergraduate programs. “Our freshman-to-sophomore retention rate for students declaring business as their major has averaged 88 percent since we began tracking in 2003. We’re extremely proud of those accomplishments.”

Much of the credit goes to the college’s top-level instruction, but other factors are important, too.

“In 2009, we opened the new James A. Haslam II Business Building,” says Jan Wilkins, dean of the college. “We’re using the latest in technology to enhance the learning experience, such as global teleconferencing, webcasts, podcasts, and technologically advanced classrooms and team rooms. Our state-of-the-art Masters Investment Learning Center, with its cutting-edge technology, is teaching investment skills to students campus-wide. Yet, we’ve only scratched the surface of the building’s resources.”

Curriculum improvements—including classes in technology, business ethics, and leadership—also are making a difference. The most popular new areas of study are international business and entrepreneurship.

“The college’s new Anderson Center for Entrepreneurship and Innovation is fostering creativity and providing students across campus with the skills necessary to identify and create business opportunities,” Williams explains. “Dozens of businesses have been launched so far.”

But Williams believes that the college’s undergraduate advising program is the top reason it has such high retention and graduation rates.

The college’s 17-person advising staff establishes relationships with students to help them graduate on time, support their international study experiences, provide career and personal counseling.

Another element contributing to the college’s strong advisor/student relationship is the First-Year Seminar, taught by the advising staff. Students taking the seminar participate in a business plan competition, which helps them learn teamwork and creative thinking. They also learn academic and professional skills and develop bonds with their advisors that keep them engaged in their studies.

The Venture Living Learning Community, now in its second year, also is fostering student retention. Students living in the same floor of a residence hall, take core classes together, and take part in workshops, field trips, and community-based service projects.

“Our students are career-motivated,” Pierce says. “They know where they want to go and what they want to do. If they stay on track, we stay on track.”

And staying on track is what it’s all about for UT Knoxville’s Top 25 strategy. With the College of Business Administration as a model, the university is closer to reaching its goal.
Increase the number and diversity of graduate students

In 2010, 277 graduate students earned Ph.D. degrees, and 1,845 earned master’s and professional degrees. To be a Top 25 university, we should be awarding at least 486 Ph.D. degrees and 2,130 other graduate degrees annually. Reaching these targets by 2015 is unrealistic, so we have set target of 360 Ph.D. degrees and 2,000 other graduate degrees by 2015, with a goal of reaching the Top 25 targets by 2020. We will also work toward bringing the demographic profile of our graduate student body closer to the demographic profile of the state.
Forty-four years after he came to Oak Ridge National Laboratory as a graduate student to work on a Ph.D. in nuclear physics, Lee Riedinger is heading the Center for Interdisciplinary Research and Graduate Education (CIRE), a groundbreaking new collaborative program between UT Knoxville and ORNL. CIRE offers one of the first interdisciplinary Ph.D. programs in the nation in engineering and energy science.

Riedinger boasts an impressive list of credentials well suited to his new position as director of CIRE, including major awards in research and education, an outstanding record in public and professional service, and a long-term commitment to strengthening the ties between UT Knoxville and ORNL.

Riedinger joined the physics department at UT Knoxville in 1971 as an assistant professor. Throughout his career, he has held various administrative positions at UT, including acting associate vice chancellor for research from 1991 to 1995, head of the Department of Physics and Astronomy from 1996 to 2000, and interim vice chancellor for research in 2006 and 2007.

Riedinger took a leave of absence from UT from 2000 to 2006, initially to serve as ORNL’s deputy director for science and technology and subsequently to serve as the associate laboratory director for university partnerships.

Creating and nurturing synergetic connections between ORNL and UT Knoxville has long been a personal mission for Riedinger, especially in helping set up or improve partnership programs such as joint faculty programs, joint institutes, and mechanisms for shared funding.

And now he’s in charge of CIRE.

Combining the educational resources of Tennessee’s largest flagship institution with the research capabilities of Oak Ridge National Laboratory, CIRE is poised to profoundly increase UT Knoxville’s doctoral research clout. Riedinger expects to recruit 20-30 students for CIRE for the fall of 2011 and 20-40 students a year thereafter.

The center provides extraordinary opportunities for these students to specialize in such fields as nuclear energy, bioenergy and biofuels, renewable energy, and climate sciences related to energy. Plus, the students will have access to ORNL’s remarkable set of high-powered tools, including the Spallation Neutron Source accelerator and Jaguar and Kraken, two of the world’s fastest supercomputers.

“One reason I came to UT—and one reason I stayed—is because ORNL and its accelerators and facilities are right next door,” Riedinger says. “What I look back on as the most enjoyable and rewarding part of my career is the chance to affect and improve the relationship between UT and the national lab. That’s a pretty unique opportunity.”

Now that he’s director of CIRE, Riedinger’s biggest opportunity—and perhaps his greatest challenge—lies ahead.
Recently, Reed’s work received a boost in the form of a $5,000 fellowship from UT Athletics as part of a larger $1 million annual donation to the Knoxville campus from its ESPN contract. Originally from Rogersville, Tennessee, Reed received a bachelor’s degree from East Tennessee State University and a master’s degree from Texas State University. He hopes to receive a doctorate in December 2011, noting that the extra funding has helped him gain teaching experience and has enhanced his research projects.

“It was important to me and my department because I wanted that teaching experience as well as being able to do my own projects, which takes a lot of time,” he says. In addition to his general life-cycle research, Reed is working on a project with UT faculty and students at UT’s Center for Renewable Carbon on the life-cycle assessment of wood-based biofuels and switchgrass cellulosic biofuel. The project assesses the production and use of Woody biofuels, such as wood pellets, and compares them to energy sources like gasoline to determine which is the more ecologically sound option. Reed says the money from UT Athletics also has helped him visit more farmers and wood pellet mills for his research.

After earning a doctorate, Reed hopes to either work in academia or in the field of environmental policy. Ultimately, he hopes that holistic ecosytem research will lead to more information for manufacturers and consumers on how environmentally beneficial or detrimental things really are, leading to more informed choices.

“A lot of countries — like Switzerland and Denmark — have eco-labeling,” he says. “It’s kind of like labeling nutritional facts. They have to report the environmental impacts of their products. It may not be a big deal, but it gives you a choice. And I think it’s very important to have choice in everything.”

Daniel Reed
Ph.D. Student

One-stop shop
NEW OFFICE CENTRALIZES GRAD STUDENT RECRUITMENT, RETENTION

While undergraduate recruitment is coordinated through the Office of Undergraduate Admissions, graduate student recruitment at UT Knoxville has been quite decentralized. Each program recruits its own students, and some programs have more resources for recruitment, mentoring, and retention than others.

Building stronger graduate programs to attract the most highly talented and diverse students is critical to UT Knoxville’s Top 25 efforts. As a result, the Office of Graduate Training and Mentorship within the Graduate School opened in February 2010 to offer departments and colleges centralized support. The new office’s mission is to provide the very best academic experience and professional development possible for the university’s 6,000-plus graduate students.

Toward that end, the office assists with recruitment and retention efforts, creates a welcoming culture for graduate students from a variety of backgrounds (especially underrepresented populations), and helps coordinate grant development and research. For more information about the Office of Graduate Training and Mentorship, visit gradschool.utk.edu/ogtm.shtml.

Fueling discovery
Ph.D. STUDENT’S ECOLOGICAL RESEARCH FUNDED BY UT ATHLETICS
Strengthen capacity and productivity in research, scholarship, and creative activity

High-quality research, scholarship, and other creative activity on campus require a substantial financial commitment. We will work to increase our federal research expenditures from $70 million in 2010 to $105 million in 2015 and to $182 million in 2020 (in today’s dollars). Similarly, our total research expenditures goal is to increase from $165 million in 2010 to $247.5 million in 2015 and $427 million in 2020. We will be investing in strategic faculty hires, such as more Governor’s Chairs and National Academies of Science and Engineering members. We will also be seeking more federal funding for projects that promote economic growth in Tennessee, as well as scholarship and creative activity by faculty in each department and academic discipline.
G

alleen could open the book of nature but couldn’t read it. He didn’t have the language skills. Descartes’s analytical geometry wouldn’t appear until the end of Galileo’s life, and calculus would have to wait for Leibnitz and Newton. The biological world he’s trying to understand does not reveal its text nearly so easily as the heavens did in Newton’s day. But Gross, the director of the National Institute for Mathematical and Biological Synthesis (NIMBioS), is not looking for a mathematical Rosetta Stone for decoding the language of life. “Mathematics periodically goes through phases of new ideas that purportedly will revolutionize our understanding of the biological world,” says Gross, who is also a UT Knoxville professor in both the Department of Mathematics and the Department of Ecology and Evolutionary Biology. “A good example is game theory, which had a huge impact in such fields as economics and evolutionary biology but couldn’t begin to live up to the hype.”

To Gross, mathematics is a set of symbols and associated rules that have amazing power for explaining how the world works. He and his NIMBioS colleagues are using that language to understand phenomena like the effects of fire and water on plant communities in the Everglades and efficient ways to manage feral cats. “We don’t talk anyone what they should do at NIMBioS,” Gross explains, “and we don’t solicit particular restricted research projects. Our work is driven by community requests. People tell us what they’d like us to support, our advisory board evaluates those requests, and we set priorities based on the evaluations and funding.”

“We are a national research center. We take an integrative view of national needs across the sciences. Our partners and collaborators include the National Science Foundation, the National Park Service, the Department of Homeland Security, the National Institute of Health, the Department of Agriculture, and many others.”

Gross, the director of the National Institute for Mathematical and Biological Synthesis (NIMBioS), BRINGS MATH AND BIOLOGY TOGETHER.
Late at night on Christmas Day in 1830, President Andrew Jackson sat down to write an old friend in Nashville. Jackson’s administration appeared to be falling apart, and he believed his own vice president, John C. Calhoun, was leading a campaign to undermine him. Over 16 pages of crabbed script, Jackson poured out his frustration: “I am willing to ascribe all this to...”

Microbe hunter

GOVERNOR’S CHAIR FINDS BENEFICIAL USES FOR MICROBES

Microbes, to the uninitiated, are unappealing organisms. They count E. coli, Salmonella, and assorted other germs among their ranks. But as the world’s supply of natural resources dwindles and pollution escalates, microbes could be our best friends for making the world healthier for human habitation.

UT microbiologist Frank Loeffler is one of the leading experts in the field of bioremediation—the use of microbes and other organisms to decontaminate polluted water and other damaged aspects of the environment.

Loeffler, who currently holds the position of Governor’s Chair in microbiology, with joint appointments in the departments of microbiology and civil and environmental engineering, says he first became interested in researching microbes because they are uncharted territory for scientists. Researchers have identified only a tiny fraction of the millions of species of microbes that exist, and there are many more that have been identified but not studied in the laboratory.

Loeffler’s research has yielded a number of valuable findings. A few years ago, he accepted an assignment from the Department of Energy to help find ways to detoxify harmful metals and radioactive contaminants. Although microbes can’t destroy metals, they can make metals less toxic. For example, microbes can change the properties of uranium so the element precipitates out of water, preventing groundwater flowing through a contaminated area from picking up and dispersing the uranium. Thanks to Loeffler’s research, this strategy has been successfully demonstrated at Oak Ridge National Laboratory, a DOE facility plagued by uranium-contaminated groundwater.

In addition, his research has contributed to the routine use of “starved” microbes to detoxify groundwater contaminated with chlorinated solvents, which are toxic and highly restricted. He is still looking into other microbe-based water purification methods.

Water is not Loeffler’s only concern; he is also searching for novel groups of microorganisms that can influence the flux of greenhouse gases from soils and water into the atmosphere. By understanding these microbes and how to manage their activities, he hopes to reduce the amount of greenhouse gases released from farming activities and thawing permafrost soil.

While Loeffler is working with scientists and engineers to find cost-effective ways for microbes to restore contaminated environments, he is not optimistic we will ever reach a point at which we can live in harmony with the environment. Instead, he says we will always be trying to fix ecological processes that we broke through ignorance, thoughtlessness, or greed.

Loeffler’s research is providing the scientific base to come up with engineering solutions for these kinds of problems. Looking at the climate forecast for the near and long-term future, it seems evident that, at least in his lifetime, he’ll never be out of work.

Jackson revealed

UT PROFESSOR SHINING LIGHT ON ANDREW JACKSON PAPERS

Late at night on Christmas Day in 1830, President Andrew Jackson sat down to write an old friend in Nashville. Jackson’s administration appeared to be falling apart, and he believed his own vice president, John C. Calhoun, was leading a campaign to undermine him. Over 16 pages of crabbed script, Jackson poured out his frustration: “I am willing to ascribe all this to...”

The inexperience of my family who were overreached by the secrete [sic] workings of the great political magician [Calhoun] who works in darkness, is plausible, but cunning, and as deceitful as Satan.”

This letter, along with hundreds of Jackson’s other papers from 1830, was published by the University of Tennessee Press in December 2010 as the eighth volume in The Papers of Andrew Jackson book series. The project aims to publish all of Jackson’s extant literary record in a 17-volume series, ordered chronologically.

The project is being led by history professor Dr. Daniel Feller, who says that he and his team made a number of groundbreaking discoveries in researching the current volume. In addition to the letter above, they found a model removal treaty for the American Indians that Jackson had drafted. The model proposal for more generous compensation to the tribes than was ultimately given.

“The treaty itself—the model for the treaty—has been sitting in the federal records in Washington since 1830, and nobody even saw it until we found it, and we’re printing it,” Feller says.

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Attract and retain stellar faculty and staff

University salaries have stagnated for the past several years because of the state of the economy and its impact on the state budget. We hope to bring the salaries up to the mean for those Top 25 universities in our peer group, which includes Auburn, North Carolina State, and Iowa State. In 2010, UT Knoxville faculty members earned 10 of the most highly prized awards in academia, including fellowships from the John Simon Guggenheim Memorial Foundation, the National Endowment for the Humanities, and the American Council of Learned Societies, as well as membership in the National Academies. Our target goals are to hire a diverse faculty and staff and for the faculty to earn at least 20 of these prestigious awards a year by 2020.
In his first year at UT, Vern Granger, the new director of undergraduate admissions, has already put his mark on the next generation of UT undergraduates. Under Granger’s guidance, the 2010 fall freshman class is the biggest, brightest, and most diverse class in UT history.

Granger’s reputation is extending beyond the university environment as well. Last April, he was named president-elect of the Southern Association for College Admission Counseling, the premier organization for college admissions professionals in the South.

“We take a close look at each applicant, evaluating strengths and weaknesses, before deciding who to accept. We’re not just admitting students; we’re building a class.”

Based on the most recent freshman class, this philosophy works. The average ACT score of the class was 26.5, the average grade point average was 3.81, and 41 percent of the class had a 4.0 GPA. Clearly, Granger has done his job well. Now it’s up to the university to mold this outstanding group of young men and women—with their exceptional qualifications, interests, and abilities—into tomorrow’s leaders.

Hair-raising art NEW ART PROFESSOR USES HAIR TO EXPLORE CULTURE AND IDENTITY

Most people have a deeply personal, often conflicted, relationship with their hair. Hair can inspire confidence, shame, comfort, and frustration—sometimes all at once. Hair texture, style, and its cultural associations have influenced the work of Assistant Professor Althea Murphy-Price, who joined the printmaking program at UT Knoxville this year.

Murphy-Price uses hair in the printing process, giving her works a sense of depth that goes beyond most static images. One print shows a stylized design of swirling leaves and stems; up close, one can see the dotted nature of the ink and the scattering of hair clippings that bleed beyond the edge of the pattern. Another presents an assortment of small clumps of hair connected to each other by thin, wispy strands, as some tendrils snake into the distance.

“I find resolution in working in lithography and screen printing, in which I’m able to use photo-based processes to reinvent the linear quality of hair,” she says.

Lithographic printing allows Murphy-Price to use actual hair in printmaking. She places the hair on a photo-sensitive surface, which transfers the image to the printed matrix. The result is a detailed image in which the smallest scattering of hair fibers can be seen.

Granger’s reputation is extending beyond the university environment as well. Last April, he was named president-elect of the Southern Association for College Admission Counseling, the premier organization for college admissions professionals in the South. The Office of Admissions provides a service to students, faculty, staff, school counselors, alumni, parents, and friends, Granger explains. “My job is to make sure everyone is satisfied with our service. Once I’ve clearly articulated my vision, goals, and expectations for my staff, I need to trust their judgment and stay out of their way.”

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Shaw has been interested in geographic information science (GIS) since his graduate school days at Ohio State University, where he earned his Ph.D. in 1986. In addition to geography, Shaw took courses in civil engineering and psychology to gain a better picture of human movement and behavior.

At the beginning of Shaw’s career, geographers relied on census data as their main source of information about people’s lives. He praises modern technologies for providing comprehensive and up-to-date geographic information but adds that it has also created challenges for GIS researchers.

People’s behaviors generally keep pace with technological changes: “The faster technology advances, the quicker we change and adapt to it.”

“We often start long-range transportation planning 10, 15, or 20 years ahead,” Shaw says. “But are we going to move around in the same ways 20 years from now? Probably not. Modern technologies… are changing our activity and interaction patterns.”

At UT, Shaw is constantly exploring new technological developments. In 2006, he received a three-year National Science Foundation grant to develop a computer GIS program, which he has put online for free. The program’s site has been accessed by more than 150 universities and by government agencies and private companies from more than 75 countries and territories around the world.

He is also collaborating with medical and public health research centers at other universities, studying the potential medical benefits of GIS technology, such as heart rate monitoring, on projects funded by the National Institutes of Health.

So why is Shaw at UT Knoxville and not making big money at Google? Shaw says he likes the university setting where he is free to work on projects that interest him: “I enjoy the environment where I can stay ahead in terms of ideas and research. I’ve also had discussions with the university about patents for some of my work.”

“Are we going to move around in the same ways 20 years from now? Probably not. Modern technologies… are changing our activity and interaction patterns.”

Shih-Lung Shaw
Professor of Geography
Continually improve the resource base

Much of UT Knoxville’s infrastructure needs repair or upgrading, facilities should be more energy-efficient, and all new construction should meet the standards for energy savings, pollutant reduction, and overall environmental health required through LEED certification. The university needs resources for more faculty and staff, for an improved infrastructure, and for new buildings and equipment. We will be working on all of these issues, as well as getting within the mid-range of Top 25 schools by increasing the operating expenditures per student by $8,200 by 2020 and the endowments per student by $24,000 (in today’s dollars).
A ‘Regal’ award
COMPANY’S SCHOLARSHIPS HELP STUDENTS, BOOST CAMPAIGN FOR TENNESSEE

For UT Knoxville pre-med sophomore Morgan McPheeters, the Regal Scholarship is just what the doctor ordered. She received $2,500 to help with college expenses this year. “I work to pay for tuition, and my mother, who is on disability, does everything she can to ensure that I get a good education,” McPheeters says. “This generous donation relieves some of this pressure.”

Regal Entertainment Group has pledged to give up to $100,000 annually for the next five years to support the new program. Each year, the program provides $2,500 to 40 Knox County students—10 freshmen, 10 sophomores, 10 juniors, and 10 seniors—attending UT Knoxville. The adjusted gross family income of eligible students cannot exceed $40,000.

Regal’s scholarship program is just one of the entertainment company’s many gifts to the Campaign for Tennessee, the university’s most ambitious—and successful—fundraising effort in its history. In 2010, UT Knoxville (which includes UT Athletics) met its $610 million campaign goal. More than 98 percent of all gifts in the campaign are designated for a specific purpose, such as scholarships, endowed professorships, and building construction. “Investing in our local community is a point of pride for us,” says Amy Miles, UT alumna and CEO of Regal Entertainment Group. “Supporting the students, the faculty, and the athletic programs at UT, as well as the students and programs at UT Medical Center, are significant parts of our commitment to be a corporate leader in Tennessee.”

Headquartered in Knoxville, Regal is the largest motion picture exhibitor in the world, operating 6,775 screens in 548 locations in 39 states and the District of Columbia.

Regal Entertainment Group’s other gifts to UT include the following:

**UT Academics.** UT Knoxville’s College of Business Administration has benefited from two investments. One will establish the endowed Regal Entertainment Group Distinguished Professorship. The other will support the CBA Technology Fund, which helps maintain state-of-the-art computers, software, and other technology in classrooms in the James A. Haslam II Business Building. In appreciation, a second-floor team room in the building will be named the “Regal Entertainment Group Team Room.”

**UT Athletics.** The Regal Soccer Stadium, named in honor of Regal Entertainment Group’s legacy of support for UT Athletics, was dedicated in 2008. The $7.5 million facility was paid for by private donations. An additional gift by Regal Entertainment Group will help build a new state-of-the-art football training center adjacent to the Brenda Lawson Athletic Center and Haslam Field.

**UT Medical Center.** The Regal Foundation (Regal’s charitable arm) and the Will Rogers Foundation recently donated $1 million to UT Medical Center and the UT Graduate School of Medicine to establish the Mike Campbell Pulmonary Medicine Fellowship. The fellowship will foster enhanced research and training for physicians specializing in pulmonary disease and will help attract the nation’s leading pulmonary residents.
Campus makeover

STIMULUS FUNDS HELP IMPROVE BUILDINGS & REDUCE COSTS

Thousands of energy lighting sensors, hundreds of windows, tens of acres of outdoor lighting, and at least 25 refurbished classrooms—that’s just a snapshot of what the UT Knoxville campus will soon see through one-time funds from the American Recovery and Reinvestment Act, more popularly known as the Stimulus Act. Faculty in Henson Hall, Biosystems Engineering and Environmental Science, the Bailey Education Complex, the Jessie Harris Building, and the Health and Physical Education Building are getting the latest teaching tools in technologically advanced classrooms equipped with smart podiums and screen projection systems.

Sorely needed roofs are set for the Alumni Memorial Building and HPER Physical Education building, and the UI’s mainstay—Nelson Physics Building, Dabney/Blaylock Hall, Alumni Memorial Building, and Austin Peay—will be much less drafty once new windows are installed. Along with planning more time to plan for significant budget reductions for fiscal year 2012, stimulus funds are helping to improve and infuse green infrastructure into facilities, many of which are more than 70 years old. Approximately $35 million will be spent over two years to improve classrooms, technology, and infrastructure. More than $28 million of that will be invested to reduce future energy costs—the campus’s single fastest escalating operating expense.

Given the age of many of the campus’s 200-plus buildings, it was easy to compile a list that fits the federal criteria for stimulus spending: improvements that will lower future operating costs and make a difference in the learning environment for students.

The campus community has stepped up to reduce overall energy consumption by at least 10 percent, saving at least $1 million since 2008 through temperature adjustments and changing day-to-day consumption habits.

From campuswide changes in interior and exterior lighting to new utility meters and heating and cooling systems, UT is furthering its goals for national leadership in campus sustainability efforts. “Stimulus funding has lessened the impact of an expected loss of as much as 30 percent of our state funding... We’ve been able to make strategic decisions and investments that will place the campus in the best possible position to go forward.”

JIMMY G. CHEEK
CHANCELLOR

Trash to treasure

UT COMPOSTING PROGRAM
TRANSFORMING FOOD WASTE INTO FERTILIZER

UT Knoxville has launched a food composting program to transform otherwise wasted food into nutrient-rich fertilizer. A pilot program with pre-consumer food waste—unsold or uneaten items, such as leftover bagels and coffee grounds—started in June. The food wastes are collected from UT kitchens and taken to a composting site off Cherokee Trail, where they are mixed with leaf litter. By early fall, the school was collecting 1,000-1,200 pounds of food per week.

Bryan Alexander, who graduates this May and spearheads the student end of the composting program, says he’d like to see the initiative expanded to include post-consumer food scraps. He’d also like to see all of the campus restaurants participate. “I care about waste reduction—keeping waste out of landfills,” Alexander says. “We have only a finite amount of space. Composting and other green initiatives are important to creating a more sustainable campus and landscape in general.”
Amigo in need

UT CLINIC REMOVES TREE LIMB FROM RACEHORSE’S CHEST, HELPS HIM RETURN TO GOOD HEALTH

In January 2010, the nine-year-old Arabian stallion was brought to the University of Tennessee Large Animal Clinic after a nasty accident. His ribs were broken, his left lung was collapsing, and a two-inch-thick tree limb protruded from his chest. His doctors gave him a two-percent chance of survival. His owner, Gary Sanderson, thought he might have to put down his nationally ranked endurance racer.

Amigo underwent surgery, however, standing up and without sedation, surviving both the injury and subsequent treatment thanks to his enormous heart.

“Amigo was an extremely challenging case because of the number of life-threatening problems he encountered,” says Dr. Nicholas Frank, associate professor of large animal medicine at the UT School of Veterinary Medicine. Both lungs collapsed, he had multiple lung infections, a blood clot went to his brain, and the initial surgery to repair his ribs failed.

Frank recalls one time when Amigo had collapsed and the staff tried to get him back on his feet. His strength of character, as well as his sweet nature, had made Amigo a huge hit at the clinic.

“As he struggled to get up, we urged him on,” Frank says, “shouting, ‘Come on, Amigo. Come on, Amigo.’ Of course, he stood.”

During Amigo’s stay, Sanderson set up a Facebook page to report on his horse’s progress. The page soon attracted 10,000 fans from around the world. The fans posted messages of support and contributed money toward Amigo’s medical bills, which were over $30,000. Eventually, Sanderson started Amigo’s Fund, the proceeds of which go toward the medical care of Amigo and other badly injured horses.

Amigo was discharged in April. His recovery has been better than expected, and he regularly updates his fans with progress reports on Facebook. He’s strong enough now to give Sanderson rides, though the odds that he’ll ever enter an endurance race are poor.

However, as Frank notes, “Would you bet against him?”

Throughout this report, we’ve given you stories about people either affected by or working toward making UT Knoxville a Top 25 public research university. There’s another side to their stories, however, that should not be forgotten. Faculty, staff, and students do what they do, not only to satisfy UT goals or fulfill responsibilities, but also because they are committed to helping create the best possible educational experience, enlightened by a spirit of inquiry and service. This final story is dedicated to all those members of the university community who love what they do and who make the university the extraordinary institution that it is today.
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