

Luxbacher and Richards Advanced as New Trustee Candidates by Pitt Board's Nominating Panel

By John Harvith

The Nominating Committee of the University of Pittsburgh Board of Trustees has recommended for membership on the board Pitt alumnus Roberta A. Luxbacher (ENGR '78), vice president, Global Industrial and Wholesale, ExxonMobil Fuels Marketing Company of ExxonMobil Corporation, and Pitt alumnus Thomas E. Richards (A&S '76), president, chief operating officer, and executive committee member of CDW LLC.

The full board will act on the committee's recommendations at its June 24 annual meeting.

Biographical information on the nominees follows.

In her current position for ExxonMobil, **Luxbacher** is responsible for global fuel sales, marketing, and operations for industrial, commercial, and wholesale customers in more than three dozen countries. She joined Exxon in 1978, the same year she earned her BS degree in chemical engineering from Pitt's Swanson School of Engineering. She progressed through a series of downstream (refining and marketing) analysis, planning, business coordination, and management assignments in Houston, Dallas, and Charlotte. In 1991, she moved to Houston as planning and engineering manager for Exxon Marketing Distribution and was subsequently named Exxon's manager for Products & Feedstocks, Supply. In 1995, she moved to Exxon's upstream (exploration and production) business as the corporation's manager for its U.S. Natural Gas Marketing division.

Luxbacher was named vice president of U.S. Natural Gas in 1998 and vice president, Americas, ExxonMobil Gas Marketing Company in 1999, with responsibility for the marketing of ExxonMobil's natural gas production in North and South America.



Roberta A. Luxbacher



Thomas E. Richards

She served on the Natural Gas Supply Association (NGSA) Board from 2000 to 2002 and was elected as NGSA secretary/treasurer and then chair in 2001-02. She also served on the American Petroleum Institute Upstream Committee and U.S. Natural Gas Council. In April 2002, Luxbacher was appointed director of ExxonMobil International Limited and vice president of Europe Gas and Power Marketing, London, UK, with responsibility for ExxonMobil's natural gas and natural gas liquids marketing, infrastructure, and joint ventures across Europe.

In April 2007, Luxbacher was named general manager, Corporate Planning, Exxon Mobil Corporation, with responsibility for the development of ExxonMobil's corporate plan and annual energy outlook. In February 2009, she was named to her current position. She is an advisory council member for the ExxonMobil Women's Economic Opportunity Initiative and ExxonMobil Math and Science Initiative. She also

has served on the board of the National Bureau of Asian Research and is a frequent speaker on ExxonMobil's Energy Outlook and current energy issues.

As a Pitt undergraduate, Luxbacher was a University Scholar, a member of the American Institute of Chemical Engineers and the Society of Women Engineers, and involved in numerous student activities. An active alumnus, she is a member of the

Swanson School of Engineering Board of Visitors and an emeritus member of the Mascaro Sustainability Initiative. She was a guest speaker at the 2008 Pitt Women Connect Leadership Conference and has been recognized by the Swanson School with its 2011 Distinguished Alumni Award and the 2001 Distinguished Chemical and Petroleum Engineering Alumni Award. In 2005, she created the Roberta A. Luxbacher Engineering Legacy Fund to provide support for projects and scholarships within the Swanson School.

In his current position, **Richards** is responsible for sales, advanced technology services, marketing, product and partner management, and e-commerce at CDW, a leading provider of technology products and services to business, government, education, and the healthcare sector. Founded in 1984, CDW is ranked No. 38 on Forbes' list of America's Largest Private Companies,

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Sarah Geisler Named Pickering Foreign Affairs Fellow

The Woodrow Wilson National Fellowship Foundation has named University of Pittsburgh Honors College student Sarah Geisler a 2011 Thomas R. Pickering Undergraduate Foreign Affairs Fellow. Geisler, who just completed her junior year at Pitt, is one of only 20 new undergraduate Pickering Fellows nationwide and the only one from a Pennsylvania institution of higher education.

Administered by the Woodrow Wilson Foundation and funded by the U.S. Department of State, the award provides financial support of up to \$40,000 for each fellow's senior year of undergraduate study and up to \$40,000 for the first year of master's degree study as the fellow prepares academically and professionally to enter the United States Foreign Service.

A Pittsburgh native and resident, Geisler carries an English writing and urban studies double major in Pitt's School of Arts and Sciences and is working toward a certificate in global studies. She has focused on community development, working as a study-abroad student in Nicosia, Cyprus, at a peace-building camp for Greek and Turkish



Sarah Geisler

Geisler is the third Pitt student to be named an undergraduate Pickering Fellow.

children and with inner-city youth through various mentoring and tutoring programs. She also has studied in Istanbul and will start formal study of Turkish next year. This summer, she is doing research at Pitt on the relationship between divided cities, memory, and literature. She plans to concentrate on international development and conflict resolution in graduate school.

Pickering Fellows participate in one domestic and one overseas internship and commit to three years of service as a Foreign Service Officer for the U.S. Department of State, contingent on their passing the Foreign Service examinations. Geisler is the third Pitt student to be named an undergraduate Pickering Fellow; the previous awardees were named in 1995 and 2002.

The Pickering Fellowship is named in honor of one of the most distinguished and capable American diplomats of the latter half of the 20th century. Thomas R. Pickering held the rank of Career Ambassador, the highest rank in the U.S. Foreign Service, and was U.S. Ambassador to the United Nations from 1989 to 1992. He also served as U.S. Ambassador to Jordan, Nigeria, El Salvador, Israel, India, and the Russian Federation, finishing his diplomatic career in 2000 as U.S. Under Secretary of State for Political Affairs.

Burke Named Distinguished University Professor, And Billiar, Gronenborn, Klunk, and Strick Named Distinguished Professors

The University of Pittsburgh is honoring five faculty members this month by naming one a Distinguished University Professor and four Distinguished Professors.

The honorees and their new titles are: Donald Burke, Distinguished University Professor of Health Science and Policy; Timothy R. Billiar, Distinguished Professor of Surgery; Angela Gronenborn, Distinguished Professor of Structural Biology; William E. Klunk, Distinguished Professor of Psychiatry; and Peter Strick, Distinguished Professor of Neurobiology.

A Distinguished University Professorship recognizes eminence in several fields of study, transcending accomplishments in and contributions to a



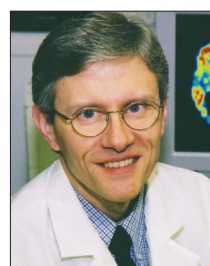
Donald Burke



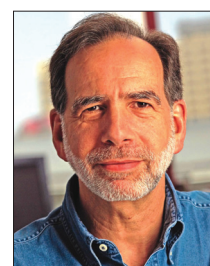
Timothy R. Billiar



Angela Gronenborn



William E. Klunk



Peter Strick

single discipline; the rank of Distinguished Professor recognizes extraordinary, internationally recognized scholarly attainment in an individual discipline or field. Pitt Chancellor Mark A. Nordenberg made the appointments—which become effective July 1—based on the recommendations of Pitt Provost and Senior Vice Chancellor Patricia E. Beeson.

Brief biographies of the honorees follow.

Donald Burke is the inaugural University of Pittsburgh Medical Center-Jonas Salk Professor of Global Health and the dean of the Graduate School of Public Health (GSPH). He is one of the world's foremost experts on the prevention, diagnosis, and control of infectious diseases of global concern, including HIV/AIDS, Hepatitis A, avian influenza, and

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ULS Director Rush G. Miller Honored with CALA Distinguished Service Award

By Sharon S. Blake

The Chinese American Librarians Association (CALA) has named Rush G. Miller, director of Pitt's University Library System (ULS) and Hillman University Librarian, the recipient of the 2011 CALA Distinguished Service Award, the association's highest recognition.

Miller, a longtime advocate of programs that reach out to Chinese libraries and librarians, is being recognized for his leadership, vision, and achievements in librarianship at the national and international levels. He developed the ULS-China Librarians Training and Exchange Program, which allows Chinese librarians to spend six months to a year at Pitt to visit and learn from libraries in the United States; ULS librarians do the same in China. To date, the program has benefitted 41 Chinese and 14 Pitt librarians.

Miller also implemented the East Asian Gateway Service (EAGS), a groundbreaking transcontinental resource-sharing service that provides document delivery between key academic libraries in East Asia and scholars in the West. EAGS has expanded to 17 academic libraries in mainland China, Hong Kong, Macau, and Taiwan and one research library in Korea. Western users are from 40 U.S. states and from other nations worldwide.



Rush G. Miller

Under Miller's leadership, the ULS is continuously strengthening its own East Asian Library, one of the most prominent collections of its kind in North America. In 2004, Miller helped organize a three-week summer institute at Hillman Library called *East Asian Librarianship: China Focus*, which included training for 28 Chinese studies librarians from throughout the United States.

When a massive earthquake shook China in May 2008, Miller took a special interest in the affected region's libraries. He spearheaded a book drive for materials in English for students in grades 7 through 12. In September 2008, he and a delegation personally took 1,700 volumes to schools and universities impacted by the disaster.

Miller, who spoke at the 2010 CALA Annual Program during the American Library Association (ALA) Annual Conference, has published articles and delivered presentations on many issues facing today's librarians. He coauthored *Beyond Survival: Managing Academic Libraries in Transition* (Libraries Unlimited, 2007), which provided examples of how changes have been managed at specific libraries.

A nonprofit organization affiliated with the ALA, CALA was founded in 1973 and is a member of the Council of National Library and Information Associations. Its objectives include the promotion of Sino-American librarianship and library services, fostering the cooperation of Chinese American librarians with other associations and organizations, and the enhancement of communication among Chinese American librarians and between Chinese American librarians and other librarians. It has chapters throughout the United States and in Canada, China, Hong Kong, Taiwan, and Singapore.



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Chancellor's Affirmative Action Award



MIKE DRZDZINSKY/CODE

Chancellor Mark A. Nordenberg awarded his 2011 Affirmative Action Award to Alaine M. Allen, director of the Pitt Engineering Career Access Program (PECAP) in the Swanson School of Engineering. The award is presented annually to an outstanding University program area or individual that has made a significant contribution in affirmation action. The chancellor presented the \$2,500 award to Allen during the June 15 University Senate Council meeting. In his June 10 letter to Allen informing her of the award, Nordenberg said the selection committee "lauded you as an ideal administrator whose experience with the range of services provided by the School of Engineering and the University brings the continuity of commitment and vision necessary to maintain both the reach and the depth of PECAP's affirmative action mission." Nordenberg also noted that he was "particularly impressed" that Allen's nomination was supported by two former PECAP participants. From left, Carol Mohammed, director of Pitt's Office of Affirmative Action, Diversity, and Inclusion, who served as chair of the award selection committee; Chancellor Nordenberg; Allen; and Patricia Weiss, vice president of the University Senate and reference and information technology librarian for Pitt's Health Sciences Library System.

Pitt Publishes, Seeks Contributions To *Contemporaneity*, a New E-Journal on Visual Culture

By Sharon S. Blake

Academic manuscripts and essays on visual culture are being solicited for *Contemporaneity: Historical Presence in Visual Culture*—a new e-journal published by the University of Pittsburgh's University Library System (ULS), a national leader in Open Access digital publishing.

Contemporaneity: Historical Presence in Visual Culture will publish work that grapples with the question of how cultures throughout history use images to record, define, and confront temporal experiences.

The new journal has as its mission rethinking the relationship between visual culture and time and facilitating an understanding of how the present is experienced differently through time, depending on individuals and social histories.

Contemporaneity will be published every spring and will be edited by Pitt graduate students in the University's Department of the History of Art and Architecture.

Pitt's E-Journal Publishing Program is part of ULS' D-Scribe Digital Publishing Program. The ULS is the 23rd-largest academic library system within the United States. Under the administration of the Hillman University Librarian and ULS Director Rush Miller, it includes 21 libraries and holds more than 6.2 million volumes and world-class specialized collections, among

them the Archive of Scientific Philosophy and the Archives of Industrial Society, as well as major foreign-language materials from around the world totaling 1.4 million volumes. The ULS offers state-of-the-art facilities and services, with innovative digital library collections and capabilities.

The new journal has as its mission rethinking the relationship between visual culture and time.

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"Leaky" Genes Put Evolution on the Fast Track, Pitt and UW-Madison Researchers Find

By Morgan Kelly

Small genetic mutations that add up over time could create an evolutionary express lane that leads to the rapid development of new traits, researchers from the University of Pittsburgh and the University of Wisconsin at Madison have found.

The team reports in the *Proceedings of the National Academy of Sciences (PNAS)* that slight changes in segments of DNA known as transcriptional enhancers—which determine the when, where, and how much in gene production—can activate dormant genetic imperfections. These alterations awaken specific genes to low-level activity, or "leakiness," in developing tissue different from the genes' typical location. Just a few subsequent mutations build on that stirring to result in a new function for an old gene—and possibly a novel trait.

Coauthor Mark Rebeiz, a professor of biological sciences in Pitt's School of Arts and Sciences, and his colleagues traced how a certain unwitting gene found itself in the unique optical neurons of a species of fruit fly. They found that tiny alterations in the transcriptional enhancers of the species' ancestor caused the gene to take root in these neurons for the first time. A couple of mutations later and the gene became a permanent fixture in the fly's brain cells.



Mark Rebeiz

Rebeiz worked with coauthors Sean Carroll, professor of molecular biology and genetics at the UW-Madison; Nick Jikomes, an undergraduate researcher in Carroll's laboratory; and Victoria Kassner, a research associate in Carroll's lab.

The Pitt-UW Madison work expands

on research during the past 30 years demonstrating that new genes made from scratch are rare in animals, Rebeiz said. Instead, the diversity of living things is thought to stem from existing genes showing up in new locations. In a famous example of the lack of originality in animal genes, researchers at the University of Basel in Switzerland reported in *Science* in 1995 that a gene known as PAX6, a "master control" gene for the formation of eyes and other features in flies, mice, and humans, could cause the growth of additional eyes on the legs and antennae of fruit flies.

With their report in *PNAS*, Rebeiz and his coauthors offer the first explanation of what makes these genes go astray in the first place—and they identified the deviant DNA as the culprit.

The researchers found that the gene *Neprilysin-1* present in the optical neurons of the fruit fly species *Drosophila santomea* emerged in that location about 400,000 years ago—a blip in evolutionary terms—in the last common ancestor the fly shared with its



relative *D. yakuba*. The mutation began with a transcriptional enhancer for the gene, which caused *Neprilysin-1* to show up in different neurons than usual.

From there, Rebeiz said, the development of *D. santomea*'s distinguishing neurons plays out with the clarity of a film as four mutations in subsequent generations intensify the errant enhancer's impact until *Neprilysin-1*'s presence in optical neurons become an exclusive feature of *D. santomea*. On the other hand, ensuing genetic alterations in *D. yakuba* actually extinguished this new expression and restored that fly's *Neprilysin-1* to its original location.

"It has been long appreciated that nature doesn't make anything from scratch, but the mystery has remained of how genes that have been performing the same job for hundreds of millions of years are suddenly expressed in new places," Rebeiz said. "Our work shows that even slight mutations in a transcriptional enhancer can cause leaky gene activity, which can initiate a short route to the development of new traits."

Pitt-Penn State Football to Resume in 2016



Pitt and Penn State in their last game opposing one another — Sept. 16, 2000.

By E.J. Borghetti

The rivalry will resume.

For years, the University of Pittsburgh and Pennsylvania State University waged one of college football's most colorful and historic rivalries. It was a series of annual games that captured the attention and passion of fans in Pennsylvania and throughout the country.

On hiatus since 2000, the Pitt-Penn State series will again entertain fans now that the two universities have signed a home-and-home agreement for the 2016 and 2017 seasons.

Pitt will host the initial game at Heinz Field on Sept. 10, 2016. The Panthers will play at Penn State on Sept. 16, 2017.

"Pitt and Penn State not only are long-time competitors in athletics, but also are longtime partners in a broad range of academic and civic initiatives," Pitt Chancellor Mark A. Nordenberg said in a statement. "The renewal of our football rivalry is consistent with that broader relationship, is good for both universities, will be welcomed by college football fans around the country, and presents another important opportunity to showcase Pennsylvania, the home state that we proudly share."

Pitt Athletic Director Steve Pederson said, "This is an exciting day for college football fans. The tremendous history of this rivalry is well documented, and the passion that fans have for this game is enormous. We

are very pleased that this two-game series is now in place and a new generation of fans can experience the excitement of a Pitt-Penn State football game beginning in 2016."

And Pitt head coach Todd Graham recalled the two schools' rivalry from his younger days. "As a young football fan in Texas, I used to love watching Pitt and Penn State play every November. The games were intense and featured some of the greatest players in the history of college football. The resumption of this series is great for the two schools and football fans everywhere."

Pitt and Penn State last clashed on Sept. 16, 2000, when the Panthers blanked the Nittany Lions, 12-0 at Three Rivers Stadium. Freshman Rod Rutherford scored the game's lone touchdown when he took a short pass from John Turman and ran 62 yards to the end zone. A smothering Pitt defense limited Penn State to just 64 yards rushing and 225 yards overall.

Penn State holds a 50-42-4 advantage in the all-time series that began in 1893. The schools played every season from 1900 to 1931 and 1935 to 1992. Following a four-year break, the series resumed for four games from 1997 to 2000 before its current hiatus. The rivalry gained national stature during the 1970s and '80s, when the teams met regularly with both Eastern supremacy and national title implications at stake.

Pitt Athletic Programs Exceed NCAA Academic Standards in Latest Report Card

By Gregory A. Hotchkiss

All 19 varsity athletic programs at the University of Pittsburgh exceeded the Academic Progress Rate (APR) standards set by the National Collegiate Athletic Association (NCAA), according to the NCAA's latest report card.

The report lists full APR scores and penalties for all NCAA Division I athletic programs. APR scores are based upon academic progress and graduation and retention rates over a four-year period, covering academic years 2006-07 through 2009-10.

The NCAA also recognized two of Pitt's programs—men's basketball and gymnastics—for their multiyear APR scores and for being ranked among the top 10 percent in their respective sports among NCAA Division I programs, with all of those respective top-performing NCAA Division I teams registering APR scores ranging from 977 to 1,000, a perfect score. The Pitt gymnastics program received 1,000 points, while men's basketball posted a multiyear rate of 985, one of the highest totals in the Big East.

Thirteen of Pitt's 19 sports improved

their scores from the 2010 data release, with the largest improvements coming from baseball and men's basketball (25 and 23 points, respectively). Women's basketball saw its score increase from 980 to 990, owing to perfect scores (1,000 in both eligibility/graduation and retention) in three of the past four academic years. Women's basketball was tied for second in the ranking—with the University of Connecticut—among Big East schools.

Women's swimming posted the second-highest score among Pitt athletic squads with a multiyear rate of 992 and was also rated second-best in the league. The 10 Panthers women's programs recorded no score lower than 970 for the multiyear period.

The APR is a measure of academic performance for all participating NCAA Division I athletic programs. Schools who fail to reach the NCAA's minimum score of 925 can receive penalties, including loss of scholarships, public admonishment, restrictions on practice and competition, and even expulsion from the NCAA.



Left, Pitt junior guard Ashton Gibbs, and right, the Pitt gymnastics team. The NCAA recognized Pitt's men's basketball team and the gymnastics team for their academic excellence during a four-year period from 2006-07 through 2009-10.

Burke Named Distinguished University Professor, and Billiar, Gronenborn, Klunk, and Strick Named Distinguished Professors

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emerging infectious diseases.

In addition to holding a named professorship and serving as dean of GSPH, Burke is director of the University of Pittsburgh Center for Vaccine Research and serves in the newly established position of associate vice chancellor for global health, health sciences. In 2009, he was elected to the Institute of Medicine of the National Academies, one of the highest honors in health and medicine.

Before joining the University of Pittsburgh, Burke was a professor in the Johns Hopkins Bloomberg School of Public Health, where he served as associate chair of the Department of International Health and director of the Center for Immunization Research. He also was principal investigator of National Institutes of Health-supported research projects on HIV vaccines, biodefense, and emerging infectious diseases.

Prior to his tenure at Johns Hopkins, Burke served 23 years on active duty in the U.S. Army, leading military infectious disease research at the Walter Reed Army Institute of Research in Washington, D.C., and at the Armed Forces Research Institute of Medical Sciences in Bangkok, Thailand. He retired at the rank of colonel.

Burke's career-long mission has been prevention and mitigation of the impact of epidemic infectious diseases of global importance. His research activities have spanned a wide range of science "from the bench to the bush," including development of new diagnostics, population-based field studies, clinical vaccine trials, computational modeling of epidemic control strategies,

and policy analysis. He has authored or coauthored more than 200 research reports. Burke earned his MD from Harvard Medical School in 1971 and his BA degree from Western Reserve University (now Case Western Reserve University) in 1967.

Timothy R. Billiar is the George Vance Foster Professor and Chair in the School of Medicine's Department of Surgery.

The main research focus of Billiar's laboratory is studying the immune response to injury and shock. His laboratory, which is currently funded by three National Institutes of Health grants, is credited with initially cloning the human inducible nitric oxide synthase gene. Billiar's work also extends into the areas of liver disease and innate immunity. There are seven U.S. patents associated with his research.

Billiar received his medical degree from the University of Chicago Pritzker School of Medicine and completed his surgical residency at the University of Minnesota and the University of Pittsburgh. In 1992, he was named the first Samuel

P. Harbison Endowed Assistant Professor of Surgery and in 1997 was named the Watson Professor of Surgery.

Billiar was recognized in 2006 with membership in the Institute of Medicine of the National Academies. He received the Flance-Karl Award from the American Surgical Association. He previously served as president of the Society of University Surgeons, the Surgical Infection Society, and the International Nitric Oxide Society. He also served on the Surgery Anesthesia Trauma Study Section of the National Institutes of Health and currently serves on

the Surgery Residency Review Committee of the Accreditation Council for Graduate Medical Education.

Angela Gronenborn is the UPMC Rosalind Franklin Professor and Chair in the School of Medicine's Department of Structural Biology.

Gronenborn has made key contributions in the field of structural biology, which is the study of the 3-dimensional shapes of biological molecules, such as proteins, and how their function is affected by changes in their structure and by their interactions. She has solved solution structures of a large number of medically and biologically important proteins, including cytokines and chemokines, transcription factors and their complexes, and various HIV- and AIDS-related proteins.

Using restrained molecular dynamics/simulated annealing algorithms and multidimensional, heteronuclear magnetic resonance spectroscopy methods that she developed, Gronenborn studies the structure, folding, and dynamics of macromolecules. Her extensive bibliography contains more than 400 articles and numerous book chapters.

Elected to the National Academy of Sciences in 2007, Gronenborn received her diploma and doctoral degrees in chemistry from the University of Cologne, Germany. Prior to coming to Pittsburgh in 2005, she was a member of the senior biomedical research service and chief of structural biology for the National Institute of Diabetes and Digestive and Kidney Diseases, part of the National Institutes of Health.

One of the nation's leading experts in the early detection of Alzheimer's disease, **William E. Klunk** is a professor of psychiatry and neurology in the School of Medicine. He is also codirector of the Alzheimer Disease Research Center at UPMC. He is a pioneer in the field of in vivo amyloid imaging in humans, and his group's paper on imaging the pathology of Alzheimer's disease, published in January 2004, is the most frequently cited research paper on this disease.

Klunk also was a member of the Pitt team that invented the groundbreaking Pittsburgh Compound B, a radioactive

compound that, when coupled with PET imaging, can be injected into an Alzheimer's patient's bloodstream to enable researchers to see the location and distribution of the brain's beta-amyloid plaque deposits that are associated with Alzheimer's.

Klunk completed both medical and Ph.D. degrees at Washington University in St. Louis focusing on neuropharmacology and medicinal chemistry. He is a member of the Medical and Scientific Advisory Council of the National Alzheimer's Association and has published more than 100 journal articles and book chapters.

Klunk shared the 2004 MetLife Foundation Award, the 2008 Potamkin Prize, and the 2009 Ronald and Nancy Reagan Research Institute Awards for research in Alzheimer's disease with his University of Pittsburgh colleague Chester A. Mathis, a professor of radiology.

Codirector of the Center for the Neural Basis of Cognition at Pitt and Carnegie Mellon University, **Peter Strick** is a professor of neurobiology and psychiatry in the School of Medicine. He studies how the brain's cerebral cortex controls voluntary movement; he has found that there are six pre-motor areas that play roles, which he is exploring with anatomic, physiologic, and functional imaging.

Strick is also studying neural circuits between the basal ganglia and the cerebellum that are important in planning, initiating, and regulating volitional movement. His recent research indicates that those same circuits, when dysfunctional, could be partly responsible for symptoms of behavioral illnesses such as schizophrenia, obsessive-compulsive disorder, depression, and autism.

Using viruses that have an affinity for the central nervous system, Strick's team has developed a unique approach to trace the circuitry of the central nervous system that also sheds light on how these viruses move through the brain.

Strick received his bachelor's degree in biology and his Ph.D. degree in anatomy from the University of Pennsylvania. He was elected a fellow of the American Academy of Arts and Sciences in 2004 and of the American Association for the Advancement of Science in 1999.

Pitt-Led Research Forecasts Severe Tropics' Water Shortage as N. Hemisphere Temperatures Rise

By Morgan Kelly

A 2,300-year climate record University of Pittsburgh researchers recovered from an Andes Mountains lake reveals that as temperatures in the Northern Hemisphere rise, the planet's densely populated tropical regions will most likely experience severe water shortages as the crucial summer monsoons become drier. The Pitt team found that equatorial regions of South America already are receiving less rainfall than at any point in the past millennium.

The researchers report in the *Proceedings of the National Academy of Sciences* (PNAS) that a nearly 6-foot-long sediment core from Laguna Pumacocha in Peru contains the most detailed geochemical record of tropical climate fluctuations yet uncovered. The core shows pronounced dry and wet phases of the South American summer monsoons and corresponds with existing geological data of precipitation changes in the surrounding regions.

Paired with these sources, the sediment record illustrated that rainfall during the South American summer monsoon has dropped sharply since 1900—exhibiting the greatest shift in precipitation since around

300 BCE—while the Northern Hemisphere has experienced warmer temperatures.

Study coauthor Mark Abbott, a professor of geology and planetary science in Pitt's School of Arts and Sciences who also code-signed the project, said that he and his colleagues did not anticipate the rapid decrease in 20th-century rainfall that they observed. Abbott worked with lead author and recent Pitt graduate Broxton Bird; Don Rodbell, study codesigner and a geology professor at Union College in Schenectady, N.Y.; recent Pitt graduate Nathan Stansell; Pitt professor of geology and planetary science Mike Rosenmeier; and Mathias Vuille, a professor of atmospheric and environmental science at the State University of New York at Albany. Both Bird and Stansell received their PhD degrees in geology from Pitt in 2009.

"This model suggests that tropical regions are dry to a point we would not have predicted," Abbott said. "If the monsoons that are so critical to the water supply in tropical areas continue to diminish at this pace, it will have devastating implications for the water resources of a huge swath of the planet."

New Trustee Candidates

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employs more than 6,300, and, in 2010, generated sales of \$8.8 billion. Its areas of focus include software, network communications, notebooks/mobile devices, data storage, video monitors, desktops, and printers as well as such solutions as virtualization, collaboration, security, mobility, data center optimization, and cloud computing.

Richards joined CDW in 2009 with 33 years of experience in the technology industry. Most recently, he served as chief operating officer with Qwest Communications, where he oversaw the day-to-day operations and performance of Qwest and, before assuming the role of chief operating officer, was executive vice president of Qwest's business markets group. He also served as chair, president, and chief executive officer of Clear Communications Corporation, a network management software company, and as executive vice president and management committee member of Ameritech Corporation, where he oversaw cellular, security monitoring, network services, and cable television operations. In addition, he worked for 19 years with Bell Atlantic, now Verizon, in various sales, marketing, and operations roles in telecommunications and computer services.

Richards earned his 1976 BA degree from the University of Pittsburgh in econom-

ics and his 1991 MS degree in management as a Sloan Fellow at the Massachusetts Institute of Technology. During his undergraduate years at Pitt, Richards was a member of the varsity men's basketball team and was ranked 11th on the University's all-time scoring list. In 2007, he was honored with the Pitt Varsity Letter Club Award of Distinction. He has served as a member of the Pitt School of Information Sciences Board of Visitors and as a director-at-large of the Pitt Alumni Association.

Richards is a former member of the Greater Pittsburgh Chamber of Commerce and was formerly on the Penn Southwest Association Board of Trustees, the Pennsylvania Economy League Board of Governors, the Regional Industrial Development Corporation Board of Directors, and the Boy Scouts of America—Greater Pittsburgh Council Board of Directors. In 1991, he founded with his wife, Pitt alumnus Mary Beth (A&S '78), the Little Panthers in Upper St. Clair, Pa., to teach young boys and girls to play basketball.

Richards currently serves on the Junior Achievement of Chicago Board of Directors and the Rush University Medical Center Board of Trustees, and he is a member of the Economic Club of Chicago.

Science & Technology

Wireless Tags Give Physicians Details, Condition of Orthopaedic Implants With the Wave of a Wand

By Morgan Kelly

Radio-frequency technology developed at the University of Pittsburgh that uses human tissue instead of air as a conduit for radio waves is the basis of the first electronic “tag” system designed to track and monitor orthopaedic implants.

The noninvasive system, known as Ortho-Tag, features a wireless chip attached to the implant and a handheld receiver that together would let physicians view the critical information about artificial knees, hips, and other internal prosthetics—as well as the condition of the surrounding tissue—that currently can be difficult to track down.

The chip, or tag, would have information about the patient, the implant, and the procedure uploaded to it prior to an operation, explained New Jersey-based orthopaedic surgeon Lee Berger, CEO of Ortho-Tag, Inc., and inventor of the tagged implant. In addition, sensors within the chip would gauge the pressure on the implant, the chemical balance and temperature of the tissue, and the presence of harmful organisms.

All of this information would subsequently be read by a handheld probe developed in the laboratory of Marlin Mickle, the Nicholas A. DeCecco professor of electrical and computer engineering in Pitt’s Swanson School of Engineering. When placed against the patient’s skin, the probe communicates with a radio-frequency identification (RFID) tag devised in the Mickle lab by Pitt graduate researcher Xiaoyu Liu that emits a unique wavelength designed to travel through human tissue. Special software would display information from the tag on a computer.

Berger recently patented the Ortho-Tag system (U.S. patent 7,932,825), and Ortho-Tag, Inc., has optioned the

rights to Mickle’s work. Berger envisions Ortho-Tag being attached to implants by the manufacturer, and he is currently building partnerships with manufacturers. Ortho-Tag, Inc., would distribute the software and probe to physicians. For people with existing orthopaedic devices, the company is considering producing wallet-sized cards with an affixed RFID tag uploaded with information about the patient and the implant, Mickle said.

Berger developed the Ortho-Tag concept to resolve a frequent shortage of information he experienced with patients who had received orthopaedic implants. In many cases, patients knew little about the type of device they had received, the company that manufactured it, or even the surgeon who had performed the procedure. Those details could only be learned through an extensive paper trail, made even more complex when dealing with out-of-state patients.

“Other than written records, the only way to learn about a device once it’s implanted is through an X-ray. But even that does not provide such details as size, model number, or manufacturer, or health information about the patient that is directly related to the implant’s performance,” Berger said.

“For a physician to provide follow-up care, it’s important to know the exact device a patient has, and there are several different models, shapes, and sizes of devices for use in knees, hips, feet, the spine, and other parts of the skeleton. With Ortho-Tag, a doctor only has to scan a chip to see all that information.”

In addition, said Mickle, defective implants are typically recalled by serial number, crucial information that is typically kept on written records where the original surgery took place. Ortho-Tag could be used to identify a suspect implant quickly and easily.

Ortho-Tag represents the growing potential and role of RFID technology in health care, Berger and Mickle said. A 2009 RAND Corporation (Europe) technical report found that RFID technology offers several advantages to medical care in such areas as wireless data transfer and patient/object identification and as a sensor—the primary functions of Ortho-Tag.

“There are a lot of different devices manufactured by a lot of different companies and implanted at a lot of different hospitals by a lot of different surgeons,” Mickle said.

“There has to be accountability for objects implanted in the body, and we hope that this technology will finally make orthopaedic devices much easier to monitor and, thus, safer for patients.”

Ortho-Tag prototype. Ortho-Tag would be affixed to an orthopaedic implant and scanned via radio-frequency technology with a probe and RFID tag developed at Pitt. A card (foreground) would be available to patients with an existing implant.

Pitt Research Recreates Brain Cell Networks With Unprecedented View Of Activity Behind Memory Formation

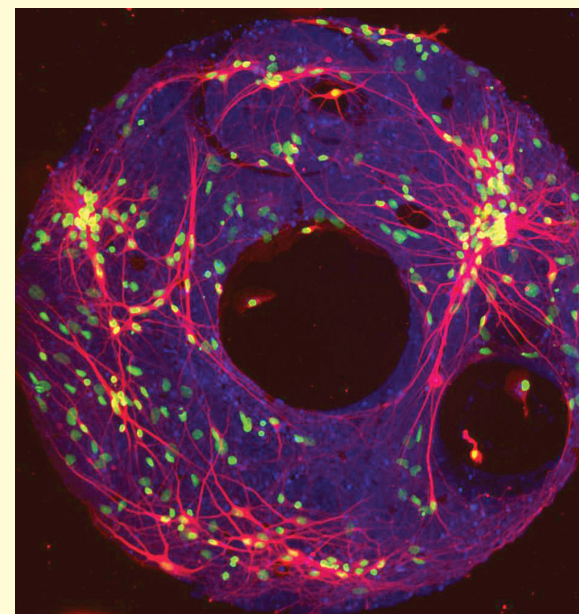
By Morgan Kelly

Research performed at the University of Pittsburgh reproduced the brain’s complex electrical impulses onto models made of living brain cells that provide an unprecedented view of the neuron activity behind memory formation.

The team fashioned ring-shaped networks of brain cells that were not only capable of transmitting an electrical impulse, but also remained in a state of persistent activity associated with memory formation, said lead researcher Henry Zeringue [zuh-rang], who until May served as a bioengineering professor in Pitt’s Swanson School of Engineering. Magnetic resonance images have suggested that working memories are formed when the cortex, or outer layer of the brain, launches into extended electrical activity after the initial stimulus, Zeringue explained. But the brain’s complex structure and the diminutive scale of neural networks mean that observing this activity in real time can be nearly impossible, he added.

The Pitt team, however, was able to generate and prolong this excited state in groups of 40 to 60 brain cells harvested from the hippocampus of rats—the part of the brain associated with memory formation. In addition, the researchers produced the networks on glass slides that allowed them to observe the cells’ interplay. The work was conducted by 2011 Pitt graduate Ashwin Vishwanathan, who most recently reported it in the Royal Society of Chemistry (UK) journal, *Lab on a Chip*. Vishwanathan, who received his PhD degree in bioengineering from Pitt, coauthored the paper with Zeringue and Guo-Qiang Bi, a neurobiology professor in Pitt’s School of Medicine. The work was conducted through the Center for the Neural Basis of Cognition, which is jointly operated by Pitt and Carnegie Mellon University.

To produce the models, the Pitt team stamped adhesive proteins onto silicon discs. Once the proteins were cultured and dried, cultured hippocampus cells from embryonic rats were fused to the proteins and then given time to grow and connect to form a natural network. The researchers disabled the cells’ inhibitory response and then excited the neurons with an electrical pulse.



A fluorescent image of the neural network model developed at Pitt reveals the interconnection (red) between individual brain cells (blue). Adhesive proteins (green) allow the network to be constructed on silicon discs for experimentation.

Zeringue and his colleagues were able to sustain the resulting burst of network activity for up to what in neuronal time is 12 long seconds. Compared to the natural duration of .25 seconds at most, the model’s 12 seconds permitted an extensive observation of how the neurons transmitted and held the electrical charge, Zeringue said.

Unraveling the mechanics of this network communication is key to understanding the cellular and molecular basis of memory creation, Zeringue said. The format developed at Pitt makes neural networks more accessible for experimentation. For instance, the team found that when activity in one neuron is suppressed, the others respond with greater excitement.

“We can look at neurons as individuals, but that doesn’t reveal a lot,” Zeringue said. “Neurons are more connected and interdependent than any other cell

in the body. Just because we know how one neuron reacts to something, a whole network can react not only differently, but sometimes in the complete opposite manner predicted.”

Zeringue will next work to understand the underlying factors that govern network communication and stimulation, such as the various electrical pathways between cells and the genetic makeup of individual cells.

“Neurons are more connected and interdependent than any other cell in the body. Just because we know how one neuron reacts to something, a whole network can react not only differently, but sometimes in the complete opposite manner predicted.”

—Henry Zeringue



News-makers

HUMAN RIGHTS DINNER



MARY JANE BENT/CUDE

The Pittsburgh chapter of the NAACP held its 57th annual Human Rights Dinner on May 5 in the Omni William Penn Hotel, Downtown. The evening's theme was "Transforming Education in Pursuit of a Stronger America"; the keynote speaker was John Jackson (left), president and CEO of the Schott Foundation for Public Education. Also shown are Gayle Moss, NAACP Pittsburgh president, and Pitt vice chancellor for public affairs Robert Hill, who introduced Jackson. Pitt's Office of the Chancellor was a sponsor of the event.

iSCHOOL INCLUSION INSTITUTE

Paul Hawkins (right), a senior consultant with the Western Pennsylvania Diversity Initiative, was welcomed as the June 13 guest speaker for the iSchool Inclusion Institute (i3) by James "Kip" Currier, program director and assistant professor in Pitt's School of Information Sciences. Supported by a \$700,000 grant from the Andrew W. Mellon Foundation, i3 aims to encourage and prepare undergraduate students from underrepresented groups to enroll in graduate studies in the information sciences. The i3, which has students spend a total of six weeks on Pitt's campus, has been designed to work with three separate cohorts of undergrads from around the country, starting this year and in 2012, and 2013, respectively. Each cohort is to attend a four-week summer introductory session at Pitt and then conduct a yearlong team project overseen by a faculty mentor. Finally, the students will return to Pitt the following summer for a two-week presentation and workshop with their faculty mentors, representatives from various information sciences schools, and information science professionals. The first group began June 6 and will wrap up June 30. More information on i3 is available on the institute Web site, www.ischool-inclusion.org.



JOE KAPLEWSKI/CUDE

YORUBA ROYALTY

Pitt's African Heritage Nationality Room received a visit from a West African tribe's royal family, who examined one of the room's treasures, a former Yoruba king's exquisitely beaded tunic. Oba Olusanya Adegboyega Dosunmu (center), the 13th Oluwu of Nigeria's Owu Kingdom; his son (left), Pitt ethnomusicology PhD alumnus Oyebade Dosunmu (A&S '10G, '05G); and the Oluwu's wife, Olatubosun Abiodun Dosunmu, (right) visited the Nationality Rooms Programs' office on May 17. The ethnic people of Owu are part of West Africa's Yoruba kingdom, which extends beyond the boundaries of Nigeria.



MICHAEL WALTER

COURIER'S FAB 40



JOHN W. BUTLER

The *New Pittsburgh Courier's* annual FAB 40 reception—which recognizes 40 African Americans under age 40 for contributions to their professions and their communities—was held April 29 in the U.S. Steel Tower, Downtown. Among the honorees were a number of Pitt alumni and faculty. Front row, from left: Allyce Pinchback (A&S '09), education program manager for the World Affairs Council of Pittsburgh; Kezia Taylor (LAW '06), an attorney with Pepper Hamilton; Melissa Wade (A&S '96), creative services producer for KDKA-TV; Marisa Bartley (A&S '05), branch manager with Citizens Financial Group; and Bethany Miller (LAW '08), a lawyer with Tucker Arensberg. Back row, from left: Jessica Brooke Ruffin (A&S '06), community impact director for Amachi Pittsburgh; Nicole Manns, vice president and manager of affirmative action compliance for BNY Mellon; Oronde Sharif (SOC WK '97G, A&S '95), Pitt lecturer and an advisor in Pitt's Department of Africana Studies; Latika Davis-Jones (SOC WK '07G, GSPH '07), an administrator with Allegheny County's Department of Human Services and an adjunct professor in Pitt's School of Social Work; and Yolanda Covington-Ward, Pitt assistant professor of Africana Studies.

Awards & More

Two University of Pittsburgh assistant professors—**Jane E. Clougherty** in the Graduate School of Public Health's Department of Environmental and Occupational Health and **Fengyan Tang** in the School of Social Work—have been awarded Steven D. Manners Faculty Development Awards from Pitt's University Center for Social and Urban Research (UCSUR).

The annual awards, which recognize promising research and infrastructure projects on campus, honor the memory of Steven Manners, a sociologist who began working at UCSUR in 1974 and served as its assistant director from 1989 until his death in September 2000.

Clougherty's project, "Adapting Geospatial Modeling Methods to Assess Individual-Level Variability in Urban Chronic Stress," will employ a modeling method aimed at enabling researchers to better assess individuals' chronic stress and the multitude of factors impacting that stress, including proximity to physical stressors associated with noise or air pollution.

Tang's project, "Retirement Transition, Volunteer Engagement, and Physical Health," will assess how older adults transition into retirement, including whether they stop working entirely or engage in part-time employment and volunteering, or any combination thereof. It will also look at which physical health changes are related to which type of retirement transition.



The Carnegie Science Center held its annual Carnegie Science Awards ceremony on May 5 at Carnegie Music Hall. The Pitt-related winners of this year's awards were as follows.

- Advanced Materials Award: **Alan Russell**, University Distinguished Professor of Surgery, bioengineering, and chemical engineering and director of the McGowan Institute for Regenerative Medicine.

- Catalyst Award: **Marc Malandro**, associate vice chancellor for technology management and commercialization and director of the Office of Technology Management.

- University/Post-Secondary Educator Award: **Thad Zaleskiewicz**, emeritus professor of physics at Pitt-Greensburg.

- Life Sciences Award: **Massimo Trucco**, Hillman Professor of Pediatric Immunology and head of the Division of Immunogenetics within the Pitt School of Medicine's Department of Pediatrics and director of the Children's Hospital of Pittsburgh of UPMC's Histocompatibility Center.

Happenings

AUBREY BEARDSLEY, ISOLDE, N.D., LINE ETCHING AND PRINTED COLOR. COURTESY OF LANDAU TRAVELING EXHIBITIONS.



Fin de Siècle Prints: Art Nouveau on Paper, The Frick Art & Historical Center, through September 11

Pittsburgh Symphony Orchestra at South Park, Thomas Hong, conductor; Huei-Sheng Kao, violin; free to public, 8 p.m. **July 2**, Buffalo Drive, Bethel Park and South Park municipalities, Allegheny County Summer Concert Series, Pittsburgh Symphony Orchestra, 412-392-4900, www.pgharts.org.

Pittsburgh Symphony Orchestra at Hartwood Acres, Thomas Hong, conductor; Tatjana Mead Chamis, viola; free to public, 8:15 p.m. **July 3**, 200 Hartwood Acres, Hampton and Indiana townships, Allegheny County Summer Concert Series, Pittsburgh Symphony Orchestra, 412-392-4900, www.pgharts.org.

Bach, Beethoven, and Brunch, longtime favorite series for classical music lovers and brunch fans, 10:30 a.m.—noon, Sundays **through Aug. 15**, lawn of Mellon Park, Fifth and Shady avenues, Point Breeze/Squirrel Hill, Squirrel Hill Urban Coalition, Bagel Factory, WQED-FM, 412-255-2493.

Stars at Riverview Jazz Series, features Pittsburgh's premier jazz musicians, 7 to 8:30 p.m. Saturdays **through Aug. 27**, Riverview Park, Riverview Avenue, North Side, BNY Mellon and WDUQ, 412-255-2493.

Exhibitions

Carnegie Museum of Art, Architecture Explorations, through Aug. 12; Pittsburgh Biennial, through Sept. 18; Ragnar Kjartansson: Song, through Oct. 9; Hand Made: Contemporary Craft in Ceramic, Glass, and Wood, ongoing, 4400 Forbes Ave., Oakland, 412-622-3131, www.cmoa.org.

Heinz History Center, Ben Franklin: In Search of a Better World, exploring personal side of one of our founding fathers, **through July 31; America's Best Weekly: A Century of The Pittsburgh Courier, through Oct. 2**; 1212 Smallman St., Strip District, 412-454-6000, www.heinzhistorycenter.org.

The Frick Art & Historical Center, Fin de Siècle Prints: Art Nouveau on Paper, through Sept. 11, docent tours of exhibition available at 2 p.m. Wednesdays, Saturdays, and Sundays, free and open to public, 7227 Reynolds St., Point Breeze, 412-371-0600, www.thefrickpittsburgh.org.

Lectures

"The General Surgeon Is Primary Care Provider," Andrew B. Peitzman, Mark M. Ravitch Endowed Chair in Surgery, Pitt School of Medicine, 4:30 p.m. **June 30**, Provost's Inaugural Lecture Series, Scaife Hall Lecture Room 6, www.provost.pitt.edu.

"Art Nouveau and the Ubiquity of Style," Sarah Hall, Frick Art Museum director of curatorial affairs, 10 a.m. **Aug. 12**, Lexington Education Center, The Frick Art & Historical Center, 7227 Reynolds St., Point Breeze, 412-371-0600, www.thefrickpittsburgh.org.

TIES Informational Luncheon for Researchers and Research Assistants, talk on Text Information Extraction System (TIES), Rebecca Crowley, director, Department of Biomedical Informatics Graduate Training Program, Pitt School of Medicine, 11 a.m.-noon, **July 12**, Presbyterian Hospital South, Conference Room M3901, open to Pitt and UPMC faculty, staff, and students, registration required, <http://ties.upmc.com/register/index.html>, 412-623-4753.

Opera/Theater/Dance

House & Garden, two plays by Alan Ayckbourn, **June 23-July 17**, The Charity Randall and Henry Heymann theaters, both in Stephen Foster Memorial, Pittsburgh Irish & Classical Theatre, 412-394-3353, www.picttheatre.org, Pitt Arts Cheap Seats Program, 412-624-4498, www.pittarts.pitt.edu.

Jekyll & Hyde, musical based on Robert Louis Stevenson's tale of good and evil, **through June 26**, Benedum Center, 719 Liberty Ave., Downtown, Pittsburgh CLO, 412-456-6666, www.pgharts.org, Pitt Arts Cheap Seats Program, 412-624-4498, www.pittarts.pitt.edu.

The Marvelous Wonderettes by Roger Bean, a return to the '50s and '60s, **through Oct. 2**, CLO Cabaret, 655 Penn Ave., Downtown, 412-281-3973, www.pittsburghclo.org, PITT ARTS Cheap Seats, 412-624-4498, www.pittarts.pitt.edu.

God of Carnage, Yasmina Reza's contemporary comedy and winner of 2009 Tony Award for Best Play, **through June 26**, Pittsburgh Public Theater, 621 Penn Ave., Downtown, 412-456-6666, www.pgharts.org, Pitt Arts Cheap Seats Program, 412-624-4498, www.pittarts.pitt.edu.

Pitt PhD Dissertation Defenses

Francis Pike, Graduate School of Public Health, 12:30 p.m. **June 21**, "Joint Modeling of Censored Longitudinal and Event Time Data," 109 Parran Hall.

Dennis Bourbeau, Swanson School of Engineering's Department of Bioengineering, 1 p.m. **June 22**, "Ventral Root or Dorsal Root Ganglion Microstimulation to Evoke Hindlimb Motor Responses," A219B Langley Hall.

Ian H. Bellayr, Swanson School of Engineering's Department of Bioengineering, 2 p.m. **June 22**, "The Role of Matrix Metalloproteinases in Influencing Stem Cell Behavior and Skeletal Muscle Healing," 2nd-Floor Main Conference Room, Bridgeside Point II Building, 450 Technology Dr., Hazelwood.

Hand Made: Contemporary Craft in Ceramic, Glass, and Wood, Carnegie Museum of Art, ongoing



PITCHER AND TRAY, 2007, BY BONNIE SEEMAN

Concerts

Pittsburgh Symphony Community Partners Concert, featuring Boyz II Men, Lawrence Loh, conductor; eighth annual PSO Community Partners Concert benefiting 25 Pittsburgh-area nonprofit organizations; 7:30 p.m. **June 23**, tickets purchased directly through nonprofits, Heinz Hall, 600 Penn Ave., Downtown, 412-392-4900, www.pittsburghsymphony.org.

John Williams and the Music of the Movies, featuring celebrated composer John Williams, 8 p.m. **June 24**, Heinz Hall, 600 Penn Ave., Downtown, BNY Mellon Grand Classics, Pittsburgh Symphony Orchestra, 412-392-4900, www.pgharts.org.



John Williams and the Music of the Movies Heinz Hall, June 24



Boyz II Men: Pittsburgh Symphony Community Partners Concert, Heinz Hall, June 23



Bach, Beethoven, and Brunch, lawn of Mellon Park, Sundays through August 15



Jekyll & Hyde, Benedum Center, through June 26

Nicole Edgar, School of Medicine's Center for Neuroscience/Neurobiology Graduate Program, noon **June 23**, "Beyond Neurons: The Role of the Oligodendrocyte-Specific Gene CNP1 in Major Depressive Disorder." Learning Research and Development Center, LRDC 2nd-Floor Auditorium.

Courtney LaValle, School of Medicine's Molecular Pharmacology Graduate Program, 2 p.m. **June 24**, "Targeting Protein Kinase D by Novel Small Molecule Inhibitors and RNA Interference in Prostate Cancer," 1395 Starzl Biomedical Science Tower.

Keith F. Moquin, School of Arts and Sciences' Department of Chemistry, 10 a.m. **June 28**, "In Vivo Fast Scan Cyclic Voltammetry Reveals Distinct Domains of Dopamine Terminal Function in the Striatum," 307 Eberly Hall.

Jesse Yen-Chih Hsu, Graduate School of Public Health's Department of Biostatistics, noon **June 30**, "Longitudinal Data Analysis in Depression Studies: Assessment of Intermediate-Outcome-Dependent Dynamic Intervention," 308 Parran Hall.

Sandlin Preece Seguin, School of Arts and Sciences' Department of Biological Sciences, 1 p.m. **June 29**, "Identification of Small Molecule Inhibitors of Polyomavirus Replication," 169 Crawford Hall.



University of Pittsburgh

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Blue, Gold, and Green: Sustainability at Pitt



Saving Our Trees

Pitt Print Shop Gets Official Stamp of Approval From Nonprofit That Safeguards Forests

By Morgan Kelly

From the Pitt print shop's location in the caverns of the Cathedral of Learning basement, its connection to an idyllic forest is unapparent. But the University's in-house producer of magazines, conference programs, brochures, business cards, and a range of other goods recently committed to help protect those unseen arboreal expanses by officially joining a supply chain that

starts with sustainable forestry.

A five-year certification from the Forest Stewardship Council (FSC) means that much of the University Marketing Communications (UMC)-run print shop's paper supply and final products fall under the global nonprofit's exhaustive monitoring of certified tree-dependent industries, from the logging site to the final product, in an effort to safeguard forests. It also means that the University and its customers can finally make Pitt's role in forest preservation known, said Dan Murphy, purchasing administrator for the print shop.

"The Pitt print shop has used FSC-certified vendors for years," Murphy said. "But with our own certification, we can now publicly tell the University community that we are trying to be environmentally friendly and use paper from forests that are responsibly managed."

Of the roughly 140 tons of paper Pitt's print shop uses each year, approximately 70 percent of it is FSC certified, Murphy said. This means certified timber companies operate in the most sustainable way possible



and that certified vendors keep to those standards when purchasing and distributing paper. The FSC upholds certification through tracking numbers and frequent audits of operations.

Although Pitt was plugged into the FSC supply chain before certification, there was no formal acknowledgement of or direction to the print shop's forest friendliness, Murphy said. (The print shop's other eco-steps include using soy-based ink—about a ton a year—for most jobs as well as recycling scrap paper and polyester printing plates, Murphy said.) A push for sustainability initiated by Pitt Chancellor Mark A. Nordenberg prompted Murphy and UMC to undertake the five-month FSC certification process, which carries a \$3,600 certification fee (for auditor expenses) and a \$1,500 annual fee.

With FSC certification comes an audit every year to make sure the Pitt print shop remains a responsible consumer of paper. A tracking number included with every outgoing order means that print shop customers also can verify via the FSC Web site that Pitt is in good standing with the organization. At the same time, Pitt can keep the same tabs on companies it receives paper

from, Murphy explained.

Most important to the print shop's green-minded clientele is that materials can now be affixed with the FSC certification logo, at the customer's request—a public acknowledgement only certified companies can provide, Murphy said. Even that small logo is subject to FSC approval of the products that can include it and the type of ink used, he said. At the time of each audit, the print shop has to compile a packet for each project featuring the logo so that the FSC can vouch for the product's adherence to the organization's guidelines.

"The process takes less time as we get more experienced with it, but it did seem daunting at first," Murphy said. "It seemed like a lot of extra work, and in some ways it is, especially at the design and preparation stage, but the payoff for the environment is worth it."

More information on FSC certification is available on the organization's Web site at www.fsc.org. Pitt's certificate is available at <http://bit.ly/kl4th5>.



Pitt's print shop is finishing its first FSC-logoed product—a Pitt Institute of Politics policy brief on primary care in Pennsylvania.

PUBLICATION NOTICE The next edition of *Pitt Chronicle* will be published July 5. Items for publication in the newspaper's *Happenings* calendar (See page 7) should be received at least two weeks prior to the event date. *Happenings* items should include the following information: title of the event, name and title of speaker(s), date, time, location, sponsor(s), and a phone number and Web site for additional information. Items may be e-mailed to chron@pitt.edu, or sent by campus mail to 422 Craig Hall. For more information, call 412-624-1033 or e-mail robinet@pitt.edu.