Study: Space environment breeds ‘superbugs’

By Richard Harth

Infectious pathogens such as Salmonella typhimurium employ a startling array of techniques to skillfully subvert the body’s defense mechanisms and produce illness. Through their expression of genes – the fundamental building blocks of cellular physiology – such microbes ingeniously adapt to suited environments, modifying their disease-causing potential or virulence.

Although the study of a broad range of microbial virulence factors is well advanced, many pieces of the puzzle are still missing. Cheryl Nickerson, a researcher at ASU’s Biodesign Institute, has explored the novel environment of space to investigate the cellular and molecular machinery of virulence. There, the space shuttle crew grew the bacteria in triple-enclosed con- tainers under conditions of minimized gravity (or microgravity).

Nickerson’s spaceflight experiments have shown that salmonella gene expression and virulence are profoundly altered by microgravity, with the pathogenic cells undergo- ing a significant increase in their infectious disease potential.

Nickerson’s latest findings, published in the journal PLoS ONE, are derived from experiments aboard NASA space shuttles.

(See SPACE on page 11)

Light rail adds new dimension to Downtown Phoenix campus

By Marshall Terrill

When the Metro Light Rail makes its Dec. 27 debut, it will end shuttle service between the Tempe and Downtown Phoenix campuses but usher in a new era of public transportation.

ASU plans to discontinue the shuttle ser- vice Dec. 22 and is launching on light rail to improve upon the model offered created in 2006.

It really is a better service, because stu- dents will be able to catch a train every 10 minutes as opposed to waiting a half-hour for the bus,” says Patricia Bettison-Clark, a public transit manager for the Department of Civil and Environmental En- gineering.

The Metro Light Rail Service runs near a set of solar panels on ASU’s Tempe campus. When the Metro Light Rail makes its Dec. 27 debut, it will end shuttle service between the Tempe and Downtown Phoenix campuses but usher in a new era of public transportation. (See LIGHT on page 11)

Scientific society selects 8 ASU faculty to join ranks

By Skip Derra

Eight ASU faculty members are among the 486 newly elected fellows of the American Association for the Advancement of Science (AAAS), a prestigious international scientific society.

AAAS is the world’s largest general scientific society.

Brad Allenby, Richard Cerutti, James Elser, Patricia Betz, Michael Chabin, Sudhir Kumar, Thomas Grimm, Sudhir Kumar, Thomas

ASU’s Sarewitz offers 3 rules for smarter use of technology

By Skip Derra

Technology can do great things, but it also can be oversold as panacea for a host of ills. A better use of technology can be gained if those who shape technology policy – and, thus, invest- ment – are clear about how to apply it and know what to expect from their efforts.

This is the conclusion of an opinion piece in the Dec. 18 issue of Nature Magazine that was written by ASU’s Daniel Sarewitz and Columbia University’s Richard Nelson. Sarewitz and Nel- son discuss three rules that can help technology and science-policy makers become smarter about where to apply technological fines – and what to expect as a result.

“Three rules can provide policy-makers must ideas about the appropriate types of in- vestments and appropriate expectations for the outcomes of these investments,” says Sarewitz, a professor of science and society and co-director of ASU’s Consortium for Science and Policy Outcomes. “They will help us smarter about identifying situations where investments in R&D (research and development) can lead to rapid progress on social problems. It also will help in distinguishing such situations from those where more R&D is unlikely to make much of a short- or medium-term difference.”

In “Three Rules for Technological Fixes,” Sarewitz and Nelson use literacy education and disease prevention as contrasting examples of the complexity of applying technology in today’s society. Both are seen as important for society, and both are subjects of high research. But the existence of vaccines has allowed for great progress in disease prevention, whereas no com- parable fix exists for illiteracy.

As “rules,” they will help people to identify situations where we can reasonably expect as a result.

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These three rules can provide policy-makers must ideas about the appropriate types of in- 10

2008 Arizona Board of Regents. All rights reserved.
More silence.

an overhead screen and asked the class what they could tell me about the cost curves, and I had drawn a set of cost curves that were displayed on and tapped away on his laptop,” she says. “The day’s lecture was about ing him to campus and attending classes with him, helping take notes. Economics Dec. 18 from ASU’s W. P. Carey School of Business.

He enrolled at ASU in the fall of 2000, with his parents taking turns driv-

Paul suffered severe injury to the visual cortex area of his brain. He also

“Tired for a cheerleader for the school,” Bavousett says. “I love the variety of the cur-

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Bavousett — a working mother — has always had an interest in sustainability. With a love for community outreach and public education, plus a degree in sustainability from ASU, she is eager and prepared to be a change agent.

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Student overcomes steep odds to graduate from ASU

by Sarah Auffret

David Paul, a 35-year-old man who almost died in an automobile acci-

dent 10 years ago, is earning his master’s degree — with just one good leg — on the night of its dedication.

But he lost both legs and his eyesight, but he persevered to earn a degree in economics Dec. 18 from ASU’s W. P. Carey School of Business.

As the first graduate of the first-ever School of Sustainability, he is eager and prepared to be a change agent.

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She looks at the front row in Mandick Hall, listens intently and smiles. Auffret says, “I can contribute in some positive way to society by repaying all the blessings I have received.”

Steffen, with Media Relations, can be reached at (480) 965-6591 and

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Online tools make biodiversity more accessible

By Rick Overton

ASU researchers are developing a Web tool that promises to revolutionize the way that park rangers, university professors and the general public access the public information about the living world, with support from the National Science Foundation.

The Symbiota project will be piloted by Corinna Gries, an associate research professor at the School of Life Sciences, and Dr. Todd Nash, a professor in the School of Life Sciences, and Edward Gilbert of the Global Institute of Sustainability, Arizona State University, who are working together from the Desert Sonoran Museum in Tucson, as well as other institutions in the Southwest.

A large amount of what is known about the world’s species has been historically accessible only to professional researchers. Gries hopes Symbiota will change that.

“Symbiota will have the most impact on non-specialists,” she says. “They have trouble getting access to biodiversity information.”

The importance of Symbiota is that it is not just a database for thousands of organisms, but rather a set of what biologists refer to as “keys.” Historically, printed keys allow users trying to identify an organism the ability to slowly narrow down possible matches from a list of all possible options.

To do this, keys offer a series of questions to a user, similar to what happens in the game “20 Questions.” In this case, however, the questions are in an either-or format, such as: “Are the leaves simple or compound?” or, “Is the blade margin of the leaf entire or serrated?”

With each successive question-and-answer exchange, the user gets one step closer to what hopefully is the correct identification of the organism. Keys are not without their problems, however.

“One problem … is that they are written by specialists who are not familiar with the plants they study, and they can be very difficult for a lay person to interpret,” Gries says.

Symbiota has many advantages over more traditional keys. First, it can be accessed by anyone who can connect to the Internet. Second, the online keys are interactive, allowing users to choose whether a question is easy or difficult and add their own information. Keys are not yet connected to the Symbiota database or even to high-quality images, but Gries says that will come.

Since keys are integrated with a vast number of collections’ records, the specimen’s location can be used to slowly narrow the criteria. This allows the user to eliminate questions from the list that aren’t relevant to the current organism.

“Almost from the beginning, we realized that the computer could learn from the mistakes that human experts made,” she says. “It’s been quite successful.”

Symbiota has already been used by university instructors to teach students about the plants in a specific area in the field. Gries says she is excited about the potential this dynamic Web tool has for educators. According to Nash, a grade school teacher who was teaching students about the plants in a specific area on a field trip can get a list of the potential plants that appear in the area and generate refined criteria that can be used to identify the specific plants they will encounter.

For the past 30 years, Nash, with the help of collaborators from all over the globe, has amassed a collection of 110,000 specimens of lichen at the ASU Lichen Herbarium. His lichens will be just one of the groups incorporated into the online keys. Funding for the project also boosts collaboration with colleagues in the existing computer database applications such as the Southwest Environmental Information Network (SEINet), which incorporates information from ASU’s Natural History Collections.

The scope of the Symbiota project allows it to play an important role in contributing to the wide-scale collaboration to survey and effectively inventory the number and distribution of Earth’s species. Symbiota links professional and student community members with one another and with vast, diverse and widely distributed collections through a streamlined framework that allows for more efficient progress.

Overton, with the School of Life Sciences, can be reached at rick.overton@asu.edu.

ASU Police Department earns note as flagship agency

By Julie Newberg

The ASU Police Department has been selected as a flagship agency by the Commission on Accreditation for Law Enforcement Agencies, representing one of eight college campuses’ law enforcement agencies throughout the country to receive this designation.

“This honor is indicative of the hard work and dedication that the ASU Police Department has provided every day as they work to keep students, faculty and visitors to the university’s four campuses safe and secure,” says ASU President Michael Crow.

Flagship agencies are selected by the commission based primarily on their past performance. Factors that are considered in the determination of a flagship agency include a minimum of two previous consecutive accreditation without noncompliance issues on current or most recent award, and no current issues involving life, safety and security standards.

“We’re honored to be selected as a flagship agency,” says ASU Police Chief John Pickem. “This designation reflects the dedication to excellence that ASU Police Department officers, aids, staff and administrators continue to serve in. It is an acknowledgment of our commitment to providing a safe environment for the ASU community.”

The ASU Police Department was granted flagship status after receiving an accreditation proceeding from the Commission on Accreditation for Law Enforcement Agencies. During proceedings, all aspects of the department’s policy and procedures, management, operations and support services were examined to verify that the university police department meets the commission’s standards.

On-site assessment examiners 460 standards to determine if an agency is in compliance by talking to agency personnel, examining files and talking to members of the university community. A public information session allows members of the community to comment, says Karen Shepard, deputy director of the commission on Accreditation for Law Enforcement Agencies program manager.

Selected flagship agencies are invited to provide an exhibit at a Commission on Accreditation for Law Enforcement Agencies conference to showcase agency materials, offer network opportunities and give public relations feedback and issues and offer suggestions to other law enforcement officials from across the country. Flagship agencies receive an official certificate and are recognized on the commission’s Web site and in CALA Update magazine.

Commission on Accreditation for Law Enforcement Agencies accreditation programs allow public safety agencies to voluntarily demonstrate that they meet an established set of professional standards and are committed to providing a safe environment for the ASU community.

Check out our most current edition online at www.asuweeklynews.com.

In MEMORY

ASU’s Stowe leaves mark on Arizona history

Noel Stowe, an ASU professor who founded the university’s Public History Program and is recognized for his work in helping Arizona preserve its heritage, died Dec. 13 at the age of 66.

A memorial ceremony to celebrate his life will be held in late January.

Stowe joined ASU in 1967 as an associate professor of history in the College of Liberal Arts and Sciences, a position he held for almost four decades. He retired in 2008, although he continued to teach courses and work at the university.

“Dr. Stowe was an integral part of the system,” Pieratt says. “Arizona charter schools are an advantageous personal financial benefit. The system is far enough down that it can be warmed by heat from the Earth’s core. Beneath the Rocky mountain is another layer of rock that is capable of flowing down under pressure. When you put your into your microwave and turn it up just a bit,” Hodgson says. “It doesn’t melt, it just heats up and makes steam.”

This year’s Christmas retail sales are energizing the winter season, with national reports showing that shopping tapered off after Thanksgiving weekend. ASU economist Tim James says 2008 will be “as bad, if not worse, than the 2001 recession.” He says 2007 is likely just that “put your into your microwave and turned it up just a bit.”

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New research shows that the mysterious force known as “dark energy” is not so mysterious after all, according to physicist Lawrence Krauss. “It’s extremely small, extremely weak, and it’s so close to being nonexistent it’s a total mystery why it should have such small value and not be zero.” Washington Post, Dec. 16.

ASU researchers are frequently called upon by the local and national news media to provide insight and opinion on campus events and current social and political issues. Following are excerpts of recent news articles featuring ASU researchers.

Using a supercomputer, a team of engineers from the University of Maryland and ASU has solved the equations that govern aerodynamic flight, and has shown that the critical points on a golf ball’s surface. “The dimples have the effect of cheating wind resistance, to the degree that it is considered to be a superhydrophobic,” says ASU engineering professor Kyle Squires. The holes are not just an advantage as to how dimples could be used in other technologies, such as turbine blades, “The idea is a game changer,” Squires says.

Larry Pieratt, chairman, ASU Board of Trustees, calls ASU “an Arizona charter school into their own, and has risen to a level where they are an institution. It’s likely you put that into your microwave and turned it up just a bit.”

Both ASU and the leaders of the national charter-school movement, says Kip Hodges, director of charter schools for university public schools at ASU, “Arizona charter schools are coming into their own, and have risen to a level where they are an integral part of the system,” Pieratt says. Arizona Republic, Dec. 14.

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Collaboration features printmaking students, Native American artists

By Judith Smith

One recent day, Mary Hood and Joe Baker were discussing the idea of “place,” and how art could be created “out of that place,” and the result was, “Mapping,” a five-day collaboration between Native American artists and students in the ASU printmaking program that will take place Sunday, Dec. 21.

“We will use the uniqueness of printmaking as a vehicle for visual communication, and the sharing of culture, language and identity,” Hood says.

Free Native American artists – who are not necessarily printmakers – will team with one or two graduate and select undergraduate students to “explore and cultivate an environment of communication, diversity, mentoring, and acknowledgement of place and people,” Hood says.

During the five days, each artist will create a limited edition of 10 prints, half of which they will keep. Two of the remaining five will be auctioned at a Jan. 16 fundraiser. Each student will receive a poster for the upcoming show at the ASU Art Museum for permanent collection.

Participating artists will be Dana Clanston, Jason Norton, Randy Kemp, Steven Yazzie and Yolanda Stevens.

The student collaborators will be Olivia Timmons, Emily Stokes, Whitney Konstang, Jacob Medders, Kathleen Moore, Gabriella Nichols, Dominick Douglass and Jacob Stainback.

The public will be able to meet the artists and student printmakers at two free events during the week. A forum with the artists will be held at Night Gallery in Tempe Marketplace from 7 p.m. to 9 p.m., Jan. 16, and a closing reception, with the fundraiser, will be held from 6 p.m. to 9 p.m., Jan. 16, also at Night Gallery.

The gallery is a community engagement project between the ASU Herberger College of the Arts and Tempe Marketplace.

As the artists and student printmakers work together, they will be emphasizing the idea of “place,” as originally envisioned, Hood says, adding: “What about the place where we are here? In the Southwest it’s difficult to do something native identity. I believe it is essential that we, as a university, engage the community with Native American-based programs that are fostering new awareness of and respect for our indigenous peoples.”

“Bringing together Native American peoples and the arts is a major focus of ‘Mapping,’” Hood says.

“With so few Native American role models in the arts, and we have Native Americans on our art faculty here,” she says. “I do have Native American students, but this is a learning process for me, and a growing process for the students.”

The visiting artists are being sponsored by King Galleries in Scottsdale, ASU P.A.R. (Future Arts Researches), the Herberger School of Art and the nonprofit organization Roppe.

The artists will be working with students both with his daughter, Ryelle, titled “Artificial Red.”

Yazzie, of Navajo-Ont Dispatch, has been creating and exhibiting works of art since the mid-1990s. While the main body of his work is painting, he has found equal success with sculpture, video and performance art. Yazzie, who was born in 1970, lives and works in Phoenix.

“SGenerally a headway, is an enrolled member of the Gila River Indian Community, Pre-Polish Qochan, currently residing in the Arizona vicin-ity, is an enrolled member of the Gila River Indian Community. He is a teacher of beadwork,has developed programs to promote a clearer understanding of the people of the Southwest through their history, clothing and decoration. Stevens teaches a variety of beading techniques, including lazy stitch, edging and peyote stitch at locations throughout the Valley.

To help raise funds for “Mapping,” the ASU Bookstore就会 Arizona State Credit Union is holding a raffle through Dec. 22 for a painting by ASU faculty member Jerry Schieff. Tickets are $1, with all proceeds going to support the program.

For more information about “Mapping” and a full biography of the visiting artists, visit the Web site at http://mappingworkshops.asu.edu.

Judith Smith, with Media Relations, can be reached at (480) 980-4821 or jps@asu.edu.
Research provides blueprint to beat holiday overconsumption
By Marshall Terrell
You’ve just stepped back from your third helping of turkey and two pieces of pumpkin pie and realize this is just the beginning of a month of holiday eating. And not just eating – overeating.
Ever wonder why?
Bradley Appelhans, an assistant professor at the University of Arizona College of Medicine in Tucson, is in partnership with ASU, might be able to tell you.
First, we have evolution working against us. “We are a species that is well tuned to be hungry in the context of our biology, and hunters-gatherers frequently had to endure lean times,” Appelhans says. “So we have evolved to be really good at storing fat. When a resource is abundant, we store fat; when there isn’t much, we use fat.
Not all fat is bad, but research shows those with obesity are at a higher risk for heart trouble, cancers and other diseases. This time of the year is particularly challenging for many folks because of our efficiency in packing on the pounds.
“People have devised a predisposition to overconsume tasty food whenever it is available – and nowadays tasty food is almost always available,” Appelhans says. Our ancestors expended hundreds of calories in hunting down and finding that meal, but that’s not so in modern times. A meal with just as many calories as a mastodon is a drive a-thru is a daily experience.
Along with evolution is the influence of your parents. Obesity is highly genetic,” Appelhans says. “Genes play a huge role. About 80 percent of the variability in people’s body weight can be attributed to genetic differences.”
“Then there’s more to the equation,” Appelhans says.
“Genes are important, but not for explaining the obesity epidemic,” Appelhans says. “The environment is a very important factor.”
Appelhans notes that, as portion sizes have grown, more sugars and fats are added to our food, carbohydrate consumption has increased, and we are all eating more sugary, sweet, fatty foods.
So what can a person do, especially at the company holiday parties?
Experts share advice to deal with stress
By Chris Lambakis and Corriella Lutte
Edward Hubbard is living proof that state of mind is everything.
 Hubbard has survived six years, seven months and 12 days as a Vietnam prisoner of war. To get back home, he had to make it over mountains, through swamps and past gunshots and bullets.
So when he was invited to accompany the first all-female team of plastic surgeons, nurses and volunteers on a medical mission to Cuenca, Ecuador, sponsored by Women for World Health (WWfW), he didn’t hesitate.
On Feb. 5, Hubbard will bring his positive message of personal growth to ASU’s Poly- technic campus in Mesa as keynote speaker for the two-day 2009 Building Healthy Life- styles Conference.
The conference is coordinated by the de- partments of exercise, and wellness and nutrition, in ASU’s School of Applied Arts and Sciences.
The theme for the conference is "Understanding and Modifying Stress: A Wellness Approach.
Hubbard will be joined by 10 stress management experts, such as Brian Seward, an interventional cardiologist with expertise in stress management, mind-body spirit healing and health promotion, and Alex Zautra, a profes- sor of medical psychology at the University of Washington in Seattle.
"The conference highlights the importance of wellness in our lives," says the conference’s director, Barbara Amorowski, an ASU profes- sor of exercise and wellness.
In addition to speakers, a professional chef working with an ASU nutrition professor will hold a workshop on healthy foods and the preparation of the foods to help combat stress. Additional workshops will be offered on mindfulness-based stress reduc- tion, and spirituality and health.
The conference is ideal for nurses, dieti- tians, life coaches and psychologists, and continuing nursing education units and con- tinuing education units (for an additional fee) will be offered for nurses and dietitians. Call (480) 727-1945 for specific details on each.
"The cost of the conference is $40 for stu- dents before Jan. 15 and $50 after that date. Non-student cost is $75 before Jan. 15 and $85 thereafter. The conference will include a dinner and a luncheon banquet. Personal checks or money orders should be made payable to Arizona State University, Department of Exercise and Wellness, Attn: Barb Amorowski, P.O. 560, E. Unity Ave., Mesa, AZ 85208-0120.
For more information, visit the Web site www.hhconference.com or call (480) 727- 945.
Lambakis, with Public Affairs at the Poly- technic campus, can be reached at (480) 727- 1173 or lambakis@asu.edu.
Researchers find key to vaccine delivery method

Researchers at the Biodesign Institute at Arizona State University have made a major step forward in their work to develop a biologically engineered organism that can effectively deliver an antigen in the body. The researchers report that they have been able to use live salmonella bacteria as the containment/delivery method for an antigen.

The work is a major step forward in development of a new means of biological containment that would be a key component to a new way to deliver vaccines in animals and humans.

If fully developed, the new method could be used to administer vaccines to many of those who do not benefit from traditional vaccines because of their cost, drug resistance or limited effects on children.

Outlined in the paper, “Regulated programmed lysis of recombinant Salmonella in host tissues to refuse protective antigens and confer biological containment,” published on the online version (July 7) of the Proceedings of the National Academy of Sciences, the researchers describe a novel, novel and effective means of biological containment for antigen delivery. The method not only effectively delivers the antigen in the body, but does so in a way that does not infect the body with salmonella and does not leave any vaccine cells in the environment.

“Our goal is to design, engineer and live a bacterial (using salmonella) antigen delivery system that would display regulated delayed lysis in vivo after invasion into and colonizing internal lymphoid tissues in an immunized individual,” says Roy Curtiss, director of the Center for Infectious Diseases and Vaccinology at the Biodesign Institute and a professor in ASU’s School of Life Sciences. Curtiss was part of the research team that made the discovery.

“We wanted to do this in a way so that no disease symptoms from salmonella would arise, a protective immune response (using PspA), and that it would be able to deliver live bacterial cells to either persist in vivo or to survive and shed into the environment,” Curtiss adds.

A key to the project, according to Curtiss, is “turning a foe into a friend.” That foe is the salmonella bacterium – an organism whose protective antigen was delivered by the vaccine construction. “Our goal is to design, engineer and evaluate a live bacterial vaccine delivery method,” says Curtiss. If fully developed, the new method could be used to administer vaccines to many of those who do not benefit from traditional vaccines because of their cost, drug resistance or limited effects on children.

National rankings show ASU on upward trajectory

ASU has been named as one of the best “Up-and-Coming Colleges” in the 2009 edition of “America’s Best Colleges” by U.S. News & World Report. ASU is ranked 11th among “schools that watch.” This new ranking highlights colleges and universities that have recently made the most promising and innovative changes in academics, faculty, students, campus life, diversity and facilities.

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Outlined in the paper, “Regulated programmed lysis of recombinant Salmonella in host tissues to refuse protective antigens and confer biological containment,” published on the online version (July 7) of the Proceedings of the National Academy of Sciences, the researchers describe a novel, novel and effective means of biological containment for antigen delivery. The method not only effectively delivers the antigen in the body, but does so in a way that does not infect the body with salmonella and does not leave any vaccine cells in the environment.

“Our goal is to design, engineer and live a bacterial (using salmonella) antigen delivery system that would display regulated delayed lysis in vivo after invasion into and colonizing internal lymphoid tissues in an immunized individual,” says Roy Curtiss, director of the Center for Infectious Diseases and Vaccinology at the Biodesign Institute and a professor in ASU’s School of Life Sciences. Curtiss was part of the research team that made the discovery.

“We wanted to do this in a way so that no disease symptoms from salmonella would arise, a protective immune response (using PspA), and that it would be able to deliver live bacterial cells to either persist in vivo or to survive and shed into the environment,” Curtiss adds.

A key to the project, according to Curtiss, is “turning a foe into a friend.” That foe is the salmonella bacterium – an organism whose protective antigen was delivered by the vaccine construction. “Our goal is to design, engineer and evaluate a live bacterial vaccine delivery method,” says Curtiss. If fully developed, the new method could be used to administer vaccines to many of those who do not benefit from traditional vaccines because of their cost, drug resistance or limited effects on children.

National rankings show ASU on upward trajectory

ASU has been named as one of the best “Up-and-Coming Colleges” in the 2009 edition of “America’s Best Colleges” by U.S. News & World Report. ASU is ranked 11th among “schools that watch.” This new ranking highlights colleges and universities that have recently made the most promising and innovative changes in academics, faculty, students, campus life, diversity and facilities.

Researchers find key to vaccine delivery method

Researchers at the Biodesign Institute at Arizona State University have made a major step forward in their work to develop a biologically engineered organism that can effectively deliver an antigen in the body. The researchers report that they have been able to use live salmonella bacteria as the containment/delivery method for an antigen.

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Solar installation sets tone for nation

ASU has awarded energy contracts to Honeywell Building Solutions, 3M, Solar Decathlon and SolarCity to install 2 megawatts of solar electric modules on about 135,000 square feet of building rooftop space and some parking structures on its Tempe campus.

With this investment, ASU has reaffirmed its commitment to renewable energy through what will be the largest deployment of solar power infrastructure by any U.S. university. The installation will begin in August, with completion scheduled for December.

Solar power is expected to provide up to 7 percent of the energy needs for ASU’s Tempe campus. Two megawatts of solar electric power run about 4,600 computers with the up-front cost for this installation, which will generate about $425,000 worth of energy each year and reduce ASU’s carbon emissions by 2,825 tons per year as compared to traditional energy generation in the state of Arizona.

The carbon reduction is equivalent to removing the annual emissions of 523 automobiles.

A study by ASU faculty and students in 2004 identified 300,000 square feet of roof space suitable for solar-based power generation on the Tempe campus campus. Because of the unprecedented expansion of new construction during the past few years, the roof space available for solar panels is now significantly larger.

The solar electric power is scheduled for the installation of up to 7 megawatts on the Tempe campus, with additional installations on ASU’s other campuses over the next several years.

“These large-scale solar installations demonstrate ASU’s commitment to achieving carbon neutrality through on-campus renewable energy generation coupled with extensive investment in energy efficiency and conservation,” says ASU President Michael Crow. “Long-term, ASU’s integrated renewable energy programs will be a key component of our nation’s energy markets away from fossil-based fuels toward advanced technologies that are economically competitive and environmentally benign.”

Crow serves as chairman of the American College and University Presidents Climate Commitment, an organization dedicated to carbon neutrality that has nearly 600 signatories to date.

Under this new agreement, ASU contracts to buy the power generated on its rooftops at a set price for 15 years. The pricing takes advantage of federal and state tax credits, as well as incentive payments provided by Arizona Public Service as authorized by the Arizona Corporation Commission’s Renewable Energy Standard Ruling.

Global Institute of Sustainability puts ASU on ‘green’ path

The new home of the Global Institute of Sustainability is one of the most eco-friendly buildings on ASU’s Tempe campus.

One of the first things visitors notice when they enter the GIOSS building is the abundant use of sunlight. Natural light is everywhere, suffusing through skylights, beaming in through exterior windows and spreading into interior windows. Low-wattage lamps, monitored by motion and light sensors, supplement natural light where needed, helping to ensure that as little energy as possible is wasted.

Filtered water fountains and water coolers are provided where possible to conserve water and to discourage use of plastic water bottles. Bathrooms are outfitted with sensor-operated faucets, which waste less water than with those motion detectors. Waterless urinals save 40,000 gallons of water per year, among other energy-saving amenities.

On the roof sit six wind turbines, each capable of running 26 hours a day and providing up to 1,000 watts of electricity that will flow into the APS grid. They are angled slightly downward to take advantage of updrafts along the face of the building and can turn at speeds as fast as five mph. The turbines, which operate most efficiently from 27 mph to 32 mph, are designed to withstand winds in excess of 120 mph.

New school bridges languages, cultures

The study of other languages and cultures has an ever-increasing importance in today’s changing world – and it will be the focal point of ASU’s new School of International Letters and Culture in the College of Liberal Arts and Sciences.

The school, new on the strengths of the former Department of Languages and Literatures, has a distinct global perspective. It reaches across traditional academic boundaries to create innovative alliances with other departments, schools and centers. The intercultural and interdisciplinary nature of the new school reflects ASU President Michael Crow’s vision for a New American University to prepare students for a world informed by a flow of information, people and culture in multiple languages.

“We are transforming the study of language, literature and culture at Arizona State University by offering students a rich variety of transdisciplinary/intercultural experiences across languages and cultures,” says Robert Jeff Cutler, a leading scholar of premodern Chinese literature and cultural history and the founding director of the school.

Engineering research paves way for better roads in U.S.

The next generation of asphalt and concrete pavements used to build and repair roads, bridges and other paved surfaces in much of the world likely will be based on a design developed by a team led by Matthew Witczak, a professor in the Department of Civil and Environmental Engineering.

Guidelines used in the United States typically are adopted by many countries throughout the world.

Witczak says he expects the new guidelines soon will be used in the Middle East, parts of Europe and South America.

The project stems from ASHHTO’s decision in 1999 to launch a study into upgrading the methods by which asphalt and concrete pavements are designed. It included ev- erything from pavements for roads and bridges to airfields, shipping ports and rail lines.

Soon after the Transportation Research Board gave the go-ahead to ASU engineering researchers to study new ways to design and construct asphalt and concrete pavements, they worked with Applied Research Associates Inc., a nationwide engineering and technical services company.

The project became the largest transport study to be conducted in the United States, leading to an extensive update of the design guide.

“It’s the kind of major project most universities don’t get to work on,” Witczak says. “It’s very rewarding to know the outcome is going to affect the way people design structures nationally and internationally.”

In developing one of only a few new major road design upgrades in the past several decades, Witczak was assisted by ASU civil and environmental engineering assistant professor Claudia Zapata and research professor Mohamed El-Basyouny.

New personalized medicine targets lung cancer

A U.S.-based personalized medicine initiative led by scientists from the Arizona Biodesign Institute and the Translational Genomics Research Institute (TGen) and Seattle’s Fred Hutchinson Cancer Research Center has secured its first major international collaboration with the government of Luxembourg.

The Luxembourg project will focus specifically on lung cancer, for which there are no reliable tools for early detection, and for patients with advanced disease with virtually no known cures.

The project also will seek to demonstrate the feasibility and potential of personalized therapies for lung cancer.

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ASU Art Museum, Nelson Fine Arts Center—
Regular Hours: 11 a.m. to 5 p.m., Tuesday, 11 a.m. to 5 p.m., Wednesday - Saturday, 1-5 p.m., Sunday, Summer hours: 10 a.m. to 5 p.m., Tuesday - Saturday. Information: (480) 965-2787.

Through Jan. 4, “The Other Mainstream II: Selections from the Mikki and Stanley Weithorn Collection.” This is the second exhibition at the ASU Art Museum that focuses on the adventurous contemporary art collection of Valley residents Mikki and Stanley Weithorn.

Due to its name, the exhibition reflects the dominance in the contemporary art world of artists from diverse backgrounds working with new issues of identity – a new “mainstream.”

Applications at the Downtown Phoenix, Polytechnic, Tempe and West campuses is available on the

EMPLOYMENT

ASU positions

A complete list of current employment opportunities and service positions (positions not specifically listed in the “Exhibitions” section run at exhibit opening only. All positions must be filled by Jan. 31, 2009. The staff requisition or job order number for each position is indicated by the gray ASU logo on each advertisement.

Academic and Outreach Coordinators (Dec. 31).

Grant Proposal Writer (Dec. 24).

Administrative support

Administrative assistant

Technical and computer

Theater Technical Artist (Theater Arts) (O) #21758 — Public Events (Dec. 31).

DOWNTOWN CAMPUS

Grant Proposal Writer (O) #21757 — College of Public Programs (Dec. 24).

Talent Acquisition Specialist (O) #21754 — College of Public Programs (Dec. 24).

For more information, contact the designated staff member. Applications are due by Dec. 15, 2008. For positions as of Dec. 1, 2008, all information interview (ITE) online application. Equal Opportunity Employer: Arizona State University, Tempe, Arizona.
ASU has been awarded two grants totaling more than $5 million from the Donald W. Reynolds Foundation. This significant gift will establish the Cronkite School of Journalism and Mass Communication as a global hub of business journalism education. President Michael Crow has been working closely with the Reynolds Foundation and Fred Smith, the foundation’s chairman, to promote the creation of a faculty chair – the Donald W. Reynolds Endowed Chair in Business Journalism – and the integration of curriculum from the Donald W. Reynolds National Center for Business Journalism.

The tenured chair position carries the faculty rank of full professor. Assistant Professor Phillip Karagas, who has worked closely with the Reynolds Foundation and Fred Smith, the foundation’s chairman, is considered an important role in advancing ASU by focusing on such a critical global issue. "At no time in our recent history has the need for good reporting and accurate news analysis of business trends – and the health of the global economy – been more apparent," Crow says. "The Cronkite School has earned a national reputation for the quality of its journalism education and has several national journalism centers. ASU is proud to be a part of a global hub of business journalism education, and we thank the Donald W. Reynolds Foundation for these generous grants.”

The Las Vegas-based foundation also announced the creation of two other business journalism chairs – the University of Missouri-Columbia and the University of Nevada-Reno. Together with a previously established business journalism chair at Washington and Lee University in Lexington, Virginia, the three professor positions will work with the Reynolds Center to improve media coverage of business and economic news.

"The current worldwide financial crisis has shown clearly that journalists must be prepared to understand and interpret complex financial and economic issues," says Smith. "Consequently, our trustees have committed substantial funding to ensure that resources are in place to help professional journalists and university journalism students gain expertise in reporting on these issues. Four Reynolds Chairs in Business Journalism in place, and with the outstanding coordinating skills of the Reynolds National Center for Business Journalism, we envision this network of Reynolds-funded institutions providing real leadership in the effort to improve the quality of business journalism across the country.

Andrew Leckey, the founding director of the Donald W. Reynolds National Center for Business Journalism who is a long-time syndicated investment columnist for the Chicago Tribune and former CNBC, will be appointed as the inaugural Donald W. Reynolds Endowed Chair in Business Journalism at the Cronkite School.

The Reynolds Center, created by the foundation in 2003 and already showing inspiring improvement in the quality of business journalism nationwide, will receive more than $3 million to continue its operations for another three years. The center was launched at the American Press Institute in Reston, Va., and moved to the Cronkite School in 2006.

The center, which has now received more than $9 million in operating funds from the Donald W. Reynolds Foundation, has reached more than 7,000 working journalists, educators and students across the country with intensive one-day workshops, weeklong residential seminars for journalism educators, a variety of “webinars” and Web-based tutorial and seminars. Its Web site, www.businessjournalism.org, is a highly popular destination for journalists and students seeking information about the latest concepts and techniques in business journalism.

The Donald W. Reynolds Foundation has played an integral role in helping the Cronkite School grow into one of the premier professional schools of journalism in the country. The foundation also funds the Donald W. Reynolds School Journalism Institute, which brings 15 high school journalism advisors from across the country to ASU each summer for intensive training and education programs. The Reynolds Center is located in the new, $71 million, state-of-the-art Cronkite building in downtown Phoenix that opened last year. The center is adjacent to the Donald W. Reynolds Leadership Suite, which houses the offices of the school’s administration, and is named in honor of the foundation.

"Chairman Smith, President Steve Anderson, journalism consultant Bill Winter and the entire Donald W. Reynolds Foundation team have played a pivotal role in our rise over the past three years," says Christopher Callahan, dean of the Cronkite School.

"We are enormously thankful to the foundation’s leaders for their great support of our mission to produce great journalists who will help to shape the field of business and economics journalism, which grows in importance every day.

ASU staff member sets sights on film career

By Ashley Lange

Health, and how human beings treat and react to diseases and disabilities, can influence a historian’s analysis of the death of a monarch or a literary critic’s examination of a poetic passage about a sickness thought to be leprosy.

Exploring the humanities through the lens of medicine will be the focus of two researchers, both graduates of ASU and the University of Wisconsin-Madison.

The seminar seeks to juxtapose two major areas of scholarly analysis – humanistic and scientific – in the setting of core discussions of the history of disease, medicine and disability, says Monica Greens, a biohistorian and director of history in ASU’s College of Liberal Arts and Sciences.

She and Walton O. Schalsick, a practicing physician and assistant professor of history of medicine and bioethics at the University of Wisconsin-Madison, are co-directors of the five-week seminar that is funded through a $146,000 grant from the National Endowment for the Humanities and administered by the Arizona Center for Medieval and Renaissance Studies (ACMRS) at ASU.

The seminar – set at the Wellcome Trust Centre for the History of Medicine at University College, London, and the Wellcome Library – is the society’s premier research center for medical history – will gather scholars from across the disciplines interested in fundamental humanistic questions of health, disease and disability in medieval Europe.

“A primary goal will be to explore how the new scientific technologies of identifying pathogens, particularly leprosy and plague, can inform traditional, humanistic methods – historical, literary, art historical and linguistics – of understanding the cultural experiences of health and disability,” says Green, whose primary field of study is medical history, with particular interest in the history of medicine in medieval Europe, medieval medical history, and race and medicine.

In addition to having access to the community of scholars who regularly convene at the Wellcome Centre, the 15 participants selected to attend the seminar will tap into resources at the Wellcome Library, self-described as “one of the largest libraries in the world” with more than 12 million books, manuscripts, archives, films and paintings on the history of medicine from the earliest times to the present day.

The curriculum will focus specifically on medieval European medical history research techniques. Three guest lecturers, all senior scholars, will bring expertise in the particular areas of Islamic medicine, medieval paleopathology and the history of surgery.


Lange, with the College of Liberal Arts and Sciences, can be reached at ashley.lange@asu.edu.
A conversation between two passionate 20th century social activists that began in 1996 and finally was completed this year will become a finished feature-length documentary film, thanks to a residency at the Wexner Center for the Arts.

ASU scholars participating in the residency are Crystal A. Griffith, an associate professor in the Herberger College’s School of Theatre and Film, and H.L.T. Quan, an assistant professor in the School of Justice and Social Inquiry in the College of Liberal Arts and Sciences.

The Wexner Center residency, offered by the Wexner Center for the Arts, will provide the filmmakers with a professional edit suite, use of an advanced video editing suite, and editing and supervised lodging. Every year, about 15 national and international filmmakers and artists are invited to work in the Wexner Center’s Arts & Technology residency program, which is located on the campus of Ohio State University. Past residents have included Sam Green, Tom Kalin, Deborah Stratman, Elizabeth Rubin and Barbara Hammer. This upcoming summer, Quan and Griffith will be in residence at the Wexner Center for the Arts, and they will reach the final cut of their project with the working title, “The Angela Davis Project.”

The film features internationally renowned activist and scholar Davis, a professor at the University of California-Santa Cruz, and 87-year old Yuri Kochiyama, a grassroots organizer, activist and a Nobel Peace laureate. Both women have worked in many of the same movements, they had never sat down for an extended conversation before Griffith and Quan brought them together for this project.

The idea of a documentary using solely conversations was born out of an intense, 4-hour panel discussion called “The Angela Davis Project.” “We are thinking of this as a series of documentaries – all conversations between Davis and other women of color artists, activists and intellectuals,” Griffith says. “We will house the bare-bones budget of 10 days on the scope to film festivals in the fall. Before then, though, they are still seeking resources to purchase archival footage and music rights, do some post-production work themselves as directors, producers, editors and more. Sometimes professionals donated their time and expertise, but finding sufficient resources has been challenging.

The intervening dozen years, between the first conversations and the most recent ones, have given the filmmakers perspective, editing skills and real-life experience to bring to their project.

“One thing that strikes us is how prescient their comments were back in 1996,” Griffith says. “When they talked about the impact of the prison industrial complex: education and society, gender and racial inequalities, torture, the inspiration they drew on youth activism and the culture of protest, they often anticipated events that followed.”

The Wexner Center will provide the facilities and most of the support needed to finish the project so it can be submitted to film festivals in the fall. Before then, though, they are still seeking resources to purchase archival footage and music rights, do some post-production work themselves as directors, producers, editors and more. Sometimes professionals donated their time and expertise, but finding sufficient resources has been challenging.

The Wexner Center residency helps complete 12-year ‘conversation’

By Nancy Newman

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December 19, 2008

“Tis the season: Dates on sale at Bookstore

Need a last-minute gift, or just enjoy a good door date now and then?

Dates derived from ASU’s own palm trees are on sale at the ASU Bookstore on the Tempe campus.

The dates are available in two sizes: 2-pound boxes for $12.99, and 1-pound boxes for $7.95.

Proceeds will benefit the Arnettson at ASU. For more information, call Deborah Thirkill at (480) 268-4165.

Seminar to focus on asbestos awareness

ASU’s Environmental Information Association and the Del E. Webb School of Construction will offer a free seminar to educate the ASU community, local businesses and the public about asbestos awareness.

The seminar will take place from 8 a.m. to noon, Jan. 14, in the Memorial Union’s Arizona Ballroom (room 221) on ASU’s Tempe campus. Presenters at the seminar will be local asbestos experts and regulators.

For more information, visit the Web site www.asu.edu/piper or call (480) 965-6089.

For registration or more information, please contact Jennifer Sipe at (480) 965-7513 or jennifer.sipe@asu.edu.

Codell announces new program director

The School of Applied Arts and Sciences has named Linda Vaughan as the associate dean for the school and industry that carries an interim basis for the past four months. She will continue to help manage the school’s growth and efforts to attract students to the school.

“Linda has the skills, experience, colleague respect and university knowledge that will be essential to continue the good work that we have started,” says Craig Hutchings, dean of the school. “She will be an integral and important part of the school’s leadership team to implement our strategic plan and our new mission and vision of undergraduate education and research.

Vaughan has been closely involved in the development of a proposed new instructional structure and academic programs, including an interdisciplinary health sciences program, as well as building links between the school and community partners, says Hutchings.

Linda Vaughan has served as the Department of Nutrition chair for six years, as well as president of the Academic Senate at the Polytechnic campus between 2007-2008. She has been an ASU professor for more than 25 years.

Codell announces new program director

Messages help answer digital TV questions

On Dec. 5, the Arizona Broadcasters Association (ABA) coordinated the statewide broadcast of a message about the upcoming digital television (DTV) transition, which will take place Feb. 17. The message was a five-minute message with pre-empted regular programming and encouraged viewers to take action on analog television sets that rely on antennas to receive broadcast channels. The message of Eighty (KEKT) conducting the ABA event where employees from local TV stations answered phone calls from viewers across Arizona.

The message generated thousands of phone calls over the course of two hours; 940 phone calls were answered locally, and overall phone calls were forwarded to the Federal Communication Commission’s (FCC) hotline.

Another statewide message was broadcast Dec. 17, and a final five-minute test is scheduled for Jan. 17 at 6:25 p.m. in advance.

For more information about DTV, visit the Web site http://asps.org/digital.

Book for discussion features healing words

While she and her husband were riding their bicycles in Fairbanks, Alaska, in 2000, Peggy Shumaker was critically injured by a teenager riding an all-terrain vehicle. Shumaker, a poet and professor emeritus at the University of Alaska-Fairbanks, tells her story of recovery, and of searching her past, in a memoir titled “Just Breathe Normally.”

The book is the January selection for the Virginia G. Piper Center for Creative Writing’s online book club.

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For more information, visit the Web site www.asu.edu/piper or call (480) 965-6089.

Police offer safety tips for holiday season

While the holiday season brings gift giving, travel and celebrating, it is also can bring about more unfortunate situations, such as theft.

To ensure the safety of students, staff and faculty during the holiday season, ASU Police offers the following safety tips:

• Be aware of the surroundings, and remember to take precautions at all times.

• Leave only a bag or jacket behind, never alone.

• Avoid isolated, dark areas.

• Do not expose cash or other tempting items, such as electronics or jewelry, in public.

• Use campus safety escort services at night by calling (480) 965-3115.

• Tell a friend where you are going and when you will return.

• Carry a whistle or noise maker, and don’t be afraid to shout for help.

• Park in well-lit areas.

• When approaching a vehicle or a door, have the keys out in advance. Don’t fumble for the keys at the door.

• Remember to lock your vehicle and place valuable items in the trunk to hold them.

• When walking to your vehicle, look under, around and in front of it to make sure there is no suspicious activity.

• Do not get into a vehicle before checking inside, especially the back seat.

• Before driving, lock the doors and put a seatbelt.

• Avoid being overloaded with packages. It is important to have clear visibility and freedom of motion to avoid accidents.

• Beware of strangers. At this time of year, con artists may try various methods of distracting shoppers with the intention of taking money or belongings.

• It is not uncommon for criminals to take advantage of the generosity of people during the holiday season by soliciting donations for a charitable cause although no charity is involved.

• Never drink and drive.

For more information, call the ASU Police Crime Preven- tion Unit at (480) 965-1972.

Next issue of ASU Insight to appear Jan. 16

While the winter break, the print edition of ASU Insi- ght will take a hiatus. The next print edition of Insight will be Jan. 16. Until then, check the Web site www.asu.edu/ASU Tucson Campus.
Scientific society selects 8 ASU faculty members to join ranks

(Continued from page 1)

ment. He recently was named as one of the U.S. Professors of the Year for 2008 by the Council for Advancement and Support of Higher Education. Richard Crabtree is cited by AAAS for "advocating in achieving and interpreting key documents in the historical development of scientific knowledge to current matters." Crabtree, a professor in the School of Life Sciences, is a philosopher of science and epistemologist and has been particularly active in questions about the nature of scientific reasoning and knowledge. He is one of the world's foremost authorities on philosophers Rudolf Carnap and Willard Van Orman Quine.

James Elser is cited by AAAS for "pioneering work in developing the theories of ecological and biological stoichiometry to integrate levels of biological organization such as the interactions between organisms and their environment and the role of nitrogen and phosphate in aquatic ecosystems." Elser, a professor in the School of Life Sciences, has built a career asking questions about evolutionary biology and marine and freshwater ecosystems, focusing on the transfer of energy and material flows in ecosystems, traveling from Antarctica to alpine environments.

ASU's Sarewitz offers 3 rules for smarter use of technology

(Continued from page 1)

for preventing the disease. So the application of vaccines is now in great demand due to "a notoriously dysfunctional health care system in the United States." Rule No. 2 is that the effects of the technological fix must be measurable and considered by the public and appropriate" in weighing the alternatives. "Systemic change, in that context, is all about creating a climate in which public discussion is possible," Sarewitz says.

Rule No. 3 is that research and development is most likely to contribute directly to solving a social problem when it focuses on improving a standardized technical capability that already exists. In other words, when the context in which it occurs is already at a point where a scientific base can be put to use, rather than on developing a new technology from scratch, there is much less chance of creating a problem as well as a solution.

Space environment promotes microbiomes to become more virulent, study finds

(Continued from page 1)

mission STS-132, launched in March. This research validated results and broadened the scope of spaceflight experiments from STS-131, conducted two years earlier.

In addition to confirming the effects of microgravity observed in the STS-131 experiments (known as M080REO), the new study hurned in on the importance of the microbial growth medium to gene expression and virulence during spaceflight.

"Pathogenic cells are smart," Nicholson says, pointing to their remarkable ability to fine-tune virulence factors in response to subtle environmental cues.

S. typhimurium, Nicholson's pathogen of choice, is a rod-shaped, motile, Gram-negative rod that is the家里 most familiar enteric pathogen responsible for salmonellosis. The changes in gene products that lead to this phenomenon produce a tremendous diversity of protein products, pointing to a global transformation in response to microgravity.

One of the many differentially expressed genes observed in the space-traveling microbes coded for an assortment of ionic response and transportations known as microvilli. These changes in gene products that lead to this phenomenon produce a tremendous diversity of protein products, pointing to a global transformation in response to microgravity.

Work on biochemistry, species distribution and abundance, and designed aquatic ecosystems in cities has revealed that many ecological features are being exploited by species of social and economic interest. For example, the Council for Advancement and Support of Higher Education. Richard Crabtree is cited by AAAS for "advocating in achieving and interpreting key documents in the historical development of scientific knowledge to current matters." Crabtree, a professor in the School of Life Sciences, is a philosopher of science and epistemologist and has been particularly active in questions about the nature of scientific reasoning and knowledge. He is one of the world's foremost authorities on philosophers Rudolf Carnap and Willard Van Orman Quine.

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In addition to confirming the effects of microgravity observed in the STS-131 experiments (known as M080REO), the new study hurned in on the importance of the microbial growth medium to gene expression and virulence during spaceflight.

"Pathogenic cells are smart," Nicholson says, pointing to their remarkable ability to fine-tune virulence factors in response to subtle environmental cues.

S. typhimurium, Nicholson's pathogen of choice, is a rod-shaped, motile, Gram-negative rod that is the家里 most familiar enteric pathogen responsible for salmonellosis. The changes in gene products that lead to this phenomenon produce a tremendous diversity of protein products, pointing to a global transformation in response to microgravity.

One of the many differentially expressed genes observed in the space-traveling microbes coded for an assortment of ionic response and transportations known as microvilli. These changes in gene products that lead to this phenomenon produce a tremendous diversity of protein products, pointing to a global transformation in response to microgravity.
December 19, 2008

2 ASU law students receive Arizona Black Bar scholarships

By Janie Magruder

Third-year law students Tiffany De'Ann Richardson and Paul Singleton recently received a $5,000 scholarship from the Arizona Black Bar, in honor of a late judge, community leader and civil-rights activist.

Richardson, who was a student-governor at the College of Law’s, decoupage Dec. 19, and Singleton, who will be a second-year law student in the fall, are the recipients of the B. Daniels Scholarships. Richardson received a $3,200 scholarship, and Singleton received a Kaplan PMBR Scholarship.

The bar award pays homage to Daniels, now deceased, the first African-American admitted to the practice of law in Arizona. Daniels fought to desegregate the Phoenix public schools before the U.S. Supreme Court struck down the “separate but equal” concept in the landmark decision of Brown v. Board of Education. During a long and well-respected legal career, Daniels gave generously of his talents for the betterment of all people, according to the Arizona Black Bar.

“These two students represent the best of the Sandra Day O’Connor College of Law,” said Paul Schuff Berman, the college’s dean. “Even though their own personal hurdles are great, they have repeatedly chosen to pursue public-interest opportunities to serve the community. Accordingly, they are ideal recipients of an award that honors Huyel B. Daniels.”

To continue Daniels’ legacy, the Arizona Black Bar provides financial scholarships to African-American law students in Arizona who intend to practice in the state.

“We realize the financial burden that comes with becoming a member of the state bar,” says Monnette Green, president-elect of the Arizona Black Bar. “Thus, our organization has identified that a need or no other organization provides: scholarships to assist graduating law students in paying their bar-course preparation fees. Tiffany and Paul demonstrated financial need – but, more importantly, they expressed a commitment and dedication to learning the practice of law here in Arizona. We are proud to include each of them in our family of scholarship recipients. We believe that Tiffany and Paul will contribute greatly to the legal community upon passing the bar.”

Both students have been active in the college’s John B. Morris Black Law Student Association.

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Law experts ponder on keeping up with technology

By Janie Magruder

Scientists from around the world participated in an ASU conference Dec. 4-5, debating whether law and ethics are capable of keeping pace with science and technology and seeking potential solutions to challenges created by the growing gap.

The conference, sponsored by ASU’s Lincoln Center for Applied Ethics and Technology, was organized by Gary Marchant, executive director of the College of Law’s Center for the Study of Law, Science and Technology, and Lincoln Professor of Emerging Technologies, Law and Ethics.

Among the participants included Joe Herkert, Lincoln Associate Professor of Ethics and Technology, and Brad Al- lenby, Lincoln Professor of Engineering and Ethics.

As developments in science and technology accelerate (the number of important scientific discoveries doubles every 20 years, and the number of patent applications filed increases 5 percent each year), laws that regulate them are being bogged down, Marchant says.

For example, the Clean Air Act, which early on was amended every three to five years, has not been updated since 1990, despite the advent of global warming and other problems, he said. The same is true of the Clean Water Act, which doesn’t address the majority of today’s water pollution problems, which are caused by runoff sources, he says.

“There’s a sense that ‘we don’t want to even open it up because the statute is such a mess,’ ” says Marchant.

At the same time, government regulators are nearly paralyzed because of extra mandates from Congress on rule-making, and their agencies frequently are mired in legal challenges from those seeking to impose their own agendas on regulation, Marchant says.

Meanwhile, emerging technologies, among them, nanotechnology, genetic testing and computer privacy, largely are unregulated, he says. As a result, public health and the environment are at risk.

In talking about the ethics of emerging technologies, Herkert asked if sociologists and ethicists should be involved in the research and development stage to help identify ethical issues and establish procedures for dealing with them.

“If we want to have the truth in the evidence,” he asks. “Is it reasonable we lay the truth in our court?”

Marchant countered, “We ought to see what other processes might be available.”

Humanoid robots pose a number of ethical dilemmas relating to concepts such as moral agency, free will, human identity, social roles and potential marginalization of humans, Herkert says. Issues include consumer safety, product liability, and what robots should — or will — ultimately have rights, as in the current debate over animal rights.

Allenby used the example of the birth of the railroads to demonstrate a technology that profoundly impacted society. The railroads, he says, created a modern sense of time and a new division of labor, and they shifted the economic structure from local to national.

Today, scientists are working on extending the human life to 150 years or more, which will affect population levels and the Kyoto Protocol, and create new economic, social and other serious issues, Allenby says.

“How do we stop this technology, control the out-of-control naut?” he asks. “Is it reasonable we are going to stop it? It’s a subtle question. We have to begin to think about what actually is going on.”

The conference was the first step in a multi-year project funded by the Lincoln Center to produce innovative solutions for bringing law and ethics into the future. The conference, titled “Ethics and Technology Accelerate,” was sponsored by ASU’s Lincoln Center for Applied Ethics. The conference was the first step in a multi-year project funded by the Lincoln Center to produce innovative solutions for bringing law and ethics into the future. The conference, titled “Ethics and Technology Accelerate.”

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3 ASU scholars earn funding for forensic identification research

By Janie Magruder

Three ASU professors are among the first scholars in the country to receive funding from the National Institute of Justice to research the psychology of decision-making using forensic science expert evidence.

A $496,450 grant was awarded to Dawn McQuiston-Surrett, an assistant professor of psychology in the Division of Social and Behavioral Sciences at ASU’s West campus, and to Jonathan Jay Saks, professors at the Sandra Day O’Connor College of Law, to study how jurors respond to fingerprints, bite marks, DNA evidence, footprint impressions, tire tracks and other types of forensic identification evidence.

McQuiston-Surrett says the research is important because, unlike the analysis of DNA, forensic identification evidence is based largely on the subjective judgment of examiners, who then testify about whether or not crime-scene evidence matches evidence taken from a suspect.

“Jurors are not supposed to be experts in forensic testimony and to give it the appropriate weight when making their decisions during deliberations, but we actually know very little about how jurors’ beliefs about the strength of that match depend on the nature of other evidence against the suspect,” she says.

A variety of basic things already are known about how jurors think, says Saks, who also is a professor in the ASU Department of Psychology. Other studies have determined that jurors tend to agree that forensic identification evidence even when they have little understanding of it, and that they take seriously their roles as legal decision-makers, Saks says.

“But some studies show that their beliefs about the significance of the forensic science evidence can vary quite a bit based on relatively minor variations in the way the evidence is described or the context within which the evidence is heard,” Saks says. “So we want to know more about the conditions under which jurors give more and less weight to such evidence in their deliberations, and when jurors are more and less likely to understand the evidence.”

The research will employ a degree of realism not usually present in jury research, in that the participants will be people who are called for jury duty, rather than a convenience sample of students, Koehler says.

“They will view a portion of a trial in which the testimony and arguments are very close to those that arise in actual jury cases,” he says.

Paul Schuff Berman, dean of the College of Law, says the college is fortunate to have on its faculty leading institutional and national scholars on forensic science and the psychology of jurors.

“This project perfectly blends these two strengths, and I expect that the study will be of interest and importance to judges, scientists and policy-makers,” Berman says.

The scholars anticipate their findings will benefit the justice system in a number of ways.

“Lawyers who learn of these findings will inevitably weigh evidence differently, especially forensic evidence such as DNA,” Koehler says. “Lawyers who learn of these findings will inevitably weigh evidence differently, especially forensic evidence such as DNA.”

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