

UNIVERSITY OF PENNSYLVANIA *Almanac*

Tuesday
March 26, 2013
Volume 59 Number 26
www.upenn.edu/almanac

Baccalaureate Speaker



Deborah Little Wyman

On Sunday, May 12, the Reverend Dr. Deborah Little Wyman will be Penn's guest speaker for the Baccalaureate Ceremony, which is an interfaith program that also includes music, readings and prayers.

Two consecutive ceremonies will be held in Irvine Auditorium in order to accommodate all those

who wish to attend. Graduating students whose last names begin with A–K are invited to attend at 1:30 p.m.; those whose last names begin with L–Z are invited to attend at 3 p.m.

Rev. Dr. Wyman is an Episcopal priest who is founder, director and minister of Ecclesia Ministries, which provides services to the homeless, and Common Cathedral, an outdoor church for the homeless, both in Boston. She has worked with homeless people, ministers, outreach and mental health workers and others in the United States, Brazil and the United Kingdom to create a spiritual community outdoors. She is the founder of Ecclesia Mission Affiliates, a network of some 100 street ministries in cities around the country that is inspired and supported by Common Cathedral. In 2010 Rev. Dr. Wyman was honored with the 13th Annual All Saints Spirituality and Justice Award in recognition of her deep spiritual faith manifested in her work with the homeless in Boston and other cities.

Rev. Dr. Wyman graduated from Chatham College in Pittsburgh and received a master's degree in American studies from Boston University. She also received a Master of Divinity degree from General Seminary in New York, a Doctor of Ministry degree from Episcopal Divinity and an honorary doctorate from Yale University's Berkeley Divinity School in 2010.

Florian Pop: The Samuel D. Schack Professor of Algebra

Dr. Florian Pop has been appointed the Samuel D. Schack Professor of Algebra in the department of mathematics in the School of Arts & Sciences. Dr. Pop is the recipient of numerous academic honors including several National Science Foundation research grants and a research grant from the John Templeton Foundation. He was named the Marie Curie Scholar of the European Union in 2007. Dr. Pop is a member of the American Mathematical Society, the Deutsche Mathematiker-Vereinigung and the European Union of Mathematics. He earned his PhD at the University of Heidelberg.

Dr. Pop has published over two dozen articles in journals such as *Annals of Mathematics* and *Inventiones mathematicae*. He is a member of the editorial board of *Mathematische Nachrichten* and an editor of *Journal de Théorie des Nombres de Bordeaux* (2000–2006).

The Samuel D. Schack chair was established in 2010 by a bequest from Samuel D. (Don) Schack, a professor and former chair of the department of mathematics at the State University of New York at Buffalo. Dr. Schack earned a bachelor's degree from Penn in 1974 and his PhD in mathematics in 1980. His gift was made in honor of Murray Gerstenhaber, professor emeritus of mathematics, who came to Penn in 1953.

Penn to Create Perry World House to Enhance Global Initiatives

The University of Pennsylvania will establish a central home on campus for global activities and initiatives to be known as the Perry World House, President Amy Gutmann has announced. It will be a gathering place for faculty and students from all 12 of Penn's schools to engage with eminent international scholars and policymakers on pressing global issues of the 21st century. As a hub for international exchange and activity, the Perry World House will anchor Penn's global resources on an interdisciplinary campus while creating partnerships abroad.

A \$10 million gift from University Trustee Richard C. Perry and his wife, Lisa Perry, will name the house and establish the Richard Perry Endowed Professorship to be affiliated with the House.

Centrally located on campus along Locust Walk at 38th Street, the Perry World House will provide the facilities necessary to support innovative research, enhance the flow of ideas between Penn and global leaders and provide a wide range of opportunities for undergraduate and graduate students to engage in major international issues.

"Richard Perry is a visionary partner in distinguishing Penn as a globally engaged, consummately interdisciplinary and eminently influential University," President Gutmann said. "With this extraordinarily generous gift, Richard and Lisa are creating a unique global research and education center that will build upon Penn's distinctive strengths in integrating world-class teaching with policy-relevant research that spans all disciplines to address the most important global issues of our time. The Perry World House will provide a rich environment for world leaders, scholars and students to gather and ad-



Richard Perry

dress key global issues with the desire and ability to change the world for the better."

Partnering in this effort will be Provost Vincent Price and Dr. Ezekiel Emanuel, vice provost for global initiatives. In addition, a renowned scholar with an interdisciplinary and international focus in teaching and research will be appointed to the Richard Perry Endowed Professorship.

"This gift will transform Penn's position on the global stage," Provost Price said. "The Perry World House will support Penn's path-breaking teaching and research and our commitment to educating future generations of leaders of an increasingly global society. Our students and fac-

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Bioethics Commission's Report on Pediatric Medical Countermeasures

In a report released on March 19, the Presidential Commission for the Study of Bioethical Issues concluded that the federal government would have to take multiple steps before anthrax vaccine trials with children could be ethically considered. The Bioethics Commission, chaired by Amy Gutmann, president of the University of Pennsylvania, was responding to a request from Health and Human Services Secretary Kathleen Sebelius who last year asked the members to study the question of anthrax vaccine trials with children after receiving a recommendation from another federal committee that such research be initiated, pending ethical review.

"The safety of our children is paramount and we have to get this precisely right," Dr. Gutmann said. "The Bioethics Commission concludes that many significant steps would have to be taken, including additional minimal-risk research with adult volunteers, before pediatric anthrax vaccine trials prior to an attack should be considered."

Dr. Gutmann also authored a perspective piece in the March 19 issue of the *New England Journal of Medicine* about the issues raised in the report. That article is available at www.nejm.org/doi/full/10.1056/NEJMp1302093

Penn faculty member Dr. Anita L. Allen, the Henry R. Silverman Professor of Law, professor of philosophy and a senior fellow in the bioethics department of the Perelman School of Medicine, also serves on the Presidential Commission. She was formerly a deputy dean for academic affairs at Penn Law.

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Pullout: April AT PENN



Florian Pop

Trustees: Penn 2013-2014 Financial-aid Budget, Undergrad Tuition

The University of Pennsylvania reaffirmed its commitment to an all-grant, no-loan financial-aid program last Thursday as the Board of Trustees authorized a \$188 million financial-aid budget for 2013-2014 while increasing total undergraduate charges by 3.9 percent.

This year's financial-aid budget reflects an increase of \$9 million, or five percent, over projected 2012-2013 aid expenditures. Increasing access for undergraduate students is one of Penn President Amy Gutmann's top priorities. Since she took office in 2004, Penn's financial-aid budget has grown by 138 percent, averaging 9.1 percent per year, more than twice the average annual growth in total charges.

"At Penn, nothing stands in the way of providing educational opportunities to the most gifted young women and men," President Gutmann said. "Through our innovative no-loan program, we are sending a strong and positive message to present and future Penn students: This institution will continue to recruit and enroll the finest students, and no student will need to decline the opportunity to experience a Penn education for financial reasons."

Total undergraduate charges for 2013-2014—tuition, fees and room and board—will increase by 3.9 percent. This is the fifth consecutive year that Penn has kept its tuition growth under four percent.

Undergraduate tuition will increase to \$40,594 from \$39,088; room and board will increase to \$12,922 from \$12,368; and fees will increase to \$5,296 from \$5,122. Tuition and fees cover 70 percent of the direct cost of delivering a Penn education.

As a result of Penn's financial-aid program, the average net cost for aided students to attend Penn today is almost \$3,000 less than it was in 2005, in constant 2005 dollars.

Penn has substituted grants for loans for all aid-eligible undergraduates since 2009. Next year, the average grant for students is estimated at \$40,200.

This year, 46 percent of Penn's undergraduate students received need-based grants from the University. Most undergraduates from families with incomes of less than \$175,000 are receiving grant assistance, and the typical student with family income of less than \$40,000 receives grant aid that covers full tuition, room and board.

Over the past several years, as increasing numbers of students have required financial assistance, Penn has maintained its commitment to meeting full need with no-loan packages.

Penn is one of fewer than 50 private institutions in the United States that admit academically qualified students without regard to their families' ability to pay while also meeting the determined full need of all undergraduates. Of the other colleges and universities with no-loan financial-aid policies for undergraduates, Penn has the largest undergraduate enrollment at 10,300.

Increasing educational access was a priority of Penn's recently completed *Making History* campaign, which raised \$4.3 billion. The campaign raised \$366.3 million for undergraduate student aid, exceeding its goal of \$350 million.

Additional information on undergraduate financial aid at Penn is available at www.sfs.upenn.edu/paying/paying-pro.htm

COUNCIL

From the Office of the Secretary

Agenda for University Council Meeting Wednesday, April 3, 2013 4 p.m. Bodek Lounge, Houston Hall

- I. Approval of the minutes of February 20, 2013. (1 minute)
- II. Follow-up comments or questions on status reports. (5 minutes)
- III. Reports on Budgets and Plans for the Next Academic Year. (40 minutes)
- IV. Presentation: Wellness initiatives for students, faculty, and staff. (40 minutes)
- V. New business. (5 minutes)
- VI. Adjournment.

Perry World House

(continued from page 1)

ulty will gain vital new perspectives by engaging in the intensive discussions, research and writing on global issues that this gift will measurably advance on campus."

The flagship programmatic initiative to be housed in the Perry World House will be the Global Solutions Program, dedicated to analyzing and developing innovative policy solutions on critical issues facing people around the world. As part of this program, the Perry World House will host experts, present major conferences and provide support for public outreach on a different global issue each year. The Global Solutions Program will bring high-profile leaders to campus to focus expertise and attention on solutions to vital global issues.

"I am thrilled to partner with Amy and Zeke in this important endeavor," Mr. Perry said. "They have created a brilliant foundation on which we will build a fully complementary constituency of scholars, leaders and students that will bring excitement and enrichment to the Penn campus."

Mr. Perry is president and CEO of Perry Capital, a private investment management firm that he co-founded in 1988. Mrs. Perry is a successful women's fashion designer with a flagship store at Madison Avenue and 77th Street in New York City. The couple has two children, David and Samantha.

At Penn, Mr. Perry is a member of the Board of Trustees, the Undergraduate Executive Board of the Wharton School and the Class of 1977 Gift Committee. In 2005, his \$10 million gift launched the Penn Integrates Knowledge Program, designed to appoint distinguished faculty, in at least two Penn schools, whose work exemplifies the integration of knowledge across disciplines. The four Richard Perry University Professors appointed since that time are Dr. Philippe Bourgois, professor of anthropology in SAS and of family and community medicine in the Perelman School of Medicine; Dr. John Jackson, professor of communication in the Annenberg School for Communication and of anthropology in SAS; Dr. Christopher Murray, professor of chemistry in SAS and of materials science and engineering in SEAS, and Dr. Adrian Raine, professor of criminology in SAS and of psychiatry in the Perelman School of Medicine. Mr. Perry has also supported undergraduate scholarships to help provide a Penn education to talented students who could not otherwise afford to attend the University.

PPSA Call for Nominations: 2013-2014 Executive Board

The Penn Professional Staff Assembly (PPSA), a voluntary organization comprised of professional (monthly-exempt) staff members, is accepting nominations for the Executive Board for the 2013-2014 term year. The mission of PPSA is to support and focus staff engagement and collaboration within the University of Pennsylvania community and to act as a productive resource for all of our members. Being a member of PPSA allows you to network with your colleagues through numerous workshops and events that enhance your professional development and work life at Penn.

PPSA:

1. Provides a forum through which staff can engage in dialogue about issues facing the University and higher education;
2. Participates and collaborates in University governance through University Council and other committees and task forces;
3. Serves as an informational network to promote seminars and programs that enrich the quality of experience and work life for professional staff;
4. Provides a supportive network to assist the University in achieving its goals and objectives.

For more information on PPSA go to: <http://penn-ppsa.org/>

The following positions on the PPSA Executive Board will be available for the coming year:

Chair-Elect: The Chairperson is the principal executive officer who calls meetings, prepares agendas, presides over meetings, and provides leadership and representation at the University Council and other meetings. After one year, the Chair-Elect automatically succeeds to the office of Chairperson.

Members at Large: Four positions are available, each for a two-year term.

The Members at Large participate in Executive Board meetings, take on special projects, and serve on other University committees. University monthly-paid professional employees are welcome to self-nominate or submit names for consideration to PPSA at ppsa@exchange.upenn.edu no later than *Friday, May 3, 2013*. Please include the home department, email, and campus extension of the nominee. All individuals nominated will receive information on completing a candidate bio and personal statement. A list of candidates will be prepared and distributed to the PPSA membership prior to the election.

The 2013-2014 election for officers will occur during the annual meeting which will take place on Thursday, May 23, 2013.

Questions on the nominating and election process can be directed to ppsa@exchange.upenn.edu

If you are not a member of PPSA and are a monthly-paid employee please consider joining by going to our webpage at <http://penn-ppsa.org/> If you are a member, please consider nominating yourself or a colleague for a Board position. Board members attend two meetings a month and assist with program development and coordination. Although there is a time commitment, the experience is rewarding and enjoyable. It is a wonderful opportunity to meet colleagues from across the University who will help to enrich your association with Penn.

—Holly Marone, PPSA Chair

McCabe Fund Awards for Fiscal Year 2013-2014: June 3

The McCabe Fund Advisory Committee is calling for applications from junior faculty in the Perelman School of Medicine and the School of Veterinary Medicine for the annual Thomas B. and Jeannette E. Laws McCabe Fund Fellow and Pilot awards. Guidelines and instructions are available online to determine eligibility. The deadline for submission is *Monday, June 3, 2013*.

Junior faculty in these schools should contact the chair of their department or Dana J. Napier, project manager, School of Medicine Administration at (215) 573-3221 or djnapier@exchange.upenn.edu for information and application forms. The McCabe Fund Advisory Committee will announce the winners at its annual June meeting.

Ed. Note: See the Honors & Other Things on page 3 for the most recent awardees.

Penn Medicine's New Institute for Biomedical Informatics

The Perelman School of Medicine at the University of Pennsylvania announces the creation of the Institute for Biomedical Informatics (IBI). With support from the naming gift of the Smilow Center for Translational Research, the IBI will "bring together the large number of Penn faculty who work in the broad field of biomedical informatics to inform science and medical care. We will expand the number of faculty even more to create a wide-ranging program of research and education to find and clinically apply the treatments of the future and to train the next generation of physician-scientists," said Dr. J. Larry Jameson, executive vice president for the Health System and dean of the Perelman School of Medicine.

Dr. John Hogenesch, professor of pharmacology, has been named interim director of the IBI. Given the breadth of this field, three associate directors have also been named: Dr. John Holmes, associate professor of medical informatics in epidemiology; Dr. Klaus Kaestner, professor of genetics; and Dr. Curtis Langlotz, professor of radiology. A national search will be launched this spring for the institute's permanent director.

Big data is increasingly driving both biological research and clinical care. In biomedicine, this information runs the gamut from bioinformatics at the genome and molecular level, to health-care informatics at the clinical level, to public-health informatics at the population level.

The IBI, in partnership with the Schools of Engineering & Applied Science, Arts & Sciences, Nursing, and Veterinary Medicine, as well as The Children's Hospital of Philadelphia, will tackle challenges directly relevant to patient care, as well as improve basic research that leads to more personalized care.

The Institute will also focus on educating the next generation of biomedical informaticians by folding in a new Masters in Biomedical Informatics degree program with the existing PhD program in Genomics and Computational Biology and by creating additional graduate and medical training programs as this field evolves.

New Paul D. Coverdell Fellows Partnership with Peace Corps and Penn

The Peace Corps and the University of Pennsylvania have teamed up to launch a new Paul D. Coverdell Fellows Program partnership, an initiative that provides graduate school scholarships to returned Peace Corps volunteers. All Fellows complete a degree-related internship in an underserved American community, allowing them to bring home and expand upon the skills they learned as Peace Corps volunteers. At the University of Pennsylvania, Fellows will be able to work toward a Master of Science in Education in the International Educational Development Program (IEDP) in GSE. This new program joins two existing Penn partnerships with the Peace Corps Paul D. Coverdell Program: the Master's of Public Health degree, and various degrees and certificates awarded through the Fels Institute of Government.

"The Peace Corps is delighted to have the University of Pennsylvania Graduate School of Education as a partner in the Paul D. Coverdell Fellows Program," said Acting Peace Corps Director Carrie Hessler-Radelet. "This new partnership enables returned Peace Corps volunteers to continue their work in public service through meaningful internships in underserved American communities. Experience overseas and graduate studies position Peace Corps Fellows to launch a career by combining coursework with service."

"It is clear that the Coverdell Fellows program is a tremendous match with our International Educational Development Program," said Dr. Andy Porter, Dean of Penn's Graduate School of Education. "Our program is greatly enriched by the skills and experiences of returning Peace Corps volunteers. In return, we are able to pro-

vide a unique environment to further develop the knowledge and practical skills returning Peace Corps volunteers need to continue a life committed to global education. We are thrilled to be able to expand the Fellows program."

Selected Fellows will receive up to \$13,500 in scholarship aid as graduate assistants, based upon their academic and professional qualifications. In addition, up to \$3,000 will be dedicated to Coverdell Fellows for their summer internship.

Internships in underserved communities will, in fact, be an integral part of each recipient's degree, allowing returned Peace Corps volunteers to bring the skills they acquired during service back home to make an impact in the United States. Most internship activities will be coordinated with Penn's Netter Center that has active relationships with dozens of local community service organizations in Philadelphia and the region.

More than 250 years after its founding, the University of Pennsylvania continues to achieve excellence in research and education. The Penn Graduate School of Education is one of the nation's premier research education schools. Dr. Dan Wagner, director of the IEDP, is a former Peace Corps Volunteer (Morocco '68). More details on the IEDP can be found at: www.gse.upenn.edu/iedp

The Paul D. Coverdell Fellows Program started in 1985 at Teachers College, Columbia University and now includes more than 80 university partners in 31 states and the District of Columbia. The program is specifically reserved for students who have already completed their tenure abroad with the Peace Corps. More details can be found at www.peacecorps.gov/fellows

Center for Molecular Studies in Digestive and Liver Diseases Pilot and Feasibility Grant Program 2013 Competition

Purpose and Research Focus

The purpose of Penn's Center for Molecular Studies in Digestive and Liver Diseases is to unite investigators with interests in digestive and liver physiology and disease and to stimulate others in the biomedical community to enter this area of research. One of the most important aspects of this effort is the funding of Pilot/Feasibility Projects.

The Pilot/Feasibility Project should be related to the focus of the Center, which encompasses molecular studies on the biology or disease of the alimentary tract, pancreas and liver. Relevant investigations include those in developmental biology, nutrition, regulation of gene expression, growth, differentiation and carcinogenesis, the biology of stem cells, molecular genetics, gene therapy and immunology, including growth factors and cytokines.

They are also accepting applications for a joint Pilot grant with ITMAT that will increase funding to \$45,000/yr. Applications are being solicited in the broad areas of biochemistry, biomedical engineering, developmental biology, genetics, immunology, microbiology, neurosciences, pharmacology and physiology linked to digestive, liver and pancreatic diseases with a translational impact, either pre-clinically or clinically.

Eligibility

All faculty members of the University scientific community who meet the eligibility requirements below are invited to submit proposals. Applicants must be a US citizen or have a permanent visa.

1. New investigators who have never held extramural support (R01 and P01).
2. Established investigators in other areas of biomedical research who wish to apply their expertise to a problem in digestive and liver disease.
3. Established digestive and liver investigators who wish to study an area that represents a significant departure from currently funded work.

Pilot project awardees are eligible for two years of funding; renewals are evaluated competitively.

Proposal Preparation


1. Submit a PDF via email to kimmeyer@mail.med.upenn.edu Complete proposals due by *Friday, May 3, 2013* in the Gastroenterology Division, rm. 954, BRB.

2. Format

- Cover page: includes abstract of up to 250 words and list of approved or pending IACUC/IRB protocols.
- NIH biographical sketch
- NIH other support
- Budget and justification: one year, \$20,000 (\$45,000 for joint RFA); one page only
- Background, preliminary results, estimated core usage, research plan, and future directions; up to four pages total.
- Senior Investigators should indicate how this project represents a new direction in their research.
- References: one page only.
- Appendix: pertaining to preliminary data only, no reprints.

For additional information, please contact: Center for Molecular Studies in Digestive and Liver Diseases, tel: (215) 573-4264, fax: (215) 898-0573, email: kimmeyer@upenn.edu

Almanac On-the-Go: RSS Feeds

 *Almanac* provides links to select stories each week there is an issue. Visit *Almanac's* website, www.upenn.edu/almanac for instructions on how to subscribe to the *Almanac* RSS Feed.

Honors & Other Things

McCabe Fund Awards

Last year there were four winners of McCabe Fellow awards of \$40,000 each:

Dr. Meeta Prasad Kerlin, medicine

Dr. Timothy Lucas, neurosurgery

Dr. Ivona Percec, surgery

Dr. Rachana Shah, pediatrics

There were 11 Pilot Award winners who received \$22,056 each:

Dr. Peter Ahn, radiation oncology

Dr. Steven Allen, surgery

Dr. Meenakshi Bewtra, medicine

Dr. Bart De Jonghe, behavioral health sciences

Dr. Sara DeMauro, pediatrics

Dr. X. Sherry Liu, orthopaedic surgery

Dr. Sage Myers, pediatrics

Dr. Emily Carter Paulson, surgery

Dr. Sara Pinney, pediatrics

Dr. Michelle J. Smith, neurosurgery

Dr. Jesse A. Taylor, surgery

The McCabe awards were established in 1969 by a generous gift from Mr. and Mrs. Thomas B. McCabe to the University of Pennsylvania Perelman School of Medicine to support junior faculty who initiate fresh and innovative biomedical and surgical research projects and who have received no or limited external research funding while in their first through third years on the faculty at the Perelman School of Medicine or the School of Veterinary Medicine at Penn.

Canine Health Award: Dr. Aguirre

Dr. Gustavo Aguirre of the Penn's School of Veterinary Medicine has received the International Canine Health Award from the Kennel Club Charitable Trust and Metro Bank at Crufts, the club's dog show held in Birmingham, England.

Dr. Aguirre is a professor of medical genetics and ophthalmology in Penn Vet's department of clinical studies-Philadelphia. *Dr. Aguirre*, who earned his undergraduate, veterinary and doctoral degrees from Penn, has played a lead role in first identifying many of the genes and defects that cause inherited blindness and then developing gene therapy to treat these conditions. Modeling the visual disorders in dogs, he and colleagues have reversed retinal degeneration in the animals, breakthroughs that have laid the groundwork for human clinical trials.

This is the first year the International Canine Health Award has been presented. It was judged by a panel of veterinary professionals and scientific researchers, chaired by *Dr. Alan Kelly*, *Gilbert S. Kahn* Dean Emeritus at Penn Vet. The honor includes over \$60,000, underwritten by the foundation of Vernon and Shirley Hill, for whom Penn Vet's Hill Pavilion is named. *Mr. Hill* is founder and chairman of Metro Bank. *Dr. Aguirre* intends to use the prize money to support continuing research on studies of inherited blindness.

Honorary Doctorate: Dr. Harkavy

Dr. Ira Harkavy, associate vice president and founding director of the Barbara and Edward Netter Center for Community Partnerships, was awarded an Honorary Doctor of Public Service degree from Westfield State University in recognition for his career at the Netter Center for Community Partnerships and as a respected educator, historian, government official and author. *Dr. Harkavy's* citation stated: "Reflecting the rich legacy of Horace Mann and the

wisdom of John Dewey, you champion civic engagement as a prime component of quality higher education. Connecting needs with resources and academics with community, you challenge and inspire us to problem-solve together to transform our neighborhoods, our schools and our society."

The Horace Mann Awards for Public Service recognize civic leaders and community volunteers who have distinguished themselves with lives of service which reflect the values and beliefs of Westfield State founder, Horace Mann.

New Journalism Award From APPC

The Annenberg Public Policy Center (APPC) has named a new award for *Brooks Jackson*, director emeritus of *FactCheck.org*. The award called the Cronkite/Jackson Prize for Fact Checking Political Messages selects its recipients through a special jury convened by APPC, home of *FactCheck.org*

KUSA, Denver, CO, won for local station for the commitment of its reportorial talent to its 44 "Truth Tests." The national winner was *CNN*, for Tom Foreman's in-depth "Reality Checks."

3M Nontenured Faculty Award:

Dr. Lee

Dr. Daeyeon Lee, assistant professor of chemical and biomolecular engineering, in SEAS, is the recipient of a 3M Nontenured Faculty Award for his proposal, "Bubble-Derived Light-Weight Materials with High Strength and Toughness." This award was created by the 3M company to support new faculty in their path to tenure.

Dr. Lee leads the Soft Nanomaterials Lab, which works to develop a deep understanding of the interactions between soft materials (polymers, colloids and biologicals, etc.) near or at interfaces. His group seeks to extend the obtained knowledge to enable the assembly of nano-/micro-scale materials into macroscopic structures that have designed properties and functionality. The major research efforts in the lab include understanding the behavior of Janus particles at fluid interfaces, understanding and improving the assembly and mechanical properties of nanoparticle films, generating hierarchical structures using emulsions and bubbles as templates and developing catalytic systems for biomass conversion.

Club of Rome: Dr. Lior

Dr. Noam Lior, professor of mechanical engineering & applied mechanics in SEAS, has been elected to the Club of Rome, an interdisciplinary, international think tank dedicated to sustainability issues. *Dr. Lior* is also a faculty member of the Wharton School's Initiative for Global Environmental Leadership (IGEL) and the Lauder Institute, as well as the Institute of Environmental Studies. It is this focus on international environmental collaboration that positions *Dr. Lior* in line with the Club of Rome's mission.

The Club was formed in 1968 as an informal collection of scientists, economists, politicians and other public intellectuals and was primarily concerned with long-term ecological problems.

Cottrell Scholar Award: Dr. Schelte

Dr. Eric Schelter, assistant professor of inorganic and materials chemistry in SAS, has received a 2013 Cottrell Scholar Award from the Research Corporation for Scientific Advancement (RCSA). He is one of only 13 Scholars named in



Eric Schelter

the US this year.

Cottrell Scholars receive \$75,000 each in recognition of their scientific research as well as their dedication to teaching. The awards are given to early-career science educators in the physical sciences and related fields. Originality, feasibility and the prospect for significant fundamental advances to science are

the main criteria for judging the candidates' research while contributions to education (especially at the undergraduate level), aspirations for teaching and the candidates' proposed strategies to achieve educational objectives are factors in assessing their teaching plans.

Dr. Schelter was recognized for his work with rare earth elements, required in the manufacture of wind turbine generators, hybrid and electric vehicles, fiber optics, cell phones and flat-panel displays. The elements must be separated from their composite mineral sources, a process that requires the use of environmentally taxing acids and solvents. *Dr. Schelter's* goal is to develop efficient, environmentally friendly separations processes for certain high-value rare earth metals based on their unique physical and chemical properties.

Described by the RCSA as "a tireless communicator for science," *Dr. Schelter* sees this research project as an educational opportunity. Through continuing lectures both on- and off-campus, he is working to interest students and the general public in the urgent problems associated with rare earth metals mining and processing. He reaches out to high school and college chemistry students to highlight the dichotomy between renewable energy devices and the environmental damage done by mining and processing the rare earth metals used in those devices.

The Cottrell Scholar Awards are named in honor of Frederick Gardner Cottrell, a scientist, inventor, and philanthropist. In 1912 *Dr. Cottrell* founded Research Corporation, America's first foundation dedicated wholly to science, providing means for scientific research and experimentation at scholarly institutions.

2013 MRS Fellow: Dr. Winey

Dr. Karen Winey, professor of materials science & engineering and chemical & biomolecular engineering, in SEAS, has been named a 2013 Materials Research Society (MRS) Fellow for "outstanding contributions to the understanding of polymer nanocomposites and ion-containing polymers through rigorous and insightful experiments and distinguished leadership in the materials community." Fellows are exceptional MRS members whose sustained and distinguished contributions to the advancement of materials research are internationally recognized, and they represent excellence in science and engineering and dedication to the advancement of materials research.

Dr. Winey's research group designs and fabricates polymer nanocomposites containing carbon nanotubes and metal nanowires with the aim of understanding how to improve their mechanical, thermal and especially electrical properties.



Karen Winey

More recently she has expanded her work to include simulations of electrical conductivity and polymer dynamics in the presence of nanoparticles. Dr. Winey pioneered the use of HAADF STEM to probe the nanoscale morphology in ion-containing polymers. Now her group focuses on correlating the structures in these materials, including block copolymers, with transport properties.

ABA Labor Mock Trial Winners

Penn Law second year students *Brandon Harper*, *Philip May*, *Niketa Patel* and *Arianna Scavetti* won the 2013 National Championship at the 9th annual American Bar Association's Labor & Employment Trial Advocacy Competition. The Penn Law team was coached by attorney Robert Englert, a Philadelphia trial lawyer and a Penn adjunct lecturer in law. This year's case involved a complex set of facts in which a 60 year-old plaintiff alleged that his employment was terminated as a result of age discrimination.

The competition judges and Judge Bernice B. Donald of the US Court of Appeals for the Sixth Circuit praised Penn Law's advocacy skills, professionalism and courtroom presence. Judge Donald further honored the students when she observed that the advocates presented their case "much better than many attorneys who are currently being paid to try cases."

Special Achievement Award: Mr. Bagnoli; Mr. Copeland

Mr. Al Bagnoli, the George A. Munger Head Coach of Football for the Penn Quakers, received a Special Achievement Award from the Philadelphia Sports Writers Association (PSWA) at its January 28 awards dinner. Mr. Bagnoli, the winningest coach in Penn's 136-year football history, guided the Penn Quakers to their ninth Ivy title this season.

Senior *Brandon Copeland*, defensive lineman for the Penn Quakers, the first sole team captain since 1997 and a three-time, first-team All-Ivy selection was given a Special Achievement Award by the PSWA. Mr. Copeland is a senior concentrating in management at Wharton.

PGA Philadelphia Teacher of the Year: Mr. Anderson



Mark Anderson

For the third time in his career, the Penn women's golf coach *Mark Anderson* will be recognized as a leader in his field by the Philadelphia section of the Professional Golfers' Association of America (PGA) at their April meeting, that named him the PGA Philadelphia

Section's 2012 Teacher of the Year.

Mr. Anderson is in his fifth season coaching the Penn women's team. He led the Quakers to their only Ivy League Championships team title in 2010, and last year the team placed second at the Championship. In the fall, Penn won the team title at the Sacred Heart Fall Classic.

Additionally, Mr. Anderson was recently awarded Trackman University Master certification. He joins a select group of 22 professionals worldwide, with only 11 certified in the US.

100 Top Hospitals: Penn Presbyterian Medical Center

For the second consecutive year, *Penn Presbyterian Medical Center* has ranked among the nation's top 100 hospitals, according to the annual study by Truven Health Analytics, formerly the Healthcare Business of Thomson Reuters. The study identifies the 100 Top Hospitals based on their overall organizational performance in 10 areas including mortality, patient safety, patient satisfaction, adherence to clinical standards of care and readmission rates for acute myocardial infarction (heart attack), heart failure and pneumonia. Penn Presbyterian was recognized in the category of Major Teaching Hospitals and is one of only two in the state of Pennsylvania to be included in the new study. In October, Truven Health also named Penn Presbyterian one of the 50 Top Cardiovascular Hospitals in the nation.

"Being listed among the top 100 hospitals is further proof of Penn Presbyterian's positive impact to the community and our dedication to providing the highest-quality patient care," said Michele Volpe, executive director and CEO of Penn Presbyterian Medical Center. "This honor, in conjunction with our other accomplishments over the last year—including achieving Magnet recognition, Primary Stroke Certification, and the Gold Seal of Approval from the Joint Commission in Orthopaedics—are great reminders of the extraordinary faculty and staff who give so much of themselves here every day. We look forward to continuing to foster this culture of excellence and growth in the years to come."

Innovation at Penn Nursing

Students at Penn's School of Nursing have taken top prizes for their healthcare technology inventions.

Students *David Bendell* and *Kerry McLaughlin* took top prizes for their healthcare innovation projects at Startup Weekend Health 2.0 in Philadelphia in February. The 54-hour event allows aspiring entrepreneurs to learn the basics of founding startups and launching successful ventures.

Mr. Bendell, currently earning his master's degree at Penn Nursing, won first place for his application, mICE (my In Case of Emergency). The mICE app aggregates and provides vital personal information, such as name, blood type, allergies and major medical conditions, for a person experiencing a health emergency via an easy-to-scan QR code.

Mr. McLaughlin, a senior, took third place for KnowMe, an app that develops profiles of nursing home residents to advance three goals: increase family members' peace of mind, enhance healthcare providers' workflow and improve health outcomes for nursing home patients.

"At a time when there is an urgent need for innovative solutions to healthcare challenges, we are preparing a generation of students who

can think outside the box and expand on the interconnectivity among healthcare science, research, and clinical practice," said Penn Nursing Professor Dr. Nancy Hanrahan. She leads Penn Nursing's Healthcare Innovations initiative aimed at improving healthcare through applications, simulations and gaming.

National Public Policy Challenge: reMind

First, Penn Nursing doctoral student *Molly Kreider Viscardi* and Penn student colleagues won recognition at Penn's School of Nursing Startup Weekend health 2.0 in February. Then they took their app re:Mind to the fourth annual Penn Public Policy Challenge. Team re:Mind's mental healthcare proposal moved on to the National Invitational Public Policy Challenge at the National Constitution Center on March 16 and 17. There they won it all.

Competing against nine teams from top universities spanning the country, team re:Mind competed in the initial round on Saturday, March 16. From that pool, four finalists were chosen for Sunday's final competition. All four of the finalist teams won \$5,000 to support their proposals. After the four interactive presentations, re:Mind of the University of Pennsylvania emerged as the winner.

"This was basically a doubling in size of the competition. Last year we invited four schools to compete against Penn, and this year we had eight," said Public Policy Challenge Executive Director Sarah Besnoff. "And what we saw was just an amazing sharing of ideas. All nine teams had fantastic ideas of great value to their communities."

Fels Institute Executive Director David Thornburgh said, "re:Mind, through their presentation and their responses to the questions, clearly knew their stuff. They were excited about what they were doing, and did a great job reaching out to leadership in the community and the city."

re:Mind's proposal involves an appointment reminder system for mental health patients, with the ultimate goal of curbing the number of costly and preventable re-hospitalizations. On the eve of the competition, the team officially partnered with Community Behavioral Health (CBH), a not-for-profit 501c (3) corporation contracted by the City of Philadelphia for mental health services.

"We just received confirmation on March 15 that CBH will partner with us," said *Meghan O'Brien*, an MD/Master in Bioethics candidate and lead presenter of re:Mind. "We're hoping to use some of the funds from the winnings to really get re:Mind off the ground and running, and do that in collaboration with CBH so that we can move this forward."

"Then, hopefully we can create a solid framework for a local model that can be recreated in other realms of healthcare and nationally."

re:Mind won the \$15,000 grand prize. Those sums supplement the \$10,000 that the team previously obtained by winning the Penn Public Policy Challenge Finals.

"We've definitely gotten further than we expected in only three months," said *Kayla Cheatham*, a Master of Social Work candidate and member of re:Mind. "It is an initiative where we're hoping that even in the next week there will already be groundbreaking."

Time to SHINE



MAKING HISTORY

THE CAMPAIGN FOR PENN

After seven years of widespread support and alumni participation, the University of Pennsylvania culminated its *Making History* campaign (*Almanac* March 12, 2013), raising \$4.3 billion, strengthening Penn's position among the world's foremost universities and making major breakthroughs in addressing society's most complex challenges, Penn President Amy Gutmann announced recently.

Designed to integrate fields of study with high social impact, add new state-of-the-art facilities, attract and retain exceptional faculty and increase student aid and alumni engagement, the Campaign far exceeded expectations on each of these fronts and more. High impact areas span student financial aid, innovative interdisciplinary teaching and research, local and global engagement and health care.

"When the Penn community comes together for a common purpose it generates remarkable transformative power," President Gutmann said. "Penn's undergraduate all-grant, no-loan financial aid policy and our graduate and professional aid—which doubled over the course of the Campaign—are ensuring educational access to a Penn education for the brightest students regardless of socioeconomic background. One out of seven Penn freshmen today will be the first in their families to graduate college, and a quarter are under-represented minorities. With new state-of-the-art facilities, our eminent faculty are revolutionizing the ways we teach, learn, and conduct collaborative research across disciplines. Across the broadest spectrum of the liberal arts and professions, Penn's capacity and commitment to making a positive difference, at home and across the globe, are unsurpassed. Penn's campus is also more strikingly beautiful than ever, with our 24-acre Penn Park—once an ugly parking lot and now a home to new athletic and recreational spaces—welcoming everyone into the greenest urban campus in the country."

Launched in 2007, the Campaign hit its financial target of \$3.5 billion 16 months ahead of the December 31, 2012, conclusion (*Almanac* October 4, 2011). It was an unusually broad-based campaign, attracting gifts from 326,952 donors.

The largest single gift in Penn's history and

A campus-wide party will be held at Penn Park on Friday, April 19, to celebrate the success of Making History: The Campaign for Penn. The celebration will feature musical performances by Grammy Award-winning Train and Grammy Award-winning Penn alumnus, John Legend. The event, 5-9 p.m., is free with a PennCard.



Raymond and Ruth Perelman

the biggest ever to name a medical school in the United States came in 2011 from Raymond G. and the late Ruth Perelman, who gave \$225 million to name the Perelman School of Medicine (*Almanac* May 24, 2011). It provides unrestricted support for scholarship, faculty, and research.

The largest cumulative contribution to the Campaign came from The late Honorable Leonore C. Annenberg, through the Annenberg Foundation, totaling more than \$286 million and funding a broad range of innovative communication, research, and educational outreach programs, in addition to endowed professorships.

Strengthening the University's eminent faculty and interdisciplinary programs and ensuring Penn's long-term financial stability were key objectives of the Campaign. Thanks to the \$2 billion added to Penn's research and programmatic development, innovative interdisciplinary programs were created and enhanced. Outright gifts and pledges to the endowment totaled \$1.9 billion, surpassing the Campaign's ambitious \$1.75 billion target. Of that \$1.9 billion pledged, \$1.45 billion has already been received and added to Penn's endowment. This amount is equal to approximately all cash additions to the endowment in the previous 263-year history of the University.

"The impact of the *Making History* campaign on increasing educational access, integrating knowledge across disciplines and putting that knowledge to good work in the world has been nothing short of transformational. The overwhelming response we received is a testament to the strength and confidence of our community. People participated because Penn's work resonates with them and what they are passionate about," Dr. Gutmann continued. "We wish to thank everyone who made this achievement possible—our alumni, parents, donors, volunteers and most especially our Board of Trustees and Campaign leadership."

The effort was led by George A. Weiss, W'65, Campaign chair; co-chairs Robert M. Levy, WG'74, Rosemary Mazanet, GR'81, M'86, and Andrea Mitchell, CW'67, and the late Christopher H. Browne, C'69 and Henry A. Jordan, M'62, RES'67; and President of Penn Alumni Lee Spelman Doty, W'76.

Opening Educational Doors: Expanding Student Financial Aid

Donors contributed \$652 million toward financial aid for undergraduate, graduate and professional students. "Penn alumni and friends rallied around the priority of increasing financial aid," George A. Weiss, Campaign chair, said. "It speaks volumes about the Penn experience that they care so deeply about making a Penn education maximally affordable for the next generation."

Campaign support has already resulted in a more socioeconomically diverse student body. This year, 14 percent of incoming freshmen are the first in their families to attend college. Nearly half of Penn undergraduates receive financial aid, a number that rose by ten percentage points in the last seven years. Currently 22 percent of the financial aid budget is financed through endowed scholarships, up from about 10 percent prior to the Campaign.

The Campaign also resulted in the doubling of scholarships and fellowships for graduate and professional students. Representing half of Penn's student body, these superb scholars are Penn's future educators and researchers. By adding new scholarship and fellowship programs, Penn provides professional and graduate students with far greater financial freedom to pursue their studies without burdensome debt, which could skew their future career choices.

"Increasing access for talented students regardless of their financial means is a key University priority," Mr. Weiss added. "With our all-grant, no-loan policy, Penn is changing lives and investing in a stronger future, not just for our students, but for society as a whole."



The new Neural and Behavioral Sciences Building, disciplinary home of Penn's life sciences which began with the design of the sun garden in the foreground, is a perspective from the south with the sun garden in the foreground; it will be constructed on the site of the existing Kaplan Center. It will connect on its north elevation to Leidy Labs and also to the lower level. The project is scheduled to begin in the fall of 2013.

Recruiting and Retaining a World-Class Faculty and Staff

\$573 million was raised for faculty, director, coach and curator positions, strengthening the University's ability to recruit and retain the most talented scholars, teachers, and professionals. Support in this category was one of the core goals of the Campaign and a common priority across all of Penn's 18 schools and centers. The Campaign added 161 newly endowed faculty positions to Penn.

A centerpiece of Penn's leadership in breaking down the barriers to integrating knowledge and maximizing the social impact of research was the creation of a unique University-wide program: the Penn Integrates Knowledge (PIK) University professorships. Each PIK professor is a renowned scholar and teacher who holds a joint faculty appointment across two schools and who exemplifies Penn's interdisciplinary, collaborative approach to research and teaching. Fourteen PIK professors with joint appointments in seven of Penn's Schools—Annenberg School for Communication, Arts & Sciences, Engineering & Applied Science, Law, Perelman School of Medicine, Veterinary Medicine and Wharton—are already having a major impact on Penn's campus and beyond.

The Campaign created 22 new PIK professorships. The Campaign also endowed 16 positions for coaches, curators and center directors.

Expanding a Green Urban Campus: Buildings and Facilities

Nowhere is the impact of the Campaign more noticeable than on the physical landscape of the campus itself. Explained David L. Cohen, chair of the Board of Trustees: "The Campaign has enabled us to transform Penn with new spaces that promote collaboration, more green space that supports our commitment to sustainability, state-of-the-art building and research

laboratories to foster discovery and athletic and recreational facilities that enhance the Penn experience."

Funds raised for Penn Medicine, over 30 percent of the Campaign total, contributed to the development of a state-of-the-art medical campus that is advancing research in medical science and patient care. New facilities include the Ruth and Raymond Perelman Center for Advanced Medicine, the Roberts Proton Therapy Center, and the Smilow Center for Translational Research.

The \$753 million raised for facilities also includes the Law School's state-of-the-art Golkin Hall; the Vernon and Shirley Hill Pavilion with great research space for the School of Veterinary Medicine; a new building designed by Pritzker Prize-winning architect Fumihiko Maki for the Annenberg Public Policy Center, which addresses the increasingly important role of communication in public policy; and the Krishna P. Singh Center for Nanotechnology, which will open later this year and light up the eastern gateway to Penn's campus and integrate pathbreaking nanoscale research in the Schools of Arts & Sciences and Engineering & Applied Science.

The most visible addition is Penn Park, a project that increased campus green space by 20 percent and turned 24 acres of parking lots into tree-lined paths and superior athletic facilities, including Dunning-Cohen Champions' Field and Seasonal Air Structure, James "Ace" Adams Field, the 12-court Lynn and Clay Hamlin Outdoor Tennis Center, a multipurpose stadium, and picnic areas on the western bank of the Schuylkill River.

Notable renovations and additions to existing buildings include an expanded Music Building featuring acoustically-isolated classrooms, offices, practice rooms, and recording studios; the George A. Weiss Pavilion and Robert A. Fox Fitness Center in Franklin Field; the newly opened Syngcuk Kim Endodontic Clinic in Penn Dental's Evans Building; the Special Collections Center, home to Penn's Rare Book and Manuscript Library; improvements to the Nursing School's Claire M. Fagin Hall; and a major overhaul of the Arts and Culture Research House (ARCH), currently underway to enhance undergraduate student life.

Forthcoming Campaign-supported projects include the Neural and Behavioral Sciences Building, which will house laboratories, classrooms, and interactive spaces designed to foster collaboration across the various fields that encompass the life sciences and the Ronald O. Perelman Center for Political Science and Economics, a new centrally-located home for two of the most popular undergraduate majors.

True to Penn's leadership in creating an environmentally sustainable campus, every new building made possible by the Campaign has been designed to be "green" and to meet LEED (Leadership in Energy and Environmental Design) sustainability standards.

Extending Penn's Reach, Locally and Globally

Campaign funds have strengthened Penn's connections to its Philadelphia neighborhoods, initiating new ways to serve its community. The endowment of the University's Barbara and Edward Netter Center for Community Partnerships has enabled the Center to expand its service pro-

grams that enhance quality of life in the city, intertwine the future of Penn and West Philadelphia, and serve as a national model of university-community collaboration. The Robert A. Fox Leadership Program educates students to be leaders in public service through leadership-focused courses and leadership-building experiences on Penn's campus and across the country. Netter and Fox exemplify the many ways that Penn increasingly serves as a learning lab for local civic engagement, involving thousands of Penn's faculty, students and staff.

Fueled by Campaign contributions, Penn's global prominence and visibility are greater than ever. Penn's global impact extends from researching solutions to HIV/AIDS in Botswana to improving agriculture in rural parts of India to pioneering environmentally-sound building design in both China and the United States. International programs aided and created through the Campaign include the James Joo-Jin Kim Program in Korean Studies and the Penn/Wharton China Center, which will provide Penn with a university-wide presence in Beijing. The PIK professorship program recruited Dr. Ezekiel Emanuel to Penn as the first Vice Provost for Global Initiatives (*Almanac* September 6, 2011). Dr. Emanuel—the Diane v.S. Levy and Robert M. Levy University Professor and Professor of Health Care Management—is overseeing international programs and working with the President and Provost to develop a comprehensive strategy for Penn's global engagement.

"By attracting international students, expanding study-abroad opportunities, and forging partnerships with developing and established nations," said Provost Vincent Price, "Penn is addressing the most complex, immediate, and interwoven challenges of the 21st century. We are committed to using our research, expertise, and resources to turn innovative discoveries into practical solutions that build a stronger global society, now and in the future."

Engaging Alumni:

The Power of the Penn Community

Increasing Penn's connection with 290,000 alumni around the globe was a key objective of the Campaign. "One of our high priority goals at the outset was to harness the energy of the broader Penn community and put it to work for the good of the University and the world at large," Lee Spelman Doty, president of Penn Alumni, said. "We want to engage alumni, parents, and friends by providing opportunities that will enrich their lives and allow them to connect with each other."

Through regional events and re-imagined campus programming, the Campaign saw a surge in alumni involvement at all levels. Attendance for major alumni events and programs has risen by 66 percent, and young alumni participation has increased by 89 percent over the last seven years.

"Thanks to the hundreds of thousands of people who fervently believe in Penn's vision, our University community is even more powerfully engaged, effectively united, and deeply dedicated to creating innovative knowledge and to addressing the most important challenges of our time," Dr. Gutmann said.

For more information about *Making History*: The Campaign for Penn, visit finalreport.upenn.edu



designed by SmkithGroup Architects to complete the interdisciplinary Carolyn Lynch Laboratory. This rendition of the building is in the foreground. The building will house biology and psychology labs. The Wing and Mudd Biology Labs, which will be demolished, will be accessed via a tunnel from the building with planned occupancy in spring 2016.

Fels Institute of Government Offers Solutions for Economic Development

Penn's Fels Institute of Government lays out six proven strategies to help governments, businesses and workers successfully address the problem of creating and retaining a quality workforce in a new report, "Solving the Skills Crisis: Promising Practices for Talent Pipeline Development."

Funded with support from the Annie E. Casey Foundation, the report highlights strategies to build a talent-development pipeline:

- *Onboarding*—teaching new employees about the organization and how their position fits into the overall scheme of the company.
- *Learn and earn*—combining paid work with education that leads to a credential.
- *Mentorship*—providing readily accessible veteran employees to guide newer workers.
- *Public/private intermediaries*—leveraging the resources of other businesses, non-profits and government organizations to provide services and resources.
- *Work/life support*—addressing employees' personal issues to decrease turnover.
- *Career coaches*—designating an individual to guide employees through the various stages and opportunities of the talent-development pipeline.

In addition to the site visits and interviews, the report features a scalability index that business can use as a checklist to decide which strategies can be successfully implemented. Numerous case studies for each strategy illustrate the real-world value for decision makers of adopting the tactics in the public and private sector. The full report is available at www.fels.upenn.edu/job-centered-economic-development

Nanoparticles Engineered to Shuttle Cancer Drug Past Immune System

The body's first line of defense, known as the innate immune system, protects against foreign invaders, including tiny microbes, bacteria or viruses. Yet it also poses a major challenge for therapeutic applications that rely on microscopic drug-delivering vehicles, or nanoparticles. These nanoparticles are in the same size range as many pathogens and are quickly detected and destroyed by macrophages, the innate immune system's sentinel cells.

Macrophages rely on proteins in blood serum that stick to foreign objects in the bloodstream; these biological 'red flags' attract macrophages to engulf the intruders. In the past, scientists working on nanoparticles have attempted to circumvent this process by, for example, masking the engineered particles with a compound called polyethylene glycol, or PEG, to create a "stealth" coat that blocks these blood proteins from sticking to the nanoparticle surface.

A new approach exploits an Achilles' heel of the innate immune system. Despite their voracious appetite, macrophages are discriminate consumers because they recognize a specific "don't eat me" signal on the surface of our own cells, represented by a protein called 'cluster of differentiation 47', or CD47. On the basis of this insight, Dr. Dennis Discher, a biochemist at Penn's School of Engineering & Applied Science and his team devised a new way to get these nanoparticles past the body's immune defenses. The scientists designed a short peptide sequence derived from CD47 and attached it to nanoparticles to fool macrophages into accepting them as 'self' rather than foreign. The details of the technique appeared in the February 22 issue of *Science*.

Using this knowledge and computational modeling, Dr. Discher and his colleagues chemically synthesized a minimal self peptide sequence of 21 amino acids designed to resemble a portion of CD47 protein that is highly conserved in the human genome. The group attached this peptide to conventional nanoparticles that could be used in a variety of therapies. After mixing equal amounts of particles with or without the peptide and injecting this mixture into mice, the scientists measured the amount of particles remaining in the bloodstream 30 minutes later and saw that there were four times as many particles left with the peptide mixture.

The relative ease of synthesizing the CD47 peptide fragment and attaching it to nanoparticles means it could be applied to deliver a wide range of drugs, including gene therapy delivery vehicles. "The next step is to be more exotic and tailor particles of different shapes and flexibility to load more drugs for more realistic approaches with various disease models," Dr. Discher said.

Reprogramming Cells to Fight Diabetes

For years researchers have been searching for a way to treat diabetes by reactivating their insulin-producing beta cells, with limited success. Type 2 diabetes not only lack insulin, but they also produce too much glucagon. Both type 1 and type 2 diabetes are caused by insufficient numbers

of insulin-producing beta cells. In theory, transplantation of healthy beta cells—for type 1 diabetes in combination with immunosuppression to control autoimmunity—should halt the disease, yet researchers have not yet been able to generate these cells in the lab at high efficiency, whether from embryonic stem cells or by reprogramming mature cell types.

The "reprogramming" of related alpha cells into beta cells may one day offer a novel and complementary approach for treating type 2 diabetes. Treating human and mouse cells with compounds that modify cell nuclear material called chromatin induced the expression of beta cell genes in alpha cells, according to a new study that appears online in the *Journal of Clinical Investigation*.

"This would be a win-win situation for diabetics—they would have more insulin-producing beta cells and there would be fewer glucagon-producing alpha cells," said lead author Dr. Klaus H. Kaestner, professor of genetics at Penn's Perelman School of Medicine and member of Penn's Institute of Diabetes, Obesity and Metabolism. Alpha cells are another type of endocrine cell in the pancreas. They are responsible for synthesizing and secreting the peptide hormone glucagon, which elevates glucose levels in the blood.

The team discovered that many genes in alpha cells are marked by both activating- and repressing-histone modifications. This included many genes important in beta-cell function. In one state, when a certain gene is turned off, the gene can be readily activated by removing a modification that represses the histone.

Co-authors are Nuria C. Bramswig, postdoctoral fellow, Logan Everett, postdoctoral fellow, Jonathan Schug, FGC technical director, Chengyang Liu, adjunct assistant professor of surgery, Yanping Luo, researcher and Dr. Ali Naji, the J. William White Professor of Surgical Research, all from Penn, and Markus Grompe, Craig Dorrell, and Philip R. Streeter from the Oregon Health & Science University. The Oregon group developed a panel of human endocrine cell type-specific antibodies for cell sorting.

Penn Vet Team Uncovers a Pathway That Stimulates Bone Growth

Researchers from Penn's School of Veterinary Medicine have discovered that a protein called Jagged-1 stimulates human stem cells to differentiate into bone-producing cells. This protein could help both human and animal patients heal from bone fractures faster and may form the basis of treatments for a rare metabolic condition called Alagille syndrome.

The study, published in the journal *Stem Cells*, was authored by three members of Penn Vet's departments of Clinical Studies-New Bolton Center and Animal Biology: postdoctoral researchers Fengchang Zhu and Mariya T. Sweetwyne and associate professor Dr. Kurt Hankenson, who also holds the Dean W. Richardson Chair in Equine Disease Research.

Last November, on the promise of these and other findings, Dr. Hankenson and his former doctoral student Mike Dishowitz launched a company, Skelegen, through Penn's Center for Technology Transfer UPstart program. Skelegen's focus is to continue to develop and improve a system for delivering Jagged-1 to sites that require new bone growth, in the hope of eventually treating bone fractures and other skeletal problems.

Although human bones seem static and permanent, bone tissue actually forms and reforms throughout our lives. Cells called osteoblasts form bone and are derived from precursor cells known as mesenchymal stem cells, which are stored in bone marrow. These stem cells must receive specific signals from the body in order to become osteoblasts.

Prior research had identified a molecule called bone morphogenic protein, or BMP, as one of these proteins that drives stem cells to become bone-forming cells. As a result, BMP has been used clinically to help patients healing from broken bones or to perform spinal fusions without relying on patients' own bone tissue.

This molecular signaling pathway is found in most animal species and is known to play a role in stem cell differentiation. The researchers chose to investigate one of the proteins that acts in this pathway by binding to the Notch receptor, Jagged-1. The Penn Vet team has previously shown that Jagged-1 is highly expressed in bone-forming cells during fracture healing and that introducing Jagged-1 to mouse stem cells blocked the progression of stem cells to osteoblasts.

Next the researchers decided to see what happened when Jagged-1 was introduced to human stem cells. There they came upon a very different result.

"It was remarkable to find that just putting the cells onto the Jagged-1 ligand seemed sufficient for driving the formation of bone-producing cells," Dr. Hankenson said.

This finding aligns with other evidence linking Jagged-1 to bone formation. Patients with a rare disease known as Alagille syndrome frequently have

mutations in the gene that codes for Jagged-1. Individuals with this condition have problems with their metabolism that severely affect their livers but also tend to have challenges with their skeletal system and break bones easily.

Genome-wide association studies, which search large populations for mutations that may be linked with particular characteristics, have found a connection between mutations near the Jagged-1 gene and low bone mass.

Dr. Hankenson has multiple collaborations with other researchers at Penn to further investigate how manipulating the Jagged-1 protein may one day help patients. He is working with Dr. Kathleen Loomes, associate professor of pediatrics at CHOP, to study pediatric patients with Alagille syndrome to find out whether their bone abnormalities are indeed connected to Jagged-1 malfunctions.

In addition to partnering with Mr. Dishowitz to develop the technology to deliver Jagged-1 to bone repair sites, Dr. Hankenson is also collaborating with Dr. Jason Burdick, associate professor of bioengineering in SEAS, Dr. Jaimo Ahn and Dr. Samir Mehta, both assistant professors of orthopaedic surgery of the Perelman School of Medicine, to improve and implement this system.

Psych Professor puts New Wrinkle in Marshmallow Test

For decades, a psychological experiment known as the marshmallow test has captured the public's imagination as a marker of self-control and a predictor of future success. In the test, a researcher presents a child with a marshmallow and leaves him or her alone for a few minutes. If the child can resist eating the marshmallow until the researcher returns, he or she can have two marshmallows instead of one.

Hidden cameras show that some kids wait patiently for the second treat, while others twist themselves into knots resisting temptation, only to eventually cave in and gobble up the sole marshmallow.

This test of delayed gratification has been found to be better correlated with scholastic performance than traditional IQ tests, but a new study shows that waiting for a bit and then giving up can actually be a rational decision.

Dr. Joseph Kable, assistant professor in psychology in SAS, studies how people make value-based decisions, especially when they require valuing something in the present with something else in the future. When trying to replicate the marshmallow test in his own research, he found that a key fact had been glossed over in both popular and academic discussions: The participants don't know how long it will be before the researcher returns.

"The kids' responses seem illogical—if you decided to wait in the first place, why wouldn't you wait the whole way through?" Dr. Kable said. "Stopping in the middle seems self-defeating, but when you exert self-control in the real world, you don't know when it's going to pay off."

In addition to analyzing data from earlier marshmallow test studies, Dr. Kable and post-doc Joseph McGuire conducted their own survey-based research to see how people estimate the lengths of waiting times in different situations. The researchers asked participants to imagine themselves in a variety of scenarios, such as watching a movie, practicing the piano, or trying to lose weight. Participants were told the amount of time they had been at the activity, and were asked to respond how long they thought it would be until they reached their goal or the end.

"Our intuition is that when we are waiting for something, the longer we wait, the closer and closer we get to that thing, which is what we see when we ask people about familiar things, like how long a movie will last," Dr. Kable said. "But what we've found is that if you don't know anything about when the outcome will occur, the longer you wait the more you think you're getting farther and farther away from that outcome."

While the marshmallow test remains a good predictor of who is better or worse at delaying gratification, Dr. Kable's research suggests that the mechanism behind that ability needs to be reinterpreted. It may give some hope to the impatient.

"This is exciting to us because it suggests a way to get people to persist to the end," Dr. Kable said. "You need to give them experiences that provide them with the right kinds of expectations."

Two-pronged Immune Cell Approach: Could Lead to a Universal Flu Shot

Seasonal epidemics of influenza result in nearly 36,000 deaths annually in the United States, according to the Centers for Disease Control. Current vaccines against the influenza virus elicit an antibody response specific for proteins on the outside of the virus, specifically the hemagglutinin (HA) protein.

Yearly vaccines are made by growing the flu virus in chicken eggs. The viral-enveloped proteins, including HA, are cleaved off and used as the vaccine, but vary from year to year, depending on what flu strains are prevalent. However, high mutation rates in envelope HA proteins result in

the emergence of new viral types each year, which elude neutralization by preexisting antibodies in the body (specifically the HA proteins' specific receptor binding sites that are the targets of neutralizing antibodies). On the other hand, other immune cell types are capable of mediating protection through recognition of other, more conserved parts of HAs or highly conserved internal proteins in the influenza virus.

Dr. E. John Wherry, associate professor of microbiology and director of the Institute for Immunology at the Perelman School of Medicine, and colleagues, report in *PLOS Pathogens* that influenza virus-specific CD8+ T cells or virus-specific non-neutralizing antibodies are each relatively ineffective at conferring protective immunity alone. But, when combined, the virus-specific CD8+ T cells and non-neutralizing antibodies cooperatively elicit robust protective immunity.

This synergistic improvement in protective immunity is dependent, at least in part, on other immune cells—lung macrophages and phagocytes. An implication of this work is that immune responses targeting parts of the virus that are not highly variable can be combined for effective protection.

"The two-pronged approach is synergistic, so by enlisting two suboptimal vaccine approaches, we achieved a better effect than each alone in an experimental model," said Dr. Wherry. "Now, we are rethinking past approaches and looking for ways to combine T-cell vaccines and antibody vaccines to make a more effective combined vaccine."

"Overall, our studies suggest that an influenza vaccine capable of eliciting both CD8+ T cells and antibodies specific for highly conserved influenza proteins may be able to provide protection in humans, and act as the basis for a potential 'universal' vaccine," said Dr. Wherry.

These results suggest a novel strategy that could potentially form a primary component of a universal influenza vaccine capable of providing long-lasting protection.

Co-authors include Brian J. Laidlaw, Vilma Decman, Mohammed-Alkhatim A. Ali, Michael C. Abt, Amaya I. Wolf, Laurel A. Monticelli, Krystyna Mozdzanowska, Jill M. Angelosanto, David Artis, and Jan Erikson.

Tweaking Gene Expression to Repair Lungs

Lung diseases such as asthma and chronic obstructive pulmonary disease (COPD) are on the rise, according to the American Lung Association and the National Institutes of Health.

These ailments are chronic, affect the small airways of the lung, and are thought to involve an injury-repair cycle that leads to the breakdown of normal airway structure and function. For now, drugs for COPD treat only the symptoms.

"A healthy lung has some capacity to regenerate itself like the liver," noted Dr. Ed Morrissey, professor of medicine and cell and developmental biology and the scientific director of the Penn Institute for Regenerative Medicine at Penn's Perelman School of Medicine. "In COPD, these reparative mechanisms fail."

Dr. Morrissey is looking at how epigenetics controls lung repair and regeneration. Epigenetics involves chemical modifications to DNA and its supporting proteins that affect gene expression. Previous studies found that smokers with COPD had the most significant decrease in one of the enzymes controlling these modifications, called HDAC2.

Using genetic and pharmacological approaches, Dr. Morrissey's team showed that development of progenitor cells in the lung is specifically regulated by the combined function of two highly related HDACs, HDAC1 and 2. Dr. Morrissey and colleagues published their findings in the February 25 issue of *Developmental Cell*.

By studying how HDAC activity, as well as other epigenetic regulators, controls lung development and regeneration, they hope to develop new therapies to alleviate the unmet needs of patients with asthma and COPD.

HDAC1/2 deficiency leads to a loss of expression of the key transcription factor, a protein called Sox2, which in turn leads to a block in airway epithelial cell development. This is affected in part by deactivating a repressor of expression (derepressing) of two other proteins, Bmp4 and the tumor suppressor Rb1 targets of HDAC1/2.

In the adult lung, loss of HDAC1/2 leads primarily to increased expression of inhibitors of cell proliferation including the proteins Rb1, p16, and p21. This results in decreased epithelial proliferation in lung injury and inhibition of regeneration.

Together, these data support a critical role for HDAC-mediated mechanisms in regulating both development and regeneration of lung tissue. Since HDAC inhibitors and activators are currently in clinical trials for other diseases, including cancer, such compounds could be tested in the future for efficacy in COPD, acute lung injury, and other lung diseases that involve defective repair and regeneration, said Dr. Morrissey.

Benefits Open Enrollment: Find Out What's Changing

Benefits Open Enrollment is right around the corner, and we want to give you plenty of time to consider what healthcare options will work best for you in the new plan year. Below is a list of changes for the 2013–2014 plan year, and how you can learn more about this year's Open Enrollment period.

Aetna Choice POS II Medical Plan

The Aetna Choice POS II plan will be more appealing than ever: deductibles and out-of-pocket maximums are being reduced. For in-network coverage, the deductible will decrease by \$200 per individual (\$600 per family), while the out-of-pocket maximum will decrease by \$800 per individual (\$2,400 per family). For out-of-network coverage, the deductible will decrease by \$200 per individual (\$600 per family), while the out-of-pocket maximum will decrease by \$600 per individual (\$1,800 per family).

Keystone HMO Medical Plan

Some services under the Keystone HMO plan will now be subject to a deductible and coinsurance. To maintain the low payroll deduction for this plan, the plan design will undergo some adjustments. The familiar copay structure will still be used for office visits and most outpatient services, but other services such as inpatient care will be subject to a 10% coinsurance after a deductible (\$100 individual/\$200 family). Preventive care will continue to be covered at 100% with no copays or deductible. The plan will have two distinct out-of-pocket maximums: one for copays and one for deductibles and coinsurance. Out-of-pocket maximums protect you by limiting how much you pay out of your own pocket each year.

The copay for radiology procedures will increase. Routine radiology procedures do not require prior authorization (e.g., chest x-ray), while complex radiology procedures do (e.g., MRI, CT scan, PET scan). The copay for routine services will increase from \$30 to \$40, while the copay for complex services will increase from \$60 to \$100.

Prescription

Penn's prescription drug carrier is changing names: Express Scripts/Medco. Medco and Express Scripts have come together as one company. The combined company is in the process of updating its name to Express Scripts on communications, but during the

transition you will continue to see the Medco name. The company merger will *not* affect your prescription benefits in any way. Please continue to use your current Medco ID card and refill order forms, as well as the same website and toll-free number.

Penn Faculty Practice Dental Plan

Several enhancements will be made to the Penn Faculty Practice dental plan, without increasing premiums. There will no longer be a maximum annual benefit specific to implants; instead, they will be covered at 50% subject to the overall annual plan maximum. Occlusal nightguards will be covered at 50%. Coverage for Invisalign will increase. Implants will be covered if the tooth was extracted while the participant was covered by a University plan within the last 60 months.

Dependent Care Flexible Spending Account

The waiting period to participate in the Dependent Care Flexible Spending Account (FSA) will be removed. Currently, eligibility occurs after one year of continuous service and attaining age 21. As of July 1, 2013, benefits-eligible faculty and staff will not have to meet age and service requirements to participate.

Attend an Open Enrollment Fair

Get more information about the 2013–2014 Open Enrollment period at this year's Open Enrollment Fairs. Representatives from Penn's healthcare providers and administrators will be on site to share information and answer questions. Learn about medical plans, prescription drug coverage, dental plans, vision coverage, flexible spending accounts and the Penn Benefits Center. At the Open Enrollment and Health Fair at Houston Hall on Tuesday, April 16, you can also take advantage of free health screenings and wellness information on several topics.

Date	Time	Location
Tuesday, April 16	10 a.m.–2 p.m.	Houston Hall, Hall of Flags
Thursday, April 18	10 a.m.–2 p.m.	New Bolton Center, Alumni Hall

For more Open Enrollment information, visit the Human Resources website at www.hr.upenn.edu/myhr/benefits/health/openenrollment

Human Resources: Upcoming Programs

Quality of Worklife Workshops

Dealing with the demands of work and your personal life can be challenging. These free workshops, sponsored by Human Resources and led by experts from Penn's Employee Assistance Program and Quality of Worklife Department, offer information and support for your personal and professional life challenges. For complete details and to register, visit www.hr.upenn.edu/myhr/registration or contact HR at (215) 573-2471 or gstull@upenn.edu

Dealing with Emotions Professionally; April 10; noon–1 p.m.; free. Discover how your emotions affect your personal and professional life and how you can harness them to generate positive outcomes. You will learn how emotions affect your perspective and contribute to your personal and professional decision-making processes. You will also learn techniques for managing your emotions for the best possible outcomes.

Healthy Living Workshops

Get the tools you need to live well year-round. From expert nutrition and weight loss advice to exercise and disease prevention strategies, we can help you kick-start your body and embrace a healthy lifestyle. These free workshops are sponsored by Human Resources. For complete details and to register, visit www.hr.upenn.edu/myhr/registration and choose Health Promotions from the Browse by Catego-

ry section. Or contact HR at (215) 898-5116 or vyasr@upenn.edu

Creating a Safe and Healthy Home; April 11; noon–1 p.m.; free. Most people spend at least half the day in their home. That means you need to make sure your house is healthy and hazard-free. Find out how to make your home a safe and healthy place. You will discover how to avoid injuries and reduce triggers for certain illnesses like asthma and allergies. You will also get hands-on practice creating safe, eco-friendly cleaning products and get recipes for making all-purpose cleaners and air fresheners. This workshop will be led by Ashlee Halbritter, health educator for Campus Health, Penn Student Health Services.

Cross-Cultural Miscommunication: Its Effects on Health and Wellness; April 23; noon–1 p.m.; free. Does your stress level rise when you're struggling to communicate with someone? Miscommunication happens all the time, and it's not uncommon at a place like Penn that's brimming with people from all over the world. But that also means that cultural barriers can take a toll on your wellness. Find out how to stay stress-free when you're communicating on the job. You will learn how poor communication can impact your wellness and what to do to keep your physical and mental health in check. This workshop will be led by Dr. Rodolfo R. Altamirano, director of International Student and Scholar Services.

—Division of Human Resources

One Step Ahead

Security & Privacy
Made Simple

Another tip in a series provided by the Offices of Information Systems & Computing and Audit, Compliance & Privacy.

Keep Your Identity Safe When Filing Taxes This Year

Nothing takes the sting out of filing taxes as much as the convenience that comes with filing your returns electronically. It's anticipated that nearly 80% of all returns filed by Pennsylvania tax payers this year will be filed electronically with slightly higher rates in neighboring states like New Jersey and Delaware.

ThreatMetrix, a leading provider of cybercrime prevention solutions, has identified five precautions taxpayers can take to safeguard their accounts and identity while e-filing¹:

1. *Make Security Part of the Decision Process:* Choose a tax preparation service or website that provides bank level security, such as two-factor authentication and anti-malware protection.

2. *Keep Your Eye on the Address Bar:* Make sure any web form you submit is HTTP Secure. An easy indicator is an "s" found after "http" in a web address or a padlock icon typically found to the left of the web address. In addition, make sure the address of each page is a valid IRS or tax preparation website.

3. *Watch for Suspicious Emails and Pop-ups:* If a cybercriminal suspects you are filing taxes online, they may send you a "phishing" email asking for additional personal information. Although these may look like authentic requests, do not respond. No legitimate bank or tax preparation service would ask a user to enter sensitive information into a pop-up screen or into a link provided via email.

4. *Safeguard Your Password:* If you set up a username and password on an e-filing website, make sure your password is unique from that of any other personal accounts—especially social networks such as Facebook and Twitter. If your password is the same across multiple profiles and one gets compromised, all your accounts will be at risk.

5. *Update Your Devices:* Even if you know the tax fraud facts and are cautious while e-filing, malware might still be on your computer to intercept data from legitimate websites. Update the anti-virus and malware detection software on any device on which you will enter tax information before you get started.

Exercising some caution when filing this year can help ensure that the only party collecting from you is the IRS.

¹ Full article available at: <http://threatmetrix.com/four-in-five-taxpayers-are-at-risk-of-identity-theft/>

For additional tips, see the One Step Ahead link on the Information Security website: www.upenn.edu/computing/security/

Update

March AT PENN

CORRECTION

29 *Is US Government Debt Different?*; Franklin Allen, finance; Charles Mooney, law; David Skeel, law; noon; rm. 209, College Hall (Social Science and Policy Forum).

FITNESS/LEARNING

29 *I'm Not _____ Enough*; workshop on de-nouncing stereotypes; related photo booth on Locust Walk all week; 1 p.m.; F70, Jon M. Huntsman Hall (Latino Coalition, La Casa Latina).

ON STAGE

27 *A Night of Comedy*; Mark Viera, stand-up comedian; 6:30 p.m.; Hall of Flags, Houston Hall (Latino Coalition, La Casa Latina).

30 *Latin Music Karaoke Night*; 8:30 p.m.; Radian Sky Lounge, the Radian (Latino Coalition, La Casa Latina).

SPECIAL EVENT

30 *4th Annual University of Pennsylvania Powwow*; celebration of Native American culture; 11 a.m.-5 p.m.; Hall of Flags, Houston Hall; info.: www.nativesatpenn.tumblr.com (Natives@Penn).

Philly Literary Bike Tour; visit literary landmarks around the city; 2 p.m.; Kelly Writers

Portable 3-Year Academic Calendar



Did you know that Penn's new 3-year academic calendar is available on *Almanac's* website, Penn's mobile website and as a printable PDF?

You can also get the calendar to sync with MS Outlook, Apple iCal, Google calendar and your mobile devices by visiting www.upenn.edu/almanac/acadcal.html and following the instructions from the link at the top of the page.

House; register: <http://literarybiketour-zvents.eventbrite.com> (KWH).

31 *Soccer Discussion/Human Foosball*; panel discussing soccer followed by games on a life-size inflatable foosball court; 1 p.m.; Golkin Room, Houston Hall (Latino Coalition, La Casa Latina).

TALKS

26 *Cross Border Deals, Technology... and Global Convergence*; Charles Chao, SINA; Frederick Cooper, Toll Brothers; Peter Linneman, Wharton; 2:30 p.m.; Ambani Auditorium, JMHH (Wharton).

Pennsando (Thinking) About the Future; a panel of Latino leaders share stories; 7 p.m.; Ben Franklin Room, Houston Hall (Latino Coalition, La Casa Latina).

27 *The Zillow Story*; Spencer Rascoff, Zillow; 4:30 p.m.; Ambani Auditorium, JMHH (Wharton).

Resistance from the Margins; Vincent Brown, Harvard University; Brian DeLay, University of California, Berkeley; Eve Troutt Powell, history; 5 p.m.; rm. 209, College Hall (Clio: The Penn History Graduate Student Group).

28 *Wharton Leadership Lecture*; Roger Crandall, MassMutual; noon; 8th fl., Jon M. Huntsman Hall (Wharton).

Meet the Creator of Big Bugs; artist David Rogers discusses his upcoming exhibit at Morris Arboretum; 4:30 p.m.; Upper Gallery, Widener Visitor Center, Morris Arboretum; \$5/non-members, free/members; register: <https://online.morrisarboretum.org/page.aspx?pid=470> (Arboretum).

Title TBA; Carlos Andrés Gomez, writer; 7 p.m.; Amado Room, Irvine Auditorium (Latino Coalition, La Casa Latina).

AT PENN Deadlines

The March AT PENN calendar is online at www.upenn.edu/almanac. The deadline for the weekly Update is each Monday for the following week's issue. The deadline for the May AT PENN calendar is April 16.

Information is on the sponsoring department's website. Sponsors are in parentheses. For locations, call (215) 898-5000 or see www.facilities.upenn.edu.



The 4th Annual Penn Powwow: March 30

On Saturday, March 30, Natives at Penn and the Greenfield Intercultural Center will host the 4th Annual University of Pennsylvania Powwow. The event, which will be held in the Hall of Flags in Houston Hall, features demonstrations of Native American singing and dancing; there will also be a crafts sale and frybread. Attendees can compete in dance contests for cash prizes, or a "Two-Step Special" for candy prizes. The Powwow will be held from 11 a.m.-5 p.m. and is free and open to the public. For more information, contact Natives at Penn at www.nativesatpenn.tumblr.com, via email at nativesatpenn@gmail.com or by phone at (215) 898-3358.

Almanac

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The University of Pennsylvania Police Department Community Crime Report

About the Crime Report: Below are all Crimes Against Persons and Crimes Against Society from the campus report for **March 11-17, 2013**. Also reported were 18 Crimes Against Property (6 thefts, 2 acts of vandalism, 1 act of fraud, 1 weapons citation, 3 acts of drunkenness, and 5 other offenses). Full reports are available at: www.upenn.edu/almanac/volumes/v59/n26/creport.html. Prior weeks' reports are also online. —Ed.

This summary is prepared by the Division of Public Safety and includes all criminal incidents reported and made known to the University Police Department between the dates of **March 11-17, 2013**. The University Police actively patrol from Market Street to Baltimore Avenue and from the Schuylkill River to 43rd Street in conjunction with the Philadelphia Police. In this effort to provide you with a thorough and accurate report on public safety concerns, we hope that your increased awareness will lessen the opportunity for crime. For any concerns or suggestions regarding this report, please call the Division of Public Safety at (215) 898-4482.

03/12/13	1:26 PM	4508 Chestnut St	Unwanted phone calls received
03/12/13	9:08 PM	3600 Chestnut St	Female assaulted by unknown male/Arrest
03/12/13	10:10 PM	100 S 36th St	Female assaulted by unknown male/Arrest
03/12/13	10:49 PM	3600 Chestnut St	Officer assaulted by defendant/Arrest
03/12/13	10:52 PM	3600 Chestnut St	Complainant assaulted/Arrest
03/16/13	4:09 PM	3935 Walnut St	Male causing a disturbance/Citation issued

18th District Report

Below are all Crimes Against Persons from the 18th District: 8 incidents with 3 arrests (4 aggravated assaults and 4 robberies) were reported between **March 11-17, 2013** by the 18th District covering the Schuylkill River to 49th Street & Market Street to Woodland Avenue.

03/11/13	4:21 PM	4900 Walnut St	Aggravated Assault
03/12/13	9:05 PM	100 S 36th St	Aggravated Assault/Arrest
03/12/13	9:08 PM	3600 Chestnut St	Aggravated Assault/Arrest
03/12/13	9:08 PM	3600 Chestnut St	Aggravated Assault/Arrest
03/12/13	11:57 PM	4619 Chester Ave	Robbery/Arrest
03/13/13	1:43 AM	4500 Larchwood Ave	Robbery/Arrest
03/13/13	1:45 AM	4233 Osage Ave	Robbery
03/14/13	8:15 AM	4901 Chestnut St	Robbery

The University of Pennsylvania's journal of record, opinion and news is published Tuesdays during the academic year, and as needed during summer and holiday breaks. Its electronic editions on the Internet (accessible through the Penn website) include HTML, Acrobat and mobile versions of the print edition, and interim information may be posted in electronic-only form. Guidelines for readers and contributors are available on request and online.

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Some Big Bugs: Coming to Morris Arboretum this Spring

On April 1 visitors to the Morris Arboretum may think nature is playing an April Fool's joke on them as *Big Bugs* spring to life all over the Arboretum's 92-acre garden. These amazing bugs are the creation of Long Island sculptor David Rogers and are actually immense garden sculptures made from materials like fallen hardwood trees, standing deadwood, and willow saplings. Imagine a 16-foot, 1,200 pound praying mantis, a parade of 25-foot long ants, a dragonfly with a wingspan of 17 feet, or a 4-foot spider spinning a 15-foot web, to name just a few of the *Big Bugs*. Morris Arboretum will host 11 *Big Bugs* installed throughout the Arboretum's garden from April 1 through August 31.

Each *Big Bug* at Morris Arboretum is a unique creation with its own whimsical character. There will be three Big Ants, one Praying Mantis, one Dragonfly, one Damsel Fly, one Spider with web, one Assassin Bug, one XL Lady Bug, one Grasshopper, and one Daddy Long-Legs. Visitors will have to explore the entire Morris Arboretum garden to discover them all.

The bugs are designed to awe and to educate, reminding us in a big way about the vital role that insects play in the environment, and of their diversity. "The insect world makes up a whole team of hidden gardeners," said David Rogers. "We take it for granted that they exist." With his *Big Bugs* displayed everywhere you look at the Morris Arboretum, the insects will be hard to ignore. But luckily, they won't be munching on the plants. Events and educational activities will accompany the exhibit.

- A *Grand Opening event* will take place on Saturday, April 6, 11 a.m.-2 p.m. Visitors are invited to dress as bugs for a parade around the garden. There will be bug-inspired music, a bug craft activity, and *Big Bugs* scavenger hunt maps. Also on site from 11 a.m.-12:30 p.m. will be expert naturalists from The Academy of Natural Sciences with a variety of insects, some of their relatives (perhaps a tarantula or scorpion!), as well as some impressive mounted specimens.

- In conjunction with the *Philadelphia Science Festival* (April 18-28), Morris Arboretum will host *Bugs a-Brewing at Iron Hill Brewery* in Chestnut Hill on Monday, April 22 from 6:30-8 p.m. Arboretum experts will discuss and field questions on topics that include insects that threaten our native tree population to bugs that 'bug' our plants to those that are beneficial and should be protected.

Visit www.morrisarboretum.org for updates and more details. The *Big Bugs* exhibit by David Rogers is made possible by the Madeleine K. Butcher Fine Arts Endowment.

Big Bugs events will keep visitors entertained all summer long, from educational offerings to bug exercises to a bug tasting. Here is a sampling:

- *Insect-Inspired Art: Big Bugs Art Series* (ages 6-12) Four Sundays, April 14-May 5, 1-2:45 p.m. This four-week art series will take inspiration from the David Rogers' *Big Bugs* exhibit, drawing on location throughout the Arboretum and then returning to the classroom to paint, create metal embossing and sculptures based on what was observed in the garden. In the process, children will learn about the important role of insects in the web of life, as well as the historic influence insects have had on cultures and civilizations throughout history. \$100; \$85/members. To register online go to <https://online.morrisarboretum.org/classes> or call (215) 247-5777 x125.

- Drop in to participate in the *Garden Discovery Series* on the first Saturday of every month from April through October, 11 a.m. to 3 p.m. No reservations required; free with regular garden admission. Visitors can experience hands-on fun at the Garden Discovery Table, located on the fabulous *Out on a Limb* canopy walk, high up in the treetops. Visitors of all ages will discover new and fascinating facts about David Rogers' *Big Bugs* and their smaller counterparts crawling throughout the garden, as well as exploring other fun science topics. Creative Discovery Table visitors will have the chance to create a cool craft to take home. Here is the schedule: April 6—*Spiders, Bugs & Beetles*; May 4—*Marvelous Metamorphosis*; June 1—*Pollination Station*; July 6—*Discover Fireflies*; August 3—*Clever Camouflage*. Free with admission.

- *Let's Move—Be a Bug* is another monthly series set for the third Saturday of each month, May through August from 11 a.m. to 1 p.m. Giggle your way through this bug boot camp as you learn how to crawl like an ant, hop like a grasshopper, float like a dragonfly, and spin like a spider. Parents—keep up with the kids and learn these fun moves too. These events are also free with regular garden admission and require no reservations.

- Try something completely different with the Arboretum's evening *Bug Crawl—Food & Drink Pairings for the 21st Century* on Wednesday, July 17. The concept of bugs as a meal is not just a novelty for the adventurous eater, but a sustainable way to feed the earth's growing population. Guests will learn about the science behind this cuisine as they sample insect edibles paired with complementary beer and wine at several *Big Bug* stations. Additional fee (TBA) for this event.

This spring and summer, visitors will surely experience big fun with *Big Bugs* at Morris Arboretum in Chestnut Hill.



Above, a dragonfly with a wingspan of 17 feet, one of the 11 large creatures that will inhabit the grounds of the Morris Arboretum. Meet the creator of *Big Bugs* on Thursday, March 28 as artist David Rogers discusses his upcoming exhibit at the Arboretum; 4:30 p.m.; Upper Gallery, Widener Visitor Center, Morris Arboretum; \$5/non-members, free/members; register: <https://online.morrisarboretum.org/page.aspx?pid=470>



One of the three 25-foot long ants that will be poised to pounce throughout the spring and summer at the Morris Arboretum, part of the *Big Bugs* exhibit.

Photo by Paul W. Meyer