

# UNIVERSITY OF PENNSYLVANIA Almanac

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## Mary Ersek: New Endowed Term Chair at Penn Nursing

Mary Ersek, professor of palliative care in the department of biobehavioral health sciences, has been appointed the new Killebrew-Censits Chair in Undergraduate Education effective July 1.

Dr. Ersek also holds a clinical appointment with the Philadelphia Veteran's Administration Medical Center, where most recently, she served as director of the Department of Veterans' Affairs' PROMISE



Mary Ersek

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## Nancy Bentley: Donald T. Regan Professor of English

Dean Steven J. Fluharty is pleased to name Nancy Bentley the Donald T. Regan Professor of English in Penn Arts and Sciences.

Dr. Bentley is a distinguished scholar of American literary and cultural studies. Her work, including the monographs *Frantic Panoramas: American Literature and Mass Culture 1870-1920* and *The Ethnography of Manners*, examines and contextualizes American literature and culture in unprecedented interdisciplinary ways.



Nancy Bentley

The recipient of a Lindback Award for Distinguished Teaching (*Almanac* April 17, 2007), Dr. Bentley has also taught and written about

(continued on page 2)

## \$9.25 Million Grant from the Paul G. Allen Family Foundation to Study Cellular Mechanisms of Concussion and Ways to Improve Recovery

The Paul G. Allen Family Foundation announced that it has awarded a \$9.25 million grant to Penn researchers to study the underlying mechanisms of concussion and help uncover potential clinical interventions that could improve recovery.

The grant was awarded to a team of researchers led by David F. Meaney, the Solomon R. Pollack professor and chair of bioengineering in the School of Engineering and Applied Science, and Douglas H. Smith, the director of the Center for Brain Injury and Repair and the Robert A. Groff professor of neurosurgery in the Perelman School of Medicine. The interdisciplinary project takes a comprehensive and data-driven look at what

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## Trevor C. Lewis: Vice President of Budget and Management Analysis

President Amy Gutmann and EVP Craig Carnaroli have announced the appointment of Trevor C. Lewis as the University's Vice President for Budget and Management Analysis, effective July 1. He will succeed Bonnie Gibson who has been in that role since 2003 (*Almanac* November 16, 2004) and is retiring at the end of June.

In his current role, as the chief of academic finance and planning for the Office of the Pro-

vost, Mr. Lewis has direct responsibility for finance, budget, human resources, space and administration for approximately 40 administrative units, staff of 1,050, and \$150 million in budget resources. With over 20 years of leadership experience in higher education, he brings his



Trevor Lewis

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## Penn Design Teaching Awards Perkins Distinguished Teaching Award for Standing Faculty

Randy Mason, associate professor of historic preservation and department chair, teaches courses on historic preservation planning, urban conservation, history and cultural landscape studies. Dr. Mason's research interests include theory and methods of preserva-

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Randy Mason

## José-Víctor Ríos-Rull: Lawrence R. Klein Professor of Economics

Dean Steven J. Fluharty is pleased to name José-Víctor Ríos-Rull the Lawrence R. Klein Professor of Economics in SAS.

Dr. Ríos-Rull is an influential scholar whose work is shaping the fields of macroeconomics as it informs discourse on economic policy in the US and other high-income economies. His research builds quantitative

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José-Víctor Ríos-Rull

## Penn Law Teaching Awards



Jean Galbraith

Six members of the Penn Law faculty are being recognized this year for excellence in teaching: Jean Galbraith, by virtue of a vote taken among the members of the J.D. Class of 2017, receives the Harvey Levin Memorial Award for Teaching Excellence.

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## GSE Excellence in Teaching Award

Howard Stevenson is the recipient of the GSE Excellence in Teaching Award. Dr. Stevenson is the Constance Clayton Professor of Urban Education and executive director of the Racial Empowerment Collaborative. His students have noted his genuine and supportive approach, his balanced perspective, and his devotion to matters of racial literacy and racial empowerment.



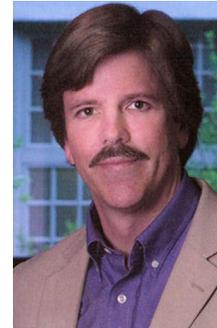
Howard Stevenson

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David Meaney



Douglas Smith

# Deaths

## John T. Carpenter Jr., Obstetrics/Gynecology

John T. Carpenter Jr., C'48, M'52, a retired obstetrician and gynecologist who delivered more than 5,000 babies and taught for 30 years at the University of Pennsylvania's School of Medicine, died on May 5 at age 89.

Dr. Carpenter specialized in natural childbirth, using hypnosis as an alternative to pain-killers. He established natural delivery birthing rooms at the Hospital of the University of Pennsylvania and at Bryn Mawr Hospital. His innovations in childbirth management included allowing fathers into the delivery room and allowing mother-baby bonding in the hospital and early discharge from the medical center.

Dr. Carpenter graduated from Radnor High School in 1944 and earned a bachelor's degree in 1948 and a medical degree in 1952, both at Penn. He completed an internship at Pennsylvania Hospital, served as an Army medical officer for two years and then began to practice in the Philadelphia area.

He joined the School of Medicine in 1955 as an assistant instructor of obstetrics-gynecology and became an instructor in 1958. He became an assistant professor in 1970, a role he held until he left in 1982.

Dr. Carpenter also maintained a solo OB/GYN practice in Bryn Mawr from 1958 until his retirement in 1997.

He is survived by his sons, John T., Geoffrey and Robert; five step-children; seven grandchildren; and a best friend and long-time travelling companion, Marian Houston. In addition, he is survived by former wives, Jean Dana and Carol Cherin.

Donations in Dr. Carpenter's name may be made to the Cape May Observatory, [www.njaudubon.org/SectionCapeMayBirdObservatory/CMBOHome.aspx](http://www.njaudubon.org/SectionCapeMayBirdObservatory/CMBOHome.aspx) or the Washington Memorial Chapel Foundation, <http://wmchapel.org/heritage/heritage-donation-form/>

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## Nancy Bentley: Donald T. Regan Professor of English

the history of American and African American literature, and she is currently writing a book on New World kinship and the American novel. Her service includes her work as chair of the department of English as well as her membership on the Faculty Senate's Committee on Academic Freedom and Responsibility and the Penn Arts and Sciences Personnel Committee.

This professorship is named for the late Donald T. Regan, HON'72 who had an impressive career as an executive at Merrill Lynch, secretary of the treasury, and chief of staff for President Ronald Reagan. He also served as chair of the University's Board of Trustees. The chair was established by Merrill Lynch and the friends of the late Mr. Regan in 1981 to recognize a distinguished scholar in English who has a strong commitment to undergraduate teaching, particularly the teaching of writing. This chair reflects Mr. Regan's interest in the English language and his belief that the development of a student's use of language is one of the most important ends of higher education.

## Arthur A. Dole, Education

Arthur Alexander Dole, Jr., professor emeritus in the Graduate School of Education, died on May 16. He was 99. Dr. Dole was known by many nicknames, including "Danny," "Red," "Old Dole" and "Art."

He graduated from Antioch College in 1946 and completed a PhD in psychology at Ohio State University in 1951. He took a position at the University of Hawaii and lived in Hawaii for the next 15 years.

He joined Penn in 1967 as a professor of education in the Graduate School of Education. He was also chair of the department. Throughout his career at Penn, he chaired more than 100 doctoral dissertations and authored more than 100 professional publications. He joined the 25-Year Club in 1992 (*Almanac* November 3, 1992). He retired and became professor emeritus that same year.

Dr. Dole was a conscientious objector to World War II and advocated for non-violence throughout his life. He contributed a chapter to the book, *A Few Small Candles: War Resisters of World War II Tell Their Stories* by Larry and Lenna Mae Gara, published in 1999.

After his retirement, he and his wife, Majorie (Welsh) moved to Trenton, Maine.

He is survived by his wife; children, Peter (Jill), Steven (Molly) and Barbara Acosta; grandchildren, Isaac, Nathan, Sam, Alyssa, Margarita and Gabriela; and great-grandchildren, Maya and Caroline.

A celebration of Dr. Dole's life is planned for October. In lieu of flowers, donations may be made to the American Friends Service Committee, [www.afsc.org/](http://www.afsc.org/) or the Fellowship of Reconciliation, <https://forusa.org/>

## To Report A Death

*Almanac* appreciates being informed of the deaths of current and former faculty and staff members, students and other members of the University community. Call (215) 898-5274 or email [almanac@upenn.edu](mailto:almanac@upenn.edu)

However, notices of alumni deaths should be directed to the Alumni Records Office at Room 517, Franklin Building, (215) 898-8136 or email [record@ben.dev.upenn.edu](mailto:record@ben.dev.upenn.edu)

## Trustees' Annual Meetings: June 15 & 16

Meetings will be held at the Inn at Penn.  
Thursday, June 15

8:30-10 a.m.

Local, National, & Global Engagement Committee  
10:15-11:45 a.m.

Facilities & Campus Planning Committee  
1:45-3:15 p.m.

Student Life Committee  
3:30-5:15 p.m.

Academic Policy Committee  
Budget & Finance Committee  
Friday, June 16

11:30 a.m.-12:30 p.m.

Stated Meeting of the Trustees

Contact the Office of the University Secretary at (215) 898-7005 with your plans to attend.

## Jean Whelan, Nursing

Jean C. Whelan, GR'00, GR'02, a Penn Nursing faculty member, died on March 7. She was 68.

Ms. Whelan joined Penn Nursing in 1987 as a teaching assistant and later worked as a research assistant. In 2009, she became assistant director of the Barbara Bates Center for the Study of the History of Nursing, and in 2012 she became an adjunct associate professor.

She joined the 25-Year Club in 2012 (*Almanac* October 2, 2012).

Ms. Whelan was named president of the American Association for the History of Nursing (AAHN) in 2012 (*Almanac* October 16, 2012). She received the 2013 Legacy Award from Penn Nursing Alumni in 2014 and the Mary M. Roberts Award from the AAHN in 2015.

She was preceded in death by her daughter, Emily Tova Gilbert.

She is survived by her husband, Mark Gilbert; son, Paul Gilbert; and siblings, Anne, Mary-Jo Karpov, Tishi Mann and John.

Contributions in her memory may be made to the American Association for the History of Nursing, [www.aahn.org](http://www.aahn.org)

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## Mary Ersek: New Endowed Term Chair at Penn Nursing

Center, a national quality improvement program aimed at enhancing the quality of end-of-life care and outcomes for veterans across 150 medical centers. She is a national and international expert on pain and palliative care for older adults, with an emphasis on the nursing home setting. Dr. Ersek has a successful record of funding from the Veterans Health Administration (VHA), the Center for Medicare and Medicaid Innovation, and the National Institutes of Health, and is well published in her area of expertise resulting in her service on the IOM Expert Panel on Advanced Dementia; chair of the National Nursing Research Field Advisory Committee of the VHA; and Editorial Board member of the *Journal of Palliative Medicine*. She is a Fellow in both the American Academy of Nursing and Palliative Care Nursing from the Hospice and Palliative Nurses Association (HPNA). She is the also the recipient of the Distinguished Research Award from the HPNA.

Dr. Ersek's teaching and mentoring reputation garnered her the Dean's Award for Exemplary Teaching in 2011. She is a leader in interdisciplinary geriatric palliative care education, and is the author of the original *End-of-Life Nursing Education Consortium (ELNEC) Geriatric Curriculum*.

In 1991, Pedie Killebrew, a member of Penn Nursing's Board of Overseers from 1987-2010, joined with fellow Overseer Richard Censits to create the Killbrew-Censits Chair in Undergraduate Education. Together, their funding provided support for "a faculty member who makes outstanding contributions to education."



John Carpenter



Arthur Dole



Jean Whelan

## Ronald P. DeMatteo: Chair of Surgery at PSOM

Ronald P. DeMatteo has been named chair of the department of surgery in Penn's Perelman School of Medicine. Dr. DeMatteo is a surgical oncologist who is nationally recognized for his expertise in treating liver, gallbladder and bile duct and pancreatic diseases, and abdominal sarcomas. He will join Penn July 1, where he completed his surgical residency and postdoctoral fellowship, from 20 years at Memorial Sloan Kettering Cancer Center, where he most recently served as the vice chair of the department of surgery and head of the division of general surgical oncology. He is also a professor of surgery and an associate dean at Weill Medical College of Cornell University.

He will lead a department which includes 130 faculty across 11 divisions who provide advanced patient care and conduct a robust portfolio of basic science and clinical research.

"We're excited to have Dr. DeMatteo return to Penn and take the helm of our department of surgery," said J. Larry Jameson, dean of PSOM and EVP for the Health System. "He is an exceptional choice to lead our team of talented clinicians and researchers as they continue to provide the highest level of care to patients, and forge new ground in the crucial research necessary to develop the next generation of surgical innovations."

Over the course of his career, Dr. DeMatteo has made significant research advances in the development of therapies to help prevent tumors from returning after surgery. He has served as the principal investigator on three national trials of the adjuvant drug Imatinib following surgery to remove gastrointestinal stromal tumors, leading to approval by the US Food and Drug Administration and a new standard of care for the disease worldwide. His clinical and laboratory research has resulted in a substantial body of scholarly work in high-impact journals including the *Lancet*, *Lancet Oncology*, *Nature Medicine*, and the *Journal of Clinical Investigation*. His research has been supported by \$17 million in funding, including several grants from the NIH and generous

gifts from patients and philanthropic foundations. A well-respected educator, he was the director of the surgical oncology fellowship program for seven years and has mentored more than 135 clinical and laboratory fellows.

"The department of surgery at Penn Medicine has a storied past, built on the commitment to delivering exceptional patient care, providing pre-eminent training, and uncovering new knowledge," said Ralph W. Muller, CEO of UPHS. "Dr. DeMatteo's outstanding track record of leadership and advancements in oncological surgery will ensure an equally bright future as a national patient care leader."

Dr. DeMatteo earned his undergraduate degree in natural sciences from Johns Hopkins University, and his medical degree from the Weill Medical College of Cornell University. He completed his residency training in general surgery and two postdoctoral fellowships in molecular biology and virology, and immunology and transplantation at HUP before a fellowship in surgical oncology at Memorial Sloan Kettering Cancer Center. Dr. DeMatteo also completed a research fellowship at Memorial Hospital in New York.

The Penn Medicine department of surgery dates back to 1765, when Penn's medical school was founded. Since then, it has been recognized for extraordinary contributions to surgery and surgical research, including many American surgery "firsts." Today, the department's standing and associated faculty operate at 10 sites and see outpatients at nine locations in southeastern Pennsylvania and southern New Jersey. The continuing generosity of Penn's benefactors has provided the department with one of the largest endowments for research in the country.



Ronald DeMatteo

## Extension of Grace Calhoun's Appointment as Director of Athletics and Recreation

Provost Vincent Price announced that the appointment of M. Grace Calhoun, director of Athletics and Recreation at the University of Pennsylvania, has been extended to 2022.

"This extension," said Provost Price, "testifies to Grace Calhoun's extraordinary leadership over the past three years. She is fostering athletic success while reaffirming the vital connections between Penn Athletics and our campus-wide values of community, work-life balance and overall mental and physical health. Above all, she is committed to making athletics and recreation an ever more integral part of the experience of every Penn student—and of every member of the Penn community. I am confident that, in the years ahead, she will continue to advance Penn's place at the forefront of university athletics and recreation programs around the world."

Since 2014 (*Almanac* April 1, 2014), Dr. Calhoun leads the University's 33 varsity athletics programs, nearly 40 club sports and broad-based intramural and recreational offerings for students, faculty and staff. During her tenure, among many highlights, there have been 13 Ivy League team championships, 106 first-team All-Ivy players, 92 individual NCAA qualifiers, 49 Ivy individual champions, 52 All-Americans, 13 Ivy Players of the Year, 11 Ivy Coaches of the Year and one Rhodes Scholar.

"I am humbled and honored to continue my service at Penn," Dr. Calhoun said. "I want to thank President Gutmann, Provost Price and EVP Carnaroli for their leadership, friendship and continued support of Penn Athletics and Recreation. Our varsity programs are experiencing competitive success and winning championships, our student-athletes benefit from programming that develops them holistically, and we are engaging the community through spirited intercollegiate events and robust recreational programs, all as a result of our talented and committed students, coaches and staff. I look forward to leading Penn Athletics and Recreation to even higher levels of eminence in the future."

Penn Athletics has increased competitiveness during Dr. Calhoun's tenure, winning six conference championships to date in 2016-17 (which ranks third all-time in a single year), while still achieving academic distinctions and offering a second-to-none student-athlete experience. In the most recent NCAA Academic Progress Rate (APR) announcement, Penn ranked fourth nationally, with 17 teams rated in the top 10 percent of their sport.

Dr. Calhoun has developed and implemented the "Champion Your Life" campaign for Penn Athletics, emphasizing five core values: Character First, Aiming Big, Humility, Enjoyment, and Community Matters. She has launched a Student Development division to enhance the student-athlete experience through holistic programming in academics and life skills and the Penn Athletics Wharton Leadership Academy to foster leadership development for Penn student-athletes. Working closely with Penn Medicine, the Sports Performance division is becoming a national leader in using cutting-edge new technologies for the training, conditioning, and injury prevention of student-athletes.

Appointed this year to the NCAA Division I Council and winner of the 2009 Nell Jackson Administrator of the Year Award from the National Association of Collegiate Women Athletics Administrators, Dr. Calhoun came to Penn from Loyola University in Chicago, following earlier leadership positions.

## Bekir Karabucak: Chair of Endodontics at Dental Medicine

Penn Dental Medicine has named a new chairman of its department of endodontics, appointing Bekir Karabucak to this leadership role. Dr. Karabucak, associate professor of endodontics, had been serving as interim chair of the department since October 2014.

"Throughout his career at Penn Dental Medicine, Dr. Karabucak has developed a reputation as an outstanding clinician, educator, and enthusiastic leader," said Dean Denis Kinane, when announcing the appointment. "I look forward to the continuing legacy of Penn Dental Medicine's esteemed department of endodontics under Dr. Karabucak's leadership."

Dr. Karabucak has been a member of the Penn Dental Medicine faculty since 1998. He joined the department of endodontics as a lecturer upon completion of his postdoctoral training in endodontics at Penn Dental Medicine, advancing to the Standing Faculty as assistant professor in 2002 and associate professor in 2011. Originally from Turkey, Dr. Karabucak holds a DDS from Istanbul University and earned his DMD and MS in oral biology from Penn Dental Medicine as well.



Bekir Karabucak

Since 2011, Dr. Karabucak has been director of the postdoctoral endodontics program at Penn Dental Medicine, while also serving as the director of the school's division of advanced dental education since 2012. He will continue to hold both of these roles in addition to the chairmanship.

Along with his teaching and administrative appointments, Dr. Karabucak, a diplomate of the American Board of Endodontics, is a practicing endodontist in the Penn Dental Family Practice and an attending physician at Children's Hospital of Philadelphia. Dr. Karabucak presents lectures nationally and internationally with particular focus on the topics of endodontic microsurgery, bioceramics, and regenerative endodontics.

The Penn Dental Medicine department of endodontics has established itself as leader in the integration of the operating microscope into conventional, and particularly, surgical endodontic education and practice. Along with the postdoctoral endodontics program, which accepts eight residents each year, the department has an international program, an advanced continuing education program designed specially for general dentists practicing in other countries who wish to sharpen their skills in endodontics; since 1993, the department has also opened its doors to current practitioners through its Microscope Training Center that provides intensive two-day continuing education seminars and one-on-one hands-on training in both microendodontics and microsurgery.

# Honors & Other Things

## Michelle Brown-Nevers: Outstanding Alumni Award

*Michelle H. Brown-Nevers*, associate vice president for student services in student registration and financial services at University of Pennsylvania, was honored with the Outstanding Alumni Award for Achievement and Leadership during the 14th Biennial Conference of the Tri-State Consortium of Opportunity Programs in Higher Education, a non-profit association in New Jersey, New York and Pennsylvania that offers opportunity programs for college students from educationally and financially disadvantaged backgrounds. Dr. Brown-Nevers, a first-generation college graduate, was a student member of the Percy Ellis Sutton SEEK Program at the City University of New York (CUNY) at Baruch College where she completed both her bachelor's and master's degrees before obtaining a master's and a doctorate from Columbia University. The SEEK Program, now in its 51st year of existence, was signed into law in 1966, and was the first "opportunity program" in the nation.



*Michelle Brown-Nevers*

## Amy Gutmann: Honorary Degree from Johns Hopkins

Penn President *Amy Gutmann* was recently awarded an honorary degree from Johns Hopkins University. The degree was awarded during the university's commencement ceremony on May 24 in Baltimore.

A statement from Johns Hopkins described President Gutmann as a "renowned political scientist, philosopher, bioethicist, professor and author" who is "internationally recognized for championing access to higher education."



*Amy Gutmann*

## Nancy Hirschmann: Three Fellowships

University of Pennsylvania professor *Nancy Hirschmann* has been named a fellow of the American Council of Learned Societies, the National Humanities Center and the European University Institute.

Dr. Hirschmann is director of the gender, sexuality and women's studies program at Penn and director of Penn's Alice Paul Center for Research on Women, Gender & Sexuality. Her work focuses on the history of political thought, analytical philosophy, feminist theory, the intersection of political theory and public policy.



*Nancy Hirschmann*

She received the 2017 American Council of Learned Societies Fellowship for her book project *Freedom, Power and Disability*.

As a fellow of the National Humanities Center, Dr. Hirschmann will spend the upcoming fall semester working on her book as a resident fellow at the National Humanities Center campus in Research Triangle Park in Durham, North Carolina. Then she will spend the Spring 2018 semester at the European University Institute in Florence, Italy, as a Fernand Braudel Senior Fellow.

## Jason Moore: American Statistical Association Fellow

*Jason H. Moore*, the Edward Rose and Elizabeth Kirk Rose Professor of Informatics at the Perelman School of Medicine at the University of Pennsylvania and director of the Penn Institute for Biomedical Informatics, was recently elected as a fellow of the American Statistical Association. ASA Fellowships are awarded to only one-third of 1% of ASA members each year.

Dr. Moore is an expert in genetics and biomedical informatics whose research focuses on developing and applying artificial intelligence and machine learning methods for uncovering complex patterns in biomedical big data. The research could help identify combinations of DNA-sequence variations and environmental factors that predict human health and genetic disorders.



*Jason Moore*

## Diana Mutz: Carnegie Fellow

*Diana Mutz*, the Samuel A. Stouffer Professor of Political Science and Communication at the University of Pennsylvania, is the recipient of a 2017 Andrew Carnegie Fellowship from the Carnegie Corporation of New York. Dr. Mutz holds appointments in the Annenberg School for Communication and the political science department in the School of Arts and Sciences.

She is one of 35 fellows chosen from among 200 nominees. The two-year fellowship supports academic research in the social sciences and humanities.

During her fellowship, Dr. Mutz plans to study the growing backlash against globalization and why increasing numbers of people are leaning toward isolationism, despite the world being more connected than ever. She will examine the ways in which people process proximity and how this could impact their perspective on foreign affairs.

Dr. Mutz is an expert on public opinion, political psychology and mass political behavior, with an emphasis on political communication. Her project will culminate in a conference of journalists and academics hosted at Penn.



*Diana Mutz*

## Daniel Rader: Award for Outstanding Work in Science as Related to Medicine

The American College of Physicians recently presented *Daniel J. Rader* with the Award for Outstanding Work in Science as Related to Medicine. Dr. Rader, the Seymour Gray Professor of Molecular Medicine and chair of the department of genetics in the Perelman School of Medicine at the University of Pennsylvania, is an internationally recognized authority in the genetics and physiology of lipoprotein metabolism and atherosclerosis (hardening of the arteries).

Dr. Rader and colleagues helped identify the molecular defect in a rare genetic disorder that causes extremely low levels of low-density lipoproteins, or LDL. This discovery resulted in the development of inhibitors of this pathway which reduced levels of LDL. Dr. Rader then spent a decade converting one such potential inhibitor, which had been abandoned by its pharmaceutical developer, into a treatment for the orphan disease homozygous familial hypercholesterolemia (HoFH), which is characterized by extremely high levels of LDL and heart disease in children. This led to FDA and European approval of lomitapide, the first effective medication for the treatment of HoFH.

Dr. Rader's work also has refined the knowledge of the metabolism of high-density lipoprotein (HDL—"good cholesterol") and its relationship to atherosclerosis.

## Patricia Stottlemeyer: Chubb Rule of Law Fellowship

*Patricia Stottlemeyer, L'17*, has been awarded this year's Chubb Rule of Law Fellowship to support her work in international law and human rights. Upon graduation from Penn Law, she will have the opportunity to work in the Washington, DC, office of Human Rights First in the refugee advocacy and national security advocacy departments.

The fellowship was established by the Chubb Charitable Foundation and Penn Law alumnus Robert Cusumano, L'80, to create new avenues for students to build careers in international rule of law and human rights.

"We are excited to have Patricia join us as our new Chubb Rule of Law Fellow," said Human Rights First president and CEO Elisa Massimino. She added, "We are deeply grateful for our partnership with Penn Law. Together, we are tackling some of the most challenging human rights issues of our time and preparing a new generation of talented lawyers to lead."



*Daniel Rader*



*Patricia Stottlemeyer*

## Four Penn Faculty: National Academy of Sciences Members

The National Academy of Sciences has elected four faculty members from the University of Pennsylvania: *Yale E. Goldman* and *Mitchell A. Lazar* of the Perelman School of Medicine, *Robert Seyfarth* of the School of Arts & Sciences and *Sarah Tishkoff*, a Penn Integrates Knowledge Professor with appointments in Medicine and Arts & Sciences. Members are elected for “their distinguished and continuing achievements in original research.”

Dr. Goldman is a professor of physiology, former director of the Pennsylvania Muscle Institute and associate director of the Nano/Bio Interface Center. His laboratory is widely renowned for its studies of molecular motors and protein synthesis.

Dr. Lazar is the Willard and Rhoda Ware Professor in Diabetes and Metabolic Diseases; founding director of the Penn Institute for Diabetes, Obesity and Metabolism; and chief of endocrinology, diabetes and metabolism. His groundbreaking research has uncovered genetic and epigenomic mechanisms by which the environment interacts with the genome to regulate circadian rhythms and metabolism and how these impact the epidemics of obesity and diabetes.

Dr. Seyfarth is a retired professor of psychology who remains an active researcher specializing in animal behavior and communication. With his wife, Dorothy Cheney, a professor of biology at Penn who was elected to the NAS in 2015, Dr. Seyfarth has conducted field studies of monkeys and apes in their natural habitats in order to clarify how nonhuman primate relationships, communication and cognition differ from humans and to explore how and why these animals form close social bonds.

Dr. Tishkoff, the David and Lyn Silfen University Professor in Genetics and Biology, studies human genetic diversity, specifically that of African populations, blending field, lab and computational approaches. Her work has not only elucidated African population history but also how genetic variation affects traits such as disease susceptibility or ability to metabolize drugs.



Yale Goldman



Mitchell Lazar



Robert Seyfarth



Sarah Tishkoff

## Four PennPREP Students: NSF Graduate Research Fellowships

Four young scholars participating in the University of Pennsylvania Post-Baccalaureate Research Education (PennPREP) program have been awarded National Science Foundation (NSF) Graduate Research Fellowships. PennPREP students *Nohely Abreu*, *Tré Artis*, *Nicole Palacio* and *Ronald Rodriguez* were chosen for the fellowships, which support outstanding graduate students in the areas of science, technology, engineering and mathematics who plan to pursue research-based graduate degrees.

Students in the PennPREP program have completed college and want to pursue a doctoral degree in the biomedical sciences. PennPREP offers them a one-to-two-year research experience.

“The NSF Graduate Research Fellowship Program is a prestigious award that honors the potential of students in STEM disciplines,” said PennPREP’s program director, Arnaldo J. Diaz, assistant dean for research training programs and director of recruitment and retention of diversity scholars for the Perelman School of Medicine. “Each year, thousands of students apply, but only a small fraction of those applicants are awarded the fellowship. The fact that four of the seven PREP scholars who applied this year received this honor is a strong indicator of the effectiveness of our program in preparing our students for success in their next level of training.”

NSF fellows receive a three-year annual stipend of \$34,000 along with a \$12,000 cost of education allowance for tuition and fees (paid to the institution), opportunities for international research and professional development, and the freedom to conduct their own research.

Mr. Rodriguez will study the molecular mechanisms involved in protein anchoring with a goal to develop effective approaches for disrupting anchoring of specific proteins, such as toxins and virulence factors in bacteria.

Ms. Palacio will study mechanisms of inflammasome responses to bacterial infection. She will explore the contribution of flagellin as an inflammasome activator in *Legionella pneumophila* infection (Legionnaires’ disease).

Mr. Artis will explore the function of DNA methylation in the honeybee. He hopes to determine the effects on gene expression, brain development, behavior and reproductive outcomes when DNA methylation levels in these tissues are altered by silencing the regulatory enzyme AmTET.

Ms. Abreu will study dense core vesicle trafficking in order to define its regulatory mechanism. Dense core vesicles in neurons contain peptide neurotransmitters, whose signaling modulates basic human behaviors. The appropriate transport and delivery of these vesicles to release sites along the axon is important for normal neuronal activity.



PennPREP students (from left) *Tre Artis*, *Nicole Palacio*, *Ronald Rodriguez* and *Nohely Abreu* have been awarded NSF Graduate Research Fellowships.

## James Brister Society Awards

The University of Pennsylvania’s James Brister Society recently hosted its annual Student and Faculty Leadership Awards ceremony.

The following awardees were honored:

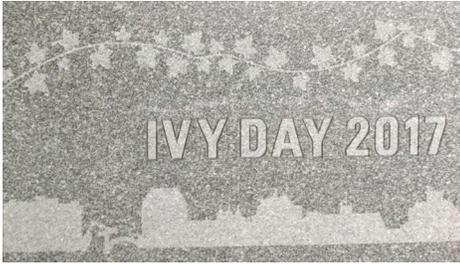
- *Vivian L. Gadsden*, the William T. Carter Professor of Child Development and Education, director of the National Center on Fathers and Families and associate director of the National Center on Adult Literacy, received the James Brister Society’s Dr. Gloria Twine Chisum Award for Distinguished Faculty.
- *Megan Yan*, C’16, W’16, received the James Brister Society’s Student Leadership Award.
- *Divya Karunanithi*, GEE’17, received the James Brister Society’s Graduate Student

Leadership Award.

- *Bianca Molina*, C’17, received the Association of Latino Alumni’s Student Leadership Award.
- *Tyler Hallmark*, GED’17, received the Association of Native Alumni’s Student Leadership Award.
- *Krisna Maddy*, C’18, received the Black Alumni Society’s Student Leadership Award.
- *William Wang*, C’17, W’17, received the University of Pennsylvania Asian Alumni Network’s Student Leadership Award.
- *Michael Karam*, C’17, received the Lesbian Gay Bisexual Transgender Alumni Association’s Student Leadership Award.

(Honors continues on next page)

# Honors & Other Things



## Class of 2017 Ivy Stone

The Class of 2017 Ivy Stone (above) was designed by Chloe Snyder, ENG'17 GEN'18, and was made from Vermont gray granite. The stone will be installed at the garden wall on the northwest corner of 36th & Locust Walk.

## Student Awards

### Senior Honor Awards

Althea K. Hottel Shield Award: *Temilola M. Ransome-Kuti*, W'17

Gaylord P. Harnwell Flag Award: *Hannah E. Fagin*, C'17

David R. Goddard Loving Cup Award: *Tunmise A. Fawole*, C'17

R. Jean Brownlee Skimmer Hat Award: *Olivia Nelson*, W'17

Spoon Award: *Darren R. Tomasso*, C'17

Bowl Award: *Michael E. Karam*, C'17

Cane Award: *Jonathan C. Muruako*, C'17

Spade Award: *Ian E. Jeong*, NU'17

### Leadership Awards

\*Association of Alumnae Fathers' Trophy: *Sydney A. Stipanovich*, C'17

\*Class of 1915 Award: *Casey S. Kent*, ENG'16, GEN'17

\*James Howard Weiss Memorial Award: *Daniel B. Durham*, ENG'17

\*Penn Student Agencies Award: *Megan C. Yan*, C'16, W'16

\*Penn Alumni Student Awards of Merit: *Sophie Y. Beren*, C'17; *Lauren D'Amore*, W'17; *Jared M. Fenton*, C'17; *Werner A. Glass*, C'17; *Sarah M. Gubara*, C'17; and *Lukas Vacek*, ENG'17, W'17

\*Sol Feinstone Undergraduate Awards: *Rebecca C. Brown*, C'17; *Christopher J. D'Urso*, C'18; and *Alexis-Amanda Malcolm*, W'18

Trustees' Council of Penn Women Leadership Award: *Aimee C. Knaus*, C'17, W'17

William A. Levi Kite & Key Society Award for Service and Scholarship: *Meredith R. Kline*, C'17

**Note:** Awards marked with an asterisk (\*) were presented during the Ivy Day ceremony on May 13. The other awards were presented at different award ceremonies this semester.

## Milken-Penn GSE Education Business Plan Awards

The University of Pennsylvania's Graduate School of Education (Penn GSE) and the Milken Family Foundation recently announced the winners of the eighth annual Milken-Penn GSE Education Business Plan Competition (EBPC). The competition required finalists to pitch their ventures to an audience of investors, researchers, and practitioners.

- *SPEAK MODalities*, of Indiana, won both the Milken Family Foundation Grand Prize (\$40,000) and ChanceLight Behavioral Health and Education Prize (\$20,000). The company provides evidence-based language learning tools for minimally verbal students.
- *Awear Technologies*, of Minnesota, was

awarded the ACT Prize (\$20,000). The company designs neurocognitive eyewear to help correct wearers' attention deficits and improve reading comprehension and learning.

- *GraphLock*, of Arizona, received the American Public University System Prize (\$20,000). GraphLock offers an affordable scientific and graphing calculator app with a patent-pending lockdown mode. GraphLock also won the Voter's Choice award of \$1,000, determined with a live poll at the event.
- *DOT LEARN*, of Massachusetts, received the iTutor Group Prize (\$20,000). DOT LEARN uses compression technology to make hours of video learning more affordable for emerging markets.

"Our competition is a place for entrepreneurs with bold ideas to create new opportunities for learners at all stages of life," said Bobbi Kurshan, Penn GSE executive director of academic innovation. "We're proud of how past winners have already helped educators, students and families, and we're excited to see how this year's participants make their mark."

The EBPC is made possible through the generous support of the Milken Family Foundation, ACT, American Public University System, ChanceLight Behavioral Health and Education, iTutorGroup and McGraw-Hill Education.

## Penn Center for Innovation Awards

The Penn Center for Innovation (PCI) celebrated patent awardees for FY2016 at the PCI Celebration of Innovation. The following awards were presented:

- 2016-2017 Biomedical Device of the Year: *Joseph Gorman*, professor of surgery; *Robert Gorman*, professor of surgery, director of cardiac surgical research and a member of the bioengineering graduate group; and *Matthew Gillespie*, associate professor of pediatrics at the Children's Hospital of Philadelphia, for "Valve Prosthesis."
- 2016-2017 Deal of the Year: *Jean Bennett*, the F.M. Kirby Professor of Ophthalmology in the Perelman School of Medicine; and *James Wilson*, the Rose H. Weiss Orphan Disease Center Director's Professor in the Perelman School of Medicine, in recognition of the 2016 Penn-Biogen R&D Alliance.
- 2016-2017 Partner of the Year: *Ben Franklin Technology Partners of Southeastern Pennsylvania*.
- 2016-2017 Inventor of the Year: *John D. Lambris*, the Dr. Ralph and Sallie Weaver Professor of Research Medicine Ophthalmology in the Perelman School of Medicine, for "Modified Compstatin With Peptide Backbone and C-Terminal Modifications."
- 2016-2017 Startup of the Year: *Vijay Kumar*, Nemirovsky Family Dean of Penn Engineering and professor of mechanical engineering and applied mechanics, computer and information science and electrical and systems engineering, recognizing Exyn Technologies.

## Accessing Almanac Online

Subscribe now to *Express Almanac* (<http://www.upenn.edu/almanac/express.html>) to receive each Tuesday's issue in your inbox before it reaches your desk. Breaking news will be posted in the *Almanac Between Issues* section of the *Almanac* website and sent out to *Express Almanac* subscribers.

## Penn IUR Urban Leadership Awards

The Penn Institute for Urban Research (Penn IUR) recently announced *Rose Molokoane* and *Victor Santiago Pineda* as recipients of its 13th annual Urban Leadership Awards, which recognize leaders who have demonstrated a vision to move cities toward a sustainable and vibrant future. Ms. Molokoane is deputy president of Shack/Slum Dwellers International (SDI), a global network of slum dweller federations in 33 countries across the Global South; national coordinator of the South Africa SDI Alliance and the Federation of the Urban Poor (FEDUP); and co-chair of the UN-Habitat's World Urban Campaign. Mr. Pineda is president of World ENABLED and adjunct professor in the department of city and regional planning at the University of California-Berkeley.

Ms. Molokoane, a resident of Oukasie township outside Pretoria, South Africa, is a veteran of the anti-apartheid struggle and one of the most internationally recognized grassroots activists involved in land tenure and housing issues.

Through FEDUP, Ms. Molokoane has worked to help slum dwellers to pool their savings and improve their lives while negotiating with government for progressive housing policy. She has initiated federations of savings schemes throughout Africa, Asia and Latin America. She was awarded the UN-Habitat Scroll of Honour Award in 2005 for her struggle to bring land and homes to the poor.

Mr. Pineda is a globally recognized expert on disability policy who teaches courses on planning theory, policy evaluation, and international community development and serves as a public member of the US Architectural and Transportation Barriers Compliance Board. He founded World ENABLED in 2003 to improve the participation outcomes for youth with disabilities through inclusive research and educational programs.

## Women Against Abuse: Barry & Marie Lipman Family Prize

The Wharton School announced the 2017 winner of the annual Barry & Marie Lipman Family Prize is *Women Against Abuse*, the leading domestic violence service provider in Philadelphia. Women Against Abuse provides a continuum of care from telephone crisis counseling to long-term supportive housing for people experiencing intimate partner violence.

Women Against Abuse received \$250,000 and official recognition at an award ceremony in April.

Wharton also recognized *Seeding Labs*, which helps talented scientists in developing countries conduct life-changing research by equipping them with tools, training and connections; and *We Care Solar*, which makes portable, cost-effective solar suitcases that power critical lighting, mobile communication devices and medical devices in low-resource areas without reliable electricity. These two organizations each received \$50,000.

The Lipman Family Prize, which was founded in 2012, is an annual global prize that advances creative solutions by inspiring people to think together in new ways. It is administered by the Wharton School on behalf of the University of Pennsylvania.

All three honorees will receive executive training and ongoing support from the Wharton School and Penn.

(Honors continues on page 7)

## Penn: Most Beautiful Campus in Pennsylvania

In a March list of the most beautiful colleges in each state, *Travel + Leisure* named the *University of Pennsylvania* the most beautiful college in Pennsylvania. In its description, the magazine stated: "Penn has it all: eclectic and varied architecture, plenty of trees, and even a park with views of the Philadelphia skyline."

The magazine chose winners based on setting and scenery, building design, upkeep of campus grounds and other details such as in-person visits and online research.

(continued from page 1)

## \$9.25 Million Grant from the Paul G. Allen Family Foundation to Study Cellular Mechanisms of Concussion and Ways to Improve Recovery

happens to the brain during and after concussion, with the potential to transform fields of research and clinical care of brain injury.

Launched in 1988 by Microsoft cofounder and philanthropist Paul G. Allen and his sister Jody Allen, the Allen family's philanthropy is dedicated to changing the trajectory of people's lives and strengthening communities by nurturing the arts, engaging children in learning, addressing the needs of vulnerable populations, and advancing scientific and technological discoveries. Since its creation, the Paul G. Allen Family Foundation has awarded over \$469 million to more than 1,400 nonprofit groups to support and advance their critical charitable endeavors in the Pacific Northwest and beyond.

This new funding for brain science research reflects Mr. Allen's longstanding commitment to advancing scientific discovery and our understanding of the human brain. There is a surprising lack of basic research on the cellular mechanisms involved in concussions and the intent of this grant is to provide better data and research, which will be made openly available to the scientific community. Instead of viewing concussions as stemming from a single mechanism, this work will uncover how cellular events will combine and influence concussion recovery pathways.

The philanthropists believes this research, if successful, could bring a paradigm shift to understanding traumatic brain injuries, leading

to more effective methods of preventing and treating concussions.

"We are thrilled to be the recipients of this grant and to have the resources to address the fundamentals of concussion science in a new way," said Dr. Meaney. "We have assembled a diverse team of experts in many fields across several academic institutions to take a comprehensive approach to the problem, and are very grateful for the Paul G. Allen Family Foundation's bold vision to accelerate concussion science and treatment."

The goal of the project is to understand the nature of concussions by taking a network approach that looks at the concussion's impact across many scales in the brain, including neural circuit connectivity, multiple cell types, blood flow, and the importance of the blood-brain barrier.

"In particular, we hope to decipher how the brain can re-route signals to bring its network back on line after a concussion," said Dr. Smith.

The research team will combine studies in living systems with data-driven approaches that will provide insight into mechanisms of damage associated with concussion, as well as what leads to successful brain repair. Because individual cases of concussion vary so widely, capturing data at the level of cells, circuits, blood flow, and metabolism will help to make sense of the concussion's diverse outcomes and help uncover potential clinical interventions to improve recovery.

(continued from page 1)

## Trevor C. Lewis: Vice President of Budget and Management Analysis

expertise in long-range strategic, financial and capital planning, budgeting, space planning, human resources management, organizational development, project management and systems implementation.

In making this announcement, Mr. Carnaroli and President Gutmann noted that, "Trevor is well known across campus and has a solid reputation as a trusted advisor and leader. As a member of the Provost's Senior Management Group, Trevor provides advice and counsel to the Provost on many academic initiatives and opportunities. He provides leadership in support of strategic University priorities through facilitation and collaboration resulting in the optimal use of central resources, ensuring both short and long term financial flexibility. Trevor serves as the Provost's primary budget liaison to the University's 12 schools and seven resource and administrative centers."

Mr. Lewis joined the Office of the Provost in 2005 (*Almanac* October 18, 2005) as the chief of academic finance and planning, where he's been a key contributor on many projects including the Penn Wharton China Center, the Penn Center for Innovation, the Online Learning Initiative, and most

recently, the Human Capital Management project.

He has served as acting senior associate dean for finance and administration for the Wharton School (2005) and acting vice dean for finance and administration with the School of Arts and Science (2012).

He began his career with Penn as an assistant wrestling coach in 1995. In 1997 he joined the Wharton School where he held a number of roles with increasing financial responsibility including comptroller and director of administrative affairs. At Wharton, he was an integral part of key initiatives including the completion of Huntsman Hall, a \$140 million project; the development of the School's cash flow model for Wharton's \$450 million capital campaign; the establishment of Wharton San Francisco; and the restructuring of Wharton executive education finance department.

Prior to his career at Penn, Mr. Lewis competed internationally for the United States, pursuing a spot on the US Olympic Wrestling Team and finishing fourth in the 1996 US Olympic Trials.

He earned a BSE in 1988 in civil engineering with a joint degree in architecture and engineering from Princeton University and in 1990 he earned his MBA in management from Lehigh University.

(continued from page 1)

## Klein Professor of Economics

macroeconomic models with heterogeneous households and applies them to questions about international capital flows, bankruptcy, asset prices and demand-driven business cycle fluctuations. He is also concerned about the interrelations between demographics and macroeconomics.

This chair was created in 1991 in honor of Lawrence R. Klein, a Benjamin Franklin Professor Emeritus of Economics and Nobel laureate in economic sciences. His work provided the foundation for econometric forecasting now used as a basic tool by government and industry. The chair is awarded to scholars who will continue the tradition of superlative teaching and research established by Dr. Klein, who passed away in 2013.

## Graduate Student Center and Family Resource Center

Vice Provost for Education Beth Winkelstein announces new leadership at the Graduate Student Center and Family Resource Center.

Shaina Adams-El Guabli has been appointed director of the Graduate Student Center. She has been associate director of the Center since 2012 and previously served as program & outreach coordinator at the Penn Women's Center and an overseas program manager at Penn Abroad. She earned an MSEd in intercultural communication from the Graduate School of Education in 2011 and a BA from Trinity University.

Jessica Allen Bolker has been appointed director of the Family Resource Center, which serves students and post-doctoral fellows with children. She joined the Family Resource Center in 2010 and has been associate director for the last five years. She earned a Master of Liberal Arts and certificate in Nonprofit Administration from the College of Liberal and Professional Studies in 2016 and a BA from the College of New Jersey.

Anita Mastroianni, who led the Graduate Student Center (*Almanac* July 17, 2001) and the Family Resource Center (*Almanac* December 8, 2009) since their inception, is now executive director of graduate education and initiatives in the Office of the Provost.

"The Grad Center and the Family Center are vital resources for our graduate and professional students," said Vice Provost Winkelstein. "We are delighted to bring new leadership to these Centers that will provide both continuity and fresh ideas in support of our students. I look forward to working with these new leaders to continue to enhance the experiences of our graduate and professional students on campus."



Shaina Adams-El Guabli



Jessica Allen Bolker

### Perkins Distinguished Teaching Award for Standing Faculty

tion planning, cultural policy, the economics of preservation, historic site management and the history of historic preservation. He leads the Center for Research on Preservation and Society, which undertakes applied research projects on site management and on social, economic and political aspects of historic preservation. Dr. Mason was awarded the 2012-2013 National Endowment for the Arts Rome Prize and has served and the Executive Director of PennPraxis since 2014. He was recently named to the City of Philadelphia Historic Preservation Task Force. A student said, "I appreciate Professor Mason's method of orchestrating the class to encourage students to develop their own viewpoints while engaging with the field's literature and contemporary practice." Another student said, "Dr. Mason is passionate and it shows. He encouraged us to think on our own and prompted us to explore."

(continued from page 1)

### Law School Teaching Awards

William Ewald, by virtue of a vote taken among the members of the L.L.M. Class of 2017, receives the L.L.M. Teaching Award.

Cathie Struve is the recipient of the A. Leo Levin Award for Excellence in an Introductory Course.

Shyam Balganesh is awarded the Robert A. Gorman Award for Excellence in Teaching.



William Ewald



Cathie Struve



Shyam Balganesh

Judge Kent A. Jordan and Matthew Pearson (member of the Penn Law Class of 2005) receive the Adjunct Teaching Award.



Kent Jordan



Matthew Pearson

### PennDesign 2017 Teaching Awards

#### Perkins Distinguished Teaching Award for Non-Standing Faculty

Michael Luegering is a lecturer in landscape architecture and senior project manager with Michael Van Valkenburgh Associates (MVVA) where he is currently contributing to garden and campus work at Princeton University as well as territorial scale planning work in Houston, Texas. He earned a Master of Landscape Architecture with distinction from Harvard's Graduate School of Design, where he was awarded the Thesis Prize in Landscape Architecture for his work: *Vernacular Pasture Lands | The Rural Design Almanac*. He teaches in the media sequence at PennDesign with Keith Van Der Sys, focusing on territorial scale workflows and the demystification of data sources and data synthesis.



Michael Luegering

A student said, "Michael is a great teacher who clearly cares about us and has a love for the topic he's teaching." Another student said, "Michael was highly knowledgeable about the material we were working with, the larger implications of the processes we were utilizing, and sympathetic to our struggles with the difficulty of the material."

**Ed. Note:** The School of Dental Medicine Teaching Awards will be published in the July issue.

#### Perkins Distinguished Undergraduate Teaching Award

This year's recipient is Sharka Hyland, senior lecturer in fine arts. Ms. Hyland teaches courses on visual communication and visual studies. Her text-based drawings have been exhibited in solo and group shows in the US and abroad, including the



Sharka Hyland

Martin Kudlek Gallery in Cologne, Germany and at Galerie Bernard Jordan in Paris. Ms. Hyland consistently challenges her students in her teaching and provides expertise on the subjects of book design and typography. Her contributions support our undergraduate majors and create curricular linkages between our department, the School of Design and related programs of the University. A student said, "She challenged my way of thinking but made me eager to learn and improve. Her impressive experience, talent and comprehensive knowledge of the field makes her a force to be reckoned with. She is fair and generous, and pushes students to accomplish more than they thought they could." Another said, "Sharka pushes you past the boundaries you set for yourself because she sees the potential in everyone and is always there to help you reach it."

These awards were presented by Frederick Steiner, dean of the School of Design, at the School of Design Awards Ceremony on May 14 in Meyerson Hall. The G. Holmes Perkins Teaching Awards recognize distinguished teaching and innovation in the classroom, seminar or studio.

### Penn Parking Rates for 2017-2018

Penn Parking Services would like to thank our valued permit holders for your patronage at the University's parking facilities. As part of our ongoing commitment to invest in Penn lots and garages, Parking Services made significant facility improvements this past year. These enhancements focus on general maintenance, safety and security upgrades and improving ingress and egress at lots and garages. Work continues in the garages around campus that include both structural and aesthetic repairs. Some of the lot improvements entail resurfacing, resealing, restriping and adding kiosks for patron convenience.

Effective July 1, 2017, the following FY18 rates apply to faculty and staff of the University and the Hospital of the University of Pennsylvania (HUP). These rate changes will be implemented in the July payroll:

Location	Annual	Monthly <sup>1</sup>	University Weekly <sup>1</sup>	HUP Bi-weekly <sup>1</sup>
Curie Boulevard and Penn Museum	\$2,327.00	\$193.88	\$48.47	\$96.94
Chancellor 32, Chestnut 34, Domus, Eisenlohr, Graduate Education, Health Sciences 51, Law, Lower Walnut, Ludlow 34, Medical School Courtyard, Nursing, Palestra, Penn Museum-Kress, Richards, Sansom 38, Sports Medicine, Spruce 38, Walnut 32, Walnut 38, and Walnut 40	\$2,217.00	\$184.77	\$46.19	\$92.39
Hollenback and River Fields	\$1,414.00	\$117.85	\$29.46	\$58.92
24 Hour	\$2,746.00	\$228.80	\$57.20	\$114.40
Weekday Evenings (after 4 p.m.)/Weekends	\$1,108.00	\$92.30	\$23.07	\$46.15
Motorcycle	\$737.00	\$61.44	\$15.36	\$30.72

<sup>1</sup> Rates reflect the permit holder's payroll deduction

#### For More Information

Please contact Penn Parking Services if you have questions or would like additional information. You may do so by visiting [www.upenn.edu/parking](http://www.upenn.edu/parking) or emailing us at [parking@upenn.edu](mailto:parking@upenn.edu) or by visiting the Penn Parking Office, Suite 447A, 3401 Walnut Street. Business hours are Monday-Friday, from 8:30 a.m. to 5 p.m.

—Penn Parking Services

ALMANAC May 30, 2017

**Make the Most of Your Flexible Spending Account Dollars**

Summer is just around the corner, and so is the end of the benefits plan year on *June 30*. That's important to note if you have a balance in your Health Care or Dependent Care Flexible Spending Account (FSA).

The money you contributed to your FSA for the 2016-2017 plan year can only be used for expenses incurred within certain dates, as shown below. As June 30 approaches, keep in mind these other important regulations and deadlines so you can make the most of your pre-tax FSA contributions.

**Health Care FSA**

If you have a balance in your Health Care FSA on June 30, 2017, up to \$500 of those unused funds will automatically roll over to the next plan year. Rollover funds are not available for use until mid-November. Any balance above \$500 will be forfeited. Expenses must be incurred by June 30 of this year, and those claims must be submitted by September 30, 2017.

**Health Care Flexible Spending Account**

Plan Year	Timeframe to Incur Expenses	Balance Rollover	Deadline to Submit Claims
July 1, 2016 – June 30, 2017 (current plan year)	July 1, 2016 – June 30, 2017	Up to \$500 automatically rolls over*	Sept. 30, 2017
July 1, 2017 – June 30, 2018 (new plan year)	July 1, 2017 – June 30, 2018	Up to \$500 automatically rolls over*	Sept. 30, 2018

**Health Care FSA Switching to High Deductible Plan with HSA**

\*If you've switched to the Aetna High Deductible Health Plan (HDHP) with Health Savings Account (HSA) for the upcoming 2017-2018 plan year, it's important to note that you cannot participate in both a Health Care FSA and the HSA at the same time. If you have unused funds in your Health care FSA at the end of the claim filing deadline, those funds will rollover to a limited purpose FSA. You will only be able to use those dollars for eligible vision and dental claims. *It is highly recommended that you spend down your Health Care FSA dollars by June 30, 2017, if possible.*

**Dependent Care FSA**

If you have a balance in your Dependent Care FSA, make sure you use it—or you'll lose it. IRS regulations require you to use the full balance in your account each plan year. Otherwise, you forfeit that unused money.

The good news is you have until September 15 each plan year to use that balance and until September 30 to submit claims.

**Dependent Care Flexible Spending Account**

Plan Year	Time Frame to Incur Expenses	Balance Rollover	Claim Submission Deadline
July 1, 2016 – June 30, 2017 (current plan year)	July 1, 2016 – Sept. 15, 2017	No rollover allowed	Sept. 30, 2017
July 1, 2017 – June 30, 2018 (new plan year)	July 1, 2017 – Sept. 15, 2018	No rollover allowed	Sept. 30, 2018

For more details on FSAs, including listings of eligible expenses and instructions on how to file a claim, visit <https://www.hr.upenn.edu/myhr/benefits/healthfsa>

—Division of Human Resources

**Independent Contractors and Limited Engagement Reminders**

In January 2017, to achieve compliance with US Department of Labor and Internal Revenue Service regulations, the University implemented a significantly revised policy and new process for classifying individual service providers who are new to Penn. *Beginning July 1, this revised policy and new process must be followed for all individual service providers.*

As this date approaches, here are few important things to note:

- Beginning July 1, all new and existing individual service providers must follow the policy and process for classification (employee vs. independent contractor) using the Service Provider Questionnaire (SPQ) and the Service Provider Evaluation (SPE) forms, unless it is one-day/one-time service that qualifies as a Limited Engagement.

- Independent contractors who are currently working without a contract must go through the classification process by July 1.

- Independent contractors who are currently working under a contract are to be classified at the end of the current contract.

- Independent contractors must be set up by Purchasing and a Purchase Order (PO) must be in place *before* any work is conducted.

- PDA Forms for individual service providers will be rejected by Accounts Payable, with the exception of services falling within the narrow definition of Limited Engagements.

- We will be reviewing data and addressing issues on an ongoing basis.

When working with Limited Engagement, please also keep the following in mind:

- Limited Engagement is designed for individual service providers (independent contractors) providing a one-time service to the University community, such as a speaker, artist, performer, presenter, or special lecturer. The service must be of short duration, meaning one time, maybe two times at most, a year.

- Once completed and signed by the individual, the Limited Engagement agreement should be sent to Purchasing at [sourcing@exchange.upenn.edu](mailto:sourcing@exchange.upenn.edu) for review and signature.

- The signed Limited Engagement agreement is a returned to the School/Center contact, which then is responsible for preparing the PDA, attaching the W9 and other documents, if needed, and sending to Accounts Payable.

This new process has been a significant change, and we appreciate the effort to understand and follow the steps for classification to help ensure the University is legally compliant with federal regulations.

To download the most current SPQ, SPE, and other forms, visit the Individual Service Provider website at [www.hr.upenn.edu/isp](http://www.hr.upenn.edu/isp) If you have questions about this process, please email the Worker Classification Help Desk at [workerclassification@upenn.edu](mailto:workerclassification@upenn.edu)

To register for an upcoming *Individual Service Provider: Classification and Payment* training session, visit <http://knowledgeglink.upenn.edu>

—Division of Human Resources

**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 PDF?

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

**NGSS Pilot Project: Course Catalog**

The Office of the University Registrar and the Next Generation Student Systems (NGSS) project are proud to announce the release of the first stage of the pilot University Catalog for the University of Pennsylvania. The 2017-2018 Undergraduate Catalog will serve as a single source of information about all of Penn's undergraduate programs, academic policies, and resources, as well as listing courses at all levels of study. While this pilot catalog focuses on traditional undergraduate programs, subsequent phases will include information about graduate, professional, and non-traditional degree programs.

Presented in a mobile-friendly display, the Catalog is a searchable, secure site that offers prospective and current students, as well as other members of the Penn community and the general public, information about academic opportunities and degree programs at Penn. The Catalog replaces the online Course Register and provides a listing, by subject, of course offerings across the campus at all levels of education.

Many people contributed time and effort to this pilot project. We would like to thank the core team, including staff members from the Office of the University Registrar, Office of the Provost, and the NGSS team. We are also grateful to our partners in the College of Arts & Sciences, Penn Engineering, Penn Nursing and Wharton, who worked collaboratively to create this Catalog.

The Catalog can be found at <https://catalog.upenn.edu>

We welcome your thoughts and feedback about the Catalog at [catalog@lists.upenn.edu](mailto:catalog@lists.upenn.edu)

—Rob Nelson, Executive Director for Education and Academic Planning, Office of the Provost

—Steve Schwarz, Project Manager, Pennant Records

—Adam B. Sherr, University Registrar

## July & August Human Resources: Upcoming Programs

### Professional & Personal Development Programs

Improve your skills and get ahead in your career by taking advantage of the many development opportunities provided by Human Resources. You can register for programs by visiting [knowledgelink.upenn.edu](http://knowledgelink.upenn.edu) or contacting Learning and Education at (215) 898-3400.

**Project Management;** 7/11; 12:30-1:30 p.m.; free. Not everyone who has to manage a project knows how to do it well. This brief session will provide solutions for project leaders to better manage your team and meet your objectives and timeline.

**Penn Perks;** 7/19; 12:30-1:30 p.m.; free. You love the benefits you gain by working for Penn. But there is a good chance there are even more benefits than you knew existed! Be prepared to be surprised and delighted by more than 100 perks we will reveal in this session. We're sure there is something that will make your day. Join us for this invaluable treasure hunt!

**Helping Your Staff Grow Professionally;** 7/20; 12:30-1:30 p.m.; free. Managing the professional development of the staff that report to you is critical to the success of a leader. In this session we will review how to help your staff grow professionally in order to achieve greater engagement and results.

**Ted Talk Tuesday: Tim Urban—Inside the Mind of a Master Procrastinator;** 7/25; 12:30-1:30 p.m.; free. In this hilarious and insightful talk, Tim Urban takes us on a journey through YouTube binges, Wikipedia rabbit holes, and bouts of staring out the window—and encourages us to think harder about what we're really procrastinating on, before we run out of time.

**Creating and Maintaining Your LinkedIn Profile** presented by HR Recruitment; 8/3; 12:30-1:30 p.m.; free. Creating a professional presence on LinkedIn can pay off big time. In this session we will review how to create a LinkedIn profile and provide ideas on how you can use LinkedIn to maintain your professional network.

**Learning with Lynda: Leading with Emotional Intelligence;** 8/9; 12:30-1:30 p.m.; free. "Emotions are all around us in the office, and it's important for leaders to understand how to harness them to cultivate productivity and positive relationships. In this course, *lynda.com* director of learning and development Britt Andreatta shows how to develop emotional intelligence to better lead teams, work with peers, and manage up. Learn what emotional intelligence is and how it factors in at work and discover concrete techniques for raising your own emotional quotient (EQ). This includes perceiving yourself accurately, exercising emotional self-control, practicing resilience, and developing empathy. Then turn those lessons around to build your awareness of others and learn to inspire helpful communication and manage conflict."

**Designing Your Resume;** 8/15; 12:30-1:30 p.m.; free. Resumes are critical to landing the right job and while the contents are important, how you design the resume itself can have a large impact. In this course we will review tips for designing your resume. Please bring a copy of your resume to class.

**Ted Talk Tuesday: Adam Galinsky - How to Speak Up for Yourself;** 8/22; 12:30-1:30 p.m.; free. Speaking up is hard to do, even when you know you should. Learn how to assert yourself, navigate tricky social situations and expand your personal power with sage guidance from social psychologist Adam Galinsky.

**STEP UP: Introduction;** 8/23; 1-4 p.m.; \$150. This course, First Steps to Excellence is the entry point for the seven-course STEP UP Pre-Supervisory Curriculum and must be completed as the

first course in the curriculum. For your scheduling convenience, all seven courses are offered multiple times on a rotating basis throughout the year. Please also enroll in the STEP UP Pre-Supervisory Curriculum which tracks your program completion.

**Accountability;** 8/30; 12:30-1:30 p.m.; free. Take charge of your actions and efforts to become more effective and promote better relationships throughout Penn. Join us for an engaging video and discussion that focuses on three basic concepts that make up the accountability model: responsibility, empowerment and accountability.

### 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](http://www.hr.upenn.edu/myhr/registration) or contact Human Resources at (215) 573-2471 or [qowl@hr.upenn.edu](mailto:qowl@hr.upenn.edu).

**Guided Meditation: Take a Breath and Relax;** 7/11; 12:30-1:30 p.m.; free. Practice mindful breathing that focuses your attention on the present moment with kindness, compassion, and awareness. Self-massage and gentle mindful movements that promote relaxation and reduce stress may also be included in the workshop. No experience necessary.

**Getting Organized at Work and at Home;** 7/12; 12:30-1:30 p.m.; free. It's the time of year when employees are gearing up and planning for the next academic year at work and at home. Would you like to make your plan a reality? This workshop will focus on strategies to integrate in your daily life that flow back and forth from work to home, resulting in more time and energy. Through these strategies you gain insight to seen and unseen clutter which causes stress in your life and learn to manage your time and energy smartly.

**Mindfulness Monday: From Mind Full to Mindful;** 7/17; 12:30-1:30 p.m.; free. Mindfulness is "paying attention, on purpose, in the present moment, non-judgmentally." Jon Kabat-Zinn. Mindfulness practice develops awareness of your present thoughts and feelings to help you manage different situations. In this once-a-month experiential workshop, you'll see how mindfulness can help you become more engaged and effective both at home and in the workplace. No prior meditation experience necessary.

**Guided Meditation: Take a Breath and Relax;** 7/20; 12:30-1:30 p.m.; free. Practice mindful breathing that focuses your attention on the present moment with kindness, compassion, and awareness. Self-massage and gentle mindful movements that promote relaxation and reduce stress may also be included in the workshop. No experience necessary.

**Webinar: Alzheimer's Disease and Dementia: Caregiving Challenges and Strategies;** 8/8; 1:00 p.m. - 2:00 p.m.; free. There are more than 5 million Americans currently living with Alzheimer's disease and more than 15 million family caregivers who help them in the US. Within the next 10 years, that number is projected to increase by forty percent. This webinar will review the different forms of dementia, including Alzheimer's, and signs your loved one may have the disease. Despite the devastating nature of Alzheimer's disease, there are supports that can make a difference and help you continue to connect with your Mom or Dad. Learn about caregiving strategies and types of care that can improve the quality of life for both you and your parent.

**Guided Meditation: Take a Breath and Relax;** 8/8; 12:30-1:30 p.m.; free. Practice mindful breathing that focuses your attention on the present moment with kindness, compassion, and awareness. Self-massage and gentle mindful movements that promote relaxation and reduce stress may also be included in the workshop. No experience necessary.

**Mindfulness Monday: From Mind Full to Mindful;** 8/14; 12:30-1:30 p.m.; free. Mindfulness is "paying attention, on purpose, in the present moment, non-judgmentally." Jon Kabat-Zinn. Mindfulness practice develops awareness of your present thoughts and feelings to help you manage different situations. In this once-a-month experiential workshop, you'll see how mindfulness can help you become more engaged and effective both at home and in the workplace. No prior meditation experience necessary.

**Mastering Change;** 8/17; 12:30-1:30 p.m.; free. This workshop will highlight skills for coping, handling and managing change on a day-to-day basis. It will also cover adaptive strategies to anticipate and prepare for future changes and situations.

**Guided Meditation: Take a Breath and Relax;** 8/24; 12:30-1:30 p.m.; free. Practice mindful breathing that focuses your attention on the present moment with kindness, compassion, and awareness. Self-massage and gentle mindful movements that promote relaxation and reduce stress may also be included in the workshop. No experience necessary.

### Penn Healthy You 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](http://www.hr.upenn.edu/myhr/registration) Or contact Human Resources at (215) 573-2471 or [qowl@hr.upenn.edu](mailto:qowl@hr.upenn.edu)

Wellness Programs will be listed on [www.hr.upenn.edu](http://www.hr.upenn.edu) as soon as they are scheduled.

### June: Employee Health and Wellness Month

June 1: HR will kick off the month with a two-mile walk at noon beginning on Locust Walk in front of the Ben Franklin statue. The walk will conclude at Pottruck Health and Fitness Center where Campus Recreation will be running an Open House with info tables, giveaways and facility tours (12:45-1:15 p.m.).

Free group fitness classes throughout June at Pottruck:

June 1	5:15 p.m.	Pilates
June 5	noon	Body Combat
June 6	noon	Zumba
June 7	12:15 p.m.	Barre
June 7	5 p.m.	Yoga
June 8	4:30 p.m.	Cardio Dance
June 9	5:15 p.m.	Zumba
June 12	noon	Yoga
June 13	noon	Zumba
June 14	5 p.m.	Yoga
June 16	5:15 p.m.	Zumba
June 19	1:15 p.m.	Zumba
June 21	12:15 p.m.	Barre
June 23	12:15 p.m.	Spin
June 26	5:30 p.m.	Mat Pilates
June 27	noon	Yoga
June 28	noon	Body Combat
June 29	11:30 a.m.	Spin
June 30	11 a.m.	Zumba

For other June Programs, see the May 23 issue of *Almanac*.

## ICA:

### Mindfulness at the Museum

This summer—*Tuesdays & Thursdays, June 6 through August 1*—ICA is launching *Mindfulness at the Museum*, a series of drop-in sessions focused on helping our wider community—inside and outside of the museum—to have access to tools to become more aware.

The launch will consist of two parts: a seated meditation and discussion on the first and third Tuesdays of the month at noon, and a walking meditation in the galleries on the second and fourth Thursdays of the month at 5:30 p.m. These free sessions are open to all and no prior meditation experience is necessary. Space is limited and available on a first-come, first-served basis.

For more information, and to register for classes, visit the ICA website at <http://icaphila.org>

### Extra Credit

*Extra Credit* is a new education series at the ICA at noon on *Sundays, June 4 through July 30*, that aims to provide a general overview of contemporary art and to demystify the field for those outside of the art world.

Featuring a wide range of topics from performance to feminism to social justice, the series is ideal for anyone interested in learning more and for those looking to further engage with exhibitions and museums. For a schedule and to register for these free courses, visit the ICA website at [icaphila.org](http://icaphila.org)

### A Worker's Lunch Box at Slought: Opening June 2

A research project and installation exploring the role of the worker in urban factory life and the production of things, with an opening reception on *Friday, June 2* from 5-7 p.m. and a lecture by Nina Rappaport at 6 p.m. For more information, see [slought.org/resources/la\\_workers\\_lunch\\_box](http://slought.org/resources/la_workers_lunch_box)

Slought is pleased to announce *A Worker's Lunch Box*, a film installation exploring the role of the urban factory worker on display from *June 2-July 21*. The installation is part of an ongoing project by curator and urbanist Nina Rappaport, author of *Vertical Urban Factory* (Actar 2016).

The film project begins in Philadelphia, a city once known as the "Workshop of the World." This provides an indelible backdrop for understanding the significance of factory life and factory workers during a period of manufacturing decline, while also showing a potential for its increase. The installation features a series of 18 filmed interviews with factory workers exploring the importance of work, the worker's role in the factory, the value of work to the worker, and the meaning of urban production. By focusing attention on the individual factory employee, these personal narratives demonstrate first-hand the importance of urban production spaces and their social significance. *A Worker's Lunch Box* builds upon over 10 years of research as well as the book and exhibition *Vertical Urban Factory* (2011-), which focuses on the architecture and urbanism of the factory and the importance of returning manufacturing to cities in a new sustainable paradigm.

### 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 **May 15-21, 2017**. Also reported were 11 incidents with 3 arrests (5 thefts, 3 vandalism, 1 liquor law, 1 drunkenness and 1 other offense) Full reports are available at: [www.upenn.edu/almanac/volumes/v63/n36/creport.html](http://www.upenn.edu/almanac/volumes/v63/n36/creport.html) Prior weeks' reports are also online. —Eds.

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 **May 15-21, 2017**. 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.

05/16/17	9:01 AM	3535 Market St	Threats made to doctor
05/16/17	2:29 PM	3535 Market St	Unwanted phone calls received
05/17/17	4:24 PM	3606 Chestnut St	Unwanted phone calls received

### 18th District Report

Below are the Crimes Against Persons from the 18th District: 5 incidents with 1 arrest (3 aggravated assaults, 1 assault and 1 indecent assault) were reported between **May 15-21, 2017** by the 18th District covering the Schuylkill River to 49th Street & Market Street to Woodland Avenue.

5/15/17	12:47 AM	4200 Regent Sq	Aggravated Assault
5/16/17	5:48 PM	506 S 42nd St	Assault
5/18/17	12:59 PM	4300 Ludlow St	Aggravated Assault
5/20/17	10:08 PM	2970 Market St	Indecent Assault
5/21/17	3:18 PM	4632 Walnut St	Aggravated Assault/Arrest

### Movement Workshop With Group Motion!

On *Wednesday, May 31*, from 5:30-7 p.m., at the Arthur Ross Gallery (located in the Fisher Fine Arts Library building) there will be a movement workshop with Group Motion. Admission is free. Experience the excitement of *Willie Cole: On Site* with Philadelphia's Group Motion. The Group Motion workshop is a resource for creative and authentic expression through dance /movement and is accompanied by live music. It offers a space for expression and communication which is spontaneous, deep and direct, allowing for new channels for creative potential to open. The Group Motion Workshop celebrates movement as a language that anyone can speak and understand. It creates a ritual space for building and celebrating community. The workshop will be led by founders Manfred Fischbeck (keyboards, vocals), Brigitta Herrmann (vocals) and long-time accompanist, Ron Kravitz, *at right* (assorted percussion and vocals). Participants will be guided through improvisational exercises. Be sure to wear comfortable clothing. All experience levels are welcome.



### College Search Workshops for Penn Faculty and Staff Families: June 19

In collaboration with Penn Human Resources, Penn Admissions will host workshops for Penn faculty and staff families with rising high school juniors and senior students to help answer questions about the college search process.

College-bound students and their parents can be overwhelmed by the choices and requirements of college admission. What courses are important to take in high school? How significant are good grades, extracurricular activities, essays, test scores, and interviews? What should a prospective student look for in a college?

Workshops on *Monday, June 19* will discuss these questions and more with Penn faculty and staff and their families, whether students plan to apply to Penn or elsewhere. The program will run from 4:30 to 6:30 p.m. in Bodek Lounge, Houston Hall, 3417 Spruce Street, and will feature Eric J. Furda C'87, dean of Admissions; Elaine P. Varas, senior University director, Student Financial Aid; Janae Boone, senior tuition benefits specialist, Human Resources; as well as Penn Admissions staff who will lead discussions and exercises.

Register for the *June 19* program at <https://key.admissions.upenn.edu/register/FS617>

If you have questions, please contact [admrvsp@admissions.upenn.edu](mailto:admrvsp@admissions.upenn.edu)

### Almanac Summer Schedule

With this issue, *Almanac* concludes Volume 63; Volume 64 will begin with the mid-summer issue on July 11. The deadline for that issue is *June 27*.

Weekly issues with resume with the August 29 issue. The deadline for that issue is *August 21*. The deadline for the September AT PENN is *August 15*.

## Almanac

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### Brain Stimulation Restores Memory During Lapses

A study at the University of Pennsylvania has shown for the first time that memory function can be restored during a lapse by electrical stimulation. The team of neuroscientists led by Michael Kahana, professor of psychology, published its findings in the journal *Current Biology*.

The study revealed an important link between appropriately timed deep-brain stimulation and its potential therapeutic benefits. This is a key advancement for Restoring Active Memory, a four-year Department of Defense project created to develop next-generation technologies that improve memory function in people who suffer from memory loss. Dr. Kahana is lead principal investigator for the program.

The Penn team began by studying and decoding signal patterns that correspond to highs and lows of memory function. “By applying machine-learning methods to electrical signals measured at widespread locations throughout the human brain, we are able to identify neural activity that indicates when a given patient will have lapses of memory encoding,” said Youssef Ezzyat, a senior data scientist in Dr. Kahana’s lab and lead paper author.

The team used this model to examine how the effects of stimulation differ during poor versus effective memory function. Participants included neurosurgical patients receiving treatment for epilepsy at the Hospital of the University of Pennsylvania as well as the Thomas Jefferson University Hospital, the Dartmouth-Hitchcock Medical Center, the Emory University Hospital, the University of Texas Southwestern, the Mayo Clinic, Columbia University, the National Institutes of Health Clinical Center and the University of Washington. Patients were asked to study and recall lists of common words while undergoing brain stimulation at safe levels. The researchers used electrodes implanted in the patients’ brains to record electrical activity and were able to identify the biomarkers of successful memory function, activity patterns that occur when the brain effectively creates new memories.

“We found that, when electrical stimulation arrives during periods of effective memory, memory worsens,” Dr. Kahana said. “But when the electrical stimulation arrives at times of poor function, memory is significantly improved.”

The findings could lead to advancements for patients with traumatic brain injury or neurological diseases, such as Alzheimer’s.

“Technology based on this type of stimulation could produce meaningful gains in memory performance, but more work is needed to move from proof-of-concept to an actual therapeutic platform,” said Daniel Rizzuto, director of cognitive neuromodulation at Penn.

### Genetic Target for Growing Hardier Plants Under Stress

Researchers from the University of Pennsylvania, supported by the NSF, German Research Foundation and National Institute for General Medical Sciences, have identified proteins that can be targeted in order to grow hardy plants that can withstand drought or low-nutrient conditions.

By targeting these two proteins, researchers can regulate whether a cell in plant roots forms a hair cell, which increases surface area for absorption, or a non-hair cell. They found that even when deprived of phosphorus, a key nutrient, plants thrived if they overexpressed one of these regulator proteins.

“Normally plants respond to phosphorous deprivation by becoming smaller, which means less biomass, less food production and less seed production,” said Brian Gregory, associate professor in the department of biology and senior author on the paper. “The intriguing thing is, by overexpressing one of these proteins we identified, GRP8, we were able to produce plants that don’t show this kind of dwarfing nearly as significantly as normal plants under phosphorous starvation. That’s the exact phenotype we want.”

These plants could outlast others under conditions predicted to be more prevalent under climate change, particularly in widespread droughts.

The initial goal of the study was to determine the difference in RNA between two very similar populations of hair and non-hair cells in the roots of the plant species *Arabidopsis thaliana*. Using an approach called PIP-seq, which obtains a complete catalog of the interactions between RNA and RNA-binding proteins, the team also was able to examine the secondary structure, or folding, of all of the cells’ RNA transcripts.

“We were able to see that there were distinct differences in RNA secondary structure as well as differences in protein binding between root hair and non-hair cells,” said Shawn W. Foley, a recent PhD recipient in Penn’s cell and molecular biology program in the Biomedical Graduate Studies group.

Next, they identified some of the RNA binding proteins that displayed distinct binding profiles between the cell populations. Two were significant: SERRATE and GRP8. When they interrogated mutant plant lines with reduced SERRATE levels, they found that plants had more, longer hair cells, while plants that the researchers engineered to overexpress GRP8 had an increased number of root-hair cells. In addition, GRP8-overexpressing plants in phosphorous-depleted soil were able to turn on genes that increase the ability to take up and transport phosphate compared to normal plants. The result was larger plants.

The next step is testing to see whether these findings extend to other plant species, specifically in crop plants. Crop plants requiring less phosphate could lessen the negative environmental impact of fertilizers on aquatic systems.

### Risk Factors for Trafficking Among Homeless Youth

A collaboration between the Field Center for Children’s Policy, Practice & Research at the University of Pennsylvania, Covenant House and Loyola University’s Modern Slavery Research Project has identified risk factors that make homeless youth vulnerable to human trafficking, including exploitation for sex, labor or both. Over a three-year period, researchers from the three organizations interviewed nearly 1,000 homeless youth across 13 cities, the largest-ever combined sample of homeless youth in the US and Canada. They found that nearly one-fifth of homeless youth are victims of human trafficking.

The study revealed that 19% of interviewees were victims of human trafficking, with 15% having been trafficked for sex. They also found that while LGBTQ youth made up only 19% of respondents, they accounted for 34% of the sex-trafficking victims.

Debra Schilling Wolfe, executive director of the Field Center, and Johanna Greeson, an assistant professor in Penn’s School of Social Policy & Practice, were co-principal investigators and interviewed nearly 300 homeless youth in Philadelphia, Washington, DC and Phoenix, Arizona.

“In addition to examining the prevalence of trafficking among homeless youth, this groundbreaking, academically rigorous study specifically focuses on the child-welfare-to-child trafficking pipeline,” Ms. Wolfe said.

The Field Center also conducted a child-welfare-focused second supplemental survey among respondents who acknowledged being victims of sex trafficking or engaging in the sex trade to survive. This supplemental survey specifically asked questions about child-welfare-related variables, such as child-abuse history, the number of foster homes in which a respondent was placed and resilience factors.

“The goal is to identify the factors that can predict who is most at risk for sex trafficking,” Ms. Wolfe said. “This work can shape national policy and create effective interventions, thereby stemming the pipeline to predators and ultimately reducing the number of victims.”

According to preliminary findings from the supplemental survey, 95% of youth who were sex trafficked reported a history of child maltreatment and 49% of those indicated a history of childhood sexual abuse. Of those youth who were sex trafficked, 39% identified as LGBTQ, and transgender youth had the highest incidence. The researchers also found that youth who reported the presence of a supportive adult in their lives and those who completed high school were less likely to be trafficked.

“With a better understanding of what places young people at risk for sex trafficking and what resilience factors lower that risk, new policy and practice initiatives can prevent further victimization,” Ms. Wolfe said.

### Trigger Identified for a Form of Macular Degeneration

Penn researchers have identified the underlying cause of Best disease, also known as vitelliform macular dystrophy. Best affects children and young adults and can cause severe declines in central vision as patients age.

The research team used an animal model of Best disease in combination with biochemical and optical assays to identify the abnormalities that lead to the impairments, including vision loss, caused by Best disease.

The study was published in the journal *Progress in Retinal and Eye Research*.

“The genetic cause of the disease has been known for 20 years, but no one had samples of patients at the stage when the disease starts,” said Karina E. Guzewicz, research assistant professor of ophthalmology in Penn’s School of Veterinary Medicine and lead author of the study. “But we were now able to pinpoint this early stage and find out what factors trigger the development of lesions.”

The study revealed the reason vision loss in people with Best disease impacts only the macula fovea, the central areas of the retina responsible for reading and tasks requiring high-resolution vision. They found the problem relates to the supporting structures of rods versus cones. Rods are supported by RPE microvilli — which cup cells like stakes holding up plants — while cones are supported by both a sheath of microvilli that engulfs the cells and an insoluble matrix. When the researchers examined the canine macula of dogs affected with the canine equivalent of Best disease, they found that the microvilli don’t form and that the matrix is fragmented. The loss of the matrix leads to disease.

In experiments conducted in collaboration with David Gamm’s laboratory from the McPherson Eye Research Institute at the University of Wisconsin-Madison, the researchers found similar signatures in at human induced pluripotent stem cell-derived RPE from Best disease patients.

The study findings will allow the researchers to begin testing a gene therapy to treat the disease with a goal of correcting these structural and biochemical abnormalities.

“Now that we understand what we’re seeing, it allows us to judge the success of a particular therapy,” said Gustavo Aguirre, professor of medical genetics and ophthalmology at Penn Vet.