The 2018 NIH Director’s Awards were recently announced, and seven Penn researchers were among the 89 recipients. These grants provide funding to extraordinarily creative scientists proposing highly innovative research to address major challenges in biomedical science. The grants are part of the NIH High-Risk, High-Reward Research Program, which supports ideas with potential for great impact in biomedical research from across the broad scope of the NIH. The Penn awardees are:

**New Innovator Awards**

Rajan Jain, assistant professor of medicine, professor of cell and developmental biology and a member of the Cardiovascular Institute and Institute for Regenerative Medicine at Penn Medicine, will receive $2.4 million to advance understanding of how cell identity is established and maintained. The goal of his group is to decode the rules that instruct genome organization and cellular identity, ultimately revealing implications for human disease.

Matthew Kayser, assistant professor of psychiatry and neuroscience at Penn Medicine, will receive $2.4 million for research focusing on the function and regulation of sleep during early periods of brain development. His work has shown that specific circuits control sleep early in life and that disrupting sleep during critical developmental periods can lead to neural-circuit malformation and abnormal behaviors in adulthood.

Michael Mitchell, Skirkanich Assistant Professor of Innovation in Penn Engineering’s department of bioengineering, will receive $2.4 million to further his lab’s work employing tools and concepts from cellular engineering, biomaterials science and drug delivery to understand and therapeutically target complex biological barriers in the body. His lab applies its research findings and the drug-delivery technologies developed to a range of human-healing applications, including cancer metastasis, immunotherapy and gene editing.

**Transformative Research Award**

Nicola J. Mason, associate professor of medicine and pathobiology at the School of Veterinary Medicine, and Aimee S. Payne, the Albert M. Klughman Associate Professor of Dermatology at Penn’s Perelman School of Medicine, received the Transformative Research Award. As co-investigators, they will be sharing $727,277 for the first year of a five-year grant for their project, evaluating a genetically engineered cell-based therapy approach to treat pet dogs with a naturally occurring autoimmune skin disease known as pemphigus. Dogs are one of the few other species to develop pemphigus naturally, and the condition mirrors pemphigus in human patients. Evaluation of this approach may ultimately lead to breakthrough therapies for humans. Dr. Mason and Dr. Payne will continue to focus on their novel gene-engineered chimeric autoantibody receptor T (CAART) immunotherapy and its potential to cause lasting remission of antibody-mediated disease.

**Early Independence Awards**

Mark A. Sellmyer, assistant professor of radiology in the Perelman School of Medicine, will receive $393,349 for the first year of a five-year Early Independence Award for his work on developing small molecule tools and converting molecular-imaging technologies into clinical use in order to address problems in such areas as cancer biology, immunology and infectious disease. Most recently, he developed new positron emission tomography probes to detect bacterial infections in patients.

Anna Wexler, a fellow in advanced biomedical ethics in the department of medical ethics and health policy at Penn Medicine, will receive $402,499 in the first year of this approach to treat pemphigus vulgaris in human patients. Evaluation of this approach may ultimately lead to breakthrough therapies for humans. Dr. Mason and Dr. Payne will continue to focus on their novel gene-engineered chimeric autoantibody receptor T (CAART) immunotherapy and its potential to cause lasting remission of antibody-mediated disease.

**NIH Director's Awards for Seven Penn Faculty**

Nicola Mason

Aimee Payne

Mark Sellmyer

Michael Mitchell

Anna Wexler

**SEAS Team: Naval Research Grant**

The University of Pennsylvania, in collaboration with Carnegie Mellon University (CMU) and Stanford University, has received a five-year, $7.5 million grant ($2.566 million for Penn) from the Office of Naval Research (ONR) under the Total Platform Cyber Protection (TPCP) program for software complexity reduction, or simplifying complex internet protocols to build greater security. The project, led by Carnegie Mellon, will create fundamentally new ways to provide greater security and resilience for legacy Navy software.

The joint project, countable Protocol Customization (CPC), aims to reduce the complexity of legacy software by identifying lean protocol subsets that are sufficient to meet the functional and security needs of relevant clients and servers while preserving backward compatibility.

The Penn team consists of faculty members in the School of Engineering and Applied Science’s department of computer and information science (CIS): Professor Boon Thau Loo; Henry Salvatori Professor Benjamin Pierce; Professor Andre Scedrov; and Professor Steve Zhancewicz. Dr. Scedrov is also professor and chair of the department of mathematics in Penn’s School of Arts & Sciences.

“Modern network protocol standards often contain a dizzying array of options with perplexing and unpredictable potential interactions. Over time, these pieces of software become hard to maintain and also easy to compromise,” said Dr. Loo. “We plan to explore real-world software that can benefit from APC’s protocol subsetting techniques, leveraging our combined strengths in systems and formal methods. The real-world use cases are immense, ranging from cloud applications, network infrastructure and the Internet of Things.”

“The benefit is in the high assurance,” said Anupam Datta of CMU, who is the overall lead investigator for the project. “It’s very hard to give high assurance to a very large, complex system. The goal of this project is to identify smaller subsets of the system to see if those parts work correctly, we can still get security guarantees irrespective of what happens in other parts of the system.”

“The project will create a scientific framework for accountable protocol customization that reliably improves security of contemporary and future networked computing environments,” said John Mitchell of Stanford. “Through this project, we aim to create principled techniques for synthesis, testing and verification of protocols. We look forward to fruitful collaborations with all participating institutions.”

**INSIDE**

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3 Music at Annenberg Center; Drug-Free Workplace; Talk and Exhibit at Esther Klein Gallery

4 Penn’s Way Raffle; Ideas in Motion; Update; CrimeStats; Classified

6 Research Roundup
The following is published in accordance with the Faculty Senate Rules. Among other purposes, the publication of SEC actions is intended to stimulate discussion among the constituencies and their representatives. Please communicate your comments to Patrick Walsh, executive assistant to the Senate Office, either by telephone at (215) 898-6943 or by email at senate@pobox.upenn.edu

Faculty Senate Executive Committee Actions
Wednesday, October 10, 2018

2018 Senate Nominating Committee. Pursuant to the Faculty Senate Rules, the members of SEC were requested to submit the name of a member of the Standing Faculty to appear on the Nominating Committee ballot.

Update from the Office of the Provost. Provost Wendell Pritchett offered an update on a number of topics. The Provost’s Office and the Online Learning Initiative are co-hosting a summit on campus October 12, 2018, with the University of the Future Network to discuss how globalization, online learning and other changes are transforming the university of the future. The Take Your Professor to Lunch program continues during 2018-2019, and a notice will be sent to students in the coming weeks. Benoit Dubé is focusing his initial efforts as Chief Wellness Officer on student wellness initiatives; Provost Pritchett thanked the Faculty Senate for its role in recommending the establishment of the Chief Wellness Officer position. The Penn First Plus program has been created to support first-generation and high-need students; two faculty co-directors, Camille Charles and Robert Ghrist, have been appointed to lead the effort. Several faculty development initiatives are in place to try to further the development of faculty at all levels, including the Penn Faculty Fellowship program and other efforts to support both junior faculty who are working toward promotion and tenure and faculty who are in management or leadership roles. The Office of the Vice Provost for Faculty helped host the conference “Changing the National Conversation: Inclusion and Equity” held in September, which included participation by presidents and provosts from more than 100 universities; a report will be issued later this year. A conversation between the Provost and SEC members ensued.

Human Capital Management Project Update. Vice Provost for Faculty Anita Allen and Associate Provost for Finance and Planning Mark Dingfield described progress on replacing Penn’s existing payroll and faculty management systems with new cloud-based products Workday and Instructure, respectively. The cloud-based systems will replace current mainframe systems, which will make them more secure. Almost every constituency in the University will be impacted, and the new products will reduce inefficiencies and streamline processes for faculty hiring, promotion, tenure, sabbatical-tracking, and more. The systems will launch on July 1, 2019, and a period of disruption during summer 2019 is expected as users acclimate to them. It is anticipated that both products will be adopted widely across the University. Hands-on training will begin in April and will include classroom-based training sessions and online training modules. On-demand training will be available (e.g., for faculty search committees).

Moderated Discussion. SEC members discussed which specific topics to address in an in-depth manner during the year. Several topics were identified, of which two will be selected at the next meeting.

NIH Director Research Awards for Seven Penn Faculty

(continued from page 1)
of a five-year grant for her Early Independence Award to examine the ethical, legal and social implications of emerging neurotechnology, such as do-it-yourself and direct-to-consumer electrical brain stimulation. She also explores how do-it-yourself movements, direct-to-consumer health products and citizen-science initiatives are disrupting traditional models of medicine and science.

Diversity Lecture: Sexual Assault in America
Susan B. Sorenson, professor of social policy at SP2 and executive director of the Ortner Center on Violence and Abuse in Relationships, will discuss From College Campuses to #MeToo: Sexual Assault in America on Wednesday, October 24 as part of The Diversity Lecture Series at Penn. The noon lecture at the second-floor meeting room of the Penn Bookstore is free and open to the public.

Dr. Sorenson will discuss how views on sexual assault have changed during the past 50 years with a particular focus on the role of college campuses. The hour will be split between her talk and a conversation about what might be next.

The Diversity Lecture Series is intended to give insight and understanding of multicultural issues and is designed to introduce an essential component of education in helping to encourage civil debate, broaden the basis for critical thought and promote cultural understanding.

To register, visit https://tinyurl.com/yay4yh25k

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Deaths

Bernard Carroll, Psychiatry

Bernard J. Carroll, former professor of psychiatry in Penn’s Perelman School of Medicine, died September 10 at his home in Carmel, California, from lung cancer. He was 77.

Dr. Carroll was born in Australia and graduated from the University of Melbourne in 1964 with degrees in psychiatry and medicine. When he was 28 years old, he developed a test called the dexamethasone suppression test, or DST, based in biology rather than Freudian theory. However the test never met widespread use because around that same time, how types of depression were classified changed and modern antidepressants hit the market, changing how studies were interpreted and shared and what new knowledge was pursued.

A few years later, in 1971, he came to Penn as a clinical research fellow in the department of psychiatry, and he served as an assistant professor of psychiatry 1972-1973. He went on to positions at University of Michigan and Duke, where he earned emeritus status. He served as clinical director of a geriatric hospital outside Durham, North Carolina.

Dr. Carroll is survived by his wife, Sylvia.

Jay Kislak, Kislak Center

Jay I. Kislak (W’43), real estate magnate and long-time supporter of the University of Pennsylvania, died October 3 at his home in Miami, Florida. He was 96.

Passionate about rare books, manuscripts and historical artifacts, Mr. Kislak donated $5.5 million to Penn (Almanac, September 17, 2013), a gift that was key to renovating Van Pelt-Dietrich Library’s 5th and 6th floors and created the sleek, modern Kislak Center for Special Collections, Rare Books and Manuscripts, which debuted in 2012 (Almanac, April 16, 2013). To date, it was the largest cash contribution from an individual donor in the Libraries’ history.

Mr. Kislak, a native of Hoboken, New Jersey, got his first real estate license in high school. After earning an economics degree from Wharton, he served as a US Navy pilot in World War II. In the 1950s, he moved to Florida and expanded his family’s business into a privately held real estate and financial services empire. Mr. Kislak’s passion for rare books, manuscripts and historical artifacts began early. Starting first with books, he began to focus his collecting interests on Europe and the Americas, later turning to art and artifacts. Collaborating with his wife, Jean, he assembled widely diverse collections encompassing many interest areas. In 2004, more than 3,000 books and other objects from their collection became a gift to the nation, now known as the Jay I. Kislak Collection at the Library of Congress in Washington, DC. He also made notable donations to create Kislak Centers at the University of Miami and Miami Dade College’s Freedom Tower.

He is survived by his wife, Jean; children, Jonathan, Philip (’70) and Paula; stepdaughter Jennifer Rettig; grandchildren; Rebecca, Jason, Tamara, Libby (W’10) and Jane; great-grandchildren Ezra, Simon, Kayla, Julia, Stokes and Aura; and his brother, David.
The Ad Hoc Consultative Committee for the Selection of a Dean of the School of Dental Medicine (SDM) was convened by President Amy Gutmann on September 26, 2017. During its four months of work, the full Committee met on nine occasions and reported its recommendations to the President and the Provost on February 1, 2018. The Committee members were:

**Chair:** Antonia Villarruel, Professor and Margaret Bond Simon Dean of Dental Medicine

**Faculty:**
- Hydar Ali, Professor of Pathology and Director of Faculty Advancement and Diversity, SDM
- Faizan Aliw, Associate Professor of Pathology; Director, Penn Oral Pathology Services; and Associate Dean for Academic Affairs, SDM
- Kathleen Biewzb-Battaglia, Professor of Biochemistry, SDM
- Eve Higginbotham, Professor of Ophthalmology and Vice Dean for Inclusion and Diversity, PSOM
- Kelly Jordan-Scuito, Chair and Professor of Pathology (SDM) and Associate Dean for Graduate Education and Director of Biomedical Graduate Studies (PSOM)
- Bekir Kersabuek, Chair and Associate Professor of Endodontics, SDM
- Eric Stoopler, Associate Professor of Oral Medicine and Director, Oral Medicine Residency Program, SDM

**Students:** Sehe Han, D’18
- Bret Lesavoy, D’19

**Alumni:**
- William Cheung, Chair of the Board of Overseers
- Martin Levin, Member of the Board of Overseers

**Ex Officio:**
- Joachim Mitchell, Senior Vice President for Institutional Affairs and Chief Diversity Officer

The search was supported by Adam P. Michaels, Deputy Chief of Staff in the President’s Office, and Dr. Warren Ross of the executive search firm Korn Ferry.

The Committee and its consultants conducted informational interviews and consultative meetings with individuals and groups throughout the Penn and Penn Dental Medicine communities, as well as many informal contacts, in order to better understand the scope, expectations and challenges of the Dean’s position and the opportunities facing the University in the years ahead. These consultative activities included full Committee meetings with Dean Denis Kimane and Interim Dean Designate Dana Graves and members of the Penn Dental Medicine leadership team, including the associate deans. In addition, the Chair and the Committee members held open meetings for various Penn Dental Medicine constituencies. The consultants interviewed administrators from the central administration and from Penn Dental Medicine and sought nominations from academics and practitioners across the nation and the world as well as from Penn Dental Medicine faculty and staff and from other organizations. Finally, members of the Committee engaged in extensive networking with Penn faculty and students, as well as colleagues at other institutions. The Committee also solicited advice and nominations from Penn Dental Medicine faculty, staff and students as well as Penn Deans and faculty and staff from across the campus via email and reviewed a variety of documents about the school.

Based upon these conversations and materials, the Committee’s charge from the President and the Provost, and the Committee’s own discussions, a comprehensive document was prepared outlining the scope of the position and the challenges a new Dean will face, as well as the qualities sought in a new Dean. The vacancy was announced (and input invited from the entire Penn community) in Almanac.

Over the course of its four-month search process, the Committee and its consultants contacted and considered more than 230 individuals for the position. From this group, the committee evaluated an initial pool of 43 nominees and applicants and ultimately selected 10 individuals for semi-finalist interviews with the entire Committee. Based on voluntary self-identifications and other sources, we believe the initial pool of 43 candidates included women and AAPI candidates and five people of color. The five individuals recommended for consideration to the President included two women and were selected from this group of 10 semi-finalists.

On March 29, 2018, President Gutmann and Provost Pritchett announced the selection of Dr. Mark Wolff as the Morton Amsterdam Dean of Penn Dental Medicine. Dr. Wolff is a celebrated teacher, globally engaged dentist, insightful thinker and deeply experienced clinician and professor and chair of cariology and comprehensive care in the College of Dentistry at New York University. He assumed his office on July 1, 2018, after ratification by the Trustees at their June meeting.

—Antonia M. Villarruel, Professor and Margaret Bond Simon Dean of Nursing; Chair, Consultative Committee on the Selection of a Dean of the School of Dental Medicine

### Nominations for University-Wide Teaching Awards: December 7

Nominations for Penn’s University-wide teaching awards are now being accepted by the Office of the Provost. Any member of the University community—past or present—may nominate a teacher for these awards. There are three awards:

- **The Lindback Award for Distinguished Teaching** honors eight members of the standing faculty—four in the non-health schools (Annenberg, Design, SEAS, GSE, Law, SAS, SP2, Wharton) and four in the health schools (Dental Medicine, PSOM, Nursing, Veterinary Medicine).
- **The Provost’s Award for Distinguished PhD Teaching and Mentoring** honors two faculty members for their teaching and mentoring of PhD students. Standing and associated faculty in any school offering the PhD are eligible for the award.
- **The Provost’s Award for Teaching Excellence by Non-Standing Faculty** honors two members of the associated faculty or academic support staff who teach at Penn, one in the non-health schools and one in the health schools.

Nomination forms are available at the Teaching Awards website, https://provost.upenn.edu/education/teaching-at-penn/teaching-awards. The deadline for nominations is Friday, December 7, 2018. Full nominations with complete dossiers prepared by the nominees’ department chairs are due Friday, February 1, 2019.

**Note:** For the Lindback and Non-Standing Faculty awards, the health schools—Dental Medicine, Nursing, PSOM and Veterinary Medicine—have a separate nomination and selection process. Contact the relevant Dean’s Office to nominate a faculty member from one of those schools.

There will be a reception honoring all the award winners in the spring.

For information, please email provost-ed@upenn.edu or call (215) 898-7225.

### Criteria and Guidelines

1. **The Lindback and Provost’s Awards** are given in recognition of distinguished teaching. “Distinguished teaching” is teaching that is intellectually demanding and imaginative. Although the distinguished teacher has the capability of changing the way in which students view the fundamentals of a discipline, and s/he relates that discipline to other disciplines and to the world-view of the student. The distinguished teacher is accessible to students and open to new ideas, but also expresses his/her own views with articulate and informed understanding of an academic field. The distinguished teacher is fair, free from prejudice and single-minded in the pursuit of truth.

2. Skillful direction of dissertation students, effective supervision of student researchers, ability to organize a large course of many sections, skill in leading seminars, special talent to handle with large classes, ability to manage time and to do work effectively, ability to handle complex scientific problems, the ability to hand out helpful material to students, the ability to handle difficult students, and the ability to handle large classes are among the attributes associated with distinguished teaching.

3. Since distinguished teaching is recognized and recorded in different ways, evaluation must also take several forms. It is not enough to look solely at letters of recommendation from students or to consider “objective” evaluations of particular classes in tabulated form. A faculty member’s influence extends beyond the classroom and individual classes. Nor is it enough to look only at a candidate’s most recent semester or opinions expressed immediately after a course is over; the influence of the best teachers lasts, while that of others may be great at first but lessen over time. It is not enough merely to gauge student adulation, for its basis is superficial; but neither should such feelings be discounted as unworthy of investigation. Rather, all of these factors and more should enter into the identification and assessment of distinguished teaching.

4. The Lindback and Provost’s Awards have a symbolic importance that transcends the recognition of individual merit. They should be used to advance effective teaching by serving as reminders to the University community of the expectations for the quality of its mission.

5. Distinguished teaching occurs in all parts of the University. Therefore, faculty members from all schools are eligible for consideration. An excellent teacher who does not receive an award in a given year may be re-nominated in some future year and receive the award then.

6. The Lindback and Provost’s Awards may recognize faculty members with many years of distinguished service or many years of service remaining. The teaching activities for which the awards are granted must be components of the degree programs of the University of Pennsylvania.
Amber Alhadeff: L’Oreal Women in Science Fellowship

Amber Alhadeff, a postdoc researcher in the department of biology at Penn, is one of the five recipients of the L’Oreal USA 2018 For Women In Science Fellowship. The fellowships are awarded annually to female postdoctoral scientists. The $60,000 grant is given to advance her research.

Dr. Alhadeff’s research focuses on understanding the neural circuits and molecular mechanisms that control food intake. This research will give scientists valuable insight into how to treat metabolic disease such as obesity, eating disorders and type II diabetes. The L’Oreal USA For Women in Science fellowship will provide Dr. Alhadeff funding to further her research, including support to hire two female undergraduate students. During her fellowship, Dr. Alhadeff will also serve as a mentor to local middle and high school girls with a special focus on STEM.

Liang Feng: Optical Society Fellow

Liang Feng, assistant professor in the departments of materials science & engineering and electrical & systems engineering in SEAS, has been elected a fellow of the Optical Society. Since 1916, the scholarly society has been the “world’s leading champion for optics and photonics, uniting and educating scientists, engineers, educators, technicians and business leaders worldwide to foster and promote technical and professional development.”

Dr. Feng joined Penn Engineering last year, among the ranks of 30 new faculty hired in a “world-class initiative” known as the Platforms program; he and fellow MSE professor Jariwala, assistant professor in the department of materials science & engineering in Penn’s School of Engineering, will provide students of materials science & engineering in Penn’s School of Engineering, and electrical & systems engineering in SEAS, has been elected a fellow of the Optical Society.

Since 1916, the scholarly society has been the “world’s leading champion for optics and photonics, uniting and educating scientists, engineers, educators, technicians and business leaders worldwide to foster and promote technical and professional development.”

Dr. Feng joined Penn Engineering last year, among the ranks of 30 new faculty hired in a two-year span. That group includes a concentration of experts in data science and new computational techniques, areas that Dr. Feng approaches from his background in developing nanomaterials that provide unprecedented control over light.

The Optical Society cited Dr. Feng for his “outstanding pioneering scientific contributions to the field of non-Hermitian photonics and its applications in integrated nanophotonics and optoelectronics.”

Dr. Feng was also recently awarded an NSF grant from its Engineering Quantum Integrated Platforms program; he and fellow MSE professor Ritesh Agarwal will use it to build quantum communication devices that take advantage of chiral properties of individual photons (see page 5).

Deep Jariwala: Young Investigator Award

The journal Nanomaterials has named Deep Jariwala, assistant professor in the department of electrical and systems engineering in Penn’s School of Engineering, the winner of its annual Young Investigator Awards, as selected by the journal’s editorial board.

Dr. Jariwala is an expert in nano- and atomic-scale devices that could have applications in information technology and renewable energy, among other fields. In giving him the award, Nanomaterials noted, “Dr. Jariwala’s impressive work combines novel nanomaterials, such as carbon nanotubes and 2D transition metal dichalcogenides, into heterostructures and electronic and optoelectronic devices. His work encompasses synthesis of nanomaterials, characterization of their electronic and optical properties, and then fabrication of them into devices, such as diodes, FETs and photodetectors.”

Three PSOM Faculty: Career Award for Medical Scientists

Three Perelman School of Medicine faculty members at the University of Pennsylvania have received 2018 Burroughs Wellcome Fund Career Awards for Medical Scientists. Elizabeth Joyce Bhoj, assistant professor of pediatrics, for research on “a novel pediatric neurodegenerative disorder caused by histone 3.3 mutations: unique insights into the histone code”; Sarah Emily Hendrickson, instructor of pediatrics, for “directly interrogating mechanisms of human T cell dysfunction in the setting of chronic inflammation and atopy”; and Mark Sellmyer, assistant professor of radiology, for “engineering digital logic for cell-cell interactions.”

The Career Awards for Medical Scientists (CAMS) is a highly competitive program that provides $700,000 awards over five years to physician-scientists who are committed to an academic career, to bridge advanced postdoctoral/fellowship training and the early years of faculty service.

Vincent Reina: National Public Policy Fellowship

Vincent Reina, assistant professor in the department of city and regional planning at PennDesign, has been awarded a fellowship from the Association for Public Policy Analysis & Management (APPAM). The 40 for 40 Fellowships provide funding for early-career research professionals to attend APPAM’s Fall Research Conference in Washington, DC. APPAM notes that the promoting of early-career professionals like Dr. Reina is intended to shape the future of public policy research.

This is the second time Dr. Reina has been honored by APPAM. He earned the organization’s prestigious Dissertation Award in 2016. His dissertation, “The Impact of Mobility and Government Subsidies on Household Welfare and Rents,” examines the behavior of landlords who provide affordable housing and the formation of policies to ensure the availability of affordable housing for low income households.

Dr. Reina’s research focuses on urban economics, low-income housing policy, household mobility and the role of housing in community and economic development.

Correction

Vincent Reina, assistant professor in the department of city and regional planning at PennDesign, should have been included in the list of Spring 2018 University Research Foundation Awards (Almanac September 11, 2018) for his project “Rental vouchers and waitlists: barriers and impacts on neighborhood access and household welfare.”

Kimberly Trout: American College of Nurse-Midwives Fellow

Kimberly Kovach Trout, assistant professor of women’s health in the department of family and community health and the track lead of the nurse-midwifery graduate program in Penn Nursing, has been named a fellow of the American College of Nurse-Midwives (ACNM).

Fellowships in the ACNM are awarded to midwives who have demonstrated leadership, clinical excellence, outstanding scholarship and professional achievement and who have merited special recognition both within and outside of the midwifery profession. The fellowship’s mission is to serve the ACNM in a consultative and advisory capacity.

Dr. Trout’s induction ceremony took place this past May during the ACNM 63rd Annual Meeting & Exhibition in Savannah, Georgia.

Chioma Woko: Health Policy Research Scholar

The Robert Wood Johnson Foundation recently announced that Chioma Woko, a doctoral student in Penn’s Annenberg School for Communication, has been named to its 2018 cohort of 40 Health Policy Research Scholars.

Designed for second-year doctoral students from underrepresented populations and disadvantaged backgrounds, the Health Policy Research Scholars program helps researchers from all fields— from economics to epidemiology— apply their work to policies that advance equity and health while building a diverse field of leaders who reflect our changing national demographics. The four-to-five-year program provides participants with an annual stipend of up to $30,000.

Ms. Woko is a health communication doctoral student studying health behaviors online. She is conducting research on what factors influence people in social networks to carry out health behaviors, such as physical activity, contraceptive use and tobacco-related behaviors.

Focusing on Black American populations, Ms. Woko’s work is based on evidence that suggests that different demographic groups use online resources for health in different ways, which are inherently related to disparities in health literacy and access to health resources. Ultimately, she hopes that her work will inform policy development that will impact the health outcomes of all marginalized groups.

Ms. Woko previously held a position at RTI International, where she worked on government funded research projects on food, nutrition and obesity policy. She will be advised through the program by John B. Jenmott III, Kenneth B. Clark Professor of Communication & Psychiatry and director of the Center for Health Behavior and Communication Research.
Teams from School of Nursing, SAS: Green Purchasing Awards

Penn's Green Purchasing Awards, presented by Penn Purchasing Services and Penn Sustainability, were announced at the annual Purchasing Services Supplier Show on September 25.

The award program recognizes the outstanding contributions of an individual or team that significantly advance the development of sustainable purchasing practices at Penn.

“With Penn’s dedication to environmental sustainability, it’s important to acknowledge the outstanding contributions being made at the University. We work in a decentralized purchasing environment with daily buying decisions that are made at the department level,” said Mark Mills, executive director of Penn Purchasing Services. “Given this model, it’s important to recognize our colleagues in the Schools and Centers who have embraced sustainability in their purchasing choices. Our 2018 honorees are making smart, responsible purchasing decisions and instituting new programs—many of which can be shared and repeated across the University.”

The first 2018 award was given to the School of Nursing’s One Less campaign team. A series of green gifts were chosen for faculty and staff and distributed at the school’s annual Service and Recognition Awards event. This all-volunteer team worked on- and off-duty to design the logo and reach consensus on the choice of this year’s reusable items. Among them were small tote bags, which can remove disposable plastic bags from the waste stream, and reusable travel mugs, which can eliminate 23 pounds of waste annually per person using them. The team negotiated with the school’s café operator to provide an ongoing discount to anyone who uses those travel mugs (or any reusable cup), incentivizing members of the community to make a green purchase daily. The award recipients included Patricia Adams, Lucia DiNapoli, Olivia Duca, Joseph Gomez, Karen Keith-Ford, Theresa Lake, Holly Marrone, Seymour Sejour and Meredith Swinney.

The second award recipient was the Furniture Reuse and Recycling team from SAS. The team created a system that diverts used furniture from landfills. The process begins by creating a monthly inventory of all used furniture available in the School. The inventory is then circulated for review to SAS’s building administrators and departments. Then the list is sent to the Netter Center for Community Partnerships—reaching dozens of charity partners who may be able to reuse furniture listed on the inventory. Furniture that cannot be reused within SAS or by charity partners is recycled by Revolution Recovery. Revolution Recovery is able to divert over 80% of SAS furniture that has reached the end of its useful life from landfills. In the last four quarters for which program metrics are available (FY17 Q4-FY18 Q3), SAS has diverted 20.86 tons of furniture from landfills. That is an 88.8% diversion rate overall. The honorees from the SAS team are Jonathan Burke, Carvel Camp, Floyd Emelife, Britanny Gross, Ruth Kelley, Ryshee McCoy and Isabel Sampson-Mapp.

Both initiatives align with Penn’s Climate Action Plan 2.0, the University’s comprehensive strategic roadmap for environmental sustainability. For more information about the recipients, visit www.upenn.edu/purchasing

Green Purchasing Awards, SAS Team.

Green Purchasing Awards, Nursing Team.
The 2018-2019 season’s focus is African American and English Colonial Experience with the first performance by The Chamber Orchestra of Philadelphia: Origins & Diaspora on Wednesday, October 17 at 7:30 p.m. The program will include West African musical traditions and influences in classical music.

This will be a unique, interactive chamber music experience with members of The Chamber Orchestra of Philadelphia. Performing in the round, host Jim Cotter will provide background and insight on each work and lead conversations with the musicians between pieces. The performance concludes with a casual audience Q&A. Tickets: https://tickets.annenbergcenter.org

The Portland Cello Project makes its Annenberg Center Debut at 8 p.m. on Saturday, October 20, performing Radiohead’s OK Computer and more. Cellos and Radiohead were meant to collide, and the results are seriously epic. Portland’s premiere alt-classical group, complete with brass, percussion and vocals, pays tribute to Radiohead with a unique spin on music from the band’s OK Computer album and other favorites. “Every piece is treated with equal sincerity and arranged not just to invoke the original but deconstruct and re-imagine its essence.” (Seattle Times) Expect an evening “where boundaries are blurred and cellos are in abundance.” (The Strand)

Soul Songs: Inspiring Women of Klezmer will have a world premiere on Sunday, October 28 at 4 p.m.—a one-night-only special event—where 12 women will be breathing contemporary life into the centuries-old tradition of Eastern European Jewish folk music at Annenberg Center’s Zellerbach Theatre. The brainchild of fourth generation klezmer musician and concert artistic director Susan Watts, this performance was created from the world-renowned trumpeter’s concern for the future of her art and appreciation of every individual involved. “Soul Songs is about the old and new intertwined,” said Ms. Watts, a 2015 Pew Fellow. “It is future provoking, intuitive, grass roots. Soul Songs is about these women’s musical journeys, their artistry and their discernment to use the force of adversity to their gain. It is the klezmer of today and a prelude to future possibilities for the art and the communities it nurtures.” Soul Songs will feature new compositions, written and performed by three generations of women who bring contemporary meaning to this traditional music. Major support has been provided to the Philadelphia Folklife Project by The Pew Center for Arts & Heritage.

Tickets: https://tickets.annenbergcenter.org

A Drug-Free Workplace

The University of Pennsylvania is committed to maintaining a drug-free workplace for the health and safety of the entire Penn community. Drug and alcohol abuse can harm not only the users but also their family, friends and coworkers. As Penn observes National Drug-Free Work Week, please take the time to review the University’s drug and alcohol policies.

Penn’s Drug and Alcohol Policies

Penn prohibits the unlawful manufacture, distribution, dispensation, sale, possession or use of any drug by its employees in its workplace. Complete policy details are available online:


The University Alcohol and Drug Policy: https://catalog.upenn.edu/pennbook/alcohol-drug-policy

Understanding Addiction

Addiction is a serious disease, but many effective treatments are available. Visit the Health Advocate at http://www.healthadvocate.com/upenn for facts about addiction, recovery and support services.

Help Is Here

If you or a family member has a substance abuse problem, we encourage you to seek help. Penn provides free, confidential counseling services for you and your immediate family members through the Employee Assistance Program (EAP). The EAP will assist you with challenges that may interfere with your personal or professional life, including substance abuse.

For more information about the EAP’s counseling and referral services, visit the Employment Assistance Program web page at https://www.hr.upenn.edu/eap or contact the Employee Assistance Program 24 hours a day, 7 days a week at (866) 799-2329.

You can also refer to Penn’s addiction treatment publication for information about treatment benefits and resources at https://www.hr.upenn.edu/docs/default-source/benefits/opioid-brochure.pdf

BioArt and Bacteria at the EKG

A solo exhibition by internationally acclaimed British artist Anna Dumitriu will open at the Esther Klein Gallery on Thursday, October 18. BioArt and Bacteria explores our relationship with the microbial world and the history and future of infectious diseases. An artist lecture will be held on Thursday, October 18 at 5 p.m., immediately followed by the exhibit’s opening reception 6-8 p.m. at the gallery.

To register, visit https://sciencecenter.org/engage/bioart-and-bacteria-artist-lecture-and-opening-reception

The exhibit runs through November 24.
Ideas in Motion: Lunchtime Running—with a Lecture

The Annenberg (Lunchtime) Running Club is launching Ideas in Motion, a monthly series of scripted lectures delivered by area experts (primarily Penn faculty, staff or students) that take place while running. Presenters prepare a lightning-fast, 4-minute lecture on a topic of their choice followed by a 15-minute Q&A, all held at a conversational (slow, that is) running pace through Penn’s campus. This will provide runners with both the recommended 20 minutes of daily cardiovascular activity and the chance to learn about new and interesting things. The inaugural lecture was delivered by Emily Falk, associate professor of communication at Annenberg, who discussed fMRIs and decision-making.

The Annenberg (Lunchtime) Running Club is an informal group of faculty, staff and students. The club began at the Annenberg School but has grown to include members from across campus and is open to anyone regardless of affiliation. Typically, the group runs during lunch three times a week and trains together for area races such as the Broad Street Run.

Upcoming Ideas in Motion Lectures:

- **October 19, 11:30 a.m.** Zane Cooper, PhD student at Annenberg, “Blockchain Technology.”
- **November 9, noon** Damon Centola, associate professor of communication at Annenberg, director of the Network Dynamics Group, “How Ideas Spread Through Human Networks.”
- **December 17, noon** Jennifer Swerida, post-doctoral fellow, Penn Museum, “Archaeology and Alternative Pathways to Social Complexity in the Sultanate of Oman.”

Have an idea for someone who should give a talk? Or want to work on your own elevator pitch? Or, just want to run? Join the Annenberg (Lunchtime) Running Club: [https://groups.google.com/ forum/#!forum/annenbergrunningclub/join](https://groups.google.com/forum/#!forum/annenbergrunningclub/join)

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**The University of Pennsylvania Police Department Community Crime Report**

**About the Crime Report:** Below are the Crimes Against Persons or Crimes Against Society from the campus report for **October 1-7, 2018**. Also reported were 11 Crimes Against Property (1 burglary, 2 frauds and 8 thefts). Full reports are available at: [https://almanac.upenn.edu/sections/crimes 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 for the dates of **October 1-7, 2018**. The University Police actively patrol from Market St to Baltimore Avenue and from the Schuykill River to 43rd St 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.

**18th District**

Below are the Crimes Against Persons from the **18th District**: 9 incidents (1 robbery, 1 assault, 1 indecent assault, 2 aggravated assaults and 4 domestic assaults) were reported October 1-7, 2018 by the 18th District covering the Schuylkill River to 49th Street & Market Street to Woodland Avenue.

<table>
<thead>
<tr>
<th>Date</th>
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<th>Description</th>
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<tbody>
<tr>
<td>10/2/18</td>
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<td>4806 Market St</td>
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<td>10/2/18</td>
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**Penn’s Way 2019 Raffle Prize Listing**

**Week One Winners**

- **Flash Prize Listing**
  - Penn’s Way 2019 ($100)
  - The Annenberg (Lunchtime) Running Club: [https://groups.google.com/forum/#!forum/annenbergrunningclub/join](https://groups.google.com/forum/#!forum/annenbergrunningclub/join)

- **Entry List**
  - Pennsylvania Academy of Medicine ($50)
  - Fisher Scientific: Old Navy gift card ($50)
  - Starr Restaurants: Parliament Coffee Bar gift card ($75)
  - Gift Baskets for Thought: Penn-Themed gift basket ($100)
  - Philadelphia Flyers: Signed memorabilia ($35)
  - Fisher Scientific: ExxonMobil gift card ($50)
  - Fisher Scientific: New Navy gift card ($50)
  - Fisher Scientific: Lowe’s gift card ($50)
  - Geoffrey Filtness, ISC
  - Specialty Underwriters LLC: Amazon gift card ($100)
  - Shynita Price, UPHP Corporate Philadelphia Eagles: Carson Wentz autographed 8x10 photo ($50)
  - Joanne DeLuca, CPUP

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**AT PENN Deadlines**

The October AT PENN is online. The November AT PENN will be published October 30. The deadline for the weekly Update is the Monday of the week prior to the issue. The deadline for the December AT PENN is November 5.

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Prenatal Gene Editing for Treating Congenital Disease

For the first time, scientists performed prenatal gene editing to prevent a lethal metabolic disorder in laboratory animals, offering the potential to treat human congenital diseases before birth. Published in *Nature Medicine*, research from the Perelman School of Medicine at the University of Pennsylvania and the Children’s Hospital of Philadelphia (CHOP) offers proof-of-concept that this new use of a base editing, low-toxicity tool that efficiently edits DNA building blocks in disease-causing genes.

The team reduced cholesterol levels in healthy mice treated in utero by targeting a gene that regulates those levels. They also used prenatal gene editing to improve liver function and prevent neonatal death in a subgroup of mice that had been engineered with a mutation causing the lethal liver disease called tyrosinemia type 1 (HT1). HT1 in mice usually appears during infancy, and it is often treatable with a medicine called nitisinone and a strict diet. However, when treatments fail, patients are at risk of liver failure or liver cancer. Prenatal treatment could open a door to disease prevention for HT1 and potentially for other congenital disorders.

“Our ultimate goal is to translate the approach used in these proof-of- concept studies to treat severe diseases diagnosed early in pregnancy,” said study co-leader William H. Peranteau, a pediatric and fetal surgeon in CHOP’s Center for Fetal Diagnosis and Treatment and assistant professor of surgery in the Perelman School of Medicine. “We hope to broaden this strategy to intervene prenatally in congenital diseases that currently have no effective treatment for most patients and result in death or severe cognitive and developmental disabilities.”

In this study, the scientists used base editor 3 (BE3) to form a partially active version of the CRISPR-Cas 9 tool and harnesses it as a homing device to carry an enzyme to a highly specific genetic location in the liver cells of fetal mice. The enzyme chemically modified the targeted genetic sequence, changing one type of DNA base to another. BE3 does not fully cut the DNA molecule and leave it vulnerable to unanticipated errors when the cut is repaired, as has been seen with the CRISPR-Cas 9 tool.

After birth, the mice in the study carried stable amounts of edited liver cells for up to three months after the treatment, with no evidence of unwanted, off-target editing at other DNA sites. In the subgroup of the mice bioengineered to model HT1, BE3 improved liver function and preserved survival. The BE3-treated mice were also healthier than mice receiving nitisinone, the current first-line treatment for HT1 patients. To deliver CRISPR-Cas 9 and BE3, the scientists used adeno-associated vectors, but they are investigating alternate delivery methods such as lipid nanoparticles, which are less likely to stimulate unwanted immune responses.

Regrowing Dental Tissue with Baby Teeth Stem Cells

When trauma affects an immature permanent tooth, it can hinder blood supply and root development, resulting in what is essentially a “dead” tooth. Until now, the standard of care has entailed a procedure called apicectomy that encourages further root development, but it does not replace the lost tissue from the injury and causes root development to proceed abnormally.

New results from a clinical trial, jointly led by Songtao Shi of the University of Pennsylvania and Yan Jin, Kun Xuan and Bei Li of the Fourth Military Medicine University in Xi’an, China, suggest that there is a more promising path: using stem cells extracted from the patient’s baby teeth. Dr. Shi and colleagues have learned more about how these dental stem cells, called human deciduous pulp stem cells (hDPSC) work and how they could be safely employed to regrow dental tissue, known as pulp.

The Phase 1 trial, conducted in China, enrolled 40 children who had each injured one of their permanent incisors and still had baby teeth. Thirty were assigned to hDPSC treatment and 10 to the control treatment, apicectomy. Those who received hDPSC treatment had tissue extracted from a healthy baby tooth. The stem cells from this pulp were allowed to reproduce in a laboratory culture, and the resulting cells were transplanted into the injured teeth. Upon follow-up, the researchers found that patients who received hDPSCs had better results than the control group of healthy root development and thicker dentin, the hard part of a tooth beneath the enamel, as well as increased blood flow. At the time the patients were initially seen, all had little sensation in the tissue of their injured teeth. A year following the procedure, only those who received hDPSCs had regained some sensation.

While using a patient’s own stem cells reduces the chance of tissue rejection, it is not possible in adult patients who have lost all of their baby teeth. Dr. Shi and colleagues are beginning to test the use of allogenic stem cells, or cells donated from another person, to regenerate dental tissue in adults. They are also hoping to secure FDA approval to conduct clinical trials using hDPSCs in the United States. Eventually, they see even broader applications of hDPSCs for treating systemic disease, such as lupus.

Reducing Political Polarization on Climate Change

Social media networks may offer a solution to reducing political polarization, according to new findings published in the *Proceedings of the National Academy of Sciences* from a team led by Damon Centola, associate professor of communication in Penn’s Annenberg School for Communication and the director of the Network Dynamics Group.

While using a patient’s own stem cells reduces the chance of tissue rejection, it is not possible in adult patients who have lost all of their baby teeth. Dr. Shi and colleagues are beginning to test the use of allogenic stem cells, or cells donated from another person, to regenerate dental tissue in adults. They are also hoping to secure FDA approval to conduct clinical trials using hDPSCs in the United States. Eventually, they see even broader applications of hDPSCs for treating systemic disease, such as lupus.

Researchers randomly assigned participants to one of three experimental social media groups: a political-identity setup, which revealed the political affiliation of each person’s social media contacts; a political-symbols setup, in which participants received posts with party symbols of the donkey and the elephant displayed at the bottom of their screens; and a non-political setup, in which people interacted anonymously.

Twenty Republicans and 20 Democrats made up each social network. Once randomized, every individual then viewed a NASA graph with climate change data as well as forecasted Arctic sea-levels for the year 2025. They first answered independently, and then viewed peers’ answers before revising their guesses twice more.

“We were amazed to see how dramatically bipartisan networks could improve participants’ judgments,” said Dr. Centola. In the non-political setup, for example, polarization disappeared entirely, with more than 85 percent of participants agreeing on a future decrease in Arctic sea ice. “But,” Dr. Centola added, “…the improvements vanished completely with the mere suggestion of political party.”

New Insights on Interprofessional Health-Care Training

A recent research study led by Zvi D. Gellis, director of the Center for Mental Health & Aging and the Ann Nolan Reese Penn Aging Certificate Program at Penn’s School of Social Policy & Practice, demonstrates the potential of utilizing Interprofessional Education and Simulation-based training to instruct health professions students in team communication.

The federally funded study, led by Dr. Gellis and his health professions colleagues from Penn and the University of the Sciences, reports on outcomes of a simulation-based “real-world” training among a large group of health professions students comprised of medicine, nursing, chaplaincy and geriatrics social work scholars (from the Penn Aging Certificate Program), as well as University of the Sciences occupational, physical therapy and pharmacy students.

Dr. Gellis and his research partners examined a comprehensive set of outcomes overlooked in previous work, including attitudes towards health-care teams, self-efficacy in team communication, interprofessional collaboration and satisfaction with the simulation. The research team chose a geriatrics-palliative care study because this specialty has grown significantly in the US. Interprofessional teams frequently treat older patients with prevalent and complex chronic illnesses. Following the training, team communication self-efficacy scale scores and interprofessional collaboration scores increased among the health professions students. In addition, all participants reported more positive attitudes towards working in health-care teams and reported high satisfaction scores, post-simulation.

A recent research study led by Zvi D. Gellis, director of the Center for Gerontology & Geriatrics Education, revealed many advantages to simulation training in health-care education. Simulation training enables students to practice clinical skills in real time among peers and faculty, without jeopardizing the safety of actual patients, and it affords the opportunity to receive immediate patient feedback. Within a supportive learning environment, students can develop their skills and knowledge. Meanwhile, faculty have the chance to lead by example by discussing the significance of interprofessional team roles, participant recruitment in simulation learning with other disciplines, and modeling positive and professional clinical team behaviors. Simulation training can improve performance and self-efficacy in real-world clinical settings, resulting in a better experience for patients and their caregivers.

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