

UNIVERSITY OF PENNSYLVANIA Almanac

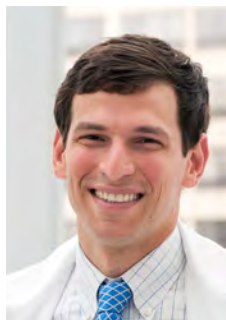
Tuesday
April 6, 2021
Volume 67 Number 33
www.upenn.edu/almanac

Penn Medicine Researcher: \$1 Million Grant to Expand COVID-19 Treatment Discovery Platform

David C. Fajgenbaum, an assistant professor of translational medicine & human genetics and the director of the Center for Cytokine Storm Treatment & Laboratory at the Perelman School of Medicine at the University of Pennsylvania, was awarded \$1 million by the Parker Institute for Cancer Immunotherapy (PICI) to expand the scope of the COVID-19 Registry of Off-label & New Agents (CORONA) project and build out his team to accelerate treatment identification for COVID-19.

"For the last year, over 100 volunteers and members of my lab have worked on nights and weekends to extract and centralize data for CORONA which has been used to identify and advance the most promising treatments for COVID-19," Dr. Fajgenbaum said. "With this grant from PICI, we can build out our team to integrate and analyze data with the effort and urgency that this global pandemic warrants."

CORONA is the world's largest database of COVID-19 treatments, covering more than 400 treatments that have been reported to be administered to more than 340,000 patients, helping researchers to identify and prioritize promising



David Fajgenbaum

treatments for well-designed clinical trials and to inform patient care. With funding from PICI, several new tools are in development or have already been built, including an open-access dashboard that integrates data between studies and presents vital data points for prioritizing promising treatments, such as the number of randomized control trials that have been completed, the number that are open, the number that achieved their primary endpoint, and others.

"All of the really relevant and important data is listed right next to each COVID-19 drug and kept up to date," Dr. Fajgenbaum said. "Given the hundreds of drugs that have been tested in the last year, the tens of thousands of published studies about them, and the global importance of finding truly effective treatments, we had to build a central tool like this. We can't afford to let a promising treatment fall through the cracks."

Fortunately, CORONA has been accessed by over 20,000 users and has served as a critical dataset for the Food and Drug Administration (FDA) and National Institutes of Health (NIH). In fact, Dr. Fajgenbaum was recently selected to serve on the NIH's ACTIV-6 team to select the most promising COVID-19 treatments for a large randomized controlled trial. He is also leading a similar effort for the CURE Drug Repurposing Collaboratory, a public-private partnership between the FDA, NIH, and Critical Path Institute. During the COVID-19 pandemic, Dr. Fajgenbaum also contributed to establishing a unifying

(continued on page 2)

School of Nursing 2021 Teaching Awards

The honorees listed below will be recognized during a virtual, end-of-the-year event on *Thursday, May 27, 2021* from 3-5 p.m.

Dean's Award for Undergraduate Scholarly Mentorship

Diane L. Spatz is a professor of perinatal nursing and the Helen M. Shearer Term Professor of Nutrition in the department of family and community health. Dr. Spatz's impact on students' scholarly growth is quite significant. Her mentees develop their scientific inquiry skills, including evaluating literature, crafting clinical research questions, data collection, and research dissemination. Dr. Spatz's encouragement and mentorship inspire some of her undergraduate students to join the Hillman Scholars program, which has led them



Diane Spatz

to obtain PhDs and develop their own programs of research. Students praise Dr. Spatz for her unwavering support and advocacy, ensuring they have adequate resources for their academic pursuits. An internationally known breastfeeding, lactation, and human milk expert, Dr. Spatz is a nurse researcher at CHOP's Breastfeeding and Lactation Program and a clinical coordinator at CHOP's Mothers' Milk Bank. These positions have afforded Dr. Spatz's mentees incredible opportunities, as she includes students in her research process and connects students of all class years. Dr. Spatz's passion and ability to build a constructive and mutually rewarding relationship with her students, both inside and outside of the classroom, speaks to her embodiment of an ideal undergraduate scholarly mentor.

Dean's Award for MS/MSN/DNP Scholarly Mentorship

Mamie K. Guidera is an advanced senior lecturer in the Nurse-Midwifery program in the department of family and community health. Ms. Guidera is well-known for her inspiring and creative nature. Nationally recognized for excellence in teaching by the American College of

(continued on page 8)

Graduate School Rankings 2022

Each year, *U.S. News & World Report* ranks graduate and professional schools in business, medicine, education, law, engineering and nursing. Five of Penn's Schools are in the top 10 list. Those in the top 30 are below; for more, see *U.S. News'* website: www.usnews.com.

	2021	2022
Wharton School	1	2
Finance	1	1
Real Estate	-	1
Marketing	2	2
Executive MBA	3	2
Accounting	3	3
Business Analytics	5	3
Management	7	4
International	5	6
Production/Operations	6	6
Entrepreneurship	6	6
Information Systems	11	10
Graduate School of Education	2	1
Higher Education Administration	6	5
Education Policy	7	5
School of Nursing	3	3
Administration	5	1
Adult/Gerontology, Primary Care	1	2
Adult/Gerontology, Acute Care	2	2
Pediatric, Primary Care	1	3
Psychiatric Mental Health/Lifespan	3	3
Nurse Practitioner-Family	6	5
Nurse Midwifery	7	7
PSOM-Research	3	9
PSOM-Primary Care	14	24
Pediatrics	1	1
Psychiatry	6	2
Ob/Gyn	4	3
Internal Medicine	4	4
Anesthesiology	5	5
Radiology	4	5
Surgery	6	6
Clinical Psychology	8	8
Law School	7	6
Business/Corporate Law	6	3
Contracts/Commercial Law	6	5
Criminal Law	6	7
Intellectual Property Law	8	13
International Law	14	14
Tax Law	15	21
Health Care Law	22	20
Clinical Training	27	27
School of Arts & Sciences	—	—
English	-	3
Psychology	-	8
Economics	-	9
History	-	11
Mathematics	-	16
Chemistry	-	19
Political Science	-	19
Engineering & Applied Science	18	18
Biomedical/Bioengineering	8	8

(—) Indicates not ranked.

INSIDE

- 2 A Message to the Penn Community Concerning COVID-19 Vaccine Distribution; Tree Giveaway
 - 3 Sachs Grant Opportunity; PPSA Nominations; Factcheck.org Awarded Funding
 - 4 Deaths; New Annenberg Center for Collaborative Communication
 - 5 Honors & Other Things
 - 6 75th Anniversary of the ENIAC
 - 10 Spring at Morris Arboretum; Virtual Magic Academy
 - 11 Update; CrimeStats
 - 12 Research & Innovation
- Supplement: Campus Iconography Group Report**

From the Associate Provost of Finance and Planning, Chief Wellness Officer, Vice President for Human Resources, Chief Information Officer, and Vice Provost for Faculty

A Message to the Penn Community Concerning COVID-19 Vaccine Distribution

March 31, 2021

It has been one year since the pandemic began changing the ways we live, work, and learn. Though it has been a time of unprecedented challenges, the Penn community has shown remarkable resilience. Critical tools such as [PennOpen Pass](#) and [Penn Cares](#) have engaged all of us in our collective responsibility to protect ourselves and each other, and to reduce the spread of COVID-19. The next critical step in our fight against the virus is vaccine distribution.

We recognize the many questions about what role Penn will play in distributing vaccines to the Penn community. Penn's Vaccine Response Team (VRT) is currently working on implementing a vaccine distribution plan to provide vaccine access to faculty, staff, postdocs, and students.

The University has received authorization from the [Philadelphia Department of Public Health \(PDPH\)](#) to administer the vaccine on campus to eligible faculty, staff, postdocs, and students.

The site will open in April at Gimbel Gymnasium in the Pottruck Health and Fitness Center. *We value your feedback about our vaccine efforts and ask that you take a few minutes to complete the [Penn Wellness COVID-19 Vaccine Interest survey](#).* Your answers will let us know that you are interested in receiving the vaccine on campus should you be eligible when it becomes available.

Vaccines are not mandatory. However, when they are available, the University will facilitate access to vaccines according to the [vaccine phases](#) established by the PDPH. *The vaccines will be administered to faculty, staff, and postdocs who are Philadelphia residents, as this is the current PDPH guideline. Students are exempt from meeting the permanent residency requirement.* We will communicate details of our plan and process once those plans have been finalized.

This message is to explain the eligibility process for vaccination and provide guidance for you on what to do if you have questions or are looking for additional options and resources to get vaccinated.

Who is Eligible?

In the City of Philadelphia, vaccines are being prioritized based on two principles: occupational exposure and transmission risk, and underlying mortality and morbidity risk. The vaccine access Penn provides will first be dictated by the City of Philadelphia guidelines. However, Penn will help coordinate access to the vaccine based on occupational risk and age only. To maintain medical health confidentiality, Penn is not considering morbidity risk in providing access to the vaccine. If you have a co-morbidity that you believe elevates your eligibility for the vaccine, please consult with your primary care physician.

In Philadelphia, vaccines are being distributed in Phases 1a, 1b, 1c, and 2. Phase 1a includes individuals who are high risk for exposure and transmission to vulnerable populations such as patient-facing healthcare workers. Phase 1b includes individuals who are 65 years of age and older, are frontline workers at high risk for exposure and who perform essential duties, work, and reside in congregate settings, and have high-risk medical conditions. Phase 1c comprises those working in higher education. Phase 2 represents the general population, including students.

Although Penn's vaccine plan does not include some individuals such as retirees and emeritus faculty, we are committed to providing all members of our community with information and guidance to explore all options for obtaining a vaccine.

Penn's upcoming vaccine distribution plan provides just one avenue to get vaccinated. We encourage everyone in the Penn community, wherever you may live, to explore all options available to receive your vaccination, as the vaccine that you can safely receive the earliest will be the ideal option. Here are additional links with vaccine information based on your state of residence: [New Jersey](#), [Delaware](#), [Pennsylvania](#).

Other resources to consider include: [Centers for Disease Control and Prevention Vaccine Finder](#), [National Public Radio Vaccine Tool](#), and the [NBC News Plan Your Vaccine platform](#).

Questions about Vaccines

Penn has created a dedicated [Vaccination website](#) where we will post updated information about the vaccine rollout, so please check it regularly.

If you have questions, contact the [COVID Resource Call Center](#) at (215) 573-7096 or email covidresource@upenn.edu. You can also view these [vaccine-related FAQs](#).

The vaccine supply and distribution process remain fluid, so we deeply appreciate your patience as our vaccine plan evolves.

We thank you for your dedication and commitment to carrying out your roles and responsibilities and look forward to communicating more details about vaccines as they become available.

—Mark Dingfield, Associate Provost for Finance and Planning

—Benoit Dubé, Associate Provost and Chief Wellness Officer

—Jack Heuer, Vice President for the Division of Human Resources

—Tom Murphy, Vice President of Information Technology and Chief Information Officer

—Laura Perna, Vice Provost for Faculty

Penn Medicine Researcher: \$1 Million Grant to Expand COVID-19 Treatment Discovery Platform

(continued from page 1)

definition for cytokine storm, the most deadly manifestation of COVID-19, and uncovered new mechanisms that can be involved in combating cytokine storm.

Additional members of the lab and volunteers on the effort include Sheila Pierson, Johnson Khor, Alexis Phillips, Amber Cohen, Ania Korsunski, and Matt Chadsey.

This process of drug discovery is very personal to Dr. Fajgenbaum and his team. Using a similar approach to CORONA, they have also discovered multiple promising treatment approaches for Castleman disease, which Dr. Fajgenbaum battles as a patient, and even used one of those treatments to induce an extended remission for Dr. Fajgenbaum.

The CORONA project currently has seed funding for one year and is actively seeking additional financial support. While they hope that they can contribute to accelerating the end of this pandemic within that timeframe, they also hope to turn this tool for COVID-19 into a platform for drug discovery and repurposing beyond COVID-19.

Creating Canopy Tree Giveaway

Penn's tree giveaway event, designed to encourage the "greening" of our communities in greater Philadelphia, is back for 2021! All Penn and UPHS employees who are residents of the City of Philadelphia are invited to register to receive a free street tree. Registration opens at 10 a.m. on *Tuesday, April 13*, and trees can be picked up on *Thursday, May 6*, 1-4 p.m.

Event information, and the registration link, may be found on the website: <https://www.sustainability.upenn.edu/participate/staff-and-faculty/creating-canopy>.

Please note that there have been some changes made to the program this year:

- Only 100 trees will be available. First come, first served via the online registration.
- Registrations will be accepted only via the online system.
- Trees must be planted in the City of Philadelphia. The address you submit will be verified by our partners at TreePhilly.
- You are responsible for transporting your own tree from our Penn Park event location.

We're unable to accept walk up registrations and we will not be able to distribute unclaimed trees at the end of the day, as we have in the past.

Please send your questions to sustainability@upenn.edu. No tree registrations will be accepted by email.

Planning an Event? Email *Almanac*

Almanac's monthly AT PENN calendar is the only all-inclusive calendar of Penn events. A free listing in the AT PENN increases visibility and attendance.

Email us at almanac@upenn.edu with your event details, including the event date, time, topic, speaker information and sponsors.

For more information, visit <https://almanac.upenn.edu/deadlines-for-submitting-at-penn-information>.

Sachs Grant Opportunity for Anti-Racist Projects

We unequivocally condemn racism, white supremacy, and all acts of violence and hate. The Sachs Program stands with our Asian, Asian American and Pacific Islander colleagues, collaborators, friends, and neighbors against the persistent, continued, and escalating racial violence directed at Asians, Asian Americans, and Pacific Islanders (AAPI) in the United States. We acknowledge our long-term responsibility to support work that addresses ongoing and overlapping forms of violence and oppression.

As an arts program, we also want to recognize the ongoing and significant creative practice being done by AAPI artists and activists across our civic and cultural life. We want to continue to support this work and amplify these voices.

Towards this end, we invite proposals for projects led by or primarily serving Asian, Asian-American, and Pacific Islander artists and communities.

To apply, please share a one-page statement that includes:

- What you're proposing
- What you hope to achieve
- What you need in order to make this happen (including funding amount)

Projects can request up to \$1,500.

We are currently accepting applications and will continue to accept them through *May 1*.

All University of Pennsylvania alumni, students, faculty and staff are eligible to apply.

Applicants will be notified about funding no later than *May 31*.

Please email applications to sachsgrants@gmail.com and include any relevant work samples as attachments or links. You can also email us at this address with any questions.

This funding opportunity is part of our ongoing efforts to support artistic communities impacted by racism, hatred, and violence. We will continue to provide additional opportunities and resources for AAPI and other communities in the future and welcome your input and suggestions as we continue this work. This opportunity is in addition to our normal grant cycle, which Penn AAPI artists and communities are encouraged to apply to as well. For more information visit www.sachsarts.org/grants.

We also urge you to support the efforts and actions below to combat AAPI racism.

- [A message to the Penn community regarding violence and anti-Asian hate incidents](#)
- [#FlattenTheHate](#)
- [Pan-Asian American Community House](#)
- [Asian Arts Initiative](#)
- [Stop DiscriminAsian](#)
- [Asian Americans Advancing Justice](#)
- [Asian American Legal Defense and Education Fund](#)

—The Sachs Program for Arts Innovation

2021 Call for PPSA Board and Committee Nominations

Nominations are open for positions on the Penn Professional Staff Assembly (PPSA) Executive Board and University Council Committees. All monthly-paid, full-time University staff members are eligible to participate. More information is available at [the PPSA website](#).

Committee and Executive Board service is a rewarding and enjoyable experience that requires only a few hours per month. It is a wonderful opportunity to meet colleagues from across the University who will help to enrich your work life with Penn.

For Executive Committee and University Committees Nominations

[To nominate, please fill out the form linked here.](#)

The following positions are open for nomination:

- PPSA Chair-Elect (one position, three-year term of service)
- Executive Committee Member-At-Large (four positions, two-year term of service)
- PPSA Representative to University Council Committees (seven positions, one-year term of service)

Descriptions of duties and responsibilities for each position are available on the nomination form, linked above.

All monthly-paid, full-time University staff members are encouraged to self-nominate or nominate colleagues for consideration using the form below by no later than Wednesday, May 12, 2021.

The 2021-2022 election for officers will occur after PPSA's annual meeting, to be held virtually on *Wednesday, May 26, 2021* at noon ET. We are honored to be joined by Erika James, Dean of the Wharton School.

All full-time, monthly-paid University staff members are welcomed to participate in this annual meeting by registering here: [PPSA Annual Meeting Registration Link](#).

For more information on the work of the seven University Council Committees, visit <https://secretary.upenn.edu/univ-council/committees>.

An online election will take place to identify the Chair-Elect and the Members-At-Large in the days following the annual meeting. University Council Committee members will be appointed by the PPSA Tri-Chairs from among all applicants following the election.

Questions on the nominating and election process can be directed to ppsa@lists.upenn.edu. The elections process is governed by the PPSA Bylaws, available on the PPSA website at <http://ppsa.upenn.edu>.

—Penn Professional Staff Assembly (PPSA)

FactCheck.org and Univision Noticias Funded by Google to Address COVID Misinformation

[FactCheck.org](#) and Univision Noticias have been awarded funding from the Google News Initiative to produce fact checks about COVID-19 immunization misinformation and short bilingual video explainers.

The joint project is designed to combat viral misinformation and provide accurate information about vaccination to U.S. Hispanic households via videos in Spanish and English.

FactCheck.org, a project of the [Annenberg Public Policy Center](#) of the University of Pennsylvania, and Univision are the only U.S.-based organizations among the eleven projects chosen for Google News Initiative funding, which was announced on March 16, 2021.

"We worked with Univision's talented staff during the last two months of the 2020 election and we are excited to continue working with them on COVID-19 misinformation," said Eugene Kiely, director of FactCheck.org. "Univision is the primary news source for Hispanics in the U.S. This gives us an opportunity to reach a larger and more diverse audience."

"The pandemic and misinformation have disproportionately affected the Hispanic community," said Jose Zamora, senior vice president of strategic communications at Univision News. "This exceptional partnership between Univision Noticias and FactCheck.org, with the support of the Google News Initiative, allows us to work with one of the most respected fact-checking platforms in the U.S. to continue and amplify our fight against misinformation and ensure that Latinos have access to accurate information. Univision Noticias is committed to serving its community through journalism and fact-checking; this partnership allows us to fulfill both purposes and our mission."

The Google News Initiative launched a \$3 million Open Fund in January for projects on COVID-19 vaccines that are directed at communities underserved by fact-checking organizations or targeted by misinformation. Google received [more than 309 applications from 74 countries](#).

Early in 2021, FactCheck.org's SciCheck program launched an expanded initiative to produce written and video fact checks about the coronavirus, COVID-19, and vaccines in Spanish as well as English in an effort to reach underserved communities where long-standing social and health inequities have put people at greater risk of illness and death from COVID-19, and where vaccination rates have been low. To date it has produced more than 15 articles and videos in Spanish, including guides to the FDA-approved Pfizer, Moderna, and Johnson & Johnson vaccines. Other fact checks in Spanish include:

[No hay evidencia de que las vacunas afecten la fertilidad](#) (No evidence vaccines impact fertility)

[Video difunde información falsa y engañosa sobre mascarillas](#) (Video airs false, misleading claims about face masks)

[Video de SciCheck: Los hechos sobre las recomendaciones de uso de mascarillas del Dr. Fauci](#) (SciCheck video: The facts about Fauci and masks)

[Video engañoso aviva miedos de comunidades de color respecto a vacuna contra el COVID-19](#) (Video uses bogus claims to stoke race-based fears of COVID-19 vaccine)

A guide to FactCheck.org's coronavirus coverage can be found [here](#).

Deaths

Beatrice Novack Engelsberg, Labs

Beatrice Novack Engelsberg, a pioneering scientific researcher who worked for more than 50 years in several departments at Penn, died on March 8 from complications of Alzheimer's disease. She was 95.

Born in South Philadelphia, Ms. Engelsberg graduated from the Philadelphia High School for Girls in 1943, where she edited the school newspaper. She majored in chemistry at Penn's College of Liberal Arts for Women and graduated in 1946. Because many men were in the military during World War II, Ms. Engelsberg was able to take classes that had been unavailable to many women before her. Her father, noticing that she was exceptionally bright, offered to pay her tuition to medical school, but instead she married Paul Novack and had two daughters.

Ms. Engelsberg joined Penn's staff soon after her graduation, as a tech in the Harrison Department of Surgery Research, now the department of surgery in Penn Medicine. She became a research assistant in the same department in 1950 but quit two years later to focus on raising her children. In 1966, after the death of her husband Paul, Ms. Engelsberg returned to the Harrison Department of Surgery Research as a research lab tech, but she left Penn again in 1973. During this time at Penn, she was part of a group studying cytochrome P450, a family of enzymes that are essential for the metabolism of medica-



Beatrice Novack Engelsberg

tions. She designed and performed lab experiments, then wrote and edited the conclusions for publication.

In 1980, she married again, to Allan Engelsberg. She played classical piano, and would frequently duet with her husband, who played flute. Though Mr. Engelsberg died in 1994, Ms. Engelsberg's love of music stayed with her: Her loved ones remember that she frequently attended Philadelphia Orchestra rehearsals.

From 1982 to 1988, Ms. Engelsberg once again worked at Penn, as a research specialist in the department of pathology and laboratory medicine. From 1990 until her retirement in 1996, she worked as a research specialist in the department of radiation oncology. After retiring, she worked as a temporary employee in Penn Dental from 1997 to 1999. At various times, Ms. Engelsberg also held research jobs at Hahnemann Medical College, Thomas Jefferson University Hospitals, and Rutgers University.

Until the end of her life, Ms. Engelsberg loved to learn. She played tennis, attended lectures, and went to history and exercise classes with her caregiver, Doreen McKenzie. She was a social activist, fighting against a 1970 proposal by Penn to limit financial aid to children of university staff while retaining it in full for children of faculty. She also supported Doctors Without Borders and the Southern Poverty Law Center and was active in her synagogue, Temple Beth Zion-Beth Israel of Philadelphia.

Ms. Engelsberg is survived by her daughters, Ilene Novack and Janet Novack; and her grandchildren, Paul Novack Golob and Stephanie Novack Golob. A private service was held on March 12.

Donations in her memory may be made to Covenant House Pennsylvania, 31 E. Armat St., Philadelphia, PA 19144.

Frederick Osborne, Fine Arts

Frederick Spring Osborne, a prominent member of art academia and a former faculty member of Penn's Graduate School of Fine Arts, died at home in Chester, Connecticut on October 28, 2020. He was 80.

Mr. Osborne earned a master of fine arts from Yale in 1965, then joined Penn's faculty in 1966 as an instructor in fine arts in the department of undergraduate sculpture. He rose through the ranks in the department, becoming a lecturer, then an assistant professor, and in 1975, a professor. In 1976 he became a lecturer again, then left Penn in 1977 to join the Philadelphia College of Art (now University of the Arts). During the eleven years he taught at Penn, he was twice nominated for a Lindback Distinguished Teaching Award.

He served on PCA's faculty for eight years before being appointed Dean of the School of the prestigious Pennsylvania Academy of the Fine Arts in Philadelphia in 1985. He served as PAFA's Vice-President for External and Alumni Affairs for three years, during which he established PAFA's first official alumni association and stewarded the largest gift it had yet received. In 2002, Mr. Osborne was appointed President of the Lyme Academy of Fine Arts in Old Lyme, Connecticut ([Almanac July 11, 2006](#)). During his presidency, the Academy completed its transition from a regional studio art center to an accredited college.

Mr. Osborne is survived by his wife; daughters; sister; and other family members.

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. Email almanac@upenn.edu.

Penn and USC: New Annenberg Center for Collaborative Communication

At a time when tackling the world's biggest challenges demands ambitious collaborations, two of the preeminent schools for communication and media studies—the University of Pennsylvania's Annenberg School for Communication and the USC Annenberg School for Communication and Journalism—have jointly established the Annenberg Center for Collaborative Communication to enable their faculties and doctoral students to think and work across institutional, geographic, and disciplinary divides.

The first-of-its-kind center will provide a critical infrastructure for reimagining and potentially revolutionizing how communication can be used to address complex issues such as health care, data privacy, cultural and demographic change, politics, new media, gender and racial equity and justice, media literacy and policy, journalistic trust, and the restructuring of media industries in an evolving age of streaming and networked distribution.



Sarah Banet-Weiser

USC Annenberg professor of communication Sarah Banet-Weiser—a leading scholar in feminist theory, race and the media, youth culture, popular and consumer culture, and citizenship and national identity—will serve as the center's inaugural director. In this role, working closely with faculty and doctoral students from both schools, she will shape the center's vision and goals and map out its future direction.

On July 1, Dr. Banet-Weiser will also join the faculty of the Annenberg School at Penn, becoming the first person with appointments in both schools. She will teach courses at Penn and USC.

Annenberg Penn Dean John L. Jackson, Jr., and USC Annenberg Dean Willow Bay note that the center's aim encapsulates the enduring vision of the schools' founder—Ambassador Walter Annenberg—who foresaw the centrality of communication to understanding the profound changes society faces. The center, they said, will build on the important work of uniting the skills, research, and intellectual vision of the two educational institutions he founded.

"Our founder and his daughter, Wallis Annenberg, have supported every opportunity for the two schools that bear their name to promote innovative enterprises that advance the public good through improved communication," Dean Bay said. "Under Professor Banet-Weiser's leadership, this center will urge our faculty and doctoral students to not only explore entirely new

ways of working together, but to break down institutional boundaries that may slow down transformational social change."

Dean Jackson added that Penn and USC are ideally poised to help solve society's most vexing problems.

"This collaboration puts us in a unique position to address emerging global issues at a time when convergence and crisis, proliferation and disruption, challenge our world in unprecedented and unpredictable ways," Dean Jackson said. "From industries to information, from culture and creativity to big data and networked media, from justice and empowerment to crises of media distrust and political polarization, there has never before been a greater urgency for scholars to engage."

Dr. Banet-Weiser said she hopes to use her position as director to leverage the expertise and intellectual power of both schools.

"I want us to ask big questions about the future of communication and media, the impact of that future on the questions that matter most, and the most cutting-edge ways to educate our doctoral students interested in posing critical questions that anticipate media worlds yet to come," she said. "I can't wait to see what our collaborative strengths can accomplish."

The Annenberg Center for Collaborative Communication will officially launch under Dr. Banet-Weiser's leadership on July 1, 2021.

Honors & Other Things

Jamie Baum: Distinguished Law Student

University of Pennsylvania Carey Law School student Jamie Baum, L'22, has been named a Distinguished Law Student of the Third Circuit by the American College of Bankruptcy. Only one student is selected from each circuit for this prestigious award; eligible students undergo a rigorous evaluation process that includes a review of their academic standing as well as interviews and a submission of written materials.

Ms. Baum was nominated by Charles W. Mooney Jr., the Charles A. Heimbold, Jr. Professor of Law, after completing Mr. Mooney's bankruptcy course. Last summer, Ms. Baum also assisted Mr. Mooney with research on the insolvency of Cryptocurrency exchanges around the world.

Award winners receive an all-expenses paid trip to the College's annual induction ceremony and related events, to be held from October 4-6, 2021 in Indianapolis.

Shelley Berger, Celeste Simon: Fellows of the AACR Academy

World-renowned genetics researcher Shelley L. Berger and cellular biologist M. Celeste Simon have been named as members of the 2021 class of fellows of the American Association for Cancer Research Academy. The AACR Academy recognizes and honors distinguished scientists whose major contributions have propelled significant innovation and progress against cancer.

Dr. Berger, the Daniel S. Och University Professor in the departments of cell and developmental biology and genetics in Penn's Perelman School of Medicine and the director of the Penn Epigenetics Institute, is recognized for her contributions to the fields of chromatin biology and epigenetics and for identifying numerous enzymes responsible for post-translational histone modification, as well as defining epigenetic pathways in tumor suppressor biology and cancer.

Dr. Simon, the Arthur H. Rubenstein Professor of Cell and Developmental Biology in the Perelman School of Medicine and the scientific director of the Abramson Family Cancer Research Institute, is recognized for her contributions to the understanding of cellular, tissue, and organismal responses to changes in oxygen availability and for defining how oxygen levels may regulate cardiovascular development, stem cell function, and tumor development, among other functions.



Shelley Berger



Celeste Simon

Fellows of the AACR Academy serve as a global brain trust of top contributors to cancer science and medicine who help advance the mission of the AACR to prevent and cure all cancers through research, education, communication, collaboration, science policy and advocacy, and funding for cancer research.

All fellows are nominated and elected through an annual peer review process conducted by existing fellows of the AACR Academy and ratified by the AACR Academy Steering Committee and AACR Executive Committee. The AACR will formally induct its 2021 fellows during its virtual annual meeting, which will be held from April 9-14.

Martha Farah: Howard Crosby Warren Medal

Martha J. Farah, Walter H. Annenberg Professor of Natural Sciences in the department of psychology, was awarded the Howard Crosby Warren Medal for her foundational cognitive neuroscientific work on face and object recognition, visual attention, mental imagery, and semantic memory and for her recent work investigating the influence of early life experience on neurocognitive development.

The award, given by the Society of Experimental Psychologists, recognizes outstanding achievement in experimental psychology in the U.S. and Canada.

Dr. Farah is a widely recognized expert in the fields of psychology and neuroscience and serves as director of the Center for Cognitive Neuroscience. She is the author of several books, including *The Cognitive Neuroscience of Vision*.



Martha Farah

Sharon Irving: ASPEN Fellowship

Sharon Y. Irving, associate professor of pediatric nursing and vice chair of Penn Nursing's department of family and community health, has been named a 2021 Fellow of the American Society for Parenteral and Enteral Nutrition (ASPEN). She is one of 29 members of the class of 2021, which was announced on March 20 during ASPEN's 2021 Virtual Nutrition Science & Practice Conference.

ASPEN Fellows are outstanding leaders in nutrition support, consistently contributing in education, practice, research, and service to the field. A Fellow of ASPEN (FASPEN) designation is the highest honor available to members. These individuals have records of exemplary achievements.

In addition to her Penn appointment, Dr. Irving practices as a pediatric nurse practitioner at the Children's Hospital of Philadelphia (CHOP),



Sharon Irving

where she provides patient care in the pediatric intensive care and progressive care units. She co-founded and led a multi-disciplinary ICU-Pediatric Nutrition Team (ICU-PNuT) in designing and implementing the first nutrition pathway to improve nutrition delivery to infants and children during and immediately following critical illness at CHOP. The pathway includes ensuring timely initiation of nutrient provision to attain appropriate caloric and protein intake, using primarily the gastrointestinal tract and, when contraindicated or insufficient, the intravenous route.

In 2019, Dr. Irving was awarded ASPEN's Distinguished Nutrition Support Nurse Service Award.

Allyson Mackey: NSF Award

Allyson Mackey, assistant professor of psychology in the School of Arts & Sciences, has received a National Science Foundation (NSF) CAREER award for her work combining approaches in neuroscience, psychology, and education to predict and improve science learning in early elementary school students. Dr. Mackey's work focuses on understanding how early experiences shape the brain and how brain development supports learning, with the aim of developing strategies for improved learning in STEM.

Carlo Siracusa: Mark L. Morris Jr. Investigator Award

The Morris Animal Foundation has awarded its second Mark L. Morris Jr. Investigator Award to Carlo Siracusa, associate professor of clinical behavior medicine at Penn Vet, for a groundbreaking study on how chronic inflammation affects cognition, behavior and the overall health of senior cats.

The award, which funds up to \$200,000 annually for three years, is designed to support important companion animal research for which there is a pressing need, with the potential to make rapid, meaningful progress.

Recent surveys of cat owners indicate that approximately 28% of cats aged 11 to 14 years old develop signs of behavioral issues and cognitive decline, with prevalence increasing to over 50% in cats aged 15 years or older. Some experts believe these figures underestimate the true number of cats suffering from significant mental decline.

"There is an increasing body of evidence that shows the immune system and inflammatory response have an influence on behavior, but we don't yet have enough data on cats," said Dr. Siracusa. "We want to investigate how physical health influences mental health and vice versa."

Dr. Siracusa, along with his Penn colleagues and a team at the University of Milan in Italy, will study 100 client-owned cats age 7 years or older. Researchers will first perform a routine veterinary exam on each cat to look for signs of chronic inflammation, including specific blood markers and physical changes. Qualified veterinary behaviorists then will assess the cats' behavior, their living environment and their cognitive abilities using validated questionnaires and behavioral tests.

Dr. Siracusa, chief of the animal behavior service and primary care education section at Penn Vet, is a leading voice in behavior medicine for companion animals. The Mark L. Morris Jr. Investigator Award, first awarded in 2016, was created to honor the legacy and vision of Mark Morris Jr., son of Mark Morris Sr., the Morris Animal Foundation's founder.

75th Anniversary of the Electronic Numerical Integrator and Computer (ENIAC)

On February 14, 1946, the world's first general purpose electronic computer was introduced to the world. The Electronic Numerical Integrator and Computer (ENIAC), constructed at the Moore School of Electrical Engineering (now Penn's School of Engineering and Applied Science), was touted as "an amazing machine which applies electronic speeds for the first time to mathematical tasks hitherto too difficult and cumbersome for solution."

While the abilities of this "amazing machine" have since been surpassed by 75 years of progress in electronics and computers, ENIAC's development was instrumental in sparking a revolution in computer science and electrical engineering that continues to this day. This lasting legacy is thanks in part to a team of women programmers who, despite their significant contributions to ENIAC's success, were only recently recognized for their efforts.

The Early Days of Computing

Before ENIAC's time, "computers" referred to the people who worked on complex math equations. During World War II, computers relied on "function tables," detailed information used to predict a shell's path using metrics like air density, temperature, and wind, to calculate one part of a ballistics equation that would then be completed by a team of computers.

Starting in the late 1920s, devices known as differential analyzers were developed to help automate the process of solving the differential equations used in ballistics calculations. These wheel-and-disc devices could perform integrations, and one such device was built and used in the Moore School building in the mid-1940s to compute artillery firing tables. The challenge, explains emeritus professor Mitch Marcus, is that these devices were difficult to work with. "Setting up a problem involves putting gears of the right



Kathleen Antonelli, Alyse Snyder, and Sis Stump operate the differential analyzer in the basement of the Moore School of Electrical Engineering in the years leading up to ENIAC's construction.

size together, and once you set up a problem on a differential analyzer, it's very hard to change it," he explains. "You program it once and get it into an alignment, but if the wheels slip then you've got big problems."

ENIAC's design and construction was financed by the U.S. Army, led by Major General Gladeon M. Barnes and was designed by engineers John Mauchly and J. Presper Eckert.

To improve upon the differential analyzer's

limitations, work on an alternative began in secret at the Moore Building in 1943. ENIAC was the fastest computational device of its time, able to do 5,000 additions per second, but because it had no internal storage, it had to be programmed manually for each new set of calculations.

The task of "programming" ENIAC was given to a group of women who had all previously been working as computers at the Moore School: Kathleen Antonelli, Jean Bartik, Frances "Betty" Holberton, Marlyn Meltzer, Frances Spence, and Ruth Teitelbaum. Although their contributions were instrumental to ENIAC's success, their stories were nearly lost to history and only more recently was their work formally recognized.

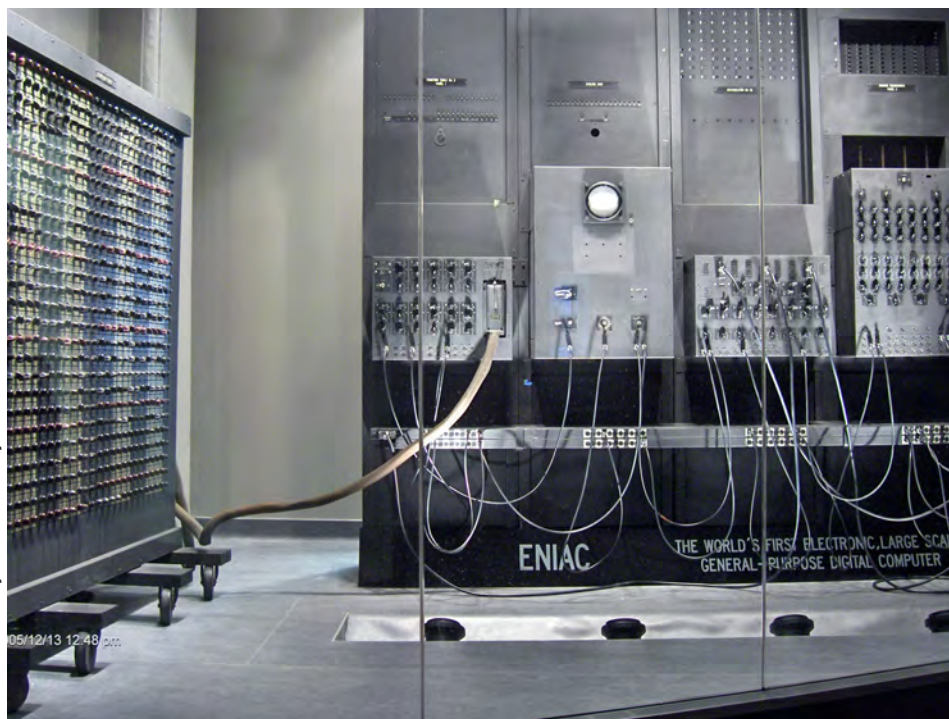
The "ENIAC Six" Rise to the Occasion

Kathleen Antonelli earned a degree in mathematics from Chestnut Hill College in 1942. As one of the few math majors from her class, she saw the U.S. civil service as a pathway to do work in math without becoming a teacher and was hired for a position as a computer at the Moore School.

Jean Bartik was the only mathematics major from what is now Northwest Missouri State University when she graduated in 1942. Ms. Bartik learned about the need for math-savvy individuals at Moore and came to Philadelphia toward the end of ENIAC's construction.

Frances "Betty" Holberton, who was from Philadelphia, graduated from Penn with a degree in journalism in 1939. She also got involved working as a computer before ENIAC was built and, with Ms. Bartik, would go on to become one of its co-lead programmers.

Marlyn Meltzer was also from Philadelphia and graduated from Temple University with a degree in social studies in 1942. Because she could operate an adding machine, Ms. Meltzer was brought into the Moore School to work on weather calculations. After her unit was dis-



ENIAC on display at the Moore School Building in the School of Engineering and Applied Science.

(continued on page 7)

(continued from page 6)

banded, she was encouraged to apply to the U.S. civil service so she could stay at Moore doing ballistics work.

Frances Spence, also born in Philadelphia, graduated from Chestnut Hill College the same year as Ms. Antonelli, who told Ms. Spence about the effort to recruit math majors to work at Penn for the U.S. Army.

Ruth Teitelbaum, from Far Rockaway Beach, New York, graduated from Hunter College with a degree in mathematics and came to the Moore School to work on ballistics calculations shortly before the ENIAC project began.

Because of the classified nature of their work, ENIAC's six programmers only had access to blueprints and were not even allowed into the same room as the device. Despite these challenges, the women learned about ENIAC using schematics and interviews with its engineers and were able to figure out how to design algorithms and adjust ENIAC's switches for programming calculations.

"The biggest advantage of learning the ENIAC from the diagrams was that we began to understand what it could and what it could not do. As a result we could diagnose troubles almost down to the individual vacuum tube," Ms. Bartik told the Institute of Electrical and Electronics Engineers (IEEE) in 1996. "Since we knew both the application and the machine, we learned to diagnose troubles as well as, if not better than, the engineer."

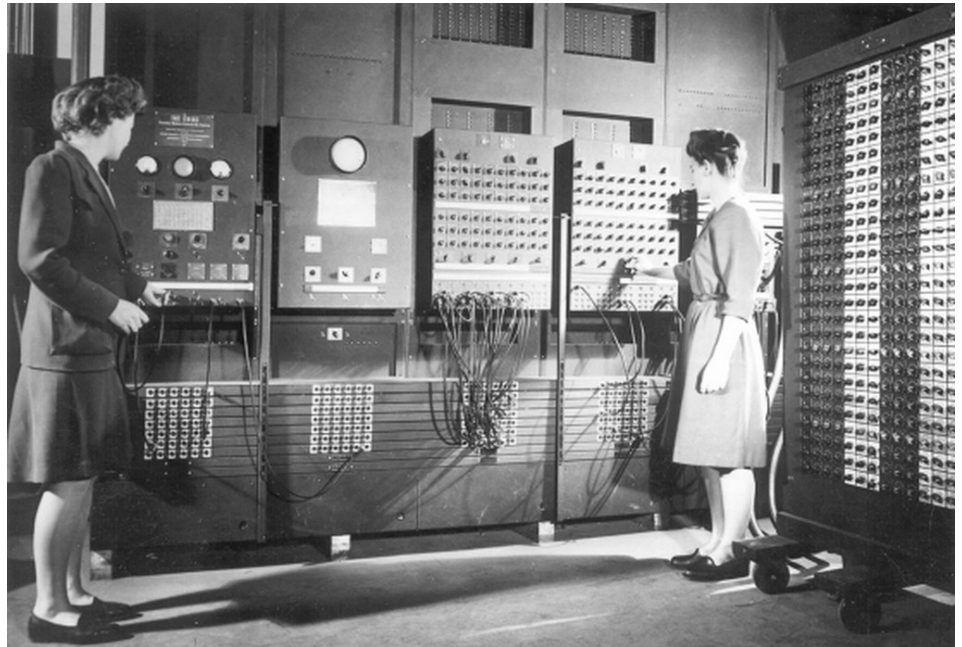
Computer science professor and Penn ENIAC Mini-Symposium organizer Andre DeHon says what the programmers did was far more than adjusting switches: The programmers had to develop logic behind how to program, use, and debug ENIAC, work that required a massive amount of innovation and problem solving. "Reading their stories, you realize how much they made it happen," said Dr. DeHon. "They were handed a new field, perhaps by people who underestimated the intellectual requirements of that field, who simply said 'We built it and you program it.' It was more sophisticated than that, and they rose to the occasion."

Despite the significance of the ENIAC six's efforts in programming ENIAC, much of the early recognition and credit was given solely to Ms. Mauchly and Ms. Eckert. Then, when ENIAC was moved to Aberdeen Proving Ground, its six original programmers' paths varied and their contributions were nearly lost to history. Thanks to Kathy Kleiman, who learned about the ENIAC six while doing research for her undergraduate thesis, the stories of the ENIAC programmers were finally brought to life and all six women were inducted into the Women in Technology Hall of Fame in 1997.

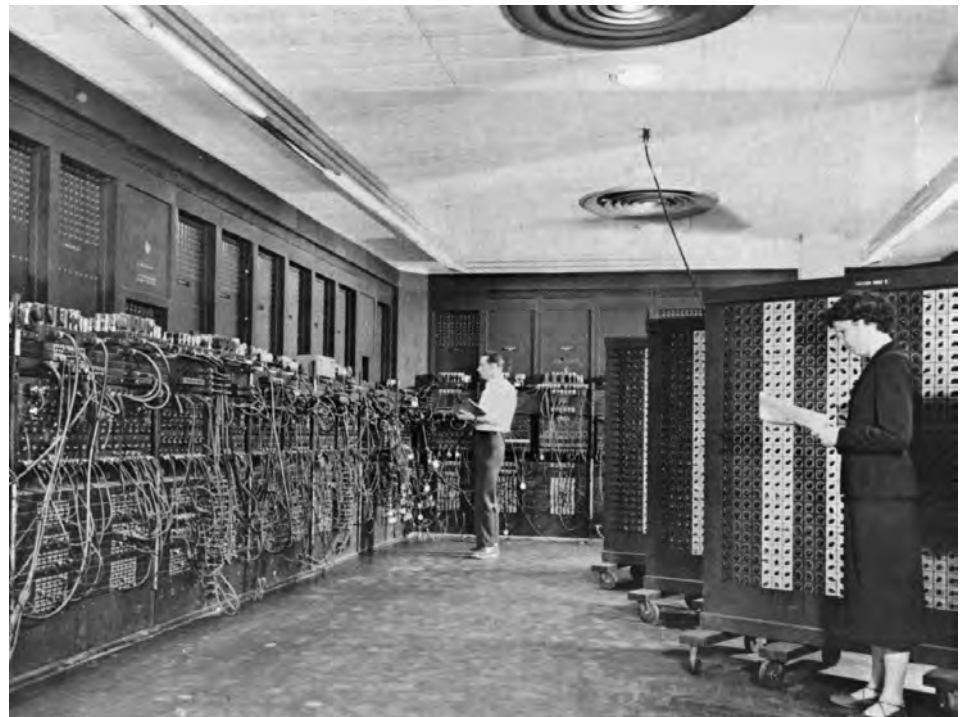
ENIAC's Legacy, 75 Years Later

ENIAC's introduction to the world was lauded as "birth of the computer age," and Dr. Marcus said that ENIAC's continued legacy is due to the programmers who developed ideas around stored programs and conditional programming that remain a cornerstone of computer science.

"The first half of every chapter is electronics and the second half is modern computer science—and these women invented it," says



Jean Bartik (left) and Frances Spence operating the ENIAC's main control panel. Ms. Bartik was present on the day of ENIAC's unveiling to the world, and helped troubleshoot a switch issue the night before its unveiling, but her efforts, and those of ENIAC's five other women programmers, were nearly forgotten.



Glen Beck (background) and Betty Holberton (foreground) programming the ENIAC.

Dr. Marcus. "Women rediscovered things that men forgot about, and by talking theoretically and mathematically, they abstracted all of these ideas."

For Dr. DeHon, ENIAC's impacts can also be found in modern-day computer science research. In his work on programmable media, architectures that resemble ENIAC processors are becoming more attractive due to the limits

of Moore's law.

More broadly, he says, "ENIAC's legacy is this whole computerized world we have now, and the world we live in is a better place for all of the automated and computational technologies that have come out of this."

Adapted from a [Penn Today](#) article by Erica K. Brockmeier, February 11, 2021.

School of Nursing 2021 Teaching Awards

(continued from page 1)

Nurse Midwives, Ms. Guidera is praised by her peers and her students for her ability to convey sensitive and complicated information in a way that motivates her students to continue their scholarly and professional work. Her deep commitment to student success has remained a constant aspect of her mentorship, which has seen her build lasting relationships and provide her students with guidance and feedback that inspires them to become well-prepared nurse scientists and midwives. Ms. Guidera mentors each student according to their needs, gifts, and talents, cultivating their academic, emotional, and social growth. In many instances, Ms. Guidera's mentorship and dedication to student success has helped many struggling students to stay, and thrive, in their nursing program. Whether through her assistance with clinical placements or facilitating additional support for students who may need academic support, Ms. Guidera readily and expertly shares her exceptional knowledge on all projects, modeling a collaborative approach to mentorship.



Mamie Guidera

Dean's Award for Distinguished Teaching

Bridgette M. Brawner is an associate professor of nursing in the department of family and community health. Dr. Brawner's undergraduate courses, Nursing and the Community, Research/Inquiry-Based Service Residency, and Psychological and Social Diversity in Health and Wellness, have all left an indelible impact on her students. Students consistently praise Dr. Brawner's effortless presentation of complex concepts in such a way that students are able to understand and build upon such knowledge. Through skillful and stimulating communication, her lectures are innovative and use highly engaging teaching methods so that students build meaningful connections between concepts. Dr. Brawner's graduate courses, Mixed Methods Research and Research Residency, are often described as enriching. Her lessons and class discussions meet students' individual needs, ensuring that nursing students are well prepared to become successful clinical professionals and nurse scientists. Dr. Brawner provides a variety of resources, content, and opportunities

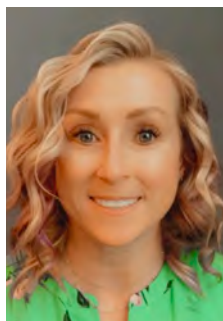


Bridgette Brawner

for student discourse in both her graduate and undergraduate courses. She is approachable and kind and she understands the stress of a rigorous education. A dedicated professor and masterful teacher, Dr. Brawner builds relationships through course discussions and her investment in each student.

Dean's Award for Teaching Excellence

Aleaha Peoples is a senior lecturer in the department of biobehavioral health sciences. Ms. Peoples co-teaches Nursing of Young and Middle-Aged Adults with Maria White. Not only does Ms. Peoples consistently demonstrate expertise in her course curriculum, but she also stimulates student interest and fosters their professional development. Many students and faculty praise Ms. Peoples' ability to present complex concepts and foster a diverse set of student interests, as well as develop students' critical thinking skills. Her effortless ability to create an inclusive classroom environment, combined with her concern for student well-being, has allowed those who take her courses to become successful nurses, students, and researchers. Ms. Peoples delivers difficult, and sometimes abstract, course content in a variety of media to create memorable connections between course concepts and real-life application for all kinds of student learners. Course discussions create nurses who are critical thinkers and ask important, thoughtful questions throughout their didactic and clinical processes. Through her interactions with students inside and outside the classroom, Ms. Peoples' dedication to student well-being and success is ever-present, and she creates meaningful, long-lasting relationships with her students.



Aleaha Peoples

Dean's Award for Teaching Excellence

Maria White is a senior lecturer in the department of biobehavioral health sciences. Students praise Ms. White's seamless blending of her clinical expertise with her course curriculum. In her course Nursing of Young and Middle-Aged Adults, Ms. White and her colleague Aleha Peoples work to create a stimulating, yet compassionate, learning environment so that all students can develop excellent critical thinking skills. Ms. White's students become nurses who are well-prepared and quick thinkers. Most notably, Ms. White strives to ensure her classroom environment is inclusive and welcoming, creating a rapport with her students. She is accessible, kind, and available for additional help when needed. Her use of diverse media to convey

complex lessons allows all learners to understand the material and how to apply it to their future as clinicians. Ms. White's teaching methods remain innovative and engaging every year and students appreciate her teaching style. Her classroom and relationship with her students are described as supportive, engaging, and kind. Ms. White's enthusiasm is unparalleled, and her regular engagement with students, both inside and outside of the classroom, proves Ms. White to be an invaluable professor.



Maria White

Dean's Award for Exemplary Professional Practice

Deborah Becker is a practice professor of nursing in the department of biobehavioral health sciences. As the director of the Adult Gerontology Acute Care Nurse Practitioner program, Dr. Becker has worked to develop an online, three-course streamlined gerontology acute care program, not only preparing Penn Nursing students to be exceptional providers, but also assisting frontline nurses, advanced practice nurses, and other healthcare professionals. Dr. Becker collaborates with leaders at various clinical sites, including the University of Pennsylvania Health System, ChristianaCare, and the SIM Lab. Additionally, Dr. Becker's leadership in the Annual Interprofessional and Intercollegiate Education Disaster Preparedness and Response Simulation prepares Penn students of all disciplines to use their critical thinking skills in order to approach, consider, and manage an emergency, especially with interdisciplinary colleagues. Students in Penn Medicine's Critical Care Advanced Practice Fellowship praised Dr. Becker's role in designing the curriculum and maintaining relationships with alumni of the program. Dr. Becker is recognized as an expert educator, collaborator, and thought leader who has consistently made significant contributions to nurse practitioner education and partnerships. She exemplifies a practice leader who has created lasting impact on nurse innovation and education.



Deborah Becker

(continued on page 9)

(continued from page 8)

Barbara J. Lowery Faculty Award, Doctoral Student Organization

Peggy Compton is the van Ameringen Chair in Psychiatric and Mental Health Nursing and an associate professor of nursing in the department of family and community health. Doctoral students praise Dr. Compton's unmatched mentorship, generosity, kindness, and endless support for their success. In addition to her care and concern for her mentees, Dr. Compton is focused on providing opportunities for student growth and has helped with re-designing the DSO website. She establishes a mutual



Peggy Compton

respect with her mentees and cultivates student interests in a diverse range of topics, preparing students for their future as clinicians and researchers. A dedicated mentor, Dr. Compton supports doctoral students through both formal and informal teaching and mentoring. As such, her students can practice creative freedom within her structured guidance. Dr. Compton's leadership in planning the Nursing Annual Research Day, which allows students to disseminate their research, and her assistance in the review process of the DSO Health Equity Grant further evidence her influence on these future nurse researchers. As a warm and enthusiastic professor, Dr. Compton has had an incomparable impact on Penn Nursing students, shaping the personal and professional trajectory of many nurse scholars.

Outstanding Nurse Educator Award, Graduate Student Organization

Dawn Bent is a program administrator of the DNP-Nurse Anesthesia program and a lecturer in the department of biobehavioral health sciences. Dr. Bent has never wavered in her advocacy for students, maintaining their safety within clinical settings as a top priority. To ensure that educational needs are fulfilled, Dr. Bent has adapted courses when needed but maintained academic rigor without sacrificing content. Continuously complimented for her ability to go above and beyond for nursing students, Dr. Bent has devoted countless hours to the advancement of nurse anesthetist students and has always communicated with them promptly and honestly. Her classes, such as Advanced Principles of Nurse Anesthesia,

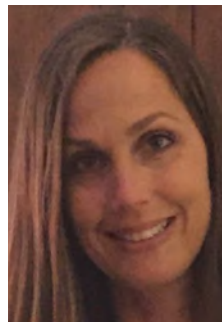


Dawn Bent

create an environment of shared learning, emotional support, and cohesion amongst curricula. Dr. Bent's expertise is not lost on students, as her instruction is unparalleled, relaying difficult content in a way that students can remember and apply to their own patients and healthcare delivery, elevating their professionalism as future nurse anesthetists. Dr. Bent has personified the leadership, character, and level of excellence she instills in her students. They have expressed their deepest gratitude for her contribution to the advancement of their nursing and leadership endeavors.

Undergraduate Award for Teaching, Student Nurses at Penn

Monique Dowd is a senior lecturer in the department of biobehavioral health sciences. Ms. Dowd's class Fundamentals of Nutrition allows BSN students an important perspective on patient health. Ms. Dowd leads by example and brings a holistic approach to students' nursing careers and patient care. Ms. Dowd's undergraduates praise her ability to use real-life patient encounters to impart extensive knowledge to her students that will create thoughtful nurses and healthier patients. Ms. Dowd provides helpful, notable lessons on a variety of topics and health-specific diets, complete with anecdotes, statistics, and tangible examples. Additionally, she emphasizes the importance of cultural understanding when patients have cultural or religious dietary restrictions. As a clinician and an educator, Ms. Dowd seamlessly forges the bridge between her classroom and her clinical environments so that her students will be able to do the same with the knowledge they gain in her classes. A thorough and engaging instructor, Ms. Dowd ensures that the lessons in her course are applicable or relatable to content in other nursing courses, strengthening students' understanding of nursing and nutrition. Ms. Dowd embodies the characteristics her students will strive to emulate in their careers.

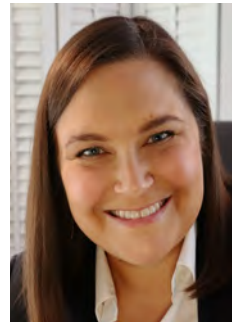


Monique Dowd

Dean's Award for Undergraduate Advising

Holly Harner is the Afaf I. Meleis Director of the Center for Global Women's Health and a practice professor of women's health. Dr. Harner's extensive knowledge of the undergraduate curriculum and willingness to support students is a hallmark of her advising at Penn Nursing. Dr. Harner's students are grateful for her accessibility, as she has made a significant contribution to their academic, professional, and personal development. In addition to her professionalism, her advisees have praised her kindness, knowledge, and insight into potential nursing career paths,

whether it is a PhD or a specialization within the nursing field. Dr. Harner does not leave any question unanswered, thoroughly evaluating possible outcomes and explaining her reasoning for her advice to students. Her organization and great memory ensure that her advisees feel supported, heard, and that they are receiving individualized advice. Dr. Harner's calm demeanor and positive outlook make undergraduate students feel at ease when they discuss academic or professional conflicts with her. Her ability to propose a variety of solutions to undergraduate challenges allows all students to thrive. Dr. Harner's advice, leadership, and rapport with her students will propel these future nurses into successful careers.



Holly Harner

Dean's Award for Exemplary Citizenship

Annie Hoyt-Brennan is the director of the Helene Fuld Pavilion for Innovative Learning and Simulation and is a simulation education specialist. Ms. Hoyt-Brennan has led the simulation faculty and staff through an enormous challenge in delivering both virtual and in-person simulations for nursing students. In addition to simulations, this initiative included online and in-person skills training and disseminating simulation and skills training packets for students as the majority of courses moved to a digital format.

Ms. Hoyt-Brennan's leadership allowed nursing students to remain on track in their programs, successfully solving complex scheduling challenges in the lab. Other than clinical placements, the Simulation Lab provided the only in-person experiences that students had this past year. Ms. Hoyt-Brennan also managed all purchasing, tracking, supplying, and training on how to use personal protective equipment. Additionally, Ms. Hoyt-Brennan's dedicated effort was instrumental in ensuring that students could attend clinicals in settings that advanced their learning, but where the site did not have extra PPE for students. Her quick problem-solving, innovative solutions, attention to detail, and commitment to students across all of Penn Nursing's academic programs is impressive, heartwarming, and inspiring. Ms. Hoyt-Brennan inspires the Penn Nursing community to prepare successful nurses and students.



Annie Hoyt-Brennan

Morris Arboretum Invites Visitors to Experience Spring

After a long winter in Philadelphia, everyone is ready for spring. And the Morris Arboretum, with its spacious 92-acre garden, intends to show off its collections this spring in a safe and beautiful environment.

As visitors enter the Morris Arboretum's winding drive, spring bursts forth along the Magnolia Slope in a dizzying array of form and color. The Magnolia Slope's small-to-medium-sized flowering trees are one of the most diverse groups of ornamental trees in our area. Magnolia flowers generally range in color from white to soft pink to deep purple, and recent advances in breeding have resulted in yellow-flowered forms as well. The Arboretum has more than 200 plants of 101 types of magnolias and April and early May is the best time to enjoy their beautiful and wonderfully fragrant flowers.

Other glorious harbingers of spring are Japanese flowering cherries, which are among the most beloved ornamental flowering trees. The ephemeral nature of ornamental cherries makes them all the more special. The Morris Arboretum has approximately 45 different types of cherries with staggered bloom times, so depending on weather conditions, visitors can enjoy three to four weeks of blooming cherries throughout the Arboretum's garden. Although hard to define, the full bloom is usually based on when 70 percent of the Yoshino cherry (*Prunus × yedoensis*) blossoms are open. Two groups in Washington, D.C. study the weather extensively to predict the blooming period including The National Park Service (www.nps.gov) and the National Cherry Blossom Festival (www.nationalcherryblossomfestival.org). Philadelphia Yoshino cherries flower about one week to ten days after those in Washington, D.C., so in 2021 we can expect bloom time in Philadelphia and at the Morris Arboretum to be somewhere around April 9-16. Of course, Morris Arboretum has more than just Yoshino cherries, so there is always more to see.

New this year, visitors will also be treated to more than 8,000 tulips planted for spring, from the Step Fountain to the Rose Garden to the Garden Railway.

Also, this April, the Morris Arboretum welcomes artist Reed Bmore, who will install



Photo Courtesy of Morris Arboretum

Magnolia trees at the Morris Arboretum

approximately 10 of his wire sculptures throughout the garden. Mr. Bmore is a street artist from Baltimore, Maryland. As a street artist, Mr. Bmore installs wire drawings on traffic lights and electrical lines around America. The idea of these installations is to instill a sense of nostalgia and wonderment to the viewer. At the Morris Arboretum, Mr. Bmore will suspend his large wire sculptures from trees for visitors to discover. A scavenger hunt will be available online for visitors to find each of the nature-themed wire sculptures. Images of Reed Bmore's work can be found at reedbmoreart.com.

Spring is a wonderful time to visit the Morris Arboretum! With advance tickets required to control the number of visitors, the Morris Arboretum is a safe and beautiful way to experience nature. Garden hours from April-October are 10 a.m.-5 p.m. on weekdays and 9 a.m.-5 p.m. on weekends.

Tree Planting in Philadelphia: Mobilizing Communities to Restore the Urban Forest

The Barnes Endowed Lecture is presented annually in memory of Laura L. Barnes, founder of the Barnes Foundation Arboretum. This lecture is viewable online only.

Tuesday, May 18
1-2 p.m.

Members: \$10

Non-Members: \$15

Tickets can be purchased at:

<http://morrisarb.org/onlineclasses>.

Virtual Magic Academy with The Amazing Max at the Annenberg Center for the Performing Arts

The Annenberg Center presents some amazing abracadabra action with the *Virtual Magic Academy with The Amazing Max* on Saturday May 1 at 3 p.m. This is a live, interactive event that will occur via Zoom. Visit annenbergcenter.org for details.

Known for his off-Broadway "awesome and hilarious live magic show" (PBS Kids), magician Max Darwin, aka The Amazing Max, takes the virtual stage to teach children easy-to-perform magic tricks with a side of laughter and confidence-boosting fun. Budding wizards will take the Magician's Oath, laugh along with The Amazing Max while mastering easy-to-learn magic skills, and surprise and trick their grown-ups with the help of only a pencil, deck of cards, and two of each of the following coins: quarters, nickels and pennies. (Cape, hat and adorable white bunny optional.)

Max Darwin first appeared on stage before he could walk. He loves theatre, magic, ninjas, and the sound of children laughing. His stage show, *The Amazing Max*, has been playing off-

Broadway in New York and touring across the U.S. since 2011. He can be seen as a featured artist in seasons three and four of *Brain Games* (National Geographic Channel) and is a magic consultant for *Gotham* (Fox) and *America's Got Talent* (NBC). Mr. Darwin's TV credits include hosting the hit Nickelodeon show *Game Farm* and appearances on *FBI*, *Sneaky Pete*, *Girls*, *Blindspot*, and *Black Box*. He has also appeared in national TV commercials for T-Mobile, Verizon, Bank of America, and Coca-Cola. In 2018, Mr. Darwin was selected as an artist-in-residence as part of New Victory Theater's LabWorks program. During COVID-19, Mr. Darwin has stepped onto a virtual stage to perform perhaps his most incredible feat ever: Getting kids truly excited about learning something and—in the process—showing them how to believe in themselves. Mr. Darwin mentors students across the U.S. and as far away as Mexico, Finland, Kuwait, and Hong Kong.

Annenberg Center for the Performing Arts' full season calendar can be accessed [here](http://annenbergcenter.org).



The Amazing Max

Photo Courtesy of Annenberg Center for the Performing Arts

Update

April AT PENN

CHILDREN'S ACTIVITIES

Penn Museum

Online events. Info and to register: <https://www.penn.museum/calendar>.

9 Virtual Passport Day: *The Americas*; 11 a.m.

CONFERENCES

9 *Liberté, Égalité, Identité: France, American Academia and the Islam Debate*; conversations about the 2021 version of the French Cultural Wars in the wake of the murder of history teacher Samuel Paty; 11 a.m.-1:30 p.m.; Zoom meeting; register: <https://tinyurl.com/middle-east-conf-apr-9> (Middle East Center).

EXHIBITS

9 *Virtual Global Guide Tour: Middle East Galleries*; a thought-provoking tour of the Middle East Galleries led by a guide who grew up in the region; 2:30 p.m.; online event; register: <https://www.penn.museum/calendar/705/virtual-global-guide-tour> (Penn Museum).

FITNESS & LEARNING

6 *The Future of Copyright Law: The CASE Act and Beyond*; panel of distinguished experts will discuss implications of the CASE Act as well as potential developments in copyright law; 4:30 p.m.; online event; register: <https://tinyurl.com/case-act-apr-6> (Penn Law).

9 *Clinical Legal Studies Workshop: Advocating for Black and Brown Low-Wage Workers*; conversation about creative advocacy strategies for Black and Brown low-wage workers; noon; online event; register: <https://tinyurl.com/racial-justice-law-workshop> (Penn Law).

Houdini Presentation; demonstration of 3D cinematic scientific visualization; 2 p.m.; Zoom meeting; info: kathom@seas.upenn.edu (PICS).

11 *Coffee and Conversation – Something That Could Be Anything: Minimalism, Diversity, and Social Critique in the Modern American Workplace*; open conversation; 3 p.m.; Zoom meeting; register: <https://tinyurl.com/coffee-convo-apr-11> (ICA).

13 *Everything You Wanted to Know About Making a Record*; workshop about recording with the PRISM Quartet; noon; online event; info: <https://music.sas.upenn.edu/events/> (Music).

Penn Libraries

Online events. Info and to register: <https://guides.library.upenn.edu/workshops>.

12 *InterProfessional Student Advisory Gatherings (IPSAG): Virtual Health Tea & Coffee Chat*; 11 a.m.

READINGS & SIGNINGS

8 *Timescales: Thinking Across Ecological Temporalities*; book launch with co-author Patricia Kim, G'19; 6 p.m.; Zoom event; register: <https://tinyurl.com/kim-launch-apr-8> (History of Art).

Kelly Writers House

Online event. Info and to register: <http://writing.upenn.edu/wh/calendar/0421.php>.

13 *The Next American Poetry*; Levi Bentley, Susan Briante, Simone White, and Timothy Yu; 6 p.m.

TALKS

6 *Epistemology of the Violets: Heuristics Toward a Sensorium of Afro-Japanese Co-Creativity*; Will Bridges, University of Rochester; 4 p.m.; online event; register: <https://www.eventbrite.com/e/149154243357> (CEAS).

A Dialogue; Nakita Reed, Quinn Evans Architects; 6 p.m.; Zoom meeting; register: <https://tinyurl.com/reed-talk-apr-6> (Center for the Preservation of Civil Rights Sites).

7 *The Long Crisis of Black Masculinity in Racial Capitalism*; Jordanna Matlon, American University; noon; online event; info: <https://sociology.sas.upenn.edu/events/> (Sociology).

8 *Bio-like Structural Hydrogels with Life-like Intelligence*; Ximin He, UCLA; 10:45 a.m.; Zoom meeting; info: info-mse@seas.upenn.edu (MSE).

Re-Reading Persian Love Poetry: From the Ethics of Experience to the Aesthetics of Vision; Domenico Ingenito, UCLA; 1:30 p.m.; Zoom meeting; register: <https://tinyurl.com/ingenito-talk-apr-8> (Middle East Center).

Physiologic and Pathologic Alveolar Regeneration; Rachel Zemans, University of Michigan; 4 p.m.; BlueJeans meeting; join: <https://bluejeans.com/497920610> (Penn-CHOP Lung Biology Institute).

Countering Infrastructural Violence: Grassroots Innovations in African Cities; Charisma Acey, UC Berkeley; 6 p.m.; Zoom meeting; register: <https://tinyurl.com/acey-talk-apr-8> (City & Regional Planning).

9 *On the Connection between Deep Neural Networks and Kernel Methods*; Ronen Basri, Weizmann Institute of Science; 10 a.m.; Zoom meeting; join: <https://upenn.zoom.us/j/91784948875> (Mathematics).

Patriarchal Racism: The Convergence of Anti-Blackness and Gender Tensions on Chinese Social Media; Benson Zhou, CSCC; noon; online event; info: <https://cscs.sas.upenn.edu/events/> (CSCC).

12 *The Impact of COVID-19 Policy Responses on Mental Well-being: Evidence from 27 European Countries*; Arnstein Aassve, Bocconi University; noon; Zoom meeting; info: <https://www.pop.upenn.edu/> (PSC).

13 *Racial Differences in Wealth Trajectories during Early Adulthood*; Alexander Adames and Ellen Bryer, sociology; 9 a.m.; online event; info: <https://sociology.sas.upenn.edu/events/> (Sociology).

Design, Fabrication, and Control of Biologically Inspired Soft Robots; Michael Tolley, UC San Diego; 10:30 a.m.; Zoom meeting; info: peterlit@seas.upenn.edu (MEAM).

Penn Dental

Online events. Info and to register: <https://www.dental.upenn.edu/news-events/events/>.

7 *The Role of Dentists in Protecting Human Milk & Breastfeeding*; Diane Spatz, Nursing; 6:30 p.m.

8 *Peri-Implant Tissue and Prosthesis Relationship in the Anterior Sector*; Oscar Gonzalez Martín, University Complutense of Madrid; 6 p.m.

12 *The Joy of Treating patients with Special Healthcare Needs (IDD)*; Allen Wong, University of the Pacific; 5:30 p.m.

Penn Museum

Online event. Info and to register: <https://www.penn.museum/calendar/>.

8 *Living Room Lecture: A Hidden Cultural Lens: Investigating Museum Science Displays*; Lizzie Oakley, anthropology; 5:30 p.m.

Almanac

3910 Chestnut Street, 2nd floor
Philadelphia, PA 19104-3111
Phone: (215) 898-5274 or 5275
Email: almanac@upenn.edu
URL: www.upenn.edu/almanac

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

EDITOR

ASSOCIATE EDITOR	Louise Emerick
ASSISTANT EDITOR	Alisha George
EDITORIAL ASSISTANT	Jackson Betz
STUDENT ASSISTANT	Justin Greenman

ALMANAC ADVISORY BOARD: For the Faculty Senate: Sunday Akintoye, Christine Bradway, Daniel Cohen, Al Filreis, Cary Mazer, Martin Pring. For the Administration: Stephen MacCarthy. For the Staff Assemblies: Jon Shaw, PPSA; Marcia Dotson, WPPSA; Rachelle R. Nelson, Librarians Assembly.

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, color, sex, sexual orientation, gender identity, religion, creed, national or ethnic origin, citizenship status, age, disability, veteran status or any other legally protected class status in the administration of its admissions, financial aid, educational or athletic programs, or other University-administered programs or in its employment practices. Questions or complaints regarding this policy should be directed to Sam Starks, Executive Director of the Office of Affirmative Action and Equal Opportunity Programs, 421 Franklin Building, 3451 Walnut Street, Philadelphia, PA 19104-6205; or (215) 898-6993 (Voice).

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 **March 22-28, 2021**. Also reported were 8 crimes against property (2 burglaries, 2 vandalism, 1 auto theft, 1 fraud, 1 theft other, and 1 other offense) with 1 arrest. 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 between the dates of **March 22-28, 2021**. The University Police actively patrol from Market St to Baltimore Avenue and from the Schuylkill 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.

03/22/21	10:27 AM	4010 Ludlow St	Offender bit complainant/Arrest
03/25/21	1:14 PM	3400 Spruce St	Employee punched in the face by patient, causing injury
03/25/21	7:36 PM	3300 Walnut St	Confidential sex offense

18th District

Below are the Crimes Against Persons from the 18th District: 6 crimes against persons (2 aggravated assaults, 1 assault, 1 domestic assault, 1 indecent assault, and 1 robbery) with 2 arrests were reported for **March 22-28, 2021** by the 18th District covering the Schuylkill River to 49th St & Market St to Woodland Avenue.

03/22/21	10:27 PM	4010 Ludlow St	Domestic Assault/Arrest
03/23/21	9:57 AM	4823 Chester Ave	Assault
03/25/21	1:52 PM	4601 Walnut St	Aggravated Assault/Arrest
03/25/21	4:43 PM	35 S 45th St	Robbery
03/26/21	6:39 AM	3400 Spruce St	Aggravated Assault
03/26/21	12:47 PM	3330 Walnut St	Indecent Assault

RNA, a Key Component of COVID-19 Vaccines, Could Be Used to Treat Cancer and Rare Childhood Diseases

As COVID-19 vaccines roll out, the concept of using mRNA to fend off viruses has become a part of the public dialogue. However, scientists have been researching how mRNA can be used to in life-saving medical treatments well before the pandemic.

The “m” in “mRNA” is for “messenger.” A single-stranded counterpart to DNA, it translates the genetic code into the production of proteins, the building blocks of life. The Moderna and Pfizer COVID-19 vaccines work by introducing mRNA sequences that act as a set of instructions for the body to produce proteins that mimic parts of the virus itself. This prepares the body’s immune response to recognize the real virus and fight it off.

Because it can spur the production of proteins that the body can’t make on its own, mRNA therapies also have the potential to slow or prevent genetic diseases that develop before birth, such as cystic fibrosis and sickle-cell anemia.

However, because mRNA is a relatively unstable molecule that degrades quickly, it needs to be packaged in a way that maintains its integrity as it is delivered to the cells of a developing fetus.

To solve this challenge, Michael J. Mitchell, Skirkanich Assistant Professor of Innovation in the department of bioengineering, is researching the use of lipid nanoparticles as packages that transport mRNA into the cell. He and William H. Peranteau, an attending surgeon in the division of general, thoracic and fetal surgery and the Adzick-McCausland Distinguished Chair in Fetal and Pediatric Surgery at Children’s Hospital of Philadelphia, recently co-authored a “proof-of-concept” paper investigating this technique.

In this study, published in *Science Advances*, Dr. Mitchell examined which nanoparticles were optimal in the transport of mRNA to fetal mice. Although no disease or organ was targeted in this study, the ability to administer mRNA to a mouse while still in the womb was demonstrated, and the results are promising for the next stages of targeted disease prevention in humans.

The appeal of the fatty substances is that they are biocompatible. In the vaccines, for example, two of the four lipids used to make the delivery spheres are identical to lipids found in the membranes of human cells—including plain old cholesterol.

When injected, the spheres, called nanoparticles, are engulfed by the person’s cells and then deposit their cargo, the RNA molecules, inside. The cells respond by making the proteins, just as they make proteins by following the instructions in the person’s own RNA. (Important reminder: The RNA in the vaccines cannot become part of your DNA.)

Among the different lipid combinations that Dr. Mitchell and his lab members tested, some were better at delivering their cargo to specific organs, such as the liver and lungs, meaning they could be a good vehicle for treating disease in those tissues.

Read the full text at <https://tinyurl.com/rarechildhooddiseases>.

Closing the Racial Disparity Gap in Survival After In-Hospital Cardiac Arrest

In-hospital cardiac arrests (IHCA) are catastrophic and often terminal events. Despite investments to improve the quality of resuscitation efforts, fewer than 25 percent of all patients that experience cardiac arrests in hospitals survive to discharge, and survival varies significantly across hospitals and by race. Until now, few have been able to specify reasons for the between-hospital differences.

A new study from the University of Pennsylvania School of Nursing’s (Penn Nursing) Center for Health Outcomes & Policy Research is the first of its kind to describe the relationship between medical-surgical nurse staffing and its association with racial disparities in survival after IHCA. It suggests that while the likelihood of survival to discharge after an IHCA is lower for Black patients than for white patients in both poorly staffed and well-staffed hospitals, the survival difference produced by better staffing is more pronounced for Black patients than for white patients.

“The effect of being cared for in hospitals with better medical-surgical staffing has a greater effect on Black patients than white patients, and differences in survival to discharge after an IHCA between Black and white patients are more pronounced in poorly staffed hospitals than in well-staffed hospitals,” says J. Margo Brooks Carthon, associate professor of nursing at Penn Nursing and lead author of the study. “The findings are consistent with a growing number of studies that suggest that hospital-based disparities may be related to variation in nursing care quality in the settings where Black patients receive care.”

The study included more than 14,000 patients in 75 U.S. hospitals. The article, “Better Nurse Staffing Is Associated With Survival for Black Patients and Diminishes Racial Disparities in Survival After In-Hospital Cardiac Arrests,” is set for publication in the journal *Medical Care*.

Read the full text at <https://tinyurl.com/racialdisparitygap>.

Text Message Program Shows 60 Percent of Opioid Tablets Unused After Common Procedures

More than half of the opioid tablets prescribed for patients who underwent orthopaedic or urologic procedures went unused, says a new study by researchers at the Perelman School of Medicine at the University of Pennsylvania. Using an automated text messaging system that regularly checked in with patients on their pain and opioid use, the study also showed that most opioids are taken within the first few days following a procedure and may not be necessary to manage pain even just a week following a procedure.

“Through simple text messaging, we highlight a method which gives clinicians the information they need to reduce prescribing and manage pain,” said co-lead author Anish Agarwal, a clinical innovation manager in the Penn Medicine Center for Digital Health and an assistant professor of emergency medicine. “We found that more than 60 percent of the opioid tablets prescribed went unused, which tracks with the team’s preliminary studies.”

“Right now, care teams rely heavily on patient recall, which they may not be able to remember in detail; phone calls, which require a lot of effort in making calls; or tracking from the health system ordering, which does not provide information from the patients themselves about how much they are using, and how much pain they are in,” explained co-lead author Daniel Lee, an assistant professor of urologic oncology. “So with these older methods, either the data we are getting could be inaccurate, or the way we get the data is not scalable for an entire health system.”

Using automated text messaging systems, then, provides the opportunity for large-scale, near-real-time polling of patients. But as an emerging method, it requires study.

With that in mind, Dr. Agarwal, Dr. Lee, co-author Eric Hume, director of quality and safety and an associate professor of orthopaedic surgery, and senior author M. Kit Delgado, an assistant professor of emergency medicine and epidemiology, and their team set out to test the text messaging system. Over a span of several months in 2019, they enrolled patients who’d had common orthopaedic and urologic procedures, ranging from knee arthroscopy to hand fracture fixes and vasectomies to prostatectomies.

A little more than 900 patients—approximately 45 percent of those eligible—participated in the study. About 80 percent were orthopaedic patients and just under 20 percent had urological procedures. Participants were asked to rate their pain (on a scale of zero to 10), as well as if they felt able to manage that pain on the fourth day following their procedure. Subsequent texts went out on days 7, 14 and 21 to measure the change over time. Each of these texts also inquired about opioid tablet use which was matched to their initial prescription.

As time went on, the text messages showed that the average pain scores fell among patients of both classifications of procedures. At the same time, the ability to manage pain climbed, according to patients. However, this all seemed to be accomplished with fewer and fewer opioid pills, the study showed, and certainly far fewer than were prescribed. By day seven, most patients had actually stopped taking tablets (the average patient in the study took zero tablets by day seven).

The team believes that knowing the difference between prescription rates and use, along with finding this reliable way to measure that difference, will be a game-changer in pain management for surgical procedures.

Read the full text at <https://tinyurl.com/opioidtablets>.

Penn Wharton Budget Model Projects Vaccine Hesitancy

The outlook for the pandemic and the U.S. economy hinges on the pace of COVID-19 vaccinations this year. The Penn Wharton Budget Model (PWBM) at the Wharton School of the University of Pennsylvania today released a report on the health and economic effects of reducing COVID-19 vaccine hesitancy, following up on a recent analysis of vaccination’s projected economic and epidemiological impact. PWBM analyzes how two types of behaviors—hesitancy to get vaccinated and social distancing—will affect the pandemic and the economy in 2021.

PWBM estimates that by the end of 2021, social contact rates (the frequency of close physical proximity to other persons outside the home) will return to 70 percent of pre-COVID levels and 25 percent of eligible U.S. residents will choose to remain unvaccinated.

If instead all eligible residents are vaccinated, PWBM projects a cumulative 5.3 million to 8.3 million fewer cases in 2021, 2.6 million new jobs by December 2021, and a 2 percentage point increase in Q4 2020 to Q4 2021 GDP growth.

If vaccine hesitancy persists and people optimistically increase social contact rates beyond 70 percent, a “perfect storm” emerges. If social contact rates rise to 85 percent of pre-COVID levels, PWBM projects up to 4.6 million additional coronavirus cases in 2021.

Read the full text at <https://tinyurl.com/projectedvaccinehesitancy>.