UPDATE TO THE BOARD
in advance of the June 4, 2021
Board of Trustees Meeting

Key Updates

President’s Announcement
On March 4, 2021, President Morton Schapiro announced that, at the end of 13 gratifying years, his term as 16th president of Northwestern will conclude on August 31, 2022. The date was selected several years ago to provide ample time to plan a smooth transition to a successor.

Search Committee Established to Find the Next Northwestern President
The Presidential Search Committee has been appointed to advise the Board of Trustees in selecting the University’s next president. The 36-member search committee comprises a diverse mix of members from across Northwestern’s stakeholder groups, including trustees, faculty, students, staff and alumni leaders. The faculty and students represent the broad domain of schools at Northwestern and include undergraduate and graduate/professional student representation. Trustee and Vice Chair Peter Barris is serving as the chair of the search committee. The search committee is holding open listening forums from May 17-25, 2021 and has invited the University community to provide perspectives on priorities for the search.

Three Weinberg College faculty elected to National Academy of Sciences
Three faculty members of Northwestern’s Weinberg College of Arts and Sciences — psychologist Dedre Gentner, biological anthropologist Thomas McDade and chemist Michael R. Wasielewski — have been elected to the prestigious National Academy of Sciences. Membership in the academy is one of the highest honors bestowed upon a scientist in the United States. Gentner is the Alice Gabrielle Twight Professor in the department of psychology and a professor in the School of Education and Social Policy. Her research focuses on analogical learning and on language and cognition, language acquisition and cross-linguistic studies. McDade is the Carlos Montezuma Professor of Anthropology, director of the Laboratory for Human Biology Research and Director of Cells to Society (C2S): The Center on Social Disparities and Health in the Institute for Policy Research. McDade’s research is primarily concerned with the dynamic interrelationships among society, biology and health, and the integration of biological measures into population-based research. Wasielewski is the Clare Hamilton Hall Professor of Chemistry, executive director of the Institute for Sustainability and Energy at Northwestern (ISEN) and director of the Center for Molecular Quantum Transduction, a US-DOE Energy Frontier Research Center. His research focuses on light-driven processes in molecules and materials, artificial photosynthesis, molecular electronics, quantum information science, ultrafast optical spectroscopy and time-resolved electron paramagnetic resonance spectroscopy.
Faculty elected to American Academy of Arts and Sciences
Six Northwestern faculty members — Linda Broadbelt, Joseph Hupp, Vicky Kalogera, Thomas McDade, Elizabeth McNally and Catherine Woolley — have been elected members of the American Academy of Arts and Sciences, one of the nation’s oldest and most prestigious honorary societies. Broadbelt is Sarah Rebecca Roland Professor and professor of chemical and biological engineering at the McCormick School of Engineering. A member of the National Academy of Engineering, Broadbelt is internationally recognized for contributions in complex kinetics modeling of hydrocarbon chemistry, particularly for the development of automated mechanism generation techniques and methods for specification of rate coefficients. Hupp is Morrison Professor of Chemistry in the Weinberg College. Hupp and his research group make and study molecular materials and supramolecular assemblies. Kalogera is the Daniel I. Linzer Distinguished University Professor of Physics and Astronomy in Weinberg and director of the Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA). Kalogera addresses questions about the origins of black holes and neutron stars. McDade is the Carlos Montezuma Professor of Anthropology at Weinberg College, director of the Laboratory for Human Biology Research and Director of Cells to Society (C2S): The Center on Social Disparities and Health in the Institute for Policy Research at Northwestern. A biological anthropologist, McDade’s work is primarily concerned with the dynamic interrelationships among society, biology and health over the life-course, with an emphasis on long-term effects of early environments. McNally is the Elizabeth J. Ward Professor of Genetic Medicine and director of the Center for Genetic Medicine at the Feinberg School of Medicine. A physician-scientist, McNally has made contributions to genome analysis techniques that have bettered understanding of rare genetic variation. Woolley is the William Deering Chair in Biological Sciences in the department of neurobiology and associate dean for research at Weinberg. Woolley is widely known for her research on intrinsic biological differences between males and females in the molecular pathways that regulate the brain’s synaptic communication.

Hari M. Osofsky Named Dean of Northwestern Pritzker School of Law
Hari M. Osofsky has been named as the next dean of Northwestern Pritzker School of Law. She comes from Penn State University, where she serves as dean of Penn State Law and the Penn State School of International Affairs and Distinguished Professor of Law, professor of international affairs and professor of geography. Osofsky will begin her role on August 1.

Kelly Mayo Named Dean of The Graduate School at Northwestern University
Kelly E. Mayo, who served as interim dean of The Graduate School (TGS) at Northwestern since June 2020, has been named dean of TGS. Mayo has been a Northwestern faculty member since 1985, serving as associate dean for research and graduate studies at the Weinberg College of Arts and Sciences, chair of the Department of Molecular Biosciences, director of the Center for Reproductive Science, director of the Interdisciplinary Biological Sciences Graduate Program and as the Walter and Jennie Bayne Professor of Molecular Biosciences. The appointment was effective May 1. Mayo also has served as interim associate provost for graduate education since last spring and will continue in that role.
Luke Figora Named Vice President for Operations
Luke Figora has been named Northwestern University’s first vice president for operations. In this newly created role, Figora reports to senior vice president of business and finance Craig Johnson, acting as an essential advisor and operational subject matter expert. As vice president for operations, Figora will work closely with unit leaders in Neighborhood and Community Relations; Organizational Strategy and Change; Risk, Internal Audit, and Compliance; Safety and Security; and the Office of the Senior Vice President. Figora began in his role on April 1.

Sarah Klaper Named First University Ombudsperson
Sarah Klaper has been named as Northwestern University’s first Ombudsperson. The Ombudsperson acts as a neutral, independent, impartial and confidential resource for faculty, staff and students on all three Northwestern campuses: Evanston, Chicago and Doha, Qatar. The Ombudsperson will offer assistance on a broad array of issues, including academic and work-related concerns. Klaper was hired following a national search and will start on August 1.

Mike Polisky Steps Down as Athletic Director
Mike Polisky was named the new Combe Family Vice President for Athletics and Recreation on May 3 and on May 12, Polisky announced he would be stepping down from his role and leaving Northwestern. In a letter to the Northwestern University Athletics & Recreation (NUDAR) staff and students, Polisky said it had become clear he would not be able to lead effectively in the current environment. Polisky served as Northwestern’s deputy director of athletics for external affairs since 2010. Following Polisky’s resignation, President Schapiro named Northwestern linguistics professor Robert Gundlach as interim athletic director. Professor Gundlach served in this same interim role in 2008 during another time of transition.

Preliminary Undergraduate Admissions Numbers Indicate 21% of Incoming Class is Pell-Eligible
Preliminary numbers for the Fall 2021 entering undergraduate class (Class of 2025) indicate a continued positive trajectory for Northwestern’s undergraduate admissions. Northwestern received 47,632 undergraduate applications for Fall 2021 admission, a 21.3 percent increase over last year’s applicant pool and a 48.4 percent increase over 5 years ago. The number of early decision applicants increased 3 percent over last year and a 71 percent increase over 5 years ago. The University admitted 1,105 students in Early Decision from a very strong pool of 4,545 applicants. The average SAT of all deposits received is 1502. As of May 12, Northwestern has received deposits from 120 Chicago Public Schools students (down from 130 last year) and 13 Evanston Township High School students (down from 25 last year). Preliminary numbers indicate African American students make up 12 percent (up from 11.1 percent last year) of incoming students, while Hispanic students account for 17.1 percent of known domestic students, nearly the same as last year.

2021 EPA Sustained Excellence Award
The US EPA has awarded Northwestern with the 2021 ENERGY STAR Sustained Excellence Award. This is the EPA’s highest honor recognizing leadership in energy efficiency and conservation solutions. While ENERGY STAR is well known to many in
the corporate sector, Northwestern is the only university to receive this recognition. The award reflects the commitment to sustainability across all elements of our community.

**Financial Update**

**Liquidity and Debt Management**
Treasury, Investments, and Budget and Planning continue to collaborate closely with respect to liquidity monitoring, planning, and debt management in support of the University’s operating and capital needs.

**Investment Management**
The Long-Term Balanced Pool returned 5.8 percent for the quarter ended March 31, 2021. This preliminary return includes roughly 70 percent of the first quarter valuations for the illiquid portfolios, and the market value of the Pool on March 31, 2021, was $13.8 billion. For the fiscal year period from September 1, 2020, through March 31, 2021, the Pool returned 24.7 percent versus the policy benchmark return of 20.2 percent. For the fiscal year period through March 31st, distributions from illiquid investments have been robust and outpaced calls by $220 million.

**Alumni Relations and Development Update**
Through April 30, 2021, Northwestern raised $384.1 million in new gifts and commitments towards the $520 million fiscal year goal, compared with $310.2 million at the same time last year. The net amount raised without giving to Northwestern Medicine’s related entities is $179 million, compared to $205.9 million for the same period last year. The “We Will” Campaign has raised $5.393 billion to date, or 107.9 percent of the total $5 billion goal.

**Research Update**

**Research Award Funding**
Northwestern’s research award funding through the second quarter of FY 2021 reached $255.1 million, a 2 percent decrease from the previous year’s second quarter year-to-date amount. The number of awards totaled 1,224, 1 percent lower than last year’s total through the second quarter. The dollar volume of proposals submitted through the second quarter of FY 2021 was $2 billion, an 18 percent increase over the prior year. The number of proposals submitted (1,866) decreased 2 percent from FY 2020. Typically, 30 percent of annual awards arrive in the first half of the fiscal year, followed by 25 percent in the third quarter and the remaining 45 percent arriving in the final quarter of the fiscal year. The timing of large awards can significantly skew year-over-year comparisons. Proposals tend to be distributed evenly across all four quarters of the fiscal year.

At the end of the second quarter of FY 2021, the dollar volume of awards from the National Institutes of Health reflected a 16 percent increase (to $124.6 million). The dollar volume of proposals submitted to the National Institutes of Health was up about
16 percent (to $1.3 billion), while that to industry sponsors was up 3 percent (to $69.8 million).

**Research News and Faculty Updates**

**Northwestern selected for national study on virus transmission after vaccination**

The National Institutes of Health (NIH) has selected Northwestern University to participate in a national research study investigating COVID-19 infection and virus transmission after vaccination, the University announced on April 1. The study, currently enrolling undergraduate students between the ages of 18 and 26, will assess the effectiveness of Moderna’s COVID-19 vaccine to prevent virus transmission. Study results are expected to be published later this year and will be used to guide public health policy in the next phase of the pandemic, as more individuals become vaccinated. “We know the vaccines are effective at preventing serious COVID-19 illness, and our next step is to understand whether they prevent vaccinated individuals from transmitting the virus to others,” said Dr. Karen Krueger, an infectious disease expert at the Feinberg School of Medicine and Northwestern Medicine, and lead investigator of the study.

**Northwestern spinoff receives $21.3 million from NIH to manufacture COVID-19 test**

A new, highly sensitive, easy-to-use test for COVID-19 that requires a single swab and 15 minutes has received $21.3 million from the National Institutes of Health (NIH) Rapid Acceleration of Diagnostics (RADxSM) initiative. Developed at Northwestern’s Center for Innovation in Global Health Technologies (CIGHT), the point-of-care technology is being commercialized by Northwestern spinoff company Minute Molecular Diagnostics, which will use the NIH grant to ramp up production to one million test cartridges per month. Called DASH (Diagnostic Analyzer for Specific Hybridization), the device is about the size of a cereal box and uses a polymerase chain reaction (PCR) technique that amplifies DNA, increasing incredibly small virus samples to detectable levels. To use the DASH test, a user simply performs a nasal swab, puts the swab into a chamber within a small cartridge and then inserts the cartridge into the testing unit. After 15 minutes, an easy-to-read positive or negative result appears on the unit’s touchscreen. The device was developed by David M. Kelso, a clinical professor of biomedical engineering at Northwestern’s McCormick School of Engineering as well as co-founder, president and CEO of Minute Molecular Diagnostics, and Sally McFall, a research associate professor of biomedical engineering at McCormick, CIGHT’s director of research, and co-founder and chief scientific officer at Minute Molecular Diagnostics.

**Measuring the impact of innovation at Northwestern**

Northwestern is working to quantify and predict the impact of the University’s innovation by gathering data from various sources and tracking measures such as grant proposals, funding and possible commercialization in the form of patents or startups. Leading the effort is Dashun Wang, associate professor of management and organizations at the Kellogg School of Management and the founding director of the Center for Science of Science and Innovation (CSSI). His current research focuses on the “science of science,” an endeavor that uses and develops tools from complexity sciences and artificial intelligence to explore opportunities and promises offered by the recent data explosion in science.
Northwestern elected first Secretariat of U7+ Alliance
Northwestern University has been elected to serve as the first Secretariat of the U7+
Alliance of World Universities, leading a global coalition of higher education institutions
spanning six continents and seeking to find solutions to the greatest global challenges by
coordinating with G7 governments and beyond. During its three-year term, the
Secretariat will be housed at Northwestern’s Roberta Buffett Institute for Global Affairs.
As Secretariat, Northwestern will support the 2021 U7+ Presidential Summit to be
hosted in the UK by Imperial College London; the London School of Economics and
Political Science (LSE); University College London (UCL); the University of Cambridge;
and the University of Edinburgh. The Secretariat will co-organize the Summit’s
Worldwide Student Forum with UCL and convene a series of intergenerational
roundtables, which will bring together students, faculty and administrators from across
the U7+ network for discussion and debate on critical global challenges. “Our academic
community places the highest priority, within its scholarly work, on exploring global
challenges,” said Northwestern President Morton Schapiro. “It will now be able to
further expand its role in addressing immediate and long-term issues affecting societies
around the world,”

Osburn and Fong receive prestigious NSF CAREER Awards
Northwestern physicist Wen-fai Fong and geologist Magdalena Osburn have received
Faculty Early Career Development (CAREER) Awards from the National Science
Foundation (NSF), the foundation’s most prestigious honor for junior faculty members.
An assistant professor of physics and astronomy in the Weinberg College of Arts and
Sciences and member of the University’s Center for Interdisciplinary Education and
Research in Astrophysics (CIERA), Fong will receive $777,186 over five years to
characterize the properties of galaxies that host short-duration gamma-ray bursts
(SGRBs) and fast radio bursts (FRBs). Her research uses observations across the
electromagnetic spectrum to study explosive transients and their host galaxy
environments. Osburn, an assistant professor of Earth and planetary sciences in
the Weinberg College will use her award support to study microorganisms that live deep
inside the Earth’s crust. Her research examines the study of lipids to track the habits of
modern and ancient microbes.

Bryna Kra and Jared Wunsch awarded Simons Fellowship in Mathematics
Northwestern faculty members Bryna Kra and Jared Wunsch have been awarded the
Simons Fellowship in Mathematics from the Simons Foundation for 2021. Kra, the
Sarah Rebecca Roland Professor of Mathematics in the Weinberg College of Arts in
Sciences, researches ergodic theory and dynamical systems, particularly on problems
motivated by combinatorics and number theory. Wunsch, professor of mathematics in
Weinberg, studies partial differential equations.

Three Northwestern professors named Sloan Research Fellows
Three Northwestern faculty members — mathematicians Xiumin Du and Ilya Khayutin
and chemist Julia Kalow — have each been awarded a prestigious 2021 Sloan Research
Fellowship from the Alfred P. Sloan Foundation. An assistant professor of mathematics
in the Weinberg College of Arts and Sciences, Du’s research focuses on harmonic
analysis and its interactions with partial differential equations and geometric measure
theory. Kalow is an assistant professor of chemistry at the Weinberg College, where her
lab explores controlling the synthesis and properties of polymeric materials with light. Khayutin is an assistant professor of mathematics in Weinberg and investigates number theory and homogenous dynamics. The three are among 128 candidates this year to receive the honor, which recognizes exemplary achievements and the potential to bring substantial contributions to their scientific fields.

Four professors named Guggenheim fellows
Northwestern faculty members Mesmin Destin, Vicky Kalogera, Jennifer Lackey and John A. Rogers are among the 2021 Guggenheim Fellows recently named by the John Simon Guggenheim Memorial Foundation. Destin is an associate professor of human development and social policy in the School of Education and Social Policy and of psychology in the Weinberg College of Arts and Sciences. He studies how environments shape people’s identities and the impact of these dynamic identities on school experiences and well-being. Kalogera is the Daniel I. Linzer Distinguished University Professor of Physics and Astronomy in Weinberg and director of the Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA). Kalogera’s research addresses questions about the origins of black holes and neutron stars, employing methods from computer science, statistics, and applied mathematics. Lackey is the Wayne and Elizabeth Jones Professor of Philosophy at Weinberg and founding director of the Northwestern Prison Education Program (NPEP). Her scholarship explores social epistemology, examining how knowledge operates in social settings, including in groups and institutions such as the judicial system. Rogers is the Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Neurological Surgery at the McCormick School of Engineering and at the Feinberg School of Medicine. A bio-integrated electronics pioneer, Rogers develops electronic devices that can bend, stretch, twist and sometimes even dissolve harmlessly inside the body.

Chad A. Mirkin receives G.M. Kosolapoff Award
Chad A. Mirkin received the prestigious G.M. Kosolapoff Award for outstanding scientific achievement—a distinction earned by 12 Nobel laureates. Mirkin is the George B. Rathmann Professor of Chemistry in Northwestern’s Weinberg College of Arts and Sciences and director of the International Institute for Nanotechnology, one of 40 cross-disciplinary University Research Institutes and Centers at Northwestern. A world-renowned chemist and expert in nanoscience and nanomedicine, Mirkin is known for the invention of spherical nucleic acids (SNAs), which are globular forms of DNA that possess the ability to actively enter cells for targeted treatment delivery. As part of the award program, Mirkin delivered a lecture on “rational vaccinology,” an emerging scientific field that explores how the overall structural presentation of a vaccine or immunotherapeutic — not simply the active chemical components — can impact its potency and performance.

President Biden nominates Ben Harris as assistant secretary for economic policy
In March, President Joseph Biden announced his intent to nominate economist Ben Harris, associate professor at Kellogg School of Management at Northwestern, as assistant secretary for economic policy at the Treasury Department. Executive director of public policy programming at the Kellogg School of Management, Harris previously served as then Vice-President Biden’s chief economist during the Obama administration.
and was known as the “quiet architect” of Biden’s economic policy, according to the New York Times. Harris’ economic vision is marked by an emphasis on how policy should concretely improve lives, including by his work to close loopholes that prevented workers from being paid for overtime.

Historian Amy Stanley wins literary awards for ‘Stranger in the Shogun’s City’
Amy Stanley, a history professor in the Weinberg College of Arts and Sciences, has won the 2021 PEN/Jacqueline Bograd Weld Award for Biography for her book Stranger in the Shogun’s City: A Japanese Woman and Her World (Scribner, 2020). The award recognizes biographies of exceptional literary, narrative, and artistic merit, based on scrupulous research. Stranger in the City also earned a National Book Critic’s Circle Award this year.

Center for Economic History receives $2.5 million grant from Menard family
Northwestern’s Center for Economic History in the Weinberg College of Arts and Sciences has received a $2.5 million grant from the Menard family. The grant will fund a faculty position for an economic historian, who will serve as associate director of the center. The grant also will fund two postdoctoral fellowships, faculty and student research, and administrative support. “The Menard grant will solidify Northwestern’s position as the premier center for economic history worldwide,” said Joel Mokyr, the center’s co-director (with economist Joseph Ferrie), the Robert H. Strotz Professor of Arts and Sciences, and professor of economics and history at Northwestern.

Michael R. Jackson begins residency at the School of Communication
The School of Communication hosted a virtual residency with Hope Abelson Artist-in-Residence Michael R. Jackson February 15, 2021 to March 5, 2021. During the residency, Jackson visited classes, led workshops for performers, dramatists, composers and lyricists, and participated in a public panel event. Jackson is a playwright, composer and lyricist, and creator of the 2020 Pulitzer Prize-winning musical “A Strange Loop.”

Research Highlights
Membranes unlock potential to vastly increase cell-free vaccine production
By cracking open a cellular membrane, Northwestern synthetic biologists have discovered a new way to increase production yields of protein-based vaccines by five-fold, significantly broadening access to potentially life-saving medicines. In February, the researchers introduced a new biomanufacturing platform that can quickly make shelf-stable vaccines at the point of care, ensuring they will not go to waste due to errors in transportation or storage. The research sets the stage to rapidly make medicines that address rising antibiotic-resistant bacteria, as well as new viruses, at 40,000 doses per liter per day, costing about $1 per dose. At that rate, the team could use a 1,000-liter reactor (about the size of a large garden waste bag) to generate 40 million doses per day, reaching 1 billion doses in less than a month. Leading the study was Michael Jewett, professor of chemical and biological engineering at Northwestern’s McCormick School of Engineering and director of Northwestern’s cross-disciplinary Center for Synthetic Biology. Jasmine Hershewe and Katherine Warfel, both graduate students in Jewett’s laboratory, are co-first authors of the paper. “In the time of COVID-19, we have all realized how important it is to be able to make medicines when and where we need them,” Jewett said. “This work will transform how vaccines are made, including for bio-
readiness and pandemic response.” The research was published April 22 in the journal Nature Communications.

**New anti-obesity medication twice as effective as most currently approved weight-loss drugs**

A new anti-obesity medication was shown to be almost twice as effective at helping people lose weight than some of the current weight-loss drugs on the market, according to a new landmark study conducted at Northwestern Medicine and other institutions. The drug, Semaglutide, taken once a week at 2.4 mg, works by suppressing appetite centers in the brain to reduce hunger and calorie intake. The study was published online February 10, 2021 in the *New England Journal of Medicine.* Some 40 percent of adults in the U.S. are impacted by obesity, which is associated with multiple disease complications. “This is by far the most effective intervention we have seen for weight management when you compare it to many of the currently existing drugs,” said the study’s corresponding author Dr. Robert Kushner, professor of medicine and medical education at Northwestern’s Feinberg School of Medicine and an internal medicine physician at Northwestern Medicine. His research focuses on medical education in nutrition and obesity.

**‘SuperAger’ brains resist protein tangles that lead to Alzheimer’s**

A new Northwestern Medicine study showed cognitive “SuperAgers” have resistance to the development of fibrous tangles in a brain region related to memory and which are known to be markers of Alzheimer’s disease. The tangles are made of the tau protein that forms structures to transport nutrients within the nerve cell. These tangles disrupt the cell’s transport system, hampering communication within the neuron and preventing nutrients from performing their particular job within the cell. Tangle formation results in cell death. “SuperAgers,” a term coined by the Northwestern Mesulam Center for Cognitive Neurology and Alzheimer’s Disease, are unique individuals over age 80 who show outstanding memory capacity at a level consistent with people 20 to 30 years younger. Lead study author Tamar Gefen is assistant professor of psychiatry and behavioral sciences at Northwestern’s Feinberg School of Medicine with a focus in neurodegenerative disorders and trajectories of aging. She also directs the Laboratory for Translational Neuropsychology.

**ALS neuron damage reversed with new compound**

Northwestern scientists have identified the first compound that eliminates the ongoing degeneration of upper motor neurons that become diseased and are a key contributor to ALS (amyotrophic lateral sclerosis), a swift and fatal neurodegenerative disease that paralyzes its victims. Dubbed NU-9, the compound has the ability to reduce errors in protein folding and was developed in the lab of study author Richard B. Silverman, the Patrick G. Ryan/Aon Professor of Chemistry at Northwestern. Senior author Hande Ozdinler, an associate professor of neurology at Northwestern’s Feinberg School of Medicine, collaborated on the research with Silverman. The Ozdinler Lab is interested in understanding the cellular and molecular mechanisms responsible for early vulnerability and progressive degeneration of upper motor neurons. Silverman’s research group investigates the molecular mechanisms of action, rational design, and syntheses of potential medicinal agents. The study was published in *Clinical and Translational Medicine* on February 23, 2021.
New brain-like computing device simulates human learning

Researchers at Northwestern and the University of Hong Kong have developed a brain-like computing device that is capable of learning by association. Similar to how famed physiologist Ivan Pavlov conditioned dogs to associate a bell with food, researchers successfully conditioned their circuit to associate light with pressure using novel organic, electrochemical “synaptic transistors” that simultaneously process and store information just like the human brain. The researchers demonstrated that the transistor can mimic the short-term and long-term plasticity of brain synapses, building on memories to learn over time. With its brain-like ability, the novel transistor and circuit could potentially overcome the limitations of traditional computing, including their energy-sapping hardware and limited ability to perform multiple tasks at the same time. The device also has higher fault tolerance, continuing to operate smoothly even when some components fail. The research was published April 30, 2021 in the journal *Nature Communications*. Northwestern’s Jonathan Rivnay is the study’s senior author. Rivnay is an assistant professor of biomedical engineering in the McCormick School of Engineering, where his research group designs and develops new materials and devices to facilitate the seamless integration of sensing/actuation technologies with cells and tissue to enable improvements in diagnosis and therapy.

Northwestern drug kills glioblastoma tumor cells

An early clinical trial found that a spherical nucleic acid drug developed at Northwestern kills tumor cells in people with the fatal brain cancer glioblastoma. This is the first time a nanotherapeutic has been shown to cross the blood-brain barrier and cause cell death, said Priya Kumthekar, lead investigator and associate professor of neurology in the Division of Neuro-oncology at Northwestern’s Feinberg School of Medicine. Her research focuses on treating primary brain tumors such as gliomas and meningiomas and metastatic disease to the brain from systemic cancers such as melanoma, lung and breast cancer. Kumthekar led the phase 0 study in eight patients with recurrent glioblastoma at the Robert H. Lurie Comprehensive Cancer Center. Patients received the drug intravenously before surgery and then Kumthekar and her team then studied patients’ tumors and found that a low dose of the drug caused tumor cells to undergo apoptosis or programmed cell death.

Behind the scenes with the first Black women bosses of TV news

The media industry has fallen short on commitments to make newsrooms look more like the communities they cover, says Medill journalism professor Ava Thompson Greenwell. Television news has made more progress than other sectors, with a steadily increasing number of women and people of color delivering the news. But a crucial measure of racial and gender equity is missing, and Greenwell’s recent book, *Ladies Leading: The Black Women Who Control Television News*, documents the experiences of 40 Black women in the media industry as they combat racial and gender bias in hiring and in how media stories are portrayed. “These women’s stories teach the industry what it needs to do to improve. In addition, their awareness of their experiences may help future Black women managers better cope and correct the historical biases that continue to grip all facets of the news business,” said Greenwell, who currently serves as co-director of Northwestern’s South Africa Journalism Residency Program and is a faculty mentor for the University’s Posse Scholars Program, a college access and leadership development program.
Researchers reveal 3D structure responsible for gene expression
For the first time, a Northwestern-led research team has looked inside a human cell to view a multi-subunit machine responsible for regulating gene expression. Called the Mediator-bound pre-initiation complex (Med-PIC), the structure is a key player in determining which genes are activated and which are suppressed. Because this complex plays a role in many diseases, including cancer, neurodegenerative diseases, HIV and metabolic disorders, researchers’ new understanding of its structure could potentially be used to treat disease. Yuan He, the study’s senior author, is principal investor in the He Lab in the Weinberg College of Arts and Sciences, where he studies the molecular mechanisms by which large, multi-subunit complexes engage in DNA-centric processes using cryo-electron microscopy (cryo-EM) and other biophysical and biochemical approaches. “Visualizing the structure in 3D will help us answer basic biological questions, such as how DNA is copied to RNA,” said He, assistant professor of molecular biosciences and a member of the Chemistry of Life Processes Institute, one of 40 interdisciplinary University Research Institutes and Centers at Northwestern.

Home blood test for COVID-19 antibodies can measure vaccine effectiveness and progress toward herd immunity
A new COVID-19 antibody blood test developed by a team of interdisciplinary Northwestern scientists requires only a single drop of blood self-collected at home. It could generate estimates of herd immunity, measure vaccine effectiveness in the general population and model the course of future waves of infection. For the test, a person uses a finger stick to collect a blood sample on filter paper before mailing it to a lab for analysis. This method would allow for large-scale testing of neutralizing antibodies against COVID-19. “Neutralizing antibodies are important because they measure the level of immune protection against infection,” said senior study author Thomas McDade, professor of anthropology at the Weinberg College of Arts and Sciences and professor of medical social sciences. Study co-author Alexis Demonbreun, assistant professor of pharmacology at the Feinberg School of Medicine, said “The test has tremendous potential to help accelerate our understanding of the immune response to COVID-19 vaccination and to natural SARS-CoV-2 infection.”

Academic Affairs Update

Roberta Buffett Institute for Global Affairs
Pivots in Global Research and Education Amid COVID-19
The Roberta Buffett Institute for Global Affairs has successfully, created new opportunities for transnational research, transnational dialogue and international education. The Buffett Institute solidified their governance structure with the establishment of the Northwestern Buffett Board of Advisors and has begun implementing a University-wide global strategic plan that will guide Northwestern’s internationalization efforts for the next decade.

Catalyzing Internationalization Efforts Across Campus
The Buffett Institute continued work to internationalize Northwestern classrooms through the Global Campus Collaborative program, which leverages the University’s partnerships to support faculty members’ international teaching, research and
engagement activities. Last Fall alone, Northwestern awarded 10 international classroom partnering grants to faculty throughout Northwestern to connect with classrooms in Argentina, China, Ethiopia, France, Mexico, Singapore, Switzerland, Israel and Taiwan. The program will continue during the 2021-22 academic year.

Supporting Graduate Students in Pursuing Careers in International Affairs
Northwestern Buffett’s Global Impacts Graduate Fellowship Program is providing an interdisciplinary cohort of graduate students with dissertation research support, mentoring, and opportunities to explore career paths in international affairs, policy and development during the 2020-21 academic year. The program also includes a Global Careers Speaker Series open to all Northwestern graduate students. The series connects students with alumni and leaders across sectors for conversations on a wide range of exciting career paths in international affairs, policy and development. After the success of the inaugural program, Northwestern Buffett will support a second cohort of Global Impacts Graduate Fellows during the 2021-22 academic year.

Leveraging Digital Technology to Create New Global Learning Experiences
Amid COVID-19, the Northwestern Roberta Buffett Institute for Global Affairs’ Global Learning Office (GLO) developed novel approaches to facilitating international exchange and global learning, including the first virtual Global Engagement Studies Institute (GESI) program, “Virtual Global Development in Action.” In Fall 2020, the virtual program provided over 60 undergraduate students from seven Northwestern schools and 34 areas of academic study the opportunity to put international development theory into practice through a combination of remote coursework and internships with community-based organizations across seven countries.

The Graduate School
Enhanced Funding for Underrepresented PhD Students
TGS offered enhanced funding to 64 admitted underrepresented PhD students through stipend supplements, relocation cost coverage, and/or research funds. These additional funds are used to compete with peer institutions to actively recruit exceptionally strong underrepresented candidates. Thirty-two of the 64 students offered a funding enhancement accepted our offer of admission, and TGS has committed over $110,000 in FY 2022 for this recruitment initiative.

School of Professional Studies
Expands International Reach Despite Pandemic
This June, the School of Professional Studies (SPS) will be graduating its first cohort of both international and domestic students in the one-year Accelerated Masters in Public Policy and Administration Program (AMPPA). In a challenging year for international student recruitment, SPS was able to successfully recruit and enroll a cohort of students from China to join our domestic students in this one-year program. SPS leveraged its unique ability to deliver both an on-campus experience and a robust online experience for the international students that were not able to travel to the United States due to the pandemic. The AMPPA program is also offered in a part-time, online format, therefore, much of the AMPPA curriculum was already optimized for online teaching, enabling the program to quickly pivot and provide a consistent high-quality experience for both on-campus and online students. Twelve students are expected to graduate from this
program in June, half from the United States and half from China. SPS has also secured approval from the Department of Homeland Security to offer the Masters in Data Science and Masters in Information Systems programs in an on-campus, accelerated one-year format to international students.

Northwestern University - Qatar (NU-Q)
NU-Q holds graduations for Class of 2020 and Class of 2021
NU-Q celebrated the graduation of its Class of 2020 in a virtual ceremony that featured remarks from Northwestern University President Schapiro, NU-Q Dean Marwan M. Kraidy, Mariam Al-Dhubhani as the student speaker, and Dena Takruri, AJ+ senior producer and presenter, as the graduation speaker. The students’ graduation had been postponed from last year due to the pandemic. A virtual ceremony was held the following evening for the Class of 2021. During the ceremony, remarks were made by President Schapiro and Dean Kraidy as well as Dima Khatib, AJ+ managing director, as the graduation speaker, and Razan Ghadban as the student speaker. During the ceremony, Dean Kraidy announced several awards, including the Northwestern Qatar Career Achievement Award, which was presented to Professor Ann Woodworth. NU-Q also graduated its first masters student this year. Ghaida Almarwani will receive a Master of Arts in Sports Administration, which is offered in partnership with the School of Professional Studies.

Dean’s Global Forum and Hiwar Speaker series host inaugural events
Two new speaker series were inaugurated this year. The Dean’s Global Forum will feature diverse leaders from academe, media, the arts, and public affairs in conversation with Dean Kraidy, on enduring issues and pressing global matters. The conversations will also include the speakers’ career journeys and life experiences. Eve Troutt Powell, a MacArthur fellow and the Christopher H. Browne Distinguished Professor of History and African Studies at the University of Pennsylvania, was the inaugural speaker.

New academic leaders and full-time professors appointed
In January, NU-Q announced the appointment of Kathleen Hewett-Smith as senior associate dean and chief academic officer, and Sami Hermez as director of the Liberal Arts Program.

Professors documentary premieres at major international festival
A new documentary film about the grim reality of slavery and the diamond industry in Africa, directed by NU-Q Professor João Queiroga, had its world premiere at the Hot Docs International Documentary Festival in Toronto, the largest documentary festival in North America. The film - Digging for Life – tells the true story of a Cameroon man, Adiang Assuoe Thomas Germain (Tommy), who travels to South Africa hoping to start a new life, but finds himself trapped as a slave digging for diamonds in Angola.
Trustee News and Honors

Gwynne Shotwell to Deliver Commencement Address
Trustee Gwynne Shotwell, president and COO of SpaceX, will deliver the Northwestern Commencement address to the Class of 2021 during the University’s June 14, 2021 virtual ceremony. Shotwell, a double Northwestern alumna, also will receive an honorary degree, along with ‘me too.’ movement founder Tarana J. Burke, renowned medical researcher Dr. Helen H. Hobbs and fellow alumnus George R.R. Martin, the best-selling author and creator of HBO’s “Game of Thrones.”

Administrative Update

Government Relations
In March and April 2021, President Schapiro met with federal and state officials including U.S. Senators Dick Durbin and Tammy Duckworth, U.S. Representative Mike Quigley, Governor JB Pritzker, the new Illinois House Speaker Emanuel “Chris” Welch (WCAS ’93), Illinois Senate President Don Harmon, and Illinois House Minority Leader James Durkin to discuss higher education issues and Northwestern priorities. In video meetings with federal legislators, President Schapiro was joined by Vice President for Research (VPR) Milan Mrksich to lobby for the University’s Defense research efforts and to discuss the University’s response to the pandemic and campus reopening efforts. They also highlighted recent faculty research successes in the life sciences and synthetic biology. With State officials, President Schapiro expressed support for the need-based Monetary Award Program (MAP), and highlighted our leadership in helping to build a strong state innovation ecosystem, including the University’s proposal to build a wet-lab incubator in Evanston to serve Northwestern startups.

Global Marketing and Communications
Top News Stories
From January through April 2021, top stories include Ken Paller’s research finding it is possible to communicate with people during lucid dreams (period reach: 32.9 million); Diane Schanzenbach’s research about rising food insecurity during the pandemic (period reach: 31.4 million); Tim Calkins’ and Derek Rucker’s assessment of 2021 Super Bowl ads (period reach: 29.7 million); Igor Koralnik’s research finding that COVID-19 has long-lasting neurological symptoms including “brain fog” (period reach: 26.6 million); and commentary by several faculty – most notably Michael Kang and Steven Calabresi – on the second impeachment of Donald Trump (period reach: 22.7 million).

COVID-19 and Campus Updates
For the period of February-May, traffic to the COVID-19 and Campus Updates site remained high, receiving more than 350,000 page views. The Dashboard continued to be the most frequently trafficked page with about 48,000 page views. As in the previous quarter, COVID testing-related webpages were among the top pages; they received more than 90,000 combined page views during this period. New information on Vaccination Updates was added to the site, and it rose to become the site’s fourth most visited page with more than 22,000 views.
Athletics Update

Northwestern Football Will Open 2022 Season in Ireland
The Wildcats will make history when they play Nebraska in the Aer Lingus College Football Classic on August 27, 2022, in Dublin, Ireland. It will be the first Northwestern football game played outside the U.S. The Big Ten West contest will take place at Aviva Stadium in Week Zero of the college football season.

‘Cats Shatter Winter Academic Mark
A school-record 80 Northwestern student-athletes from five winter varsity programs earned Academic All-Big Ten honors. The accomplishment came after Northwestern posted a school-record 155 Fall Academic All-Big Ten honorees in December and brings the academic year's current total to 235 student-athletes recognized. The Wildcats have eclipsed 200 student-athletes earning Academic All-Big Ten distinction in 11 consecutive years.

Northwestern Thrives in NFL Draft
Two players from Northwestern were selected in the first round of the NFL Draft for the first time in school history. The Los Angeles Chargers took offensive lineman Rashawn Slater at No. 13 and the Cleveland Browns picked cornerback Greg Newsome II at No. 26. Defensive lineman Earnest Brown IV also was selected in the fifth-round by the Los Angeles Rams.

Payne Named Head Men’s Soccer Coach
Following a comprehensive three-month search, Russell Payne has been named Northwestern’s head men's soccer coach. Payne comes to Evanston after 11 seasons as head coach at Army West Point, and extensive experience with the United States Soccer Federation, including as goaltending coach or the U.S. Men’s National Team from 2015-17. Payne succeeds Tim Lenahan, whose final season with the Wildcats came this spring after a 20-year career in Evanston.

Lacrosse Takes Aim at Eighth Crown
The seven-time NCAA champion Wildcats lacrosse program captured its first Big Ten Regular-Season Championship, and its second-straight Conference Tournament title, outscoring opponents by nearly 10 goals/game. Kelly Amonte Hiller was recognized as the 2021 Big Ten Coach of the Year, and junior Izzy Scane – the nation’s leading scorer – was the unanimous choice for Conference Attacker of the Year and is the presumptive favorite for the Tewaaraton Award as the nation’s top player.

Wrestling Caps Special Season
Senior Ryan Deakin finished off a perfect regular-season with his second-consecutive Big Ten Conference Wrestling Championship at 157 lbs. Deakin, Yahya Thomas and Chris Cannon all earned All-America honors while leading the Wildcats to a Top-10 finish at the NCAA Championships, the program’s best finish under head coach Matt Storniolo.