His toes dangle just inches from the ground.

Struggling for air, the rope around Solomon Northup’s throat tightens each time his balance wavers. He hangs for hours before being cut down; free to breathe, but far from free.

The scene in Steve McQueen’s *12 Years a Slave* is excruciatingly difficult to watch, yet through its depiction of plantation slavery, the film presents a story largely untold in American cinema, says Nick Davis, English and gender and sexuality studies. “The visibility of *12 Years* awakened many people to how few treatments of similar material had emerged in recent decades,” says Davis. “In researching the history of black enslavement in film and TV it’s rare to find treatments of slavery that are not primarily concerned with the ennoblement of white abolitionist-patriarchs,” he says, citing as an example Stephen Spielberg’s *Amistad* (1997). A variant features slavery as an “incongruously picturesque background to the ‘heroic’ actions of ‘kind’ slave owners,” such as the one Mel Gibson played in *The Patriot* (2000).

“Jay Walsh, vice president for research, notes the role that talent and collaboration have played in this advance. “Northwestern’s research enterprise has grown impressively in recent years due to the ingenuity, hard work, and perseverance of our faculty, students, postdoctoral fellows, and staff,” he says. “The level of investment in the University’s discovery is just one sign, but a powerful one, that our researchers continue to create high-impact knowledge with the potential to transform diverse disciplines.” Northwestern’s total sponsored research funding has risen 63 percent since 2006.

Northwestern’s sponsored research awards grew to $620 million in fiscal year 2015, the largest amount in the University’s history and a four percent increase over last year’s $593.9 million.

Nick Davis, English and gender and sexuality studies, and Miriam Petty, radio, television, and film, are among the Northwestern faculty presenting their research during this year’s Chicago Humanities Festival, scheduled from October 24 to November 8.
Davis and Miriam Petty, radio, television, and film, are among the Northwestern faculty presenting their research during this year’s Chicago Humanities Festival (CHF), scheduled from October 24 to November 8. Their scholarship explores the history of slavery onscreen and examines the broader implications that different storytelling styles have for communicating about slavery across cultures.

“The Chicago Humanities Festival has enjoyed a longstanding and close relationship with Northwestern,” says Jonathan Elmer, CHF artistic director. “As an intellectual resource and extremely generous venue partner, Northwestern is integral to CHF’s profile and reach.”

In addition to Davis and Petty, Chris Abani, English, and Sylvester Johnson, African American studies, will be among more than a dozen presenters to open the festival.

“We’re thrilled to bring the intellectual intensity and the magic of the Humanities Festival to Evanston and Northwestern,” says Kohl Kaplan. “We’re also increasingly inspired by the number of students and members of the community who take advantage of the opportunity to immerse themselves in the world-class humanities discussion the festival provides — right in their own backyard.”

Davis and Petty’s cross-departmental research was supported early on by the Kaplan Institute, which invited them to give a presentation at the Evanston Public Library.

“We’re both interested in the difficulty of slavery as a subject for American audiences, especially once the popular historical school of thought that imagined the antebellum era as a harmonious and idyllic time was largely debunked,” Petty says.

Petty’s research interests largely focus on the limits and potentialities of African American stardom in 1930s Hollywood. Her first book, Stealing the Show, will be published in March. She also co-teaches a class on DW Griffith’s pioneering and deeply racist magnum opus The Birth of a Nation.

Davis’s research most frequently focuses on lesbian, gay, bisexual, and transgender representation and politics in narrative cinema and on feminist approaches to filmmaking and film theory.

“I think Miriam and I were struck by how seldom US film and television producers have broached the topic of plantation slavery, as compared to many other historical traumas with a huge archive of cinematic depictions,” says Davis. “Because our backgrounds vary, it’s even easier to involve a public audience within our discussion, and to welcome a greater diversity of reactions and questions.”

Slavery on Screen will be presented from 4:30 to 5:30 p.m. on October 24 at Harris Hall room 107.

Learn more.
Research Note: What’s in a Number? The Future of Discovery

This edition of Research News highlights some exceptional numbers: Funding awarded to Northwestern researchers has increased yet again. This past year, sponsored funding rose about 4 percent. Over the past nine years, our research awards have jumped by 63 percent, which is truly remarkable and distinguishes the University among its peers.

This is unquestionably great news. That said, I have long viewed this number as a proxy — a quantitative, relatively easy-to-measure proxy — for Northwestern’s research impact.

There is no doubt that modern research requires resources. At the University, we provide some support from internal funds, but the vast majority comes from outside sponsors and is gathered by our faculty and their teams. Grants and contracts help pay for researcher time, such as a graduate student’s stipend. These funds also pay for supplies, equipment, and travel vital for advancing research. As a result, the dollar amount of sponsored research awards is an indicator of the progress that can be attempted in the near future.

But to obtain an award, especially in the current funding climate, researchers must create a great proposal detailing the work to be done and indicating its value. Researchers — and, increasingly, their teams — must demonstrate a track record of high-impact discovery. Invariably, then, a proposal’s funding is both a testament to the intellectual potential of the proposed work as well as to the researchers’ overall career accomplishments.

The year-over-year increase in award volume indicates that Northwestern researchers are making ever-greater impact with their research. For those of us within the University, the numbers also indicate that we are all part of a vibrant environment defined by renowned scholars conducting research that matters to the world.

Are there other measures of research impact? Of course. We can measure publication numbers, citations, invited talks, and election to positions of honor, such as society fellowships or national academy memberships. Academics view these, too, as important markers. We can also see the impact that research has on products or processes in the marketplace, or on policies developed at the local, state, national, or global level. We can see when research results change the behavior of people, corporations, or governments. In short, we can see when research makes the world a better place!

In the end, the awards number is an important measure, but not the only one that matters. So long as we remember the number is a proxy for a larger set of measures, it certainly offers a reasonable accounting of Northwestern’s exceptional research impact out in the world.

Vice President for Research

Kozlowski New IACUC Director

Northwestern has named Mandy Kozlowski director of the Institutional Animal Care and Use Committee (IACUC).

IACUC is responsible for reviewing and approving protocols for Northwestern’s program for the humane care and use of animals and inspecting animal facilities and investigator laboratories.

“I am particularly excited by this opportunity because it’s so rewarding to know that I can play a role — a small but necessary one — in supporting the amazing research conducted at Northwestern.” Kozlowski says. “All of us, including our family, friends, and pets, benefit from scientific investigation.”

Kozlowski has been at Northwestern since 2011, when she joined IACUC as the post approval monitoring coordinator. She most recently served as assistant director of the office. Kozlowski is currently pursuing a master of science in law at Northwestern.
Origins: Exploring the Journey of Discovery
Advocating for Truth and Justice with Thomas Geraghty

As the longtime director of Northwestern’s Bluhm Legal Clinic, Tom Geraghty, law, has been a leading voice for a range of court reforms. Bluhm is globally recognized as an exemplary clinical program with expertise across more than 20 areas, including human rights litigation, negotiation, and juvenile and family justice. Geraghty and his colleagues in Bluhm’s Center on Wrongful Convictions proved instrumental in exonerating more than 30 people and helped abolish the death penalty in Illinois. Their work also led to more robust representation for children and adults in Cook County.

Strengthening the juvenile justice system — at home and abroad — has been a focus for Geraghty, who is the Class of 1967 James B. Haddad Professor of Law and Dean of Clinical Education. The son of a Northwestern Law alumnus and aide to Admiral Chester Nimitz during World War II, he grew up in Glencoe, Ill., attending the North Shore Country Day School in Winnetka, where an emphasis on public service aligned well with his family’s community-oriented, egalitarian values. In college, Geraghty spent time in Africa, where he saw “the grinding poverty that is the life of so many millions of children.” That experience, combined with “disturbing” courtroom encounters as a young attorney, highlighted deficiencies of a system where politics and payoffs could trump justice.

Geraghty graduated cum laude from Harvard College in 1966, earning a bachelor’s degree in English, and his juris doctorate from Northwestern in 1970. His decades of service include improving access to justice in Africa and Asia through better legal aid programs and enhancements in legal education. A father of four, he is married to Diane Geraghty, the A. Kathleen Beazley Chair in Childlaw and Director of the Childlaw Center at Loyola University of Chicago. Research News recently interviewed Dean Geraghty.

What early experiences shaped your appreciation for justice?
As a young lawyer, I presented a court pleading to a senior criminal court judge in Cook County. The judge was in chambers having coffee with the state’s attorney, public defender, and his court staff. It did not appear that he would be taking the bench any time soon, so I asked to go into chambers to present the pleading. The judge looked at me quizzically and said, “What’s this all about?” I replied, “It’s a motion based upon People v. Jones.” The judge responded, “F*** People v. Jones.” That was quite a shock and it underscored the lack of respect for the rule of law that’s been a feature of Cook County courts for years — exposed by undercover investigations of judicial corruption like “Operation Greylord.” I appeared before many judges who were indicted in the Greylord scandal, not knowing that they were taking money from other lawyers. I filed a petition before one notorious judge alleging that he had solicited a bribe from a client facing the death penalty. That judge was later convicted of bribery and extortion and was imprisoned. This disturbing history was produced by many of the same shortcomings that exist now: isolation of our criminal justice system, political control over the election of judges, and the disproportionate impact of our criminal justice system on minorities and the poor. Much work remains to be done to eradicate these systemic shortcomings.

You are a strong advocate for juvenile justice. What prompted you to dedicate yourself to this cause?
Early influences were the summer that I spent in Chad while a college student and the year that I spent in Ethiopia during law school, which exposed me to the grinding poverty that is the life of millions of children. This fact is brought home every time I visit a developing country to work on access to justice and legal education. Unfortunately, little progress is being made in addressing the needs of the millions disenfranchised youth around the world. We face similar problems in the US. One of the roles of a great US law school is to expose our students to this chronic problem through on-the-ground initiatives — from client

“The abolition of the death penalty in Illinois would not have occurred but for the efforts of my colleagues in the Center on Wrongful Convictions.”
Welcome New Faculty Members

As of the 2015-16 academic year, the following faculty members have joined Northwestern. Names were submitted by the dean’s office of each school. Please join us in welcoming these new full-time, tenure-track members of the Northwestern community!

**Bienen School of Music**
- Sarah Bartolome
- Taimur Sullivan

**Feinberg School of Medicine**
- Nabil Alshurafa
- Alex Barker
- Paul Burridge
- Jaehyuk Choi
- Marilyn Cornelis
- Daniel Foltz
- Craig Horbinski
- Dai Horiuchi
- Evangelos Kiskinis
- Sabrina Lee
- Yuan Luo
- Marc Mendillo
- Panagiotis Ntziachristos
- Guillermo Oliver
- Egon Ozer
- Amelie Petitclerc
- Antonio Sanz-Clemente
- Jeffrey Savas
- Stephen Schueller
- Thomas Shanley
- Benjamin Singer
- Jonah Stulberg
- Marie-Pier Tetreault
- Yuan He
- Daniel Horton
- Xiaomin Bao
- Lydia Barnett
- Robert Braun
- Hayden Cherry
- Christopher Davis
- Marti Mestieri Ferrer
- Enectali Figueroa-Feliciano
- Yifeng Liu
- Daniel Majchrowicz
- Mark McClish
- Julie Merseth
- Vijay Mittal
- Mar Reguant
- Mi-Ryong Shim
- Jennifer Tackett
- Debra Thompson
- Kelly Wisecup
- Rebecca Zorach

**McCormick School of Engineering and Applied Science**
- Simone Campanoni
- Anindy De
- Michael Rubenstein

**School of Communication**
- Claudio Benzecry
- Agnes Horvat
- Elizabeth Norton
- Madhu Reddy
- Angela Roberts
- Courtney Scherr
- John Paul Sniadecki

**School of Education and Social Policy**
- Quinn Mulroy

**Weinberg College of Arts and Sciences**
- Katherine Amato
- Adia Benton
- Xiaomin Bao
- Lydia Barnett
- Robert Braun
- Hayden Cherry
- Christopher Davis
- Marti Mestieri Ferrer
- Enectali Figueroa-Feliciano
- Yuan He
- Daniel Horton
- Irena Knezevic
- Daniel Krcmaric
- Yifeng Liu
- Daniel Majchrowicz
- Mark McClish
- Julie Merseth
- Vijay Mittal
- Mar Reguant
- Mi-Ryong Shim
- Jennifer Tackett
- Debra Thompson
- Kelly Wisecup
- Rebecca Zorach

representation to policy work — that will produce a new generation of practitioners and scholars who will solve problems that my generation has been unable to solve.

**Providing this experience is a key part of the Bluhm Clinic’s mission, right?**
The Bluhm Legal Clinic has been a laboratory in which my faculty colleagues and our students there have discovered new and better ways of providing justice to the citizens of our community, our nation, and to many in countries that need support for access to justice and better systems of legal education for future leaders. The abolition of the death penalty in Illinois would not have occurred but for the efforts of my colleagues in the Center on Wrongful Convictions. I’m also proud of the opportunities that our Clinic offers our students — including representation of entrepreneurs, public housing residents, persons and organization seeking to protect the environment, and human rights activists.

**How do you think about justice as compared with mercy?**
A case in point are prisoners convicted as juveniles and given sentences of life without parole. Bluhm Legal Clinic is leading efforts to provide qualified counsel to these prisoners, including about 100 prisoners serving life without parole in Illinois for crimes committed when they were 18 or younger. We know from recent research on brain development that the decision-making ability of youth is less developed than that of adults. Yet, these prisoners are alleged to have committed very serious crimes. In re-sentencing these prisoners, how should courts balance the scientific with the normative considerations that all judges take into account when sentencing those alleged to have committed serious crimes? This is a question that we at the Clinic are grappling with. We’ll employ an interdisciplinary approach as we create a model approach for doing justice in these challenging and important cases.
Dafny to Senators: ‘We Are Paying a Premium on Our Premiums’

Leemore Dafny, strategy, recently testified before the US Senate Subcommittee on Antitrust, Competition Policy, and Consumer Rights on the impact of health insurance consolidation on consumers.

Her testimony delved into the recent trend of mergers by health insurers and how that has affected premiums and other potential interests to customers. In the past, Dafny argued, a lack of competition has contributed to an increase in premiums.

“We are paying a premium on our premiums because of limited competition,” she says. “Given these stakes, there is a substantial public benefit to critically evaluating any significant changes in industry market structure.”

Read more.

Frakes to Explore Malpractice, Defensive Medicine

What happens to the quality of care delivered when physicians face no threat of malpractice? Does the presence of malpractice pressure lead to “defensive medicine” — the delivery of tests or treatments that may not necessarily be in the best interest of the patient but can serve to shield the physician from threats of liability?

The National Institutes of Health has awarded Michael Frakes, law, a $1.2 million grant to conduct a four-year study exploring such questions.

A noted expert in law and economics, Frakes’s research interests include health law — with a particular focus on how certain legal and financial incentives affect decision making in health care — and innovation policy — with a focus on the relationship between the financing of the US Patent and Trademark Office and its decision-making processes.

To conduct this work, Frakes will work with a unique data set from the Military Health System: extensive information on treatment, outcomes, and patient satisfaction from active duty personnel, dependents, and retirees.

“Under federal law, active duty patients who are negligently harmed while receiving treatment at military facilities cannot sue for medical malpractice,” Frakes explains. “But malpractice laws do apply to the treatment of dependents and retirees at these same facilities.”

Read more.

Scientific Collaboration with Shanghai University

Luo Hongjie, president of Shanghai University, and Northwestern Provost Daniel Linzer sign a memorandum of understanding on October 12, 2015. The agreement encourages and promotes academic, research, and scholarly activities between Northwestern and Shanghai University, one of China’s leading institutions. President Hongjie, along with eight of his colleagues, visited the Evanston campus to meet with leadership from the Center for Hierarchical Design, tour numerous laboratories, and foster closer scientific collaboration.
Northwestern Receives $5 Million for Nanoscale Research

Northwestern has received a five-year, $5 million grant from the National Science Foundation to establish a new national resource that provides academic, small business, and industry researchers access to cutting-edge nanotechnology facilities and expertise.

In addition to traditional nanotechnology tools, the Soft and Hybrid Nanotechnology Experimental (SHyNE) Resource enables the hybridization of soft (biological) nanostructures with rigid nanoparticles, for applications such as microfluidic modules for biosensors and synthetic scaffolds for tissue regeneration, among others. The new resource deepens existing collaborations between Northwestern and the University of Chicago and is expected to draw a variety of researchers from the Chicago area, the Midwest, and nationally. SHyNE also offers regional colleges and public institutions, including museums, the opportunity to access research and training instrumentation from a single, integrated source.

Read more.

CMIDD Leading Collaborative Effort for Drug Discovery

Northwestern researchers from the Center for Molecular Innovation and Drug Discovery (CMIDD), the Robert H. Lurie Comprehensive Cancer Center, and Feinberg School of Medicine have received funding from the National Cancer Institute (NCI) to develop compounds that may lead to an entirely new treatment for Acute Myeloid Leukemia (AML).

AML is a type of blood cancer in which the bone marrow makes abnormal white blood cells, red blood cells, or platelets.

“This project is an excellent example of how collaborators with different expertise can carry out truly innovative research,” says Gary Schiltz, CMIDD and principal investigator.

The NCI grant will provide $1.58 million over the next three years to support medicinal chemistry, molecular modeling, and biological testing to optimize a small molecule aimed at a receptor that plays a critical role in cancer, HIV, inflammation, and myriad other diseases.

Read more.

Alumnae Pledge $1 Million to Aid Undergraduate Research

Undergraduates seeking to participate in research will soon have more opportunities, thanks to a philanthropic investment from The Alumnae of Northwestern University.

The group, a volunteer organization of women that raises funds for various projects at the University, will donate $1 million as part of its centennial celebration to create an endowment for undergraduate research.

Founded in 1916, The Alumnae of Northwestern has donated more than $7.5 million to the University in the form of grants, fellowships, and scholarships.

Read more in the Daily Northwestern.

Career Development Awards Available

The Northwestern University Clinical and Translational Sciences Institute is soliciting proposals for two career development awards.

The Multidisciplinary Mentored Career Development (KL2) Program trains a diverse workforce of early career investigators needed to drive future innovation and implement effective clinical and translational research. The Multidisciplinary Training Program in Child and Adolescent Health (TL1) is a novel training initiative that promotes interactions among mentors and postdoctoral fellows. TL1 applies to researchers in engineering and basic science who desire to apply their expertise to child and adolescent health projects.

Learn more.
ICEP Receives $4.2 Million Renewal

The US Department of Energy has awarded Northwestern’s Institute for Catalysis in Energy Processes (ICEP) a $4.2 million renewal grant.

As part of the Center for Catalysis and Surface Science, ICEP researchers endeavor to understand at the molecular level the catalytic transformations relevant to clean energy harvesting, storage, and utilization. These investigations also further the discovery and development of highly efficient, environmentally friendly, and sustainable catalytic processes.

“ICEP is an integral part of energy research efforts at Northwestern,” says Peter Stair, chemistry and ICEP director. “The University has been a world leader in catalysis since the 1930s, so this grant is supporting an important historical effort.”

Preferred Vendor Selected for LED Microscopy Initiative

Northwestern has selected Nikon Instruments Inc. as the preferred vendor for its LED Microscopy Initiative. This effort encourages researchers to replace all mercury and metal halide lamps on microscopes with more eco-friendly LED lamps.

In recent years, LED lamps have increased significantly in brightness. They also maintain several other important advantages over older technology, such as longer operating life, lower energy consumption, less heat and ozone production, and more uniform spectral properties.

For more information about the initiative, please email Phil Hockberger, executive director of research facilities.

Big Turnout for Lunar Eclipse

Northwestern provided the telescopes and more than 1,700 students, faculty, staff, and community members stood atop the Segal Visitors Center Parking Garage on September 27 to view the total lunar eclipse. Total lunar eclipses are fairly rare, occurring when the entire moon moves into the Earth's shadow. Over a few hours, the moon changes from a luminous disk to a reddish one, before slowly reverting to its usual color and brightness. Guohua Wei, a PhD candidate in the applied physics program, captured these stunning images of the moon. The next full lunar eclipse will occur on January 21, 2019.

“This was the largest public observing event that I have helped run since coming to Northwestern in 2003,” says Michael Smutko, physics and astronomy. “Our previous record was about 900 people for the Transit of Venus in 2012.”

CIERA and the Dearborn Observatory regularly hold a variety of outreach events connecting the public to astronomical events and astronomers. Last October, close to 200 people gathered atop the same parking garage to safely view a partial solar eclipse.

EPA Head Discusses Clean Energy at Northwestern

US Environmental Protection Agency Administrator Gina McCarthy stands with Michael Wasielewski, Institute for Sustainability and Energy at Northwestern director, following a roundtable discussion on October 8, 2015. While on campus, McCarthy met with a group of students and faculty to discuss recent EPA clean air and clean water initiatives. A centerpiece of the conversation was the Clean Power Plan, a landmark EPA action enacted in June that governs carbon emissions from the electric power sector. Read more.
IPR Distinguished Public Policy Lecture October 27 at Hardin Hall

The Institute for Policy Research (IPR) welcomes Andrew Leigh, a member of the Australian Parliament and the Academy of the Social Sciences, to campus on October 27. Leigh will deliver IPR’s Distinguished Public Policy Lecture at 4 p.m. at Hardin Hall in Evanston. His presentation is titled “Humans Need Not Apply: Will the Robot Economy Pit Entrepreneurship Against Equality?”

“A key driver of productivity growth over coming decades will flow from the invention and adoption of new technologies,” says Leigh. “Yet we know that such technologies are likely to threaten a significant share of current jobs. The science fiction threat of the singularity seems to be a ways off for all of us, but for many workers, the machines that can do their jobs are arriving daily.”

Leigh will discuss what policymakers might do to anticipate these changes and whether the future will offer greater equality and more entrepreneurial opportunities.

Before his election in 2010, Leigh, who holds a PhD in public policy from the Harvard Kennedy School, was a professor of economics at Australian National University, specializing in labor economics, public finance, and political economy.

The Buffett Institute for Global Studies is cosponsoring the event. Registration is required.

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Ryan's Pledge $25 Million To Support Faculty

Northwestern University alumni Patrick G. Ryan and Shirley W. Ryan have made a $25 million gift commitment to advance research and teaching at their alma mater.

A portion of the gift will be used to accelerate the creation of endowed professorships across the University.

This gift brings the Ryans’ total contributions through the “We Will” Campaign to more than $100 million. It increases their total giving to Northwestern to nearly $200 million.

Read more.

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Internet of Things in Transportation Workshop

The Northwestern University Transportation Center (NUTC) is hosting a technical workshop from 2 to 4:30 p.m. on October 27 at the Hilton Orrington Hotel in Evanston.

The event occurs in conjunction with the NUTC Business Advisory Council’s fall 2015 meeting; topics will address current applications for the Internet of Things (IoT) in transportation and logistics settings.

IoT refers to a network of physical and mobile objects embedded with electronics, software, sensors, and network connectivity. In a transportation system, interaction among these “things” enables vehicular communication, smart traffic control, logistics and fleet management, intelligent port operations, vehicle control, and more.

The workshop features speakers from transportation firms, Internet infrastructure companies, and technology providers for the transportation industry, and will describe IoT applications in trucking, rail, and port operations.

Learn more.

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CHECK OUT THE NEW IACUC WEBSITE

VISIT http://bit.ly/1N27Bpw
Coffee Associated With Colon Cancer Survival

Patients treated for colon cancer who regularly drink caffeinated coffee have lower rates of cancer recurrence and mortality, according to a recent study co-authored by Al B. Benson III, medicine: hematology/oncology.

The study, published in the Journal of Clinical Oncology, involved 953 patients who participated in a clinical trial comparing two treatments for stage III colon cancer. While researchers found no significant difference between the therapies, data from patient questionnaires about their diets as they underwent treatment provided compelling insights.

Following up a median of seven years after patients completed the questionnaires, the investigators determined that those who had consumed four or more cups of coffee a day were 42 percent less likely to have their cancer return compared to non-coffee drinkers, and they were 33 percent less likely to die from cancer or any other cause.

“There has been a great deal of interest in looking at diet and lifestyle factors as prevention strategies for colorectal cancer,” says Benson. “It seemed that if these factors might contribute to an increased or decreased risk of developing colon cancer, it would be wise to study these factors for people who already have cancer, too.”

Northwestern Hails Champions of Science

Jay Walsh, vice president for research, recently joined college and university leaders from across the country in Washington, DC, to applaud some 30 members of Congress being honored as Science Coalition Champions of Science.

These legislators were celebrated for demonstrating a continuing commitment to funding the basic research that keeps the nation at the forefront of scientific and medical discovery.

Walsh and colleagues from the University of Illinois, Southern Illinois University and Fermi Lab presented an award to Rep. Dan Lipinski (D-Illinois) during the biennial Breakfast of Champions. Sen. Dick Durbin (D-Illinois) also was honored this year, and Rep. Randy Hultgren (R-Illinois) was recognized as a past Champion.

The Breakfast of Champions recognizes the most recent class of honorees with commemorative Wheaties cereal boxes.

The Science Coalition is a nonprofit, nonpartisan organization of more than 60 US public and private research universities. Its Champion of Science award is given each year to a small number of members of Congress whose actions and votes consistently reflect their belief that basic scientific research, conducted at universities and national labs across the country, is essential for America.

The Coalition believes research is crucial for the nation to address pressing issues in health, security, energy and the environment, and, additionally, that a strong federally supported basic research enterprise drives innovation that fuels the US economy. About 80 members of Congress have received the award since 1999.

Read more.

DeSimone Receives Inaugural Kabiller Prize

From left: Northwestern trustee and alumnus David G. Kabiller, whose gift established the Kabiller prizes; Eric Neilson, vice president for medical affairs and Lewis Landsberg Dean at the Feinberg School of Medicine; Joseph DeSimone, University of North Carolina at Chapel Hill and recipient of the inaugural $250,000 Kabiller Prize in Nanoscience and Nanomedicine; Chad Mirkin, chemistry and International Institute for Nanotechnology (IIN) director; and Warren Chan, University of Toronto and recipient of the inaugural $10,000 Kabiller Young Investigator Award. DeSimone and Chan were honored at an event hosted by IIN on September 29, 2015.
Alzheimer’s Disease Focus of Oct. 21 Science Café

Nearly every minute, someone in the United States develops Alzheimer’s disease, according to the Alzheimer’s Association.

Robbing individuals of their memory — and eventually their life — the disease has confounded researchers for more than 100 years. It remains the only top-10 killer in America with no method of prevention and no cure.

Newfound optimism and the groundbreaking research of Bill Klein, neurobiology, will be the next topic of Northwestern’s Science Café, taking place from 6:30 to 8 p.m. on October 21 at the Firehouse Grill in Evanston.

“2015 marks the first year that Alzheimer’s scientists have been able to claim success in a clinical trial,” says Klein. “Our lab’s strategy to provide a cure may prove even better.”

In their research at Northwestern, Klein and his team previously discovered a small toxin that builds up in Alzheimer’s disease and attacks the brain’s memory centers. It was found that these memory toxins instigate neural damage leading to dementia.

“The goal is to create a future in which these harmful neurotoxins can be eliminated by a new generation of Alzheimer’s vaccines,” he says.

Honors

Robert Bonow, medicine; cardiology, has been named editor-in-chief of JAMA Cardiology, a new journal in the JAMA Network that will debut in 2016. The journal will focus on all aspects of cardiovascular medicine, including epidemiology and prevention, diagnostic testing, interventional and pharmacologic therapeutics, translational research, healthcare policy, and global health.

Solar Fuels Institute Managing Director Dick Co has been named to the 2015 Midwest Energy News “40 Under 40” list.

Janice Eberly, finance and former chief economist for the US Department of Treasury, has been named coeditor of the Brookings Papers on Economic Activity, one of the leading publications on global economic policy. Eberly is the first woman to assume the role in the journal’s 45-year history.

The Illinois Technology Association has named Kristian Hammond, electrical engineering and computer science, Technologist of the Year. Hammond codirects the Intelligent Information Laboratory and co-founded Narrative Science, a Northwestern startup that turns raw data into natural language narratives.

Vicky Kalogera, physics and astronomy and director of the Center for Interdisciplinary Exploration and Research in Astrophysics, has been awarded the American Physical Society’s Hans A. Bethe Prize. The award recognizes outstanding work in theory, experiment, or observation in the areas of astrophysics, nuclear physics, nuclear astrophysics, or closely related fields.

The Hamilton Project, a nationwide economic policy initiative of the Brookings Institution based in Washington, DC, has appointed economist Diane Whitmore Schanzenbach, School of Education and Social Policy, as its director. In addition to her two-year directorship, she will also serve as a senior fellow in economic studies. “The number one economic issue we should be talking about in the next few years is how to foster broad-based growth, and the role for effective government to enhance that,” says Schanzenbach, a member of Northwestern’s Institute for Policy Research.

James Spillane, School of Education and Social Policy, has received a $1 million Lyle Spencer Research Award for a comparative study of school systems. To develop knowledge needed for education reform, Spillane’s research will investigate the relationship between various types of school systems and improvement in instruction.

The International Communication Association has bestowed its B. Aubrey Fisher Mentorship Award on Ellen Wartella, communications studies. The annual award honors outstanding scholars, teachers, and advisors who serve as role models in those capacities and who have had a major impact on the communication field. Most importantly, recipients of this award have influenced the discipline through their former students, who themselves are important figures in the communication discipline.
Spotlight: Research in the News

The country's national conversation periodically focuses on race but often soon veers elsewhere. Racial minorities, though, do not have the luxury of ignoring prejudice, and now a new study lead by Emma Adam, human development and social policy, suggests there may be a price to pay for living with that daily stress. “Each of the instances may be quite subtle,” says Adam. “When they accumulate over time, they really have more profound effects on biology than if you look in the moment.” The research was featured in Boston Globe and numerous other national media publications.

Guardian highlighted the work of Galen Bodenhausen, psychology, for his study showing that negative emotions and antisocial behaviors increase in consumerist cultures.

Amy Farrell, criminal justice, was quoted in the Charleston Post and Courier regarding states’ struggles with sex trafficking. Farrell is lead author of a study that examined obstacles to investigating and prosecuting trafficking cases across the country. The study found that most officers aren’t trained in ways to spot sex trafficking, to properly gather evidence in these cases, or to get the cooperation of victims.

Our universe was once home to galaxies so bright they make the Milky Way look like a mere candle next to a searchlight. But what can possibly have fueled such brilliance? A new simulation called Feedback In Realistic Environments (FIRE) developed at Northwestern suggests that these radiant beasts are not the result of galaxies smashing into each other — as some astronomers suspect — but rather the consequence of a galaxy recycling fuel to igniting hundreds of suns per year. The project, led by Claude-André Faucher-Giguère, physics and astronomy, was featured in Science.

Nour Kteily, management and organizations, co-wrote a piece in Washington Post regarding how Americans view Muslims. Researchers found that people often saw Muslims as apes, or worse. Dehumanization is a phenomenon by which people see others as somehow “less than human.” Psychologists have linked this perception with everything from perceiving others as primitive and backward to seeing the dehumanized as savage and aggressive.

New York Times featured the Medill Justice Project after it conducted one of the most exhaustive studies of shaken baby syndrome’s legal ramifications. The research was conducted in collaboration with Washington Post journalists and found a large number of cases in which criminal charges were dropped or dismissed, defendants were acquitted, or convictions were overturned.

Chicago Tribune featured Aldon Morris, sociology, for his new book The Scholar Denied: W.E.B. Du Bois and the Birth of Modern Sociology. In it, he argues that W.E.B. Du Bois is the father and founder of the modern principles of American sociology, which is provocative because the credit always has gone to the University of Chicago and Robert Park, a white sociologist who taught there.

Researchers have found a correlation between the performance of the housing market and college attendance for some groups. A new paper, co-written by Matthew Notowidigdo, economics, was recently featured in Atlantic. According to the study, the housing boom accounts for about 30 percent of the slowdown in college attendance of young adults aged 18 to 25 during that time period.

Discoveries

The Center for Molecular Innovation and Drug Discovery has received a three-year, $1 million grant from the National Cancer Institute to discover effective therapeutic treatment against metastatic prostate cancer. More than 80 percent of cancer-related deaths stem from the formation of metastases, incurable secondary tumor growths that spread from their original cancer sites. However, effective anti-metastatic treatments are virtually non-existent due to a lack of potent and selective molecules to target metastasis regulators. Read more.

In a startling new finding by lead investigator Jeffrey Goldberger, medicine: cardiology, heart attack patients treated with a substantially lower dosage of beta-blockers survived at the same, or even better, rate than patients on higher doses used in clinical trials. Read more.

New research led by Dylan Minor, managerial economics and decision sciences, found that companies can save far more money by weeding out toxic workers than investing in hiring superstar employees. While a superstar who performs in the top 1 percent saves a company about $5,300 annually in wages by doing more work than the average employee, replacing a toxic worker with an average one saves about $12,800 by reducing turnover. Read more.

The world may not be well prepared for the next significant tsunami, reports Northwestern tsunami expert Emile Okal, Earth and planetary sciences, in a new study. Read more.

The “American Dream” might be little more than a pipe dream for children born to less-privileged circumstances, according to recent research from Lauren Rivera, management and organizations. Read more.
The NUANCE of Science

From left: Vinayak Dravid, director of the Northwestern University Atomic and Nanoscale Characterization Experimental Center (NUANCE), talks with Northwestern Trustee David Kabiller, and Eve Hanson, a graduate student in Dravid’s research group, about the Hitachi S-3400N-II scanning electron microscope during NUANCE Fest. The microscope is used for imaging and analysis of pristine materials, as a primary teaching tool for undergraduate courses, and by graduate students for research.

Center for Musical Arts Dedicated

President Morton Schapiro joined members of the Ryan family, music school, and Northwestern community in dedicating the Patrick G. and Shirley W. Ryan Center for the Musical Arts on September 24. The Ryan Center is home to the Henry and Leigh Bienen School of Music and includes performance and rehearsal spaces, teaching studios, classrooms, practice rooms, and faculty and administrative offices.

“The philanthropy and service that Pat and Shirley have given to Northwestern have touched nearly every aspect of the University,” says Schapiro.

Read more.

$6.5 Million Gift to Support Computer Science

Dennis H. Chookaszian, former chairman and CEO of CNA Insurance Companies and a Northwestern University alumnus, and his wife, Karen, have made a $6.5 million gift commitment to his alma mater to establish the Chookaszian Family Program in Computer Science, the first of its kind at the University.

Fueled by the prevalence of technology in society, the demand for computer science courses has exploded at Northwestern and across the country. The number of computer science majors at Northwestern has more than tripled in the past five years, and students from across the University are taking numerous computer science courses.

The new therapy has been licensed to the Foundation that supports Limb Girdle Muscular Dystrophy 2C research and is being developed with the goal of clinical trials and eventual commercial treatments.

The finding was published in the Journal of Clinical Investigation.

RNA Editing Technique Treats Severe Form Of Muscular Dystrophy

An RNA editing technique called “exon skipping” has shown preliminary success in treating a rare and severe form of muscular dystrophy that currently has no treatment, based on a new study from Northwestern Medicine and the University of Chicago. Children with the disease lose significant muscle strength early in life.

The discovery stems from the persistence of a father whose two sons were diagnosed with a rare and severe form of muscular dystrophy and his search for and partnership with the genetic scientist — Elizabeth McNally, director of the Center for Genetic Medicine — who studies the disease.

A new partnership among the University of Chicago, Northwestern University and The Kurt+Peter Foundation will support the development of therapies for Limb Girdle Muscular Dystrophy Type 2C.

Read more and watch video.

Elizabeth McNally, director of the Center for Genetic Medicine
…continued from cover

a gain unmatched by the University’s peer institutions. The 2014-15 fiscal year marks the sixth consecutive year that annual research grants and contracts exceeded a half-billion dollars.

Strong proposal activity from the Feinberg School of Medicine continue to be the bedrock for this research growth, with more than $400 million dollars of sponsored awards invested in principle investigators at the medical school. Northwestern received a record of nearly $300 million from the National Institutes of Health (NIH).

“The scientists on our medical school faculty are at the forefront of their respective fields, and continued recognition of their groundbreaking work by a wide variety of funding agencies is another sign of our growing reputation as a preeminent university for innovative research and discovery,” says Eric G. Neilson, MD, vice president for medical affairs and Lewis Landsberg Dean at Feinberg. “I have no doubt that as we expand our research enterprise and recruit talented leaders to our faculty funding will continue to increase.”

With construction beginning on the Simpson Querrey Biomedical Research Center — a 14-story science hub to be connected to the Robert H. Lurie Medical Research Center in Chicago — the breadth of investigation at Feinberg will grow. The new facility will provide laboratories and support space for significant new biomedical research to improve human health through the recruitment of approximately 100 new tenure-track faculty. The first of these is John A. Rogers, the eminent bioelectronics pioneer, who will join Northwestern in 2016.

Last year’s funding successes included projects to research nucleic acid-based nanonconstructs for the treatment of cancer (led by Chad Mirkin and Leonidas Platanias); funding for the Third Coast Center for AIDS Research (Richard T. D’Aquila); a four-year, $272 million grant from NIH to renew the Northwestern University Clinical and Translational Sciences Institute (Donald Lloyd-Jones); and a 5-year, $17.5 million grant from NIH for an interdisciplinary effort to invent, develop, and test an implantable drug delivery system to protect high-risk individuals from HIV infection for up to a year at a time (Patrick Kiser and Thomas Hope).

The increased dollar volume of research funding in 2015 came from several sectors, including federal agencies (4 percent increase, $16.6 million), foundations (27 percent, $7.7 million) and voluntary health organizations (15 percent, $2.6 million).

Northwestern’s research centers and institutes saw the biggest year-over-year increase in funding, rising 50 percent ($17.9 million). Awards to Feinberg increased by 3 percent ($11.8 million) and those to the Weinberg College of Arts and Sciences increased 8 percent ($4.9 million). In August, the University received $146.2 million in funding, a 47 percent increase over last year.

Click here to access the full annual report.