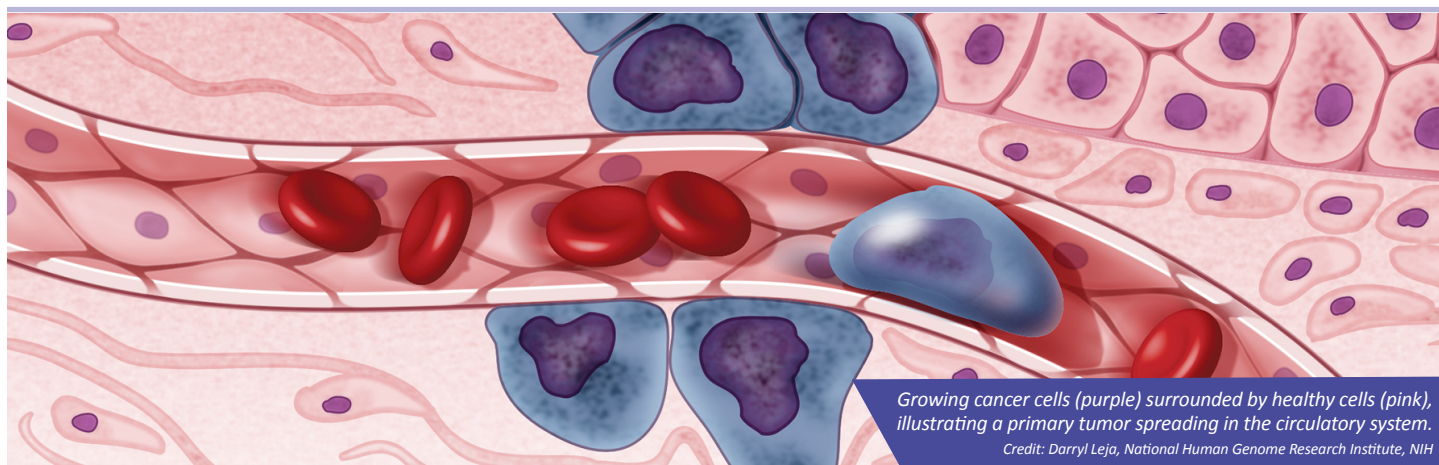


Breakthroughs

Feinberg School of Medicine Research Office

September 2018



'Exceptional' Science at the Lurie Cancer Center

By Anna Williams

At the Robert H. Lurie Comprehensive Cancer Center of Northwestern University, the team of collaborative investigators dedicated to confronting cancer has never been stronger.

In August, the Lurie Cancer Center was awarded the highest rating possible from the National Cancer Institute (NCI) — an overall “exceptional” score — during the renewal of its designation as a Comprehensive Cancer Center.

As a Comprehensive Cancer Center, the Lurie Cancer Center not only provides world-class clinical care to patients, but also integrates the spectrum of cancer research — laboratory work, clinical investigation and population studies — to more rapidly and meaningfully impact outcomes. The idea is that such a team approach both better serves patients today and cultivates discoveries that lead to tomorrow’s treatments.

This year’s NCI score, also the highest in the history of the Lurie Cancer Center, brings with it more than \$31 million in core funding — a dramatic 36 percent increase over the previous award — and provides essential support for the center’s research programs, infrastructure and shared facilities.

The rating is a nod to the extraordinary growth of the Lurie Cancer Center over the previous five years, as well as a window into what’s to come: The grant renewal will have a profound impact not only on patients living with cancer across

Chicagoland, but also in driving scientific discoveries capable of reducing cancer burden worldwide.

“The success of our cancer center reflects the innovation and remarkable achievements of our talented clinicians, clinical investigators, scientists and staff,” said [Leonidas Platanias, MD, PhD](#), director of the Lurie Cancer Center. “We are now positioned among an elite group of top cancer centers in the country. We look forward to expanding our capabilities and intensifying our efforts to defeat cancer as a disease.”

DESIGNATED AS A LEADER

This year’s renewal marks the fourth consecutive time the Lurie Cancer Center has been awarded the prestigious “comprehensive” designation.

The NCI assigns numerical scores to centers on a unique scale from 10 to 90, with 10 being a perfect score. This year, the Lurie Cancer Center received the highest possible qualitative rating of “exceptional” and earned a near-perfect impact score of 12 — a leap from the previous score of 20 in 2013.

A score of 12 is essentially like receiving a 98 percent out of 100, explains [Aleksandar Zafirovski, MBA](#), associate director for Administration, and Renee Webb, associate director for Research Administration. Simply put, the NCI score signifies that the nation’s experts consider Lurie one of the best cancer centers in the country.

The renewal is the result of a rigorous peer-review process that includes more than a year of preparation, intensive analysis by

(continued on page 2)

Exceptional *(continued from cover page)*

leading scientists on a wide range of measurements — from NIH funding to high-impact research publications to recruitment to clinical trials — and an intensive site visit.

Hard numbers clearly demonstrate the Lurie Cancer Center's progress over the last five years: NIH research funding has soared nearly 50 percent (an incredible improvement, given a national downward trend), enrollment in clinical trials has more than doubled, and 90-plus new faculty members have been recruited since the previous review.

"The score is really a reflection of the system as a whole, and every individual piece that makes it up," Zafirovski said. "Everyone here — every lab technician, every staff member whether in the clinic or a core facility, all the way up to leadership — had an impact."

TEAM SCIENCE

Within the Lurie Cancer Center, more than 300 investigators throughout Northwestern come together with a shared goal of improving patient outcomes through innovative cancer research.

As members of the Lurie Cancer Center, investigators receive access to special training programs and intramural research funding opportunities, plus priority access and special pricing for [shared facilities and resources](#) fundamental to understanding cancer.

"The shared resources provide our scientists with state-of-the-art instruments and techniques, many of which are far beyond the budgets of individual laboratories," explained [Milan Mrksich, PhD](#), associate director for Shared Resources at the Lurie Cancer Center. "Funding from the NCI allows us to purchase these instruments and hire expert staff to collaborate with our scientists."

Beyond such resources, by joining basic, clinical and population-based investigators into one dedicated hub, the Lurie Cancer Center fosters collaboration critical to cancer discovery.

"The NCI reviewers recognized that by bringing together a unique and powerful combination of nanotechnology, chemistry and life sciences across the Evanston and Chicago campuses, we are uniquely positioned to translate what have been historically great



Members of the Lurie Cancer Center celebrate the NCI's "exceptional" rating.

basic science discoveries into innovative treatments and diagnostics," explained [Kathleen Green, PhD](#), the Lurie Cancer Center's associate director for Basic Sciences Research.

The team's research efforts also include population science programs that scored high in the grant review.

"Scientists in our division are national leaders and trendsetters in behavioral and biological approaches to preventing cancer, evaluating and improving the quality of life of people living with cancer, and extending principles and practices of cancer prevention and control into our diverse Chicago community," said [David Cella, PhD](#), associate director for Cancer Prevention and Control Research at the Lurie Cancer Center.

LOOKING FORWARD

With a solid structure in place, the Lurie Cancer Center now has its eyes on the future.

Basic science remains the bedrock of cancer research and will be an important area of growth over the next grant period, which runs through 2023. In particular, cancer immunotherapy, metabolism, epigenetics, physical sciences and nanotechnology will be key areas of focus in the coming years.

In the realm of clinical research, the Lurie Cancer Center plans to enhance precision medicine capabilities and further expand the translation of scientific discoveries into clinical trials.

A 20 percent increase in research space, with the upcoming completion of the [Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center](#), will also help aid this ambitious research growth.

Clinically, scaling to communities across Chicagoland, in order to bring novel treatments closer to where patients live, will also be a key mission moving forward. Just as important will be expanding scientific partnerships.

"Our track record was fantastic before, but it's even more fantastic now. This will open up the door for collaborations at multiple levels with other academic institutions, private entities, pharmaceutical companies and foundations," said [Maha Hussain, MD](#), deputy director of the center. "The fact that within a short period of time, the strength and impact of the Lurie Cancer Center has increased so significantly means the sky is really the limit now."

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Incoming PhD Students Arrive on Campus

New PhD students from around the world have arrived on campus, joining the Driskill Graduate Program in Life Sciences (DGP), Northwestern University Interdepartmental Neuroscience Program (NUIN), Clinical Psychology PhD Program, Medical Scientist Training Program (MSPT) and the Health Sciences Integrated PhD (HSIP) program.

This year, DGP welcomes 28 new PhD students from as far away as Singapore and as close as the Midwest. DGP students complete courses and lab rotations during their first year, which allows them to explore various types of research before selecting a dissertation lab and project.

NUIN has 14 incoming students who will rotate in at least three different laboratories and complete coursework before committing to a single lab to conduct thesis research.

Eight new students join the Clinical Psychology PhD Program, coming from the east and west coasts and as close as Minnesota. They will spend six years at Feinberg training in the clinical practice and science of psychology, along with specific training needed for careers as clinical psychologists conducting research and/or clinical work in healthcare settings.

MSTP welcomes 15 new students (pictured right) who will earn both their MD and PhD degree at Northwestern. They will complete two years of medical school before starting their PhD and will then return to medical school to complete their Doctor of Medicine degree. This year's entering class includes students coming from competitive universities such as Johns Hopkins University, Harvard University and Cornell University.

Four HSIP students make up the program's seventh entering class. Unique to Northwestern, HSIP trains students in processes and methodologies in clinical and population sciences through the Institute for Public Health and Medicine. This year's students come from New Jersey, California, China and Nigeria.



NEW STUDENTS

Driskill Graduate Program in Life Sciences

Aalaa Abdallah
Carlton Adams
Lourdes Brea
Ram Prosad Chakabarty
Shuvam Chaudhuri
Jennifer Cheng
Shweta Dipali
Corey Dussold
Mallory Filipp
Tiffany Ge
Wendy Geslewitz
Vanessa Hayashi
Nathan Hodge
Viriya Keo
Hana Kubo
Adriana Landeros
Calvin Law
Marine Lebrun
Esther Liu
Joseph O'Brien
Tanvi Potluri
Jen Ai Quan
Sara Radecki
Anthony Smith
Rebecca Southern

Emily Stroup
Sharon Tam
Hanyin Wang

Northwestern University Interdepartmental Neuroscience Program

Alexander Cates
James Coy-Dibley
Andrew Flemming
Sarah Freda
Jasmine Harris
Meghana Holla
Natalie Koh
Amy Kristi
Anne Linden
Kelly Marshall
Nalini Rao
Alexander Telenson
Yung-Hsu Tsai
Feng Xuan

Medical Scientist Training Program

Erika Arias
Jay Daniels
Madison DeWinter
John Edelbrock
Kendal Ezell

Raymond Fang
Jeanne Quinn
Neha Reddy
Zachary Reinstein
Daniel Selgrade
Kalyn Thayer
Manuel Torres
Steven Tran
Elizabeth Weiss
Yuyang Yang

Clinical Psychology PhD Program

Emily Fu
Janna Guilfoyle
Rachel Keszyski
Maria Luna
Paris Singleton
Jane Stocks
Claire Weaver
Esther Yoon

Health Sciences Integrated PhD Program

Cassandra Iroz
Jessica Puri
Julianne Murphy
Jiancheng Ye



New Video Spotlights DGP Program

The Driskill Graduate Program in Life Sciences is a community of diverse and talented young scientists who excel in what they do and make a difference. Watch a [video](#) to learn how the comprehensive interdisciplinary PhD program trains students in biomedical sciences all while fostering collaboration and mentorship at our downtown Chicago campus.

Habitually Curious: The Neurological Basis for Habit Formation

Talia Lerner, PhD, Assistant Professor of Physiology



Human beings are creatures of habit: from driving a car to brushing our teeth, many actions we take on a day-to-day basis are rooted in a biochemical feedback loop.

[Talia Lerner, PhD](#), assistant professor of [Physiology](#), has spent much of the last decade studying the neurological basis for habit formation, hoping to illuminate brain circuitry that could improve treatments for psychiatric diseases such as obsessive-compulsive disorder or substance use disorders.

She joined Feinberg in 2017 after completing a postdoctoral fellowship at Stanford University.

Q&A

What are your research interests?

I'm very interested in habit formation; the process by which behavior becomes automatic. Habit formation is an essential survival strategy in a complex world. It's also an interesting behavior because it sits at the interface between reward learning circuits and motor circuits. Feedback, in the form of rewards and punishments, is required in the initial stages of learning a new task, but as actions are repeated they are taken over by motor circuits — streamlined, stereotyped and de-coupled from feedback, leading to inflexible behavior.

My lab wants to know which neural circuits are responsible for this complex process of habit formation. How do neural circuits weigh the costs and benefits of automaticity and use feedback from the environment to regulate the formation of habits over time?

We already have some insight into this: We know that habit formation requires the striatum, the input nucleus of the basal ganglia, as well as dopamine inputs to the striatum from the substantia nigra pars compacta (SNc). Previously, I identified two parallel SNc dopamine neuron subpopulations projecting to the dorsomedial striatum and dorsolateral striatum, [publishing](#) these findings in the journal *Cell*. These populations differ in their biophysical properties, input wiring and natural activity patterns during free behavior.

They are also interconnected with each other, suggesting possible routes of information transfer during habit formation. To test our hypotheses, my lab is examining how the properties of dopamine neuron subpopulations — and their interconnections with the striatum — change with habit formation, and how forces such as stress and drug exposure alter the course of learning by acting on these circuits.

What is the ultimate goal of your research?

My work provides an important foundation for future studies of the roles that habits play in a range of psychiatric diseases, including obsessive-compulsive disorder and drug addiction. As our studies progress, they will provide insight into the circuit-level etiology of human mental disorders and help us to design circuit-based therapies.

My lab is also very interested in individual differences in circuit structure that might predispose one towards disease. Ultimately, I think my studies could help provide information for risk screening as well as for the selection of personalized treatment plans in human patients.

What do you enjoy about teaching and mentoring young scientists in the lab?

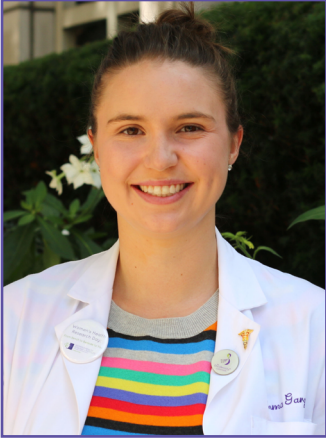
Young scientists bring new energy to a project; when a person is new to a field, they often can be their most creative. It's my job and privilege to channel that creativity into a concrete project and to make sure it fits into the bigger picture of what the lab is trying to accomplish.

I'm also proud to be a female role model in science and to model other behaviors that I'd like to see in the next generation of scientists, such as openness and inclusivity. I care a lot about diversity in science and about bringing new voices to the table. I hope to use my teaching and mentoring capacities at Northwestern to support young scientists from a variety of backgrounds.

(continued on page 9)

Bioengineering Solutions for Female Infertility

Emma Gargus, Medical Scientist Training Program



Emma Gargus, a fifth-year student in the Medical Scientist Training Program ([MSTP](#)), collaborates with an interdisciplinary team of engineers, biologists and clinicians to answer important questions about the mechanisms of ovarian health and disease in the laboratory of [Teresa Woodruff, '89 PhD](#), dean of the Graduate School and director of the [Women's Health Research Institute](#).

Q&A

Where is your hometown?

Columbus, Ohio.

What are your research interests?

I've always been interested in the ways that cells interact with their microenvironments and how these interactions can result in normal tissue function or lead to disease. The overarching goal of my thesis work is to design and fabricate biomaterials for ovarian cell culture.

One project is to understand the structure, mechanical properties and biochemical constituents of the healthy, physiologic ovary and mimic those properties in an engineered material, in order to improve ovarian follicle and oocyte maturation in vitro. By developing these new methods to generate healthy, fertilizable eggs in a dish, we'll expand the fertility options for young girls who have survived cancer but have diminished ovarian function as a side effect of their chemotherapy and radiation treatments.

My other project is to mimic the properties of an aged and polycystic ovary syndrome ovary to model and understand the mechanisms driving reproductive dysfunction in those conditions and ultimately to develop new treatments to expand the fertility options available to these women.

Why did you choose Feinberg?

When I was looking at physician-scientist programs, I wanted to find a school that would provide excellent clinical training,

a collaborative research environment with expertise in biomaterials engineering and an institutional climate where I'd feel at home for the next seven to eight years. Feinberg fit the bill on all counts.

When I met current students in the program and my future classmates during interview week and [Second Look](#), I was impressed with their enthusiasm, talent and drive — plus, you can't beat Feinberg's location! As an added bonus, I was impressed with the emphasis that Feinberg put on diversity and inclusion, being one of the first institutions to consider sexual orientation and gender identity as an underrepresented minority.

What has been your most rewarding experience at Feinberg?

My most rewarding experiences at Feinberg have been the opportunities I've had to connect to the prouder Chicago community and share my love of science and medicine with young people.

In particular, I have loved being involved with the [Oncofertility Science Academy](#) and Women's Health Science Program, science-based educational programs for high school girls. It's very inspiring to get to interact with and teach this new generation of learners and potential scientists, clinicians and leaders — my "sisters in science."

Science is so vital to our world and relies so heavily on public support, through government funding agencies like the National Institutes of Health and National Science Foundation, so it's critical that we as scientists learn to communicate with the public, demystify what's happening in labs and get everyone excited about all the incredible things happening in science and medicine.

What do you do in your free time?

In my free time, I play a lot of volleyball — indoor, beach and grass depending on the season. I also enjoy cooking, trying out new restaurants, dancing and competing at trivia with my friends from the lab.

What are your plans after graduation?

After graduating from the MSTP, I will be doing a residency. At this point, I'm leaning towards OB/GYN, probably with a focus on reproductive endocrinology and infertility (REI). Since I'm currently working on bioengineering solutions for female infertility, REI would be a great field where my research interests could be applied to improve patient care.

Providing Resources to Accelerate Discovery

Clare McFadden, Manager of Content Development, Northwestern University Clinical and Translational Science Institute (NUCATS)



Clare McFadden, manager of content development at Northwestern University Clinical and Translational Science Institute ([NUCATS](#)), communicates the services and tools that NUCATS offers to help scientists and research teams across Northwestern University accelerate their research.

position at BridgeHealth, a surgery benefit company. I was with BridgeHealth for almost two years before coming to work as the manager of content development for NUCATS.

Why did you choose to work at Northwestern?

I wanted to leave the corporate world and work in higher education. I very much appreciate the collaborative environment and drive to better society that is found in higher education. That paired with my background in healthcare really drove me to Northwestern.

How do you help scientists at the medical school?

I help communicate all the services and tools that NUCATS offers to help scientists, research teams and research students accelerate their clinical and translational research.

What is your favorite part of the job?

I love being a part of a bigger organization that is making significant changes in the world for the better. I also very much enjoy all the website work I do. With the tremendous help of the Feinberg web team, I just finished up redesigning the NUCATS website. I continue to maintain and update that site in addition to a few others.

What exciting projects are you working on?

I'm very excited about the podcast we are developing in partnership with the clinical and translational sciences institutes at University of Illinois at Chicago and University of Chicago. The podcast will feature stories about the exciting research that is being done in the Chicagoland area and how it is impacting the community. We are continuously looking for story ideas; if you think you have an interesting one, please let me know!

What do you like to do in your spare time?

I love to play golf, cook and travel. I also enjoy scuba diving! This past year I completed my open water diving certification. Whenever I'm on vacation I always try to play golf and scuba dive, but not at the same time.

Connect with Clare on [LinkedIn](#).

Q&A

Where are you originally from?

I grew up in Oak Park, Illinois. I loved living so close to the city and would often take the "L" downtown to explore Chicago. Now that I live in Lakeview, I'm still exploring everything the city has to offer.

What is your educational background?

I received my bachelor of arts from Marquette University in Milwaukee. I majored in advertising and had an interdisciplinary minor focused on graphic design. Marquette did not offer any programs in graphic design but through my interdisciplinary minor I was able to take classes at the Milwaukee Institute of Art and Design and received credit at Marquette. I am currently working on my master of science in higher education administration and policy, here at Northwestern, to gain a better understanding of higher education.

Please tell us about your professional background.

After graduating from Marquette, I worked as a creative coordinator for Olson Communications, a small marketing agency located in River North. I was at Olson Communications for almost four years before moving to a marketing coordinator

Research in the News



Associated Press, August 8

[Helping nature: Inducing labor avoids cesarean for some moms](#)

William Grobman, MD, MBA, was quoted.

- This research was also featured in *The New York Times*, *U.S. News & World Report*, *Chicago Tribune*, *National Public Radio*, *HealthDay*, *NBC News*, *ABC News* and others.

National Public Radio, August 12

[Treating Teen Depression Might Improve Mental Health Of Parents, Too](#)

- This research was also featured in *The Atlantic* and *HuffPost*.

HealthDay, August 14

[New Triple-Combo Pill Controls Blood, Study Finds](#)

Mark Huffman, MD, MPH, was quoted.

HealthDay, August 24

[Here's How Sleepless Nights Can Trigger Weight Gain](#)

Jonathan Cedernaes, PhD, was quoted.

- This research was also featured in *WebMD*.

Reuters, August 24

[Maternal depression can impact baby's physical and mental health](#)

Dorothy Sit, MD, was quoted.

Reuters, August 27

[Seniors healthier when medical care is coordinated](#)

Michael Wolf, PhD, MPH, was quoted.

[More media coverage available online.](#)

NUCATS Corner

Education and Career Development Programs

The Center for Education and Career Development (CECD) offers programs to train the entire spectrum of the translational research workforce, including early career faculty, postdoctoral fellows, scholars, trainees and clinical research professionals. Programs include:

[Navigating the Research Enterprise](#), an annual faculty development seminar series for early-career faculty offered September through December.

[Responsible Conduct of Research](#), a required course for any postdoctoral fellows and junior faculty who have received NIH training awards. The course runs from September 19 to December 5.

[Mentor Development Workshop](#), a three-hour workshop to assist your group, department or division in addressing key concerns and challenges encountered by mentors. The next workshop will be held on December 12.

[Master of Science in Clinical Investigation](#), a part-time program for medical residents, fellows and junior faculty members who wish to receive formal training in clinical research. Courses may also be taken independent of entering the degree program for professional enrichment.

[Clinical Research Coordinator Training](#), an intensive training program, offered in-person or online, designed to meet the needs of coordinators who have less than one year of experience or who have never received formal training.

Learn about all of the programs offered [here](#).



Listen to the *Breakthroughs* Podcast

Check out our latest episodes featuring Feinberg investigators like Kelly Michelson, MD, MPH, who discusses the importance of palliative care in pediatric hospitals in a recent [interview](#).

Sponsored Research



PI: John Pandolfino, MD, chief of Gastroenterology and Hepatology in the Department of Medicine

Sponsor: National Institute of Diabetes and Digestive and Kidney Diseases

Title: Disordered Tissue Biomechanics as a Driver of Esophageal Disease

Esophageal disease is extremely common and associated with a significant reduction in quality of life directly related to symptoms of dysphagia, chest pain, regurgitation and choking. There is also secondary morbidity and mortality associated with aspiration and malnutrition. Using novel techniques developed in Pandolfino's lab focused on high-resolution impedance, his team has been able to show that the mechanical properties of the esophageal wall and the response to volume distention are important in esophageal disease pathogenesis.

This program project grant assembles a team of investigators from a wide range of disciplines to study how disease states alter the structure and mechanical properties of the esophagus resulting in compromised function. The team will be using animal models of scleroderma and eosinophilic esophagitis, human physiologic studies, mathematical models, computer simulations and psychometric analysis to develop an array of tools aimed at improving the management of esophageal disease.

[Read more about this project.](#)



PI: Judith Moskowitz, PhD, professor of Medical Social Sciences

Sponsor: National Institute on Aging

Title: Leaf 2.0: Randomized Trial of a Technology-Based Positive Emotion Intervention for Informal Caregivers of Individuals With Alzheimer's Disease

In 2016, 59 percent of dementia caregivers reported experiencing high levels of emotional and physical stress, putting them at risk of developing a range of physical and mental health issues. Furthermore, caregiving burden has a deleterious impact on caregiving quality and quality of life in the care recipient.

Moskowitz's recent randomized trial of a positive emotion skills intervention, delivered by trained facilitators via the web to 170 family caregivers of people with dementia resulted in significant improvements in caregiver psychological well-being. However, facilitator-delivered interventions are costly and difficult to implement with fidelity on a large scale. Moskowitz's team will take the next step toward widespread implementation of the LEAF intervention by evaluating two methods of online delivery: facilitated and self-guided compared to a control group. If effective, the LEAF program can be disseminated to Alzheimer's caregivers nationwide.

[Read more about this project.](#)



Welcome New Faculty

[Terri Laguna, MD, MS](#), joins us as chief of [Pulmonary and Sleep Medicine](#) in the Department of [Pediatrics](#) and associate professor of Pediatrics in the Division of Pulmonary and Sleep Medicine. Her research focuses on understanding the contribution of anaerobic bacteria in the development of cystic fibrosis lung disease. The goal of her work is to provide healthcare workers with a new target for treatment that could potentially prolong longevity in patients with cystic fibrosis. Laguna earned her MD from the University of California, San Francisco, and a master's degree in clinical science from the University of Colorado, Denver. She completed residency and a chief residency in pediatrics at the University of Washington, Seattle, and a fellowship in pediatric pulmonology at the University of Colorado. She has published more than 30 peer-reviewed papers and is currently the principal investigator on an NIH RO1 grant and numerous grants funded by the Cystic Fibrosis Foundation. Laguna is one of the first three members of the Clinical Research Scholars Program through the Cystic Fibrosis Foundation, which is a competitive, grant-funded program developed to train future leaders in the foundation. She is the recipient of numerous awards and honors for her research and teaching achievements and has mentored many students, fellows and residents throughout her career.

Lerner

(continued from page 3)

How is your research funded?

My research program so far has been generously funded by the National Institute of Mental Health and by the Brain & Behavior Research Foundation. As a new investigator, I'm also grateful for support from Northwestern and from the Searle Leadership Fund.

What resources at Northwestern have been helpful for your research?

Northwestern has been an incredibly supportive environment in which to start my research program. In particular, the [Center for Advanced Microscopy](#) has been crucial for allowing my lab to image and map whole-brain dopamine circuits. We've also been supported by Quest, the high-performance computing cluster, and by many, many helpful colleagues both in Chicago and Evanston.



Cancer Patients Guaranteed Oncofertility Treatment Coverage Under New Illinois Law

Illinois cancer patients no longer have to choose between costly life-saving treatments and preserving their ability to one day have their own biological children, thanks to a fertility preservation bill signed Aug. 27 by Gov. Bruce Rauner at Northwestern Medicine Prentice Women's Hospital.

HB 02617, based in part on research and advocacy at Northwestern University, amends the Illinois insurance code to require oncofertility coverage.

Read the full coverage [here](#).

Funding

Clinical Trial on Effects of Statins in Older Adults Without Clinical Cardiovascular Disease (U19 Clinical Trial Required)

[More information](#)

Sponsors: National Institute on Aging (NIA), National Heart, Lung, and Blood Institute (NHLBI), and National Institute on Neurological Disorders and Stroke (NINDS)

Letter of Intent Due: November 17

Submission Deadline: December 17

Amount: \$2.8M in direct costs in FY2019 to fund one award

Synopsis: NIA, NHLBI and NINDS request applications for a pragmatic trial from a network or consortium of healthcare delivery systems, which together cover most of the geographic regions of the United States, and a data coordinating center to assess the overall risks and benefits of statins in adults 75 years of age and older without clinical cardiovascular disease.

Stroke Preclinical Assessment Network (SPAN) to Support Translational Studies for Acute Neuroprotection (U01 Clinical Trial Not Allowed)

[More Information](#)

Sponsors: National Institute of Neurological Disorders and Stroke (NINDS)

Letter of Intent Due: November 13

Submission Deadline: December 13

Amount: \$725,000 in direct costs over a period of three years (\$75,000 direct cost during year one to set up the network, then \$325,000 in direct costs per year)

Synopsis: Applications of promising neuroprotective drugs/interventions for the Stroke Preclinical Assessment Network (SPAN) are solicited. SPAN will support late-stage preclinical studies of putative neuroprotectants to be given prior to or at the time of reperfusion, with clinically relevant long-term outcomes and comorbidities. Parallel testing of the most promising interventions will help to determine if an intervention can improve outcome as compared to reperfusion alone and/or extend the therapeutic window for reperfusion, and if so, guide the selection of the best agent(s) to transition to future Phase II clinical trials.

Pediatric Immunotherapy Discovery and Development Network (PI-DDN) (U54 — Clinical Trial Not Allowed)

[More Information](#)

Sponsors: National Cancer Institute

Letter of Intent Due: 30 days prior to the application due date

Submission Deadline: December 17

Amount: \$2.5M in FY2019 with future year amounts depending on annual appropriations for a maximum project period of five years

Synopsis: Associated with the [Beau Biden Cancer MoonshotSM Initiative](#) that is intended to accelerate cancer research, the purpose of funding is to establish centers of collaborating investigators with the goal of identifying and advancing research opportunities for translating immunotherapy concepts for children and adolescents with cancer toward clinical applications.

[View more funding opportunities](#)

Is Your Research Data FAIR? Best Practices for Managing Data



By Sara Gonzales, data librarian

On June 4, 2018, the NIH released a new [Strategic Plan for Data Science](#).

In the strategic plan, the NIH outlines five key goals for addressing the storage, cataloging, sharing and publication needs related to the vast amounts of research data currently being generated in the biomedical sciences. With the direction of a new chief data strategist, the NIH will enact measures to support an efficient biomedical research data infrastructure; promote modernization of the data resources ecosystem; support the development and dissemination of advanced data management, analytics and visualization tools; enhance workforce development for the biomedical data sciences; and enact appropriate policies to promote data stewardship and sustainability.

Since 2010, Northwestern University has received [more than half of its sponsored funding](#) from the Department of Health and Human Services, the parent organization of the NIH, meaning that many Northwestern investigators are producing large amounts of biomedical data. In recent interviews with Northwestern investigators, Galter librarians have discovered that many have concerns about general data management principles, and some have an interest in data sharing and long-term data preservation and retrieval. The solutions align especially well with the last goal listed in the NIH's strategic plan: enacting appropriate policies to promote data stewardship and sustainability.

As outlined within the fifth goal of the NIH plan, one important policy will be to promote adherence to the FAIR principles for data stewardship (see box on page 11). The [FAIR principles](#) represent a consensus among data and information security professionals about best practices to make data freely and safely available. Processes and systems have already been put in place to make FAIR data a reality at Northwestern. One way for investigators to ensure that research data will be available for future reuse is to implement a Data Management Plan at the beginning of the research process. Northwestern investigators can easily

create a plan tailored to their own institution and funder using the online [DMPTool](#). Aside from meeting federal grant requirements, data management plans can also encourage use of file and folder naming conventions and the inclusion of metadata, efforts which will make data more findable and interoperable in the long run.

Some investigator data is findable now through tools currently hosted by Northwestern, such as the [Arch](#) institutional repository and Northwestern Medicine's [DigitalHub](#). Both have rich record descriptors to enhance data findability, and DigitalHub leverages [MeSH](#) to make its records interoperable. Like many modern institutional and data repositories, both tools use unique identifiers (DOIs) to ensure accessibility.

The accessibility principle includes an information security requirement, and that too is being met for Northwestern's research datasets. A great example of this is seen in the Northwestern Medicine Enterprise Data Warehouse ([NMEDW](#)), a joint initiative across Feinberg and Northwestern Memorial HealthCare Corporation. Its mission is to create a single, comprehensive and integrated repository of all clinical and research data sources on the campus to facilitate research, clinical quality, healthcare operations and medical education. Data from the NMEDW is released in adherence with a [Permissible Use Policy](#) and is protected by [Data Security Plans](#) for all information used in clinical research. [Northwestern University Information Technology](#) publishes and enforces additional policies for the protection of data.

By offering tools, policies and techniques to make investigators' data findable, accessible, interoperable and reusable, NU libraries, NUCATS and Feinberg show their alignment with the data management goals of the NIH, and with best practices agreed upon by an international community of research data professionals. This firm foundation will support and enable advancements in research data management. Curation, interoperability and discoverability will follow.

High-Impact Factor Research

Chen FX, Smith ER, Shilatfard A. [Born to run: control of transcription elongation by RNA polymerase II.](#) *Nature Reviews Molecular Cell Biology*. 2018 Jul;19(7):464-478.

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The Feinberg Research Office regularly tracks research published by Feinberg investigators. The citations are used on web pages, in newsletters and social media, for internal reporting and more. To more accurately track these journals, the Research Office asks that Feinberg investigators use the following institution name in the address field when publishing in peer-reviewed journals: "Northwestern University Feinberg School of Medicine."

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Accessible: retrievable by their identifier through free and open Internet protocols that allow authentication and authorization where necessary

Interoperable: described with commonly used metadata standards and controlled vocabularies

Reusable: have been assigned a license assuring their reuse and have a clear provenance

Calendar

Friday, September 14

Advances in Pulmonary and Critical Care Medicine CME Symposium

Northwestern Medicine will host this fifth annual educational program designed for pulmonologists and other healthcare providers involved in the care of patients with pulmonary disease. The program will feature didactic lectures, two hands-on breakout sessions and case discussions.

Time: 7:15 a.m. to 3:00 p.m.

Location: Prentice Women's Hospital
Conference Room L South, 3rd Floor
250 E. Superior St.

Contact: sbags@nm.org

[Registration and other information](#)

Tuesday, September 18

Microbiology-Immunology Seminar

Anne Simon, PhD, professor of Cell Biology and Molecular Genetics at the University of Maryland, will present "RNA Virus Evasion of Nonsense-Mediated Decay."

Time: Noon to 1:00 p.m.

Location: Robert H. Lurie Medical Research Center
Baldwin Auditorium
303 E. Superior St.

Contact: d-walsh@northwestern.edu

[More information](#)

Thursday, September 20

Center for Autism and Neurodevelopment Lecture

Guest speaker David Lewis, MD, distinguished professor of Psychiatry and Neuroscience at the University of Pittsburgh, and medical director and director of research at Western Psychiatric Institute and Clinic of University of Pittsburgh Medical Center, will present "A Neural Circuitry Substrate for Cognitive Dysfunction in Schizophrenia." Lewis will review evidence and current findings in schizophrenia research that contribute to cognitive disturbances and impairments.

Time: 2:00 to 3:00 p.m.

Location: Robert H. Lurie Medical Research Center
Baldwin Auditorium
303 E. Superior St.

Contact: michelle.mohney@northwestern.edu

[More information](#)

[More research events here.](#)

NIH News

Share Your Voice

In an effort to further enhance stewardship and transparency, NIH is requesting feedback on the standards they should use in assuring adequate registration and results information reporting for the subset of studies that meet [NIH's definition of a clinical trial](#) and that focus on [basic research](#) involving human participants ([NOT-OD-18-217](#)).

Respondents are encouraged to review [ClinicalTrials.gov](#) registration and results submission requirements as described in the [Protocol Registration and Results System User's Guide](#) to ensure that responses are as informed, specific and actionable as possible.

All responses should be submitted electronically by November 12, 2018. Give your feedback [here](#).

Trends in Diversity Within the NIH-Funded Workforce

In 2017, NIH launched the [Next Generation Researchers Initiative](#) to address longstanding challenges faced by investigators trying to begin and sustain independent research careers, and to take steps to promote the growth, stability and diversity of the biomedical research workforce.

As a result of this initiative, a [study](#) conducted by the Office of Extramural Research was recently published in the *Federation of American Societies for Experimental Biology Journal*, examining NIH workforce demographics while considering factors such as career stage, gender, ethnicity and race. Michael Lauer, NIH's deputy director for Extramural Research, reviewed and highlighted key findings of this study. Read his commentary and review [here](#).

Protecting the Integrity of U.S. Biomedical Research

NIH Director Francis Collins, MD, PhD, recently issued a statement on increasing threats to the security of intellectual property and integrity of peer review. There are growing concerns over the nondisclosure of financial contributions and supplemental research support by some investigators, the misuse of intellectual property, and sharing of confidential information by peer reviewers with others as means to influence funding decisions. In response, NIH will collaborate with other government agencies, NIH-funded academic institutions, U.S. professional organizations and an advisory committee to identify methods that will improve their ability to protect the integrity of biomedical research. Read Collins' complete statement [here](#).

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