

# Breakthroughs

Feinberg School of Medicine Research Office

October 2020

## How COVID-19 Impacts Cancer Care and Research

*The Robert H. Lurie Comprehensive Cancer Center of Northwestern University, led by Leonidas Platanias, MD, PhD, has altered policies and plans to minimize the risk of exposure to COVID-19 for patients, physicians and staff members, while continuing clinical trials, research and care.  
Photo credit: Andre LaCour.*



By Melissa Rohman

On March 11, the disease COVID-19 was declared a pandemic by the World Health Organization. As the disease caused by the novel SARS-CoV-2 virus quickly spread around the world, nearly every aspect of medicine was radically altered. Patient care was administered selectively and rapidly to patients both with and without COVID-19, while research and clinical trials deemed non-essential were put to an abrupt halt. Especially impacted by this drastic shift was patient care and research for cancer.

As the pandemic rolled into summer, more was learned about how exactly COVID-19 impacts cancer patients. A recent Northwestern Medicine [study](#) found that some patients treated for cancer and other underlying health conditions are among the most vulnerable patient populations for developing COVID-19 and complications from the disease due to a weakened immune system.

Northwestern investigators also found that COVID-19 can complicate cancer treatment for patients who have other comorbidities. According to that [study](#), patients who are actively receiving chemotherapy or radiation therapy, and especially those who are receiving treatments such as stem cell transplants that involve drugs which suppress the immune system, have an even higher risk of infection and death from COVID-19.

The impact of COVID-19 on cancer patients has been a stark reality for many cancer centers around the world -- especially

in the U.S., which passed 7 million cases of COVID-19 in late September. For the [Robert H. Lurie Comprehensive Cancer Center](#) of Northwestern University, a combination of time and immense dedication to patient care and research has resulted in a more comprehensive understanding of how the disease affects cancer patients and, in turn, the development of robust COVID-19 testing protocols to ensure the safety and health of every patient, physician and staff member.

“What has made the biggest difference is that we now understand better how COVID-19 is transmitted,” said [Leonidas Platanias, MD, PhD](#), director of the Lurie Cancer Center and the Jesse, Sara, Andrew, Abigail, Benjamin and Elizabeth Lurie Professor of Oncology. “We know that with wearing masks and social distancing, we can really control the spread, and that’s what makes it so much more reassuring for our patients, for our staff and for our doctors.”

### A Widespread Impact

COVID-19 is a threat not only to patients who currently have cancer, but also patients who may not know if they do. Since the pandemic began, the number of newly diagnosed cancer cases in the U.S. has significantly decreased, an unfortunate trend that both Platanias and the National Cancer Institute (NCI) are particularly concerned by.

“The belief is that people are not seeking medical help for symptoms due to their fear of being exposed to the virus,” Platanias said.

**COVID-19 Impacts Cancer** *(continued from cover page)*

According to Platanius, the number of accruals to clinical trials for cancer therapies has also decreased since the beginning of the pandemic, due to nationwide stay-at-home orders in an effort to decrease the viral spread. In response, any research deemed non-essential was temporarily put on hold or modified to be done at home.

“We’re now bringing those trials back up to speed,” Platanius said.

However, some clinical trials are too important to patient health to significantly modify. For [Priya Kumthekar, MD, ’11 ’12 GME](#), associate professor in the Ken and Ruth Davee Department of [Neurology](#) in the Division of [Neuro-oncology](#) and medical director of the cancer clinical trials office at the Lurie Cancer Center, this meant transitioning to telehealth visits and mailing medication to patients receiving treatment for brain tumors.

Kumthekar, who is the executive officer for the Alliance of Clinical Trials at the NCI, explained that her team’s experiences were informed by the guidelines released by the NCI, and speaking with other investigators helped her figure out what was best for her own trials.

“I think for the foreseeable future, we’re going to need to keep many of these policies in place,” Kumthekar said. “We have to make sure that we’re really thoughtful about everything, a balance between making sure patients are protected from COVID-19 and balancing their safety on the given clinical trial.”

**Supporting Research Efforts**

In response to the threat of COVID-19 on cancer, the Lurie Cancer Center has supported various COVID-19 and cancer-related [research efforts](#) led by Feinberg faculty members of the center by offering multiple competitive research grants.

The center has also been involved in a joint effort with the National Cancer Institute and the National Institute of Allergy and Infectious Diseases (NIAID) to develop a COVID-19 antibody test, in which Platanius has been helping provide samples



*Priya Kumthekar, MD, transitioned to telehealth visits and mailing medication to patients receiving treatment for brain tumors.*

from patients with COVID-19 to help in the development and validation of antibody serological tests.

“There are many tests that have been validated and used because of this and we’re really happy that we were able to contribute to this major effort between the NCI and the NIAID,” Platanius said.

The center has also been working with [Michael Ison, MD, MS](#), professor of [Medicine](#) in the Division of [Infectious Diseases](#) and of [Surgery](#) in the Division of [Organ Transplantation](#), to build a COVID-19 biobank. Supported by both the Lurie Cancer Center and the Northwestern University Clinical and Translational Sciences (NUCATS) Institute, the biobank will help facilitate multi-investigator research and identify patients who have recovered from the virus with protective antibodies.

**Adapting and Reactivating**

Since the beginning of the pandemic, the goal of the Lurie Cancer Center has been to administer top-notch care and treatment to patients with immediate needs while also minimizing the risk of exposure to COVID-19 for every patient, physician and staff member.

This, according to Platanius, has been accomplished in part by employing telemedicine for non-urgent services, such as having patients get imaging scans and blood tests done at other Northwestern Medicine affiliate sites across Chicagoland and utilizing video chat for patient consultations and routine follow-ups.

In response to an increased understanding and control of the virus, three months ago the center entered its reactivation phase. This has included a decline in telemedicine visits, an increase in in-person visits and the implementation of robust COVID-19 testing protocols.

For example, patients who are starting treatment must be tested for COVID-19 to minimize the risk of exposure, according to Platanius.

“When patients come here, we are prepared, and we have confidence that will create the safest possible environment for them and for everyone else who’s in the center” said Platanius.

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# Medical School Research Funding Breaks Records in 2020

Feinberg principal investigators secured a record-breaking [\\$643 million](#) in research funding and awards during the 2019-2020 fiscal year, an impressive 20 percent increase over the previous year.

Despite research challenges presented by a global pandemic, more than \$24 million in awards were awarded to Feinberg investigators for [COVID-19 related research](#).

“This record-breaking year for Feinberg’s sponsored research awards is a tribute to the creativity and innovative thinking of our investigators. This is especially so in a year where the challenge of a global pandemic could have been a great distraction. We can be sure that the discoveries enabled by this external support will contribute to improving the health of our patients,” said [Rex Chisholm, PhD](#), vice dean for scientific affairs and graduate education and the Adam and Richard T. Lind Professor of Medical Genetics.



Roughly 28 percent of awarded funds were allocated for basic science department funding and 72 percent for clinical department funding. Of the total, \$407 million was awarded from the National Institutes of Health (NIH), an 18 percent increase in funding from the NIH over the previous fiscal year. Individual grant awards included 75 individual research fellowships (F awards), 58 career development awards (K awards) and 36 training grants (T awards).

Approximately 4,169 clinical trials and research studies were conducted at Feinberg in the 2019-2020 academic year, led by 667 principal investigators and 434 principal investigators on NIH grants. Additionally, a total of 83 patents and four new start-up companies were established within the last fiscal year alone.

## Rocklin Receives NIH New Innovator Award

[Gabriel Rocklin, PhD](#), assistant professor of [Pharmacology](#), has received the National Institutes of Health (NIH) Director’s New Innovator Award, an early-career grant supporting unconventional research projects in the biomedical, behavioral or social sciences. Rocklin’s research is focused on exploring protein energy landscapes, the mapping of “hidden” structures that represent how a protein can be partially unfolded, and developing more efficient methods to study a large number of these structures simultaneously.

“It’s a big honor to receive thffe award. It enables my team to push forward with one of the most exciting projects of my career,” Rocklin said. “I also owe a large debt to many mentors, collaborators and group members who helped get the project started, collect preliminary data, and assist with grant writing and revising.”

Established in 2007, the award supports unusually innovative research from early-career investigators who are within 10 years of their final degree or clinical residency and have not yet received a research project grant or equivalent NIH grant. The

award will allow Rocklin and his team to expand their method that can indirectly observe protein energy landscapes for thousands of proteins at once. Doing so on such a large scale, according to Rocklin, will enable the team to develop models to predict a protein’s energy landscape solely based on its amino acid sequence.

Rocklin is also faculty member at Northwestern’s [Center for Synthetic Biology](#), where his lab develops high-throughput methods for protein biophysics and protein design, specifically with a focus on protein therapeutics.



*Gabriel Rocklin, PhD, assistant professor of Pharmacology, has received the NIH Director’s New Innovator Award, an early-career grant supporting unconventional research projects in the biomedical, behavioral or social sciences.*

# Improving the Diagnosis, Treatment and Management of Bladder Cancer

Joshua Meeks, '05 MD, '03 PhD, '06, '11 GME, assistant professor of Urology and of Biochemistry and Molecular Genetics



[Joshua Meeks, '05 MD, '03 PhD, '06, '11 GME](#), is an assistant professor of [Urology](#) and of [Biochemistry and Molecular Genetics](#). At Northwestern Memorial Hospital, Meeks is an [urologic surgeon](#), specializing in the diagnosis, treatment and management of bladder cancer. His [laboratory](#) focuses on both the epigenetics and genetic mutations associated with cancer biology with the hope of developing novel systemic and intravesical therapies to improve patient survival. Watch a [video](#) about his lab.

Meeks is also section chief of Robotic Surgery at the Jesse Brown VA Medical Center in Chicago and is a member of multiple centers and institutes at Northwestern, including the [Center for Genetic Medicine](#), the [Simpson Querrey Institute for Epigenetics](#), the [Northwestern University Clinical and Translational Sciences \(NUCATS\) Institute](#) and the [Robert H. Lurie Comprehensive Cancer Center](#) of Northwestern University. He has authored more than 100 peer reviewed publications and currently leads a handful of active clinical trials for bladder cancer at Northwestern.

## Q&A

### What are your research interests?

My laboratory is focused on bladder cancer. As a urologic oncologist, we are able to see this very aggressive cancer from a different perspective and I see patients approximately 50 percent of my time at Northwestern.

We focus on three main problems. The first is trying to treat bladder cancers that are resistant to conventional therapies, such as immunotherapy and chemotherapy. We think that leveraging some of the unique mutations that occur in bladder cancer makes them particularly susceptible to therapy targeting DNA and chromatin. These would be considered epigenetic therapies. A second major focus of our laboratory is trying to identify more “at-risk” patients that should be treated with either more aggressive therapies at an earlier stage or different precision therapies. Last, there is a significant sexual dimorphism in bladder cancer where men are diagnosed approximately three to four times more than women, but women have significantly worse outcomes. We think there’s a very strong biologic driver here that likely involves a tumor in the immune microenvironment. Our lab uses techniques that include mice, cells tissues from patients and different organoid systems.

### What is the ultimate goal of your research?

The ultimate goal of our research would be to cure bladder cancer, or rather identify the real cause of bladder cancer. I truly think it’s a preventable cancer. Interestingly, there’s been no survival improvements in bladder cancer in over 40 years. Survival is still at a median of 14 months for patients with metastasis. This is the second lowest of solid tumors. I really think bladder cancer is too heterogenous for a “one size fits all” approach, which emphasizes the role of biomarkers and molecular subtyping. Bladder cancer is considered a disease that occurs secondary to smoking, but only half of our patients are actually smokers. One thing that we study is how carcinogens cause bladder cancer. As a surgeon that works at the VA, I see many patients that were exposed to carcinogens during chemical and biological warfare.

### How did you become interested in this area of research?

I became interested in bladder cancer and tumor genomics as a fellow in oncology at Memorial Sloan-Kettering Cancer Center. Bladder cancer was really a black box with very limited therapies, yet it seemed very interesting to me at the genetic level. It was clear to me that my colleagues would make significant improvements in the survival of patients with prostate and renal cancer. Testicular cancer was essentially cured with platinum chemotherapy, but bladder cancer remains a challenge.

Bladder cancer looks like lung cancer, or melanoma. Survival is terrible for patients with metastasis. As a surgeon, we have constant access to the bladder and this readily prepares us for trials, biomarkers and interventions, and we just hit things at the right time — coming to Northwestern at the beginning of The Cancer Genome Atlas ([TCGA](#)). I collected tumors for the TCGA as a fellow and by the time I finished my fellowship, the bladder TCGA was published.

Almost 70 percent of bladder cancers have a mutation in chromatin regulatory proteins. I learned a lot from [Ali Shilatifard](#) — he cloned the proteins that we see mutated in bladder cancer. The first immunotherapy trial was opened at Memorial Sloan Kettering when I was a fellow. I thought that bladder cancer made a lot of sense to look at as “immunoresponsive,” since we used tuberculosis as a common treatment. I wrote a phase I trial when I arrived at Northwestern that we just completed. Again, lucky to have great mentors at the right time.

# Designing Solutions to Common Clinical Problems

## Garrett Eickelberg, a fourth-year student in the Driskill Graduate Program in Life Sciences



Garrett Eickelberg, a fourth-year student in the Driskill Graduate Program in Life Sciences ([DGP](#)), investigates antibiotic usage in the intensive care unit, working in the laboratory of [Yuan Luo, PhD](#), associate professor of [Preventive Medicine](#) in the Division of [Health and Biomedical Informatics](#), at the McCormick School of Engineering and member of the [Robert H. Lurie Comprehensive Cancer Center](#) of Northwestern University.

and unstructured clinical data in order to improve diagnosis of Familial Hypercholesterolemia. My other side project involved developing a platform to help automate data-cleaning tasks commonly used when cleaning clinical data.

### What attracted you to the DGP?

Feinberg School of Medicine was among my top choices for medical school originally, but after a “quarter-life crisis,” I realized I wanted to help improve patient care using data, rather than becoming a clinician. I was delighted to find that they have an equally high caliber Biomedical Informatics doctoral program, and the interview weekend really sold me.

### What has been your best experience at Feinberg?

I have had many unique and gratifying experiences so far, but if I had to pick one, I would say the acceptance of my first lead author publication was especially fulfilling.

### How would you describe the faculty at Feinberg?

The faculty I have worked with at Feinberg have been phenomenal. In my coursework, all of the professors I worked with were passionate and engaging. As for my mentorship, I couldn't be happier. My mentors have been there for me at every step of my journey.

Whether I needed some tough love or support, they have always had my back.

### What do you do in your free time?

I am a man of many hobbies. I like to cook, rock climb, yoga and write or play music. Guitar is my main instrument, but recently I finally took the plunge and have been learning drums.

### What are your plans for after graduation?

I can see myself working at a large academic medical center and working to help them leverage their clinical data in order to improve patient care or optimize hospital operations.

## Q&A

### Where is your hometown?

I consider Portland, Oregon to be my hometown. It's where I was born, and although I grew up in Phoenix Arizona, I spent 10 years in Portland prior to moving to Chicago and hope to someday move back.

### What are your research interests?

Broadly, my research interests involve designing solutions to common clinical problems using both data science and informatics approaches.

### What exciting projects are you working on?

In my dissertation, I focus on trying to help reduce unnecessary or inappropriate antibiotic usage and improve outcomes for patients in the Intensive Care Unit through predictive analytics.

In addition to my dissertation research, I have also been involved in a number of side projects over the past few months. The first of these projects has involved applying a novel natural language processing pipeline called cTAKES to both structured

## Research in the News

### **U.S. News & World Report, September 4**

[Permanent Nerve Damage for Some COVID-19 Survivors](#)

Colin Franz, MD, PhD, was featured.

- This research was also featured by [HealthDay](#).

### **HealthDay, September 15**

[Your Sex Affects Your Genes for Body Fat, Cancer, Birth Weight](#)

Barbara Stranger, PhD, was featured.

- This research was also featured by [U.S. News & World Report](#).

### **The Wall Street Journal, September 14**

[A New Prescription: A Dose of Live Music for Hospital Patients](#)

Borna Bonakdarpour, MD, was featured.

- This research was also featured by [NBC News](#).

### **U.S. News & World Report, September 22**

[AHA News: Cluster of Risky Conditions That Can Lead To Heart Disease Is Rising in Hispanic Adults](#)

Sadiya Khan, MD, MSc, commented on the featured research.

### **The New York Times, September 23**

[COVID-19 May Have a Hidden Impact on the Heart](#)

Clyde Yancy, MD, MSc, commented on the featured research.

### **MSN, September 24**

[Study: Positive Personality Traits Could Offset Alzheimer's](#)

Eileen Graham, PhD, was featured.

# Managing Projects that Advance LGBTQ+ Health Research

Kate Banner, MA, project manager, Institute for Sexual and Gender Minority Health and Wellbeing



Kate Banner, MA, is a project manager at the Institute for Sexual and Gender Minority Health and Well Being ([ISGMH](#)), helping design digital tools to improve social networks research.

## Q&A

### Where are you originally from?

I was born in Chicago, but spent most of my childhood in the Central Valley of California. My family later relocated back to the Midwest to a small town in southwestern Wisconsin where I graduated high school.

### What is your educational background?

I attended a liberal arts college in the Pacific Northwest, earning an undergraduate degree in social science with a minor in Latin American studies. I had the good fortune of being able to travel abroad to Ecuador, Peru, Bolivia and Venezuela as part of these studies. In 2011, I finished a master's degree in global politics at the University of Exeter in the United Kingdom.

### Please tell us about your professional background.

I have always been driven by social impact work. Prior to joining Northwestern, I worked at Open Society Foundations on transparency and accountability initiatives championed by civil society to keep government accountable. I later worked in a variety of immigrant rights organizations spanning mental health, labor organizing and legal advocacy.

When I came to Northwestern in 2016, I was interested in applying my strengths at managing large, complicated projects to the context of academic research and, in particular, research advancing LGBTQ+ health.

### Why do you enjoy working at Northwestern?

Northwestern has been a great professional home for me. I value the breadth of cutting-edge research that takes place across the institution, the enthusiasm for innovation and community-informed initiatives, and the countless opportunities for staff to engage in continued learning — even in disciplines remote from their home department.

I also appreciate the collegial atmosphere across the institution that facilitates collaboration and the pride staff, faculty and scholars alike take in their work and commitment to the university's mission.

### How do you help scientists or research students at the medical school?

I work closely with an interdisciplinary team of researchers within the ISGMH, working to design digital tools to improve social

networks research, with applications in public health as well as social and behavioral studies. As a project manager, I serve as a primary point of contact for most matters that impact day-to-day operation of the research and act to troubleshoot obstacles that impede productivity or the achievement of goals.

### What is your favorite part of the job?

The best part of my job is that no two days are ever the same. Due to the breadth of my responsibility, I have the opportunity to work with a variety of offices across the university as well as interact with members of the research community across the U.S. and beyond.

### What exciting projects are you working on?

The scientists I work with are involved in too many interesting projects to note in detail here. One study I am particularly passionate about, however, is a newly funded award that will allow our team to conduct a broad needs assessment of HIV Partner Services nationally and use this information to inform the reconfiguration of our software suite, Network Canvas, as a contact tracing tool for public health.

As we did with the development of Network Canvas, our team will be soliciting insight and feedback from practitioners and community members in an effort to produce a tool that is responsive to the needs of both. From my perspective, this work has the potential to transform Partner Services programming, yielding higher quality data to improve our understanding of disease transmission and a better experience for participants.

The project will culminate in a pilot implementation of the Network Canvas software within Partner Services of the Chicago Department of Public Health (CDPH) and a subset of clinics funded by the city to conduct Partner Services. We are hopeful this preliminary work can lead to a larger-scale implementation across the United States in future years to help modernize and simplify this critical public health intervention.

### What do you like to do in your spare time?

In my spare time I love to travel, listen to live music, write letters, and eat and cook new things. I relish getting out of the city and exploring new terrain by foot, bicycle or kayak. I also love supporting the success of other women and gender diverse folks and try to use my time to elevate inspiring people doing great things.

### Anything else we should know about you?

I am back in school pursuing a Masters in Social Work degree at Loyola University Chicago. I enjoy the challenge and intellectual engagement offered by this opportunity and have been appreciative of Northwestern's support of my personal growth in this way. I look forward to using my new developing skillset to continue to give back to the community at Northwestern and beyond.

## Meeks continued from page 4

### What types of collaborations are you engaged in across campus (and beyond)?

I've been so fortunate to have amazing colleagues that I learn from daily at Northwestern. I've been at Northwestern for over 20 years, so our lab has friends and collaborators across many departments.

I have an appointment in Biochemistry, and Ali Shilatifard has been a great collaborator and mentor. We meet monthly officially, but I have frequent touch points. I have a close relationship with [Steve Miller](#) in Immunology. He's taught me so much about immunology. I was recruited by [Tony Schaeffer](#) to become a urologist, and his son, [Ted Schaeffer](#), is my chair. Ted has been so supportive, and one of the rare urologists that is a surgeon-scientist. Ted will call at five or six in the morning and what he accomplishes daily motivates me.

Our genitourinary medical oncologists are amazing, and I really enjoy every interaction I get to have with them. They've taught me a great deal about clinical trials, but we are quite fortunate to have collaborators in both urology and biochemistry. We have strong collaborators outside of Northwestern at Johns Hopkins, University of Texas, San Antonio, and in Vancouver, Denmark, Brazil and Paris. Slack has been great to constantly share information and data across the world.

### How is your research funded?

We have been very fortunate to have funding from multiple sources since the lab began. The VA has been very supportive of our research. I had a Merit Award, funded in 2016, that was just renewed for six years. We have funding from multiple grants from the Department of Defense and the Prostate Cancer Foundation. Robert F. Smith, the philanthropist, funded our precision oncology center at Jesse Brown VA. Recently, we were funded by the [Polsky Institute](#) to study gender disparities in bladder cancer. I'd really like to be funded by the National Cancer Institute and am currently working towards this goal.

### Where has your work been published?

We had a paper [published](#) in *European Urology*, which is the best journal in our field right now, that describes the heterogeneity of stage I tumors. These tumors were a real enigma. This was a problem we have been addressing for five years — most patients do quite well with stage I tumors with the intracavitary tuberculosis vaccine (BCG), but about 15 percent will have progression and death. The patient has to decide about bladder removal or BCG therapy. This leads to a lot of over and under treatment. Our transcriptome analysis found that tumors can respond or not respond to BCG for many reasons. We actually found five different tumor subtypes using unsupervised clustering. One of these subtypes seems to have a strong epigenetic imbalance that could be targeted with a specific small molecule. The exciting thing was to develop a classifier that we could potentially use to help patients make decisions about treatments.



NUCATS Corner  
Clinical and Translational Sciences Institute

## New Website Enables Mentor-Mentee Matching for Diversity Supplements

One of the Northwestern University Clinical and Translational Sciences (NUCATS) Institute's overarching goals is to enhance diversity and equity in research within Northwestern University Feinberg School of Medicine. To this end, the NUCATS Institute has launched a [website](#) meant to help facilitate applications for National Institutes of Health (NIH) funded diversity and re-entry supplements for postdoctoral fellows and early-career faculty. This website is meant to raise awareness about diversity supplements throughout the medical school and to enable mentor-mentee pairings when needed.

"We have built out our infrastructure by creating a website that serves as a mechanism to pair candidates for diversity supplements with research opportunities led by our faculty," said Mercedes Carnethon, PhD, vice chair of Preventive Medicine and co-director of the NUCATS Institute's Center for Education and Career Development. "In doing so, we hope to build upon on our [success](#) with diversity supplements."

NIH offers research supplements to promote diversity in health-related research that are specifically designed to "provide support for research experiences for individuals from diverse backgrounds throughout the continuum from high school to the faculty level." These administrative supplements have been an important mechanism for providing mentoring to underrepresented minority young investigators and trainees on the pathway to independence. This new website is meant to facilitate the matching of underrepresented scientists with potential mentors so that they may apply for diversity supplement funding through NUCATS or other individual research awards.

If a faculty member is interested in applying for an award or matching with a student or trainee, supplement but would like assistance identifying a potential trainee, please [submit your information here](#).

The NUCATS Institute is supported, in part, by the National Institutes of Health's [National Center for Advancing Translational Sciences](#), Grant Number UL1TR001422.

# Sponsored Research

**PI: Babafemi Taiwo, MBBS, chief of Infectious Diseases in the Department of Medicine**

**Gene Stollerman Professor of Medicine and professor of Medicine in the Division of Infectious Diseases**

**Sponsor: National Institute of Child Health and Human Development**

**Title: Intensive Combination Approach to Rollback the Epidemic (iCARE) in Nigerian Adolescents**

Nigeria has the second highest number of people living with HIV and the most pediatric HIV infections globally, however; it has been neglected as a focus of public health efforts. Progress towards UNAIDS 90-90-90 goals in Nigeria has been slow with all goals less than 35 percent. Youth and men who have sex with men (MSM) are the weakest link in Nigeria's response to the HIV epidemic. Interventions reaching youth (including hard-to-reach MSM) and improving HIV care outcomes across the HIV care continuum should involve combination interventions as these have additive benefits compared to single interventions.

In this study, we propose to build on infrastructure developed through a very successful U.S-Nigeria HIV-centered academic partnership in collaboration with partner institutions in Ibadan, Lagos and Jos, Nigeria. We will test two combination interventions among youths aged 15 to 24 years across the HIV care continuum.

[Read more](#)



**PI: Lee Lindquist, MD, MPH, MBA, section chief of Geriatric Medicine in the Department of Medicine and associate professor of Medicine in the Division of General Internal Medicine and Geriatrics**

**Sponsor: National Institute on Aging**

**Title: Negotiation Training to Optimize Caregiver Communication in Alzheimer's Disease**

Family caregivers of seniors with Alzheimer's Disease (AD) frequently experience conflict with the health system when they act as patient advocates (for example, when negotiating treatments, tests, bills and more), which can cause increased stress, burden and anxiety. Unfortunately, family caregivers are vastly underprepared to effectively negotiate through these conflicts.

Northwestern University's Kellogg School of Business is an innovator in the field of negotiations and dispute resolution training. Previously, we have taught common negotiation tactics, utilized in business school curriculums, to health professionals with positive results. We hypothesize that teaching negotiation and dispute resolution tactics to family caregivers of seniors with AD will help improve communication, caregiver stress, anxiety and empowerment.

We will customize, optimize, then pilot-test a negotiation and dispute resolutions training program, based on those used in business schools, for family caregivers of seniors with AD.

[Read more](#)



## NIH News

### **THIS MONTH: Fall 2020 NIH Virtual Seminar on Program Funding and Grants Administration**

New to the world of NIH grants as an investigator or administrator? Mark your calendar for Tuesday, October 27 through Friday, October 30 for the Fall 2020 NIH Virtual Seminar on Program Funding and Grants Administration – four days of sessions and an on-demand video library! The program will feature the application and review process, opportunities to chat with NIH experts, access to downloadable resources and more. Registration is free. [Click here](#) to learn more and register.

### **Changes to Notice of Award**

As of October 1, recipients will see a new layout on page one of the Notice of Award (NoA). This new layout is part of Health and Human Services' Reinvent Grants Management initiative to standardize the NoA across various HHS systems and reduce the burden on recipients. The first page will present key

award information at a glance. For instance, financial award information and federal agency contacts (program official contact information, etc.) will be available on page one. The remaining sections of the NoA will remain mostly as is, with some data elements moving to page one from subsequent pages. The new NoA page one will be used by all HHS operating divisions. For more information, please see [NOT-OD-20-155](#). In the coming weeks, please look for resources on the [View Notice of Award](#) webpage of the public electronic Research Administration website.

### **NIH Best Practice: Use of Hypertext in Applications Restricted**

The use of hypertext (e.g., hyperlinks and URLs) in NIH applications is restricted due to concerns including reviewer confidentiality, "overstuffing" applications, review consistency and malware. Learn more about the policy [here](#).

# Funding

## Emerging Infections Network - Research for Preventing, Detecting and Managing Travelers Who Acquire Infectious Diseases Abroad

[More information](#)

**Sponsors:** Centers for Disease Control and Prevention – ERA  
**Submission Deadlines:** December 18  
**Upper Amount:** \$1.5M

**Synopsis:** The purpose of this funding opportunity is to support research activities that will assist with the prevention, detection and management of international travelers who become ill during or after travel. The project must have a focus on travel and tropical medicine providers with the capability to participate in research to determine the disease prevention strategies, burden, severity, optimal diagnostics, treatment interventions and outcomes of infectious diseases acquired while travelling abroad. This research will bridge the gap between clinical medicine and public health by assisting with improving patient care, better understanding the natural history of disease and implementing optimal diagnostic and treatment strategies, with the ultimate outcome being an advancement in the global health security of the United States.

## Cohort Studies to Improve Our Understanding of Influenza Immunity, Vaccine Response and Effectiveness in Older Adults (65 years and older) (U01 Clinical Trial Not Allowed)

[More information](#)

**Sponsors:** National Institute of Allergy and Infectious Diseases  
**Letter of Intent Deadline:** January 4, 2021  
**Submission Deadlines:** February 4, 2021  
**Amount:** \$4M in fiscal year (FY) 2022 to fund 2-4 awards

**Synopsis:** This initiative will support the use of longitudinal cohorts to develop greater understanding of important elements of influenza immunity that impact vaccine response and vaccine effectiveness in older adults (those 65 and older). In addition, this work will increase our understanding of how these elements relate to severe outcomes from influenza virus infection in older adults (i.e., hospitalization and death).

## Understanding the Role of the M. Tuberculosis Granuloma in Tuberculosis (TB) Disease and Treatment Outcomes (R01 Clinical Trial Not Allowed)

[More information](#)

**Sponsors:** National Institute of Allergy and Infectious Diseases  
**Letter of Intent Deadline:** January 22, 2021  
**Submission Deadlines:** February 22, 2021  
**Amount:** \$4M in FY 2022 to fund up to five awards

**Synopsis:** This award will support research to better define the role of the granuloma, the hallmark structure of pulmonary tuberculosis (TB), in TB disease and disease outcomes. Improved understanding of the granuloma will provide a much-needed knowledge base for the development of improved therapeutic approaches.

[View COVID-19 funding opportunities](#)

[View more funding opportunities](#)

## Welcome New Faculty

Ashley Ross, MD, PhD, joins as an associate professor of [Urology](#). Ross is a surgeon-scientist who specializes in urology and urologic oncology and is a nationally recognized expert in prostate cancer. His research efforts focus on the development, testing and implementation of novel diagnostics and therapeutics with a goal of reducing the suffering from prostate cancer. Clinically, Ross performs prostate cancer screening, prostate biopsy (including MRI-fusion biopsy), active surveillance, robotic prostatectomy and ablative therapies of the prostate. Prior to joining Feinberg, he served as director of the Johns Hopkins Urology Prostate Cancer Program, executive medical director of the Mary Crowley Cancer Research Center and an associate chair of the U.S. Oncology Genitourinary Research Committee.



# The Rise of Preprints



By Karen Gutzman

Traditional publishing is a time-intensive process. Authors often wait months for their manuscript to wind through the process of submission, acceptance, peer-review, revision and, finally, publication. In academia, the published peer-reviewed article in a quality journal has been a long-accepted measure for ensuring career advancement, recognition of effort, and advancement of knowledge. Increasingly, preprints and preprint servers are gaining prominence. These servers store versions of research papers prior to peer-review and publication in a journal. In providing opportunities for expedited dissemination of new work, they can open access to wide audiences and can yield engagement as well as feedback in non-traditional ways. For early career researchers or those seeking to advance their career, these options are major motivations for using preprint servers.

## How do preprint servers promote open access?

Many preprint servers are indexed by major search engines (such as Google and Google Scholar), and search results yield preprint records with links to full-text manuscripts. Most preprint servers allow authors to retain their copyrights. However, it is strongly advisable for the author to include a rights statement or creative commons license when posting their work; the license tells others how your content can be used. There are several licenses to choose from and [resources](#) to help you choose the best one for your purposes.

## Can a preprint posted to a server be considered for publication in a journal?

Each publisher has guidelines that may vary slightly, so you will need to consider if and where you might submit your preprint for final publication. To find a publisher's policy, search the name of the journal and the terms pre-print, preprint, prior publication, or first publication. Below are policy examples from *JAMA Network*, *Circulation* and *Nature Research*.

### • Circulation

Posting of un-refereed manuscripts to a community preprint server by the author will not be considered prior publication, provided that the following conditions are met. [See more information here.](#)

### • JAMA Network

Public dissemination of manuscripts prior to, simultaneous with, or following submission to this journal, such as posting the manuscript on preprint servers or other repositories, will necessitate making a determination of whether publication of the submitted manuscript will add meaningful new information to the medical literature or will be redundant with information already disseminated with the posting of the preprint. [See more information here.](#)

### • Nature Research

*Nature Research* journals encourage posting of preprints of primary research manuscripts on preprint servers, authors' or institutional websites, and open communications between researchers whether on community preprint servers or preprint commenting platforms. Posting of preprints is not considered prior publication and will not jeopardize consideration at *Nature Research* journals. [See more information here.](#)

## What resources are available at Northwestern for preprints?

Researchers interested in posting a preprint can use DigitalHub [DigitalHub](#), Feinberg School of Medicine's online repository of scholarly outputs, which strives to make it easier and faster for you to upload and share your various outputs online. DigitalHub accepts a wide range of research products, from preprints to presentations and publications, datasets, reports, educational materials, images and conference materials. DigitalHub assigns a unique persistent identifier (DOI) to each deposit, making each one citable in CVs, NIH progress reports, research articles and more. DigitalHub is also indexed by Google for increased discoverability and wide dissemination of research products online. Uploading your items to DigitalHub helps to increase your digital footprint and get your research into the most influential spaces.

## What is NIH Preprint Pilot?

Preprints are playing a key role in the pandemic era. The U.S. National Institutes of Health preprint pilot, launched June 2020, will run a minimum of 12 months. It builds on PubMed Central's repository aiming to explore approaches to increasing the discoverability of early NIH research results posted to [eligible preprint servers](#), initially targeting preprints that report NIH supported COVID-19 research.

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## Featured Core

### Transgenic and Targeted Mutagenesis Laboratory

The [Transgenic and Targeted Mutagenesis Laboratory](#) (TTML) provides a centralized infrastructure for the production of genetically engineered mouse lines. The core provides a wide range of transgenic-related services to Northwestern Medicine investigators working with mouse models, including the generation of mutant lines using a variety of both traditional and genome editing methodologies; embryonic stem (ES) cell expansion/injection; cryopreservation and the safe, economical long-term maintenance of cryopreserved lines; and export/import of germplasm for rederivation of SPF mouse strains. Investigators have access to cutting-edge gene editing technologies, and start-to-finish gene targeting with the core's Molecular Mutagenesis Strategy and Design lab.

Work done by the laboratory is sponsored by the the [Center for Genetic Medicine](#), the [Robert H. Lurie Comprehensive Cancer Center](#) of Northwestern University, Northwestern University's [Office for Research](#) and Feinberg's [Office of the Dean](#).

The laboratory offers the following services:

- [CRISPR/Cas9 Gene Editing](#)
- [Trangenics Projects](#)
- [Gene Targeting](#)
- [ES Cell Injection](#)
- [Importing Mouse Lines and Rederivation](#)
- [Cryopreservation of Mouse Lines](#)
- [Cryorecovery of Mouse Lines](#)

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Simpson Querrey B-700

ES Cell Laboratory  
Searle 7-525

Molecular Mutagenesis Strategy and Design Laboratory  
Searle 7-450

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