

Breakthroughs

Feinberg School of Medicine Research Office

August 2019



The new Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center was designed to promote collaboration, whether it's serendipitous chats or coordinated multi-disciplinary meetings.

Created for Collaboration

By Anna Williams

Scientific discovery depends on collaborations — whether it's serendipitous chats in the hallway, coordinated multi-disciplinary meetings or long-standing partnerships between labs.

But prior to the opening of the new [Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center](#), such interactions had been logistically challenging for investigators like [Yongchao Ma, PhD](#), associate professor of [Pediatrics](#), [Physiology](#) and [Neurology](#).

As part of the [Stanley Manne Children's Research Institute](#) at Ann & Robert H. Lurie Children's Hospital of Chicago, Ma's laboratory was located at the institute's facilities in Lincoln Park — three and a half miles from the hub of scientific activity on

Feinberg's campus. That meant extra effort to avoid isolation and time-consuming trips to attend seminars, access core resources and precariously transport reagents and mouse models between the laboratory and Feinberg campus.

"We were getting by, but it was certainly cumbersome," said Brittany Edens, a doctoral student in the Northwestern University Interdepartmental Neuroscience Program ([NUIN](#)) and a member of Ma's laboratory.

Today, that is no longer the case. Earlier this summer, the Stanley Manne Children's Research Institute moved into the Simpson Querrey Biomedical Research Center, where it occupies four floors of the new building, allowing investigators in pediatrics to share the same research space as Northwestern scientists across disciplines.

The Ma laboratory is already buzzing with enthusiasm about what these new connections might mean for their research goals. The team is focused on uncovering mechanisms of motor neuron and dopaminergic neuron development, function and degeneration, in order to inform new therapeutic strategies for devastating diseases like spinal muscular atrophy (SMA),

Collaboration *(continued from cover page)*

amyotrophic lateral sclerosis (ALS) and Parkinson's disease (PD). They've also recently taken on promising new research projects in RNA methylation and neural stem cell differentiation — findings [published](#) in *Cell Reports* — that will benefit from new proximity to the Department of Neurology and PD experts like [D. James Surmeier, PhD](#), chair of Physiology, among others.

"We are very excited to be here," Ma said. "Being a part of this building will help us to establish collaborations with other scientists, especially as we have new ideas and exciting new projects that really require a team effort."

Open for Discovery

The Simpson Querrey Biomedical Research Center, which officially opened in mid-June, is the [largest](#) new building solely dedicated to biomedical research at an American medical school. The impressive, curved-glass 12-story building adds more than 625,000 square feet of research space to the Chicago academic medical campus.

The facility, which can house 23 principal investigators and their teams on each floor, will enable Northwestern to increase sponsored research funding by \$150 million annually, or \$1.5 billion in the next 10 years with future expansions and investigators.

But even now, just over a month since the purple ribbon was cut and the building officially opened for business, scientists and staff in the new space are already seeing its benefits.

The lab plan on each floor is designed around the idea of flexible "research neighborhoods," which create a vibrant hub for scientists to work together. Each light-filled floor also has centralized, informal gathering areas to promote dialogue among the three lab neighborhoods.

This is critical for investigators like [Lisa Wilsbacher, '03 MD, '01 PhD](#), assistant professor of [Medicine](#) in the Division of [Cardiology](#) and [Pharmacology](#) and a member of



the [Feinberg Cardiovascular and Renal Research Institute](#) (FCVRI). "The open layout for both the labs and the office areas has already promoted more discussions and collaboration, and we now regularly work with more FCVRI labs to move our research forward," said Wilsbacher, who studies signaling pathways in cardiac development. "We collaborate closely with labs in the [Center for Genetic Medicine](#), and their close proximity is a real advantage as well."

The Simpson Querrey Biomedical Research Center also features floor-by-floor connections with the Robert H. Lurie Biomedical Research Center and a new skybridge connection to the Searle Medical Research Building. Scientists throughout campus in a diversity of areas — including cancer, cardiovascular diseases, neurosciences, pulmonary, pediatrics, epigenetics, nanotechnology, biomedical engineering and more — can now more seamlessly interact with one another.

"The building and views have obvious aesthetic appeal. However, I now also appreciate the intelligence behind the layout of the space," said [Marc Mendillo, PhD](#), assistant professor of [Biochemistry and Molecular Genetics](#), who studies stress response transcriptional networks in the context of malignancies. "I have experienced a great increase in the number of interactions I have with colleagues every day. This promotes the exchange of ideas, which is the foundation for new collaborations and moving biomedical research forward."

As research expands, so can the building; the Simpson Querrey Biomedical Research Center is designed to accommodate a future expansion that can more than double its size vertically, with up to 16 new floors in the second phase of construction.

For now, [Jennie Lin, MD, MTR](#), assistant professor of [Medicine](#) in the Division of [Nephrology and Hypertension](#) and a member of the FCVRI, has already found the open-concept laboratories to be beneficial to her research in cardiometabolic and kidney disease. "As more investigators finish moving into SQBRC, I look forward to accelerating discoveries through increased interactions in an incubator of scientific creativity," she said.

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Northwestern Accepting Nominations for \$200,000 Nemmers Prize in Medical Science

Northwestern University is accepting nominations for its \$200,000 Mechthild Esser Nemmers Prize in Medical Science. The biennial prize will be awarded in fall 2020.

Candidacy for the [2020 Nemmers Prize](#) is open to physician-scientists whose body of research exhibits outstanding achievement in their disciplines as demonstrated by works of lasting significance. Individuals of all nationalities and institutional affiliations are eligible, except current or recent members of the Northwestern faculty, past recipients of the Mechthild Esser Nemmers Prize and recipients of the Nobel Prize.

The 2020 recipient of the Nemmers Prize will deliver a public lecture and participate in other scholarly activities at Northwestern.

In 2016, the inaugural prize was awarded to [Huda Zoghbi, MD](#), a Howard Hughes Medical Institute investigator and professor at Baylor College of Medicine known for her groundbreaking research on Rett syndrome and other neurological disorders. In 2018, the prize was awarded to [Stuart Orkin, MD](#), a Howard Hughes Medical Institute investigator at Boston Children's Hospital and professor at Harvard Medical School, known for his landmark discoveries into blood cell development and the genetic basis of blood disorders.

"Finding answers to devastating diseases is the most important thing we in medicine will do for future generations," said [Eric G. Neilson, MD](#), vice president for Medical Affairs and Lewis Landsberg Dean. "I look forward to honoring another outstanding investigator whose discoveries can lead to answers, who has contributed to improving human health globally and who has transformed the way we think about the mechanisms of disease."



"Northwestern University is proud to offer the Mechthild Esser Nemmers Prize in Medical Science as a way to honor achievements that have made a real difference in advancing the field of medical science," said Northwestern Provost Jonathan Holloway, PhD. "We look forward to seeing the nominations for these outstanding scientists, who are under consideration for spurring the discovery of new knowledge that may help battle disease, cure illness or improve the quality of life for people who are suffering."

Nominations for the prize will be accepted until November 1, 2019. Nominating letters of no more than one page should describe the nominee's professional experience, accomplishments, qualifications for the award and a curriculum vitae of the nominee. Nominations from experts in the field and institutional nominations are welcome; direct applications will not be accepted.

Nominations can be submitted at www.feinberg.northwestern.edu/nemmers.

Training the Next Generation of Health Disparity Researchers

The Northwestern University Minority Health and Health Disparities Research Training Program (NU-MHRT) will be funded by a five-year training grant from the National Institutes of Health (NIH) National Institute on Minority Health and Health Disparities. The program will provide health disparities research training experiences to minority and other underrepresented students and trainees, supporting early career development to 10 trainees per year from diverse backgrounds.

"This grant is a dream come true for me and is highly important to Feinberg and Northwestern as it is the first training grant solely focused on minority health and health disparities research across the research continuum," said principal investigator [Melissa Simon, MD, MPH, '06 GME](#), the George H. Gardner Professor of Clinical Gynecology and vice chair for Clinical Research in the [Department of Obstetrics and Gynecology](#). [Read more here](#).

Using Technology to Improve Patients' Lives

Mozziyar Etemadi, MD, PhD, research assistant professor at the McCormick School of Engineering and of Anesthesiology



Mozziyar Etemadi, MD, PhD, research assistant professor at the [McCormick School of Engineering](#) and of [Anesthesiology](#) at Feinberg, has been at Northwestern since 2016. His lab is based inside Northwestern Memorial Hospital, where he conducts his research and mentors engineering and medical students. They work on a range of projects, including building novel wearable sensors, updating data aggregation from clinical systems (ranging from electronic medical records to ECG machines to infusion pumps) and using machine learning and AI to predict patient and health system outcomes. Listen to our latest [podcast with Etemadi](#).

Q&A

What are your research interests?

My research interests are the same as my clinical interests — to make tangible improvements in the lives of patients. I believe the best way to achieve this in the research realm is to not be limited by a particular research question, a particular set of tools or a particular mode of study. By letting patient care frame the research, it creates a vibrant resolve to use the best possible tools, techniques and methodologies to get the job done.

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

My group is based inside Northwestern Memorial Hospital in one of the Intensive Care Units. As such, we form deep collaborations across the health system. From nursing to information technology to risk management, we are informed by the direct, actionable problems facing end-users and we develop and customize technologies to solve these problems.

One way we tackle problems is by using custom electronics, firmware and software to build non-invasive wearable sensors to find patient information that is normally found using more invasive means. For example, cardiac output is determined using a catheter (invasive) or an ultrasound (requires a skilled technician and expensive equipment). We have built a custom, chest-worn patch that can measure cardiac output non-invasively.

We also collaborate with Google AI, a research team within Google. They have the world's top machine-learning talent and computing resources. Together, we work to develop novel AI tools to predict cancers based on medical imaging. Recently, we showed that we could predict lung cancer in patients — sometimes a year before a radiologist.

What is the ultimate goal of your research?

The ultimate goal of my group's research is to keep people out of the health system as much as possible. Given the significant use of technology in our research, sometimes this means using technology to develop early screening and prognostication tools for disease. But more often than not, it means using technology to make the technology disappear: when providers can focus on the human aspects of medicine, their human connection to the patient can become the cure.

How did you become interested in this area of research?

When I was in high school, I joined a startup in the Chicago suburbs that used wireless routers to provide broadband internet to suburbs that only had dial-up. I went out on service calls, so I saw all of the things our customers were using our service for. Something that for us as engineers was simple — modifying a wireless router with some basic customizations — allowed so many people to do things that had been near impossible for them. I was hooked. From that day forth, I wanted to use and develop technologies that could help people in all areas of their life, and could think of no better way to accomplish this than by building technology for healthcare.

How is your research funded?

Because most of our work is highly application driven, our work doesn't neatly fall under one of the basic science umbrellas that receive government funding. As such, we rely on the generous support of Chicago-area philanthropists who have contributed to our research.

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Staying Engaged With Student Development and Advocacy Initiatives

Radhika Rawat, Medical Scientist Training Program



Radhika Rawat, a third-year student in the Medical Scientist Training Program ([MSTP](#)), participates in a range of activities at Feinberg — from the wellness committee and curriculum review committee, to initiatives through the [Office of Diversity and Inclusion](#). She was co-chair of the 2017 Anatomy Closing Ceremony and serves as

MSTP representative on the Driskill Graduate Program Student Council.

Now in the PhD phase of her training, Rawat is currently conducting research in the laboratory of [John Kessler, MD](#), the Ken and Ruth Davee Professor of Stem Cell Biology. She recently [published](#) a review in *Current Opinion in Cell Biology*, providing a snapshot of the current research in deubiquitinase biology, with a focus on USP7, one enzyme implicated in cancer and disease. Rawat wrote the paper under the guidance of [Panagiotis Ntziachristos, PhD](#), assistant professor of [Biochemistry and Molecular Genetics](#).

Q&A

What is your research focus?

In the Kessler Laboratory, I study the effects of neurogenesis on affective behavior, specifically in the context of depression and anxiety.

Depression is one of the leading worldwide causes of disability and lost productivity, but we don't understand it well. As our lab recently [published](#) in *Molecular Psychiatry*, the most widely used antidepressant medications seem to converge on a pathway that influences adult hippocampal neurogenesis, or the birth of new brain cells.

While there has been some controversy about the existence and importance of adult neurogenesis, there is substantial evidence for it and its relation to various neurological diseases. For example, a recent paper [published](#) in *Nature* shows that the rate of neurogenesis is related to progression in Alzheimer's disease.

What we hope to learn from our current work is how new neurons contribute to behavior changes, and how these processes are altered by illness and medications. We hope that our work will provide mechanistic underpinnings for these important, but so far poorly-understood, processes.

Why did you choose the Medical Scientist Training Program at Northwestern?

The MD/PhD was a natural combination of my interests and the elements I wanted in a career. As an undergraduate at the University of California, Berkeley, I found that many of my most worthwhile experiences were at the intersection of scientific research, health policy and teaching, and my experiences working for an orthopedic surgeon made it clear to me that medicine was where I wanted to be.

Community and culture were key factors in my program decision. When I was applying, I felt immediately welcomed, challenged and at home with the Northwestern MSTP students and faculty. I also valued the opportunities and different perspectives afforded by a city like Chicago.

What has been the most rewarding experience of medical school so far?

I frequently volunteer to work with high school and undergraduate [students in the anatomy lab](#). There's no better feeling than seeing a student catch the same enthusiasm and wonder that brought me into science. Seeing students light up when we talk about the heart as an intersection of mechanics, electricity and genetics, or how different parts of the brain are responsible for movement, senses and personality, takes me back to the awe I felt learning about them for the first time.

Tell us about your involvement in other activities at Feinberg.

As part of the wellness committee, I help organize events and share resources with students, sometimes serving as a liaison between the student body and the Augusta Webster Office of Medical Education ([AWOME](#)).

I think it's notable that the medical school administration has created a culture of investing in student development. The emphasis on our growth not just academically, but as professionals, team members and individuals, is something I value immensely in our medical school's philosophy.

Last year, I co-moderated one of the [inaugural groups of Sustained Dialogue](#), a program organized through the Office of Diversity and Inclusion in which students speak more openly about issues that might stay under the radar in typical medical school conversations. I believe these kinds of programs give us useful tools for having productive discussions with our future teams and patients when we're coming from different places. Disagreements can make teams stronger, and these programs help build the skills to make that happen.

Assisting the Study of Peripheral Artery Disease

Kathryn Domanchuk, Clinical Research Associate, Department of Medicine



Q&A

Where are you originally from? What is your educational background?

I grew up in Grand Haven, Michigan, which is about a three hour drive from Chicago. I graduated with a degree in

Biopsychology and Cognitive Science from the University of Michigan in Ann Arbor.

Please tell us about your professional background.

I was awarded an undergraduate research fellowship at the University of Michigan, where I spent time as a research assistant in the School of Nursing. The project involved researching aggressive physical behavior in patients with dementia.

Post-college, I had a strong desire to move to Chicago and applied for a Project Coordinator position under [Dr. Mary McDermott](#). I have worked with Dr. McDermott's peripheral artery disease studies ever since. I spent several years as Research Project Manager and currently have an appointment as a Clinical Research Associate.

Why do you enjoy working at Northwestern?

It is always a plus to work for a reputable company, and Northwestern is the best of the best. It's an honor to work at Northwestern. When my daughter was born nine weeks prematurely, I knew I could trust the team of doctors and nurses at Prentice to care for my daughter during her extended neonatal intensive care unit stay.

I enjoy the work/life balance that is possible in my role at Northwestern. With research, there isn't an enormous amount of opportunity for growth unless you go on to obtain a PhD or MD. I know that path isn't for me, and this is okay! I think it is important to perform at your highest level while at work and spend time outside of the job enjoying family and pursuing other interests.

An added perk of working at Northwestern is VIP access to football tickets. A quick train ride to Evanston for Northwestern vs. Michigan football games is a must. I want to say "Go Blue!" but that feels out of place here.

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

I manage several ongoing studies for patients with peripheral artery disease (PAD) and assist with writing protocols and manuals, managing a team of eight research study coordinators, and manuscript writing. It is well established that supervised treadmill walking exercise can improve walking ability in patients with PAD, but access to these programs is limited and, of course, exercise is hard. It has been very interesting to see what Dr. McDermott dreams up for other ways to improve functioning in these patients.

One of our current studies examines the effects of home-based walking exercise with and without pneumatic compression (PC). The PC device needs to be worn two to three hours per day and it amazes me what our research study participants will do for us.

What do you like to do in your spare time?

I love traipsing around the city with my husband and daughter. We live in Lincoln Park and a simple three-mile walk downtown will allow one to see the Lincoln Park Zoo, beautiful parks and playgrounds, a farmer's market and Lake Michigan — just to name a few places. I loathe structured exercise but am not opposed to walking ten or more miles around the city on any given day.

I'm super into seasonal cooking so I spend a lot of time at farmer's markets — I should mention that the close proximity of my office to the MCA Tuesday market as a perk of the job — and cooking and baking with local, in-season ingredients. I took my obsession a little further and started an Instagram account (@cooktheseasons), where I post photos of what I'm cooking. I also enjoy writing and recently wrote a children's book, *The Introverted Duck*. My mom did the illustrations (I inherited my introversion from her) and it is available on Amazon in print or as an e-book. I expect to sell approximately four copies, but it has been a fun endeavor nonetheless.

Research in the News

Crain's Chicago Business, July 24

[NU gets \\$46M to accelerate research into treatments](#)

U.S. News & World Report, July 23

[Screen Every Pregnant Woman for Hep B: Task Force](#)

Melissa Simon, MD, was quoted.

► This research was also featured in *HealthDay*.

Chicago Tribune, July 18

[Some of the deadliest cancers receive the least funding.](#)

[Northwestern study says](#)

Suneel Kamath, MD, was quoted.

WTTW, July 18

[Northwestern Develops Tool to Help Scientists Play Nice](#)

[While Collaborating](#)

Bonnie Spring, PhD, was quoted.

The New York Times, July 17

[The Sad Truth About Sleep-Tracking Devices and Apps](#)

National Public Radio, July 16

[Regulations That Mandate Sepsis Care Appear To Have](#)

[Worked In New York](#)

Demetrios Kyriacou, MD, was quoted.

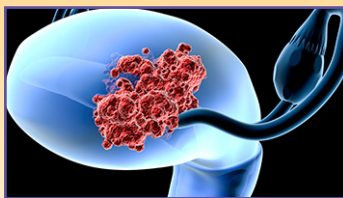
The Washington Post, July 1

[More states are targeting teen vaping, but health advocates say it's not enough to curb use](#)

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Northwestern University
NUCATS
 Clinical and Translational Sciences Institute

NUCATS Corner

Leverage the Expertise of Nationwide Clinical Research Consortium for Multi-center Clinical Trials and Studies

The [Trial Innovation Network \(TIN\)](#) is a collaborative initiative from the National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health. It is available to faculty investigators who are developing and/or leading multi-center clinical trials and studies. The goal of the Network is to execute multi-center clinical trials and studies better, faster and more cost-efficiently by building on local NUCATS resources and leveraging the expertise, skills and knowledge of the nationwide Clinical and Translational Science Award (CTSA) program consortium.

Trial Innovation Network services for both design and operation of clinical trials include:

- Disseminating information about trials across the network
- Operationalizing single institutional review board services
- Operationalizing standard agreements
- Conducting nationwide HER based discovery of eligible participants
- Recruitment feasibility assessment, plans, and materials
- Community engagement consultation studios and [more!](#)

Services may be provided in collaboration with other NUCATS resources (e.g., Center for Clinical Research, Northwestern Medicine Enterprise Data Warehouse, Biostatistics Collaboration Center).

The local NUCATS TIN liaison team offers a connection to the national Trial Innovation Network. Opportunities for Northwestern researchers include proposing a trial you design, intended to run across multiple sites in this network, or being a site investigator for a trial initiated at another TIN site. To learn more about the capabilities of the Trial Innovation Network, click [here](#).

Sponsored Research



PI: John Kessler, MD, the Ken and Ruth Davee Professor of Stem Cell Biology

Sponsor: National Institute of Mental Health

Title: BMP Signaling and Neurogenesis in Major Depressive Disorder

Major depressive disorder (MDD) is a leading cause of disability and lost productivity. Nearly half of all clinically depressed patients fail to respond to the first prescribed antidepressant, and about a third fail to respond to all medications. Development of new approaches will require better understanding of the mechanisms underlying the disorder.

This project has identified and is examining a signaling pathway not previously implicated in anxiety and depression-like behavior, bone morphogenetic protein (BMP) signaling. MDD is associated with reductions in volume of the hippocampus (HC) in humans and in neurogenesis in the HC in animal models of the disorder. Reduction of BMP signaling in the HC in mice is sufficient to produce antidepressant-like changes in behavior and to increase neurogenesis. Treatment with several different classes of antidepressant drugs reduces BMP signaling in the HC, and prevention of this reduction in BMP signaling blocks the effects of the drugs on both behavior and neurogenesis. Thus, BMP signaling in the hippocampus regulates both depression-like behavior and neurogenesis. However, a causal link between the changes in neurogenesis and behavior has not been established.

The studies will determine whether there is a causal relationship between changes in neurogenesis, electrophysiological activity of newly generated neurons, and behavior after inhibition of BMP signaling in HC stem/progenitor cells. They also will define the role of BMP signaling in cellular and behavioral responses to stress, and test the hypothesis that gene expression changes due to elevated BMP signaling contribute to the decrease in neurogenesis, increased proportion of quiescent neural stem cells, and behavioral changes associated with stress/depression.

[Read more about this project.](#)



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

Sponsor: National Institute on Aging

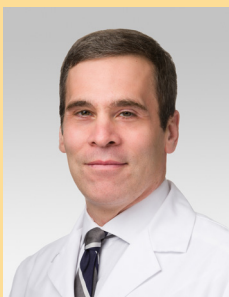
Title: Decision-making and Implementation of Aging-in-Place/Long Term Care Plans among Older Adults

The goal of this research is to better understand how older adult aging-in-place decision-making and implementation is impacted by cognitive changes seen with Alzheimer's disease, functional loss, social influences and environmental factors.

Remaining in one's own home is a priority for many older adults. Decision-making and planning is critical to ensure successful aging-in-place, especially when older adults are diagnosed with Alzheimer's disease. Through previous PCORI-funded research, the group developed a tool, PlanYourLifespan ([PYL](#)), which facilitates making decisions and planning to age-in-place, specifically with Alzheimer's disease. PYL was tested in a multi-site randomized controlled trial of 385 community-dwelling older adults with three-month follow-up and found to be significantly efficacious in improving decision-making behaviors towards aging-in-place options. With the short follow-up, the team was limited in determining how these decision-making plans of older adults translated into goal concordance towards aging-in-place. A gap exists in how decision-making for aging-in-place is impacted by older adults' changes in cognition, functional loss, social factors and environments.

To increase understanding, the team will leverage both an NIA-funded cohort (LitCog) with extensive cognitive testing and a PCORI-funded intervention: PlanYourLifespan.org. They will conduct a 42-month longitudinal study of older adults from the LitCog cohort who will receive the PYL intervention. Surveys will be conducted every six months in conjunction with the active LitCog research, where cognitive, social, functional and health literacy data is being collected. Additionally, data will be collected on decision changes, resource use, timing of plan implementation and goal concordance.

[Read more about this project.](#)



Welcome New Faculty

Stewart A. Shankman, PhD, joined as chief of Psychology in the Department of Psychiatry and Behavioral Sciences and professor of [Psychiatry and Behavioral Sciences](#). His research focuses on mechanisms and risk factors of depression and anxiety disorders, with an emphasis on neurobehavioral processes that are common vs. specific emotional between the two disorders. Currently, he is the principal investigator and co-investigator on multiple NIH-funded R01 and R21 projects. Previously, he was a professor in the psychology and psychiatry departments at University of Illinois at Chicago, and earned his PhD in clinical psychology from Stony Brook University.

Funding

Limited Submission: Restoring Warfighters with Neuromusculoskeletal Injuries Research Award (RESTORE)

[More information](#)

Sponsors: United States Department of Defense, Department of the Army, U.S. Army Medical Research and Materiel Command (USAMRMC), United States Army Medical Research Acquisition Activity (USAMRAA)

Pre-Application Submission Deadline: September 3

Submission Deadline: Pre-Application is required; application submission is by invitation only.

Upper Amount: \$3M

Synopsis: The intent of the program is to provide support for research that proposes solutions for optimal management, treatment and restoration following service-related neuromusculoskeletal injury. Research will accelerate progress toward returning veterans to combat readiness following neuromusculoskeletal injury and will ultimately benefit all patients with those injuries. The scope of proposed research must either: 1) represent innovative approaches and have the potential to make an important contribution with the RESTORE focus areas; 2) advance laboratory, discovery, population-based studies, or clinical application and acceleration toward clinical solutions; or 3) propose clinical trials with the potential to have a significant impact on veterans who have incurred neuromusculoskeletal injuries.

Microbiome and Aging: Impact on Health and Disease (R01 Clinical Trial Not Allowed)

[More information](#)

Sponsor: National Institute on Aging

Letter of Intent Due: September 30

Submission Deadline: October 30

Amount: \$2.5M in FY 2020 to fund five to seven awards

Synopsis: The purpose of this opportunity is to fund projects focused on defining the factors that influence microbiome composition and functional characteristics during aging, understanding how the aging microbiome relates to the causes

and pathophysiology of age-related chronic diseases, and development and testing of targeted interventions through diet, drugs or live organisms. Basic mechanistic, preclinical studies in animal models and human studies leveraging existing human longitudinal cohorts are accepted.

Paul B. Beeson Emerging Leaders Career Development Award in Aging (K76 Independent Clinical Trial Not Allowed)

[More information](#)

Sponsor: National Institute on Aging (NIA)

Letter of Intent Due: September 22

Submission Deadline: October 22

Amount: \$2M in FY 2020 to fund approximately seven to 10 awards for this funding opportunity and its [companion](#)

Synopsis: Early-stage physicians and other health professional investigators with a commitment to aging and/or aging-related diseases are encouraged to apply for this award to advance their research and leadership skills in their specialty and in the broader field of aging and geriatrics research.

NIA is pursuing this initiative to recruit early-stage investigators who have begun to establish research programs and who, through this award, will be ready to assume leadership roles in their field of expertise and be poised to change theory, practice and health outcomes related to the health of older individuals. Unlike other mentored K awards, candidates for this award must have received competitively awarded research support as a program director/primary investigator at the faculty level or have otherwise leveraged faculty-level research support to develop an independent line of research. They must show evidence of leadership in the clinical or research domain.

Applicants proposing a clinical trial or an ancillary clinical trial as lead investigator should apply to the companion funding opportunity ([RFA-AG-20-011](#)).

[View more funding opportunities](#)

Etemadi

(continued from page 4)

Who inspires you?

My two greatest inspirations in life are my parents and my PhD advisor, Shuvo Roy. From a young age, my parents taught me that the two greatest joys in life were learning new things and helping other people. They always encouraged me to take risks and try new things, even if it meant dealing with uncertainty. They also tolerated me taking apart every computer they ever got and not always putting them back together again.

Professor Shuvo Roy taught me to put helping patients first. He showed me that while it could be very easy, and tempting at times, to choose other milestones for success — papers, funding, promotion, press — the sum total of all of these was next to meaningless if all of the hard work did not result in a tangible improvement in the lives of others.

Article Translation Tips & Tricks



By Annie Wescott, Research Librarian

Do you immediately restrict your journal literature searches to English-only? While this is a valid strategy for many searches, it might not be appropriate for a systematic review.

Searching, compiling, screening and interpreting publications for a review is already challenging enough without the added complication of a language barrier, and while it is common to see English-language restrictions in systematic reviews, this practice risks “[language bias](#).” The risk of bias is especially problematic in systematic reviews on alternative medicine topics. Systematic reviews are often used to inform clinical decision-making, so it is important for researchers to offer a complete assessment of the available research. The [Cochrane Handbook](#) states that searches should be conducted without language restrictions and inclusion decisions made on a case-by-case basis. That said, it is unlikely that reviewers will embark on learning a new language for a single review, so where does that leave you? Consider one of these suggestions:

1. Hire a professional medical translator

The ability to read another language does not guarantee you will understand the complex medical terminology in that language. If your budget allows, hire an expert in medical translation to ensure quality specialty translation

2. Build language diversity into your review team

Are there people in your field, department or program who are fluent in languages other than English? You may even have someone on your review team who already speaks another language. Create a team with language skillsets to make your review stronger.

3. Reach out to language learning departments

Students who are majoring in a language other than English may be interested in article translation. Reaching out to

language departments on campus can be an affordable (or sometimes free) option.

4. Ask the publisher or author

In some cases, you may be able to contact the publisher or author to see whether an English translation already exists. If they cannot provide an English translation, you may still be able to get information about the data collected directly from the source.

5. Cochrane TaskExchange

The [Cochrane TaskExchange](#) allows teams to request various tasks on an open board. You can create a bulk request for translating multiple records in the same language, but if searching for translations for multiple languages, you will need to make separate requests for each language. You do not have to pay for the services on Cochrane TaskExchange, but there is an expectation to contribute your skills elsewhere.

6. Google Translate

Some people find success using automatic translation software. The issue of properly translating medical terminology remains, but [Google Translate](#) can be an especially useful tool when translating for title/abstract screening. The automatic translation may help you determine whether an article meets your pre-determined inclusion/exclusion criteria. Once you have a set of articles for full-text screening, utilizing human translation services would be preferable.

Translating non-English records is the second step in the process. The first? Include [databases with global reach](#) to be truly comprehensive. Searching the International Clinical Trials Registry Platform (ICTRP) and databases like Latin American and Caribbean Health Sciences Literature (LILACS) will give you a more comprehensive view of the global literature landscape and will make your review stronger.

High-Impact Factor Research

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Featured Core

The Simpson Querrey Institute (SQI) Peptide Synthesis Core

The Simpson Querrey Institute (SQI) Peptide Synthesis Core Facility produces custom peptides for SQI members, Northwestern investigators and other local academic and commercial labs. This core provides customers with high-quality peptides synthesized at 0.05-2mmol scales and purified by reverse-phase HPLC. They also carry out side chain or terminal modifications, such as the addition of fluorescent or biotin labels according to the customers' research applications. In addition, the Peptide Synthesis Core utilizes the leading-edge Agilent 6520 Q-TOF LCMS system to develop and deliver a wide range of mass spectrometry services. Those interested in learning the peptide synthesis and/or purification process can go through training by the core's staff to make their own peptides and learn to purify them using the core's HPLC instrumentation.

In addition to standard peptide services, the core offers consultation on peptide project design and collaborations. The experienced staff has been a part of recent publications in [Macromolecular Bioscience](#), [Advanced Healthcare Materials](#), and [Cancer Immunology Research](#) in collaboration with investigators here at Northwestern, as well as at University of North Carolina, Chapel Hill, and MIT.

Contact

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NIH News

Expiration of FY2014 Grant Funds

A reminder to NIH grant recipients that grant funds expire five years after they have been issued. On September 30, NIH will cancel any remaining balances for grants funded during fiscal year 2014 (October 1, 2013 – September 30, 2014). Please see [NOT-OD-19-111](#) for more information.

New Inclusion Policies for Human Subjects Webpage

Visit the new [Inclusion Policies for Research Involving Human Subjects](#) landing page to learn more about NIH policies on [the inclusion of women and minorities](#) and the [inclusion of individuals across the lifespan](#). The revamped pages include sections on how the policies have been implemented in applications, peer review, progress reports and tables with policy notices and resources you can quickly scan to get to the information you need. Still have questions? Check out these [FAQs](#).

Registration Open for NIH Regional Seminar

The [2018 NIH Regional Seminar on Program Funding and Grants Administration](#) will be held in Phoenix, Arizona, November 7-8, with an optional pre-seminar workshop on November 6. The NIH Regional Seminar offers a comprehensive program for the extramural community about the NIH grants process and related policies consisting of 45 different topics in flexible session tracks for administrators, new investigators and all interests. Topics include intellectual property, inventions and patents, budget basics, grant writing for success, pre-award and post-award issues for administrators and investigators, animal and human subject research and more. Register through October 11 for discounted rates.

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