Breakthroughs

Feinberg School of Medicine Research Office

October 2015

Thomas Shanley, MD, takes on leadership roles at Feinberg and Lurie Children's Hospital and shares his plans to increase collaboration between scientists, advance discoveries and make a bigger impact on the health of children.

A New Era for Advancing Pediatric Research

Few things please Thomas Shanley, MD, more than the energetic buzz generated by smart people working together to heal sick children.

In his new leadership role at Northwestern University Feinberg School of Medicine and the Ann & Robert H. Lurie Children's Hospital of Chicago, Dr. Shanley sees an opportunity to elevate downtown Chicago's reputation as an innovative hub of pediatric medical research and clinical care, powered by the energy, passion and intellect of his new colleagues.

"Now that Lurie Children's is down the street from Feinberg, the physical distance between the critical mass of Feinberg scientists and the folks at Lurie is gone," Dr. Shanley said.

"We have an opportunity to expand our partnership with integration and collaboration that wasn't as easy to achieve in the past, when the hospital was on the north side of the city."

During his first few months as chair of Pediatrics at Feinberg and the Founders' Board Centennial Professor and chairman of the Department of Pediatrics at Lurie Children's, Dr. Shanley is taking stock of the people, programs and research activities at the two institutions and making plans for the future.

"One of my desires is to build the research component and many of the divisional activities to contribute to a better understanding of disease processes, identify therapeutic targets and try to make a bigger impact on areas we are

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Northwestern Medicine®

A New Era for Advancing Pediatric Research

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studying," he said. "The opportunity to bring folks who can meet that need in various sub-specialty areas is going to be a key component of my recruitment responsibilities."

Dr. Shanley also serves as chief research officer of the Stanley Manne Children's Research Institute and president of the hospital's Pediatric Faculty Foundation, Inc. The Manne Research Institute will be joining Lurie Children's and Feinberg downtown inside Northwestern's Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center. This new building is under construction and scheduled to open late 2018.

Moving the Manne Research Institute to Northwestern's Chicago campus is an opportunity to align more scientists who study the same areas, but may not currently work together, Dr. Shanley said.

"They may not be from the same department or the same institution, but what unites them is the theme of the science that they are dedicated to studying," he said. "This approach is part of a model I have seen be successful at the places I have been in the past. It can help optimize the productivity of investigators and thus impact medicine."

Dr. Shanley comes from the University of Michigan Medical School, where he served as associate dean for clinical and translational research, professor of pediatrics and communicable diseases and director of the Michigan Institute for Clinical and Health Research. Before that, he spent seven years on the faculty at the Children's Hospital Medical Center in Cincinnati. He received his medical degree from University of Chicago Pritzker School of Medicine.

As a physician-scientist, Dr. Shanley is as comfortable in a pediatric intensive care unit as he is a laboratory. He specializes in the treatment of children with conditions such as hypoxemic respiratory failure from lung disease and septic shock triggered by infection. His research has appeared in more than 100

The broad goal of Shanley's research is to improve understanding of the molecular basis of inflammatory diseases that afflict critically ill children.

peer-reviewed publications and he plans to continue research in the area of microfluidic diagnostics at Feinberg and Lurie Children's as well as provide care to children in Lurie Children's ICU.

At Michigan, Dr. Shanley was part of a team that developed a small chip- and microfluidic-based device that can be used at the bedside of children with infections to measure a variety of biomarkers circulating in their blood.

Technology currently used for this sort of testing often requires large quantities of blood and hours or days of testing in a laboratory.

This experimental device uses less than a drop of blood and displays results in near-real time. It could help doctors make more effective decisions about treatment options in time-sensitive situations.

"We are hoping to transport that platform here, so we can be a second site to try to validate this approach and this technology," Dr. Shanley said.

The device has already identified certain circulating biomarkers in blood that can predict the outcomes of children sick with infections. Shanley said scientists are now trying to validate the use of this device in adult patients as well.

Dr. Shanley emphasizes that there is value in overlapping pediatric and adult research and care, and he sees exciting opportunities for Lurie Children's and Feinberg investigators to make connections and share knowledge that will advance medicine and help people of all ages.

"By connecting our pediatric affiliated investigators with more adult-based investigators, we can really tap the strengths of each of them," he said. "This can be applied to disease specific entities and it can be applied across lifespan types of research, too."

From the lab to the bedside, Dr. Shanley said the iterative process of discovery along the translational spectrum is important to embrace. He plans to use this approach to help research programs at Feinberg and Lurie Children's become as comprehensive as possible and improve the outcomes of sick children for years to come.

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Understanding Mechanisms Behind Bacterial Toxins

Karla Satchell, PhD, Professor of Microbiology-Immunology

Karla Satchell, PhD, professor of Microbiology-Immunology, studies bacterial MARTX toxins and their role in the pathogenesis of *Vibrio* species, pathogens that can cause food-borne infections.

She became interested in bacteria toxins as technician at the University of Washington, where she worked to purify and study the adenylate cyclase toxin of *Bordetella pertussis*, the bacterium that causes whooping cough.

Later, her experience learning microbiology as a graduate student and postdoctoral fellow made her unusual among toxin biologists: her lab conducts not only biochemical and cell biology experiments, but also studies how these mechanisms impact infection.

Q&A

What are your research interests?
My primary interest is in the mechanism of action of bacterial protein toxins and how production of these toxins contributes to the ability of bacteria to cause disease.

What is the ultimate goal of your research?
To understand the molecular basis of infection by *Vibrios* to improve surveillance and monitoring of this reportable disease as its impact increases in the U.S. due to climate change, as outbreaks of *Vibrios* bacteria commonly occur in warm climates.

How does your research advance medical science and knowledge?
Our mechanistic work has impacted many different diseases. The proteins that we have discovered and characterized turn out to be found in other important pathogens. These have become targets for development of small molecule therapeutics, including antibiotic-associated colitis, which causes 250,000 cases of hospital-acquired disease annually.

These proteins have also been used to generate novel reagents to enhance biomedical research. Finally, our newest discovery suggests that at least one of these proteins could be used to treat cancer.

What types of collaborations are you engaged in across campus (and beyond)?
I have a collaboration with David Gius, MD, PhD, professor of Radiation Oncology and Pharmacology, on the Ras protein. His lab assisted with reagents and assays that were integral to our recent characterization of one of our proteins as a Ras protease (published last June in *Nature Communications*) and another as activating apoptosis (just accepted in *Infection and Immunity*).

We have a new collaboration with Spiro Getsios, PhD, assistant professor of Dermatology and Cell and Molecular Biology, to develop a novel reagent to specifically treat skin cancer and other skin diseases.

I have also a long-term active collaboration with Wayne Anderson, PhD, professor of Biochemistry and Molecular Genetics, on the structural biology of the proteins we study. Our structural studies now also encompass a collaboration with Vadim Gaponenko, PhD, at University of Illinois at Chicago (UIC), who is working with us on nuclear magnetic resonance structures.

Across the nation, I collaborate with many biochemists and cell biologists. A pending paper in *Nature Communications,* on discovery of a novel phospholipase that inhibits autophagy, was conducted in collaboration with Gilbert Di Paolo, PhD, at Columbia University. He specializes in the role of lipids in endocytic trafficking, and his input was essential to the novel findings of this forthcoming paper.

This paper also required assistance on surface plasmon resonance from Wonhwa Cho, PhD, at UIC. Finally, we have collaborated more than 10 years with mass spectrometry specialist Joseph Loo, PhD, at University of California, Los Angeles, who does work with us on defining posttranslational modification.

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Karla Satchell, PhD
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Who makes up your research team and what role does each individual play in your research?
My group is generally a mix of graduate students, postdocs and technicians. I currently have in my group two students, two post docs and an infectious diseases fellow.

About 75 percent of my graduate students and post docs have been foreigners coming from Korea, India, Italy and Germany.

Where have you recently published papers?
I have already published 10 papers in 2015! One paper is in *Nature Communications* with another pending final review.

Other papers have been published in high quality microbiology journals including *Infection and Immunity*, *Cellular Microbiology*, *Molecular Microbiology* and *mBio*.

I have also published extensively in *Proceedings of the National Academy of Sciences*, *EMBO Journal* and *PLoS Pathogens*.

Which honors are you most proud of and why?
I am most proud of my award from the Burroughs Wellcome Fund (BWF) as an Investigator in the Pathogenesis of Infectious Diseases.

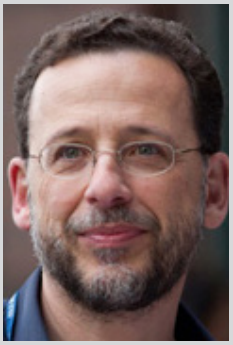
Recipients of this award are assistant professors who have already demonstrated exceptional talent as independent researchers. The BWF investigators have, as a pool, become the distinguished leaders of microbiology.

I am also proud of being inducted into the American Academy of Microbiology. This society is the premier society of our field and election recognizes outstanding research achievement in the field.

Who inspires you? Or, who are your mentors?
At Northwestern my most important mentor has been Tom Hope, PhD, professor of Cell and Molecular Biology, who for a brief period of time was housed in swing space in the lab next to mine.

Although we moved on to new permanent labs, we still meet for lunch often, where I can freely discuss how I am managing my lab, publication and funding issues and career concerns. I think it is very important as a faculty member to have a mentor outside of one's own faculty.

Welcome New Faculty



Guillermo Oliver, PhD, joins as professor of Medicine in the division of Nephrology and as director of the newly created Center of Vascular and Developmental Biology in the Feinberg Cardiovascular Research Institute.

A noted developmental biologist, Oliver focuses his research on the genes and mechanisms controlling organ development. In addition to the use of mouse models, his laboratory currently also uses stem cell to better understand the formation of structures involved in brain and visual development.

Also an expert on the development of lymphatic vasculature, Oliver and his lab were the first to uncover the origin of lymphatic vasculature and identified the gene Prox1 as one of the key players in the process leading to the formation of this vascular network. His lab also showed the first direct correlation between lymphatic malfunction and obesity.

He comes to Feinberg from St. Jude Children's Research Hospital in Memphis, TN. A native of Uruguay, Oliver earned a Doctor of Philosophy degree from the School of Sciences at University of Uruguay, Montevideo. He has also worked in Mexico and Germany. Oliver is a member of the Board of Directors of the American Society for Developmental Biology and a fellow of the American Association for the Advancement of Science.

Paul Burridge, PhD, joins as assistant professor of Pharmacology. His research is focused on the field of pharmacogenomics, using human induced pluripotent stem cells (hiPSCs) to model and probe the mechanisms of genetically diverse genome-drug interactions.

He has worked on the applications of hiPSC in disease modeling, specifically the pharmacogenomic and molecular mechanisms of chemotherapy-induced cardiomyopathy.

Burridge began his career in genomics and bioinformatics at the Sanger Institute working on the human and mouse genome projects. He then completed a Doctor of Philosophy degree at the University of Nottingham in Human Development and Genetics. Before coming to Feinberg, Burridge was an Instructor in Cardiovascular Medicine at Stanford University.

Speaking the Language of Scientists

Marya Corden, MPH, Director of Services Center for Behavioral Intervention Technologies

Where are you originally from?
I was born outside of Detroit, Michigan and moved to Chicago during high school, calling Chicago home ever since.

What is your educational background?
I graduated with a Bachelors of Science degree from the University of Michigan (Go Blue!). I majored in brain, behavior and cognitive science and minored in Spanish. During that time, I studied aboard in Santiago, Chile at the Pontificia Universidad Catolica de Chile. I later returned to school and obtained a master of public health (MPH) degree from Johns Hopkins University in Baltimore, Maryland.

Please tell us about your professional background.
After my earning my undergraduate degree, I worked at Feinberg on a couple of research trials, but mainly as research assistant on a study for the treatment of depression in adults. After my earning my MPH, I worked in Washington DC at AIDS United, an HIV/AIDS advocacy organization.

This was an amazing introduction to political and social advocacy and activism, spending time going to briefings, press conferences, writing for their blog and action alerts, researching for policy asks, capacity building and providing technical assistance to grantees.

After moving back to Chicago, I worked at University of Illinois at Chicago coordinating a Robert Wood Johnson Foundation - funded resiliency-building project aimed at preventing depression in Latino and African American youth in Chicago. I then returned to Northwestern University to work at the Center for Behavioral Intervention Technologies (CBITs).

How do you help scientists at the medical school?
Currently I work with investigators in many different phases of the project life-cycle – it ranges from idea generation and conceptualization, to grant submissions and budgeting, to managing the team of developers working on web or mobile app, to thinking about how to disseminate the project. I've found that many investigators are looking for someone who understands the importance of the data and can speak the same "language."

A large part of my role at CBITs is communicating and translating across different teams with diverse expertise and bridging those gaps.

What is your favorite part of the job?
I would say the best part of my job is the people I work with – internally and externally. It's amazing to be able to interact with so much diversity of thought on a daily basis. My favorite part of the job is contributing and collaborating with those people to work through a problem or challenge.

Whether it's how to solve a certain problem technologically, how to fix a bug, how to approach behavior change to target a specific health outcome, how best manage participant outreach and interactions, or how to present an idea to a funder. From my experience, the people make or break a work environment.

What exciting projects are you working on?
All of the projects I work on have different exciting elements to them. One of the hot projects right now involves pairing information an individual enters on their smart phone about their location, people they're around and their current emotional state, to a sensor data that's continuously collected on the phone.

For example, if my phone detects that I usually rate my mood as "meh" when I'm at home, alone, after sitting still for a long period of time, what can we do about? How can we intervene? What tips and suggestions can be presented to me to help?

What do you like to do in your spare time?
I love to travel, hike and take pictures. While lately it's been hard to make time for it, I also really enjoy photography darkroom developing and processing. I spend a lot of time with friends and family, I read, and I'm not a very good cook – so I'm trying to work on getting more confident in the kitchen!

Pulmonary & Critical Care Event

Who: Randy Levinson, PhD, Senior Editor, Nature Medicine, Nature Publishing Group
What: Hear him speak about "Navigating the Publishing Process at Scientific Journals"
When: Thursday, Oct. 29, Noon to 1:00 p.m.
Where: Robert H. Lurie Medical Research Center, 303 E. Superior, Baldwin Auditorium

Improving End of Life Care for Older Adults

Gayle Kricke, Health Sciences Integrated PhD Program

Gayle Kricke, a third-year student in the Health Sciences Integrated PhD Program (HSIP), studies ways to improve the quality of end of life care for older adults.

Kricke completed her undergraduate degree from Northwestern University and Master of Social Work from the University of Michigan. She was also a geriatric fellow at the University of Michigan and earned her certification as a specialist in aging. She became interested in her research topic through her work as a social worker for the geriatric population.

Q&A

Where is your hometown?
I would call Clawson, Michigan my hometown. It's a small suburb just north of Detroit. However, Chicago seems like my second home since I spent several years after high school hopping between Illinois and Michigan. I first moved to Evanston as an undergraduate at Northwestern, then went back to Michigan for my master's, then returned to Chicago for a job.

What are your research interests?
My primary research interest is defining, measuring and improving the quality of end of life care for older adults. Quality metrics help communicate the healthcare systems' priorities, establish national care standards and motivate systemic improvements. However, end of life quality metrics are limited, particularly outside the hospice setting. I hope my research will create informative metrics that reflect what is important to people who are dying and their loved ones.

What exciting projects are you working on?
Most recently, I worked in the laboratory of Nicholas Soulakis, PhD, assistant professor of Preventive Medicine, examining how electronic health record (EHR) documentation can be used to make informative quality and safety interventions. Our work identifies discrepancies between clinicians' understanding of their workflows and documentation of the workflow in the EHR. The difference between perception and documentation is important when planning improvement interventions because it reveals potential threats to quality and safety outcomes and identifies clinicians who may be overlooked in the clinical team.

What attracted you to the PhD program?
I was attracted to HSIP because it was new and flexible. As part of HSIP, I get to be a pioneer and shape how the program develops. As I get further in the program, I find myself asking questions that do not have answers yet, because I am the first person to ask them. I enjoy being involved in how those questions get answered for myself and for future students in HSIP.

What has been your best experience at Feinberg?
Having access to experts in any number of topics has been my best experience at Feinberg. From faculty to classmates to visiting lecturers, I find myself surrounded by people with knowledge and perspectives different from my own. Exposure to so many experts challenges me to think differently about what I think I know about my own work and opens doors to exciting collaborations.

How would you describe the faculty at Feinberg?
Feinberg's faculty and administrative staff are caring and eager to help students. HSIP is a developing program, so I often find myself needing to consult with faculty members and staff about what to do next. During my time at Feinberg, I have found everyone to be genuinely interested in students' success, both now and in the future.

What do you do in your free time?
Eat! My husband and I both enjoy trying new restaurants and we are lucky enough to live in a city with an impressive food scene. When I'm not working or eating, I enjoy playing the banjo.

What are your plans for after graduation?
My plan after graduation is to continue being an advocate for older adults in the healthcare system. I see the gaps between people and settings: between patients and providers, between clinicians and academics and between hospitals and communities. I seek to fill these gaps. My background makes me uniquely prepared to serve as a translator. As a social worker, I witnessed the struggle older adults face in understanding the big words and complicated tasks healthcare throws at them. As a healthcare quality and patient safety researcher, I pick apart complex systems and study how to make them better. In whatever position I take after graduation, I hope to use my skills to make a difference for our community's most vulnerable.

Research in the News

***Chicago Tribune* Sept. 29**
After heart attack, care for women less aggressive, study says
Marla Mendelson was quoted.

***Men's Health* Sept. 29**
Should You Tough Out Your Sore Throat—Or See a Doctor?
Landon Duyka was quoted.

***Fox News* Sept. 29**
Ringing ears and chronic pain share unexpected link
Apkar Apkarian was quoted.

***Chicago Tonight* Sept. 29**
Let's Talk About Sex … with 3-D Animation
Teresa Woodruff's MOOC was featured.

► This also was covered by *The Washington Post, The Chicago Tribune, Fox News* and *MTV*.

***U.S. News & World Report* Sept. 25**
Study: 10 percent of U.S. women drink during pregnancy
Maura Quinlan was quoted.

***Chicago Tribune* Sept. 25**
What to know before getting the genetic test for breast cancer
Nora Hansen was quoted.

***NPR* Sept. 24**
Taking stock of what's in that lunch box
Donald Lloyd-Jones's research was featured.

***U.S. News & World Report* Sept. 24**
Study: Lowering Beta-Blocker Dose May Boost Survival After Heart Attack
Jeffrey Goldberger's research was featured.

► This also was covered by *The Chicago Sun-Times, Yahoo! UK & Ireland* and *CBS News* local affiliates.

***Good Morning America* Sept. 15**
Acute pain you shouldn't ignore
Danielle McGee was quoted.

***Windy City Times* Sept. 2**
Study: Multiple barriers to HIV testing for teens
Brian Mustanski and Gregory Phillips' research was featured.

More media coverage available online.

Northwestern University
NUCATS
Clinical and Translational Sciences Institute

NUCATS Corner

Open Call for Applications Career Development Awards (KL2 and TL1)

The NUCATS Institute is soliciting proposals for two career development awards funded as part of the Institute's Clinical and Translational Science Award which is supported by the National Center for Advancing Translational Sciences at the National Institutes of Health.

Cohort 2 of the Multidisciplinary Mentored Career Development Program (KL2)
Letter of intent due: Nov. 1, 2015
Full applications due: Jan. 11, 2016
Anticipated funding start date: April 1, 2016

This program is designed to train a diverse workforce of early career investigators needed to drive future innovation and implement effective clinical and translational research. The KL2 award provides support for two years which includes salary support, 75 percent protected time for mentored research, tuition, travel, mentor materials and salary support and mentorship across areas such as community stakeholder engagement and research analysis and design methods for selected scholars. Learn more and apply.

Multidisciplinary Training Program in Child and Adolescent Health (TL1)
Letter of intent due: Nov. 1, 2015
Full applications due: Dec. 1, 2015
Anticipated funding start date: March 1, 2016

This is a novel training program that seeks to promote interactions among both mentors and postdoctoral fellows in both pediatrics and PhD scientists in the areas of engineering and basic scientific disciplines who desire to apply their discipline to a project in child and adolescent health. The TL1 award provides support for two years which includes stipend coverage at the NIH-approved rate, up to $1,500 for travel to present at national conferences and symposia, tuition coverage available for coursework to support research training and access to a host of extensive research-related training resources. Learn more and apply.

Sponsored Research

PI: Aline Martin, PhD, Research Assistant Professor of Medicine in the Division of Nephrology

Sponsor: National Institute of Diabetes, Digestive and Kidney Diseases

Title: "Regulation of FGF23 by DMP1 in Health and in Chronic Kidney Disease"

An estimated 23 million American adults have Chronic Kidney Disease (CKD). It is characterized by an early and progressive increase in osteocyte (bone cell) production of fibroblast growth factor (FGF)-23. Elevated FGF23 levels independently predict cardiovascular events, CKD progression and mortality, suggesting a need to develop novel therapeutic approaches to reduce FGF23 levels in CKD.

PHEX and DMP1 are two osteocyte proteins that regulate FGF23 locally. The aim of this project is to define an essential role of the PHEX/DMP1 axis in regulating FGF23 and identify novel therapeutic targets to treat disorders of FGF23 excess, including CKD.

Preliminary data from Martin's lab indicate that both increased transcription and reduced cleavage of FGF23 contribute to increased circulating levels of biologically active hormone in CKD, but the mechanisms of these alterations are unknown.

To date, most knowledge of FGF23 regulation comes from study of hereditary hypophosphatemic rickets, caused by inactivating mutations of the osteocyte proteins, dentin matrix protein (DMP)-1 and phosphate-regulating gene with homology to endopeptidase on the X chromosome (PHEX), that cause elevated FGF23 levels.

Like CKD, increased transcription and reduced cleavage of FGF23 drive increased circulating levels in states of DMP1 and PHEX inactivation.

The preliminary data suggest that direct binding of DMP1 to PHEX occurs through the ASARM motif present in the C-terminal fragment of DMP1 (cDMP1) peptide, and that this binding is an essential regulatory mechanism of FGF23 transcription and FGF23 cleavage.

Although cDMP1 and PHEX are proven local regulators of FGF23 in bone, no studies have tested the hypothesis that altered PHEX and cDMP1 interactions mediate dysregulated FGF23 transcription and cleavage in CKD.

For this project, Martin's team will apply their expertise in FGF23 regulation in hereditary hypophosphatemia to understand local bone mechanisms regulating FGF23 in CKD.

Other aims of this project:

- Determine if cDMP1 is the active fragment of DMP1 that binds PHEX and inhibits FGF23 transcription.
- Test whether cDMP1 inhibits GALNT3, the enzyme responsible for protecting FGF23 from degradation by glycosylating its cleavage site.
- Test the hypothesis that decreased cDMP concentrations contribute to increased FGF23 levels in CKD.

PI: Jacob Sznajder, MD, the Ernest S. Bazley Professor of Asthma and Related Disorders and Chief of the Division of Pulmonary and Critical Care in the Department of Medicine

Sponsor: National Heart, Lung, and Blood Institutes

Title: "Pathophysiology of Acute Lung Injury"

Infection with the influenza A virus (IAV) is a clinically important cause of acute respiratory distress syndrome (ARDS). ARDS affects approximately 150,000 to 200,000 people each year in the United States and has an unacceptably high mortality rate of 30 to 40 percent.

Dr. Sznajder and his team focuses on the host response and role of the lung epithelium in the development of acute lung injury following exposure to infection with the influenza A virus.

Their studies focus on finding pathways in the lung epithelium that can be targeted for the development of new therapies to treat influenza A infection and ARDS.

This project is founded on the hypothesis that the host response to IAV is of crucial importance to the outcome of patients with ARDS.

Dr. Sznajder's team is studying specific interventions at the host-virus interface early in the course of influenza A infection which can prevent or reduce the severity of influenza A-induced lung injury.

Sponsored research

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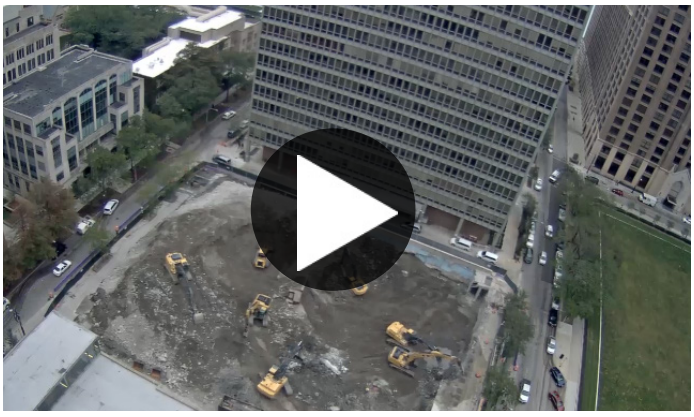
Co-investigators of this research project are: Jacob Sznajder, Navdeep Chandel, Scott Budinger and Karen Ridge.

The team is focusing on interrelated hypotheses that will be tested in these three projects:

- Test the hypothesis that linear ubiquitination assembly complex (LUBAC) modulates alveolar epithelial response to influenza A infection and that the mild inhibition of Na,K-ATPase in the alveolar epithelium inhibits influenza A virus replication.
- Determine whether vimentin acts as scaffold for the assembly and activation of the NOD-like receptor-3 (NLRP3) inflammasome and whether the NOD2 protein interaction with vimentin is required for IFN signaling and protection against influenza A virus infection.
- Determine whether changes in glucose metabolism and mitochondrial metabolism can be manipulated to reduce lung injury during influenza A infection.

Construction Site Live Web Cam



Click to watch a live web cam feed of construction at the site of the Louis A. Simpson and Kimberly K. Querrey Biomedical Research Building.

Funding

Developmental Mechanisms of Human Structural Birth Defects

More information

Sponsor: National Institutes of Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development

Submission deadline: Jan. 19

Upper Amount: $1 million

Synopsis: The purpose of this funding opportunity announcement is to integrate basic, translational and clinical approaches to understanding the developmental biology and genetic basis of major congenital structural human malformations. The projects must share a common central theme, focus or objective on a specific developmental structural malformation or class of anomalies that is genotypically, mechanistically, biologically or phenotypically analogous or homologous in both animal models and humans.

Impact of the Use of Glucose Monitoring and Control Technologies on Health Outcomes and Quality of Life in Older Adults with Type 1 Diabetes

More information

Sponsor: National Institutes of Health and National Institute of Diabetes and Digestive and Kidney Diseases

Submission deadline: Feb. 3

Upper Amount: $2.5 million

Synopsis: This funding opportunity encourages applications from institutions/organizations proposing clinical studies of the use of current and emerging technologies for monitoring of blood glucose and insulin administration in older adults with type one diabetes. Older adults may have increased vulnerability to hypoglycemia, cognitive impairment and/or multiple co-morbidities which may affect the risks and benefits of these technologies in this population. This research is intended to improve health, glucose control and quality of life of older patients with type 1 diabetes.

View more funding opportunities

Galter Library Connection

Galter Health Sciences Library Launches Digital Repository for Scholarly Outputs

Do you have research that you'd like to easily share with others and make more discoverable? Would you like to track views and downloads of your research? DigitalHub, developed by Galter Health Sciences Library, is a place to deposit your research outputs and make them widely available. This institutional repository will provide open access to the scholarly outputs of Northwestern Medicine.

More about DigitalHub
DigitalHub is an institutional repository for the research and scholarly output of Northwestern Medicine. The goals of the repository are to preserve intellectual works created by the Northwestern Medicine community, to enhance the visibility of scholarship and to promote its authors by enabling discovery and accessibility of these works by the international scientific community.

The repository provides stable, long-term storage and ongoing maintenance. Materials are submitted directly by authors with an active Northwestern University network account (NetID).

Examples of items that the repository can accommodate at this time include:

- Research papers published or unpublished
- Conference papers and presentations, including lectures
- Educational materials
- Case reports
- Technical reports
- Supporting multimedia images
- Posters
- Open access books

Get your materials into the repository
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- The content must be permanent. DigitalHub is intended to be an archive, not a storehouse for ephemeral content or multiple versions of documents.
- The content must be in a digital format.

Galter Library's Digital Initiatives Working Group will continue testing and standardizing the repository through the fall of 2015, with the official repository debut planned for Open Access Week, Oct. 19 to 23.

Open Access Week is a global event to promote open access in scholarship and research. SPARC, the Scholarly Publishing and Academic Resources Coalition, has developed some great resources in support of Open Access.

Click here to learn about Open Access Week, the benefits of Open Access to scholarship and see examples of how you can get involved!

For questions or assistance with putting your work into the repository or to discuss other options, please contact the DigitalHub DIWG team at DigitalHub@northwestern.edu.

High Impact Factor Research

August 2015

Baliki MN, Apkarian AV. Nociception, Pain, Negative Moods, and Behavior Selection. *Neuron.* 2015 Aug 5;87(3):474-491.

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Help Feinberg Track Journals

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."

Calendar

Thursday, October 15

Up in Smoke: Nicotine Reward and Withdrawal Mechanisms Studied with Mouse Models

Ryan Drenan, PhD, Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, will speak.

Time: 4:00 p.m. to 5:00 p.m.

Location: Ward Building, 5-230
303 E. Chicago Avenue

Contact: alexa.nash@northwestern.edu
More information

Tuesday, October 20

TIME Lecture: The Power and Promise of Educational Technology

Graham T. McMahon, MD, MMSc, President and Chief Executive Officer of the Accreditation Council for Continuing Medical Education will speak.

Time: 4:00 p.m. to 5:00 p.m.

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

Contact: fame@northwestern.edu
More information

Wednesday, October 28

IRB Brown Bag Session: Data Use Agreement

Bring your lunch and join for a discussion about what kinds of studies require Data Use Agreements and how to go about obtaining one.

Time: Noon to 1 p.m.

Location: Arthur Rubloff Building, Room 750
750 N. Lake Shore Drive

Contact: irbtraining@northwestern.edu
More information

More Events

Event organizers are encouraged to submit calendar items on Plan-It Purple for consideration. Please contact the Research Office with further questions.

NIH News

New Deputy Director for Extramural Research

Michael Lauer has been named the new NIH Deputy Director for Extramural Research and director of the NIH Office of Extramural Research. A board-certified cardiologist, Lauer started at the NIH in 2007 as the Director of the Division of Prevention and Population Science at the National Heart, Lung, and Blood Institute (NHLBI) and from 2009 to the present he has served as the Director of the Division of Cardiovascular Sciences at the NHLBI.

"I have worked closely over the years with Mike on a number of issues related to the NIH and the broader biomedical research community and we are delighted to have him join the NIH leadership team," Francis Collins, director of the NIH said. "He brings both research expertise and administrative skills to the job, as well as keen insights into world of extramural research."
Read more about Lauer's appointment.

Meet the Experts in NIH Peer Review

In November, the NIH Center for Scientific Review will host two "Meet the Experts in NIH Peer Review" webinars to help better explain the peer review process. One webinar will be for research project grant (R01) applicants and the other for university research administrators. To learn more and sign up for these sessions, read the announcement in the NIH Guide.

Video: Resources for the 3Rs System

Find out more about resources investigators may use to implement the "3Rs," a strategy used when designing experiments with animals. In a recored webinar, experts explain the how "replacement, refinement and reduction," has become an internationally accepted approach to apply when deciding to use animals in research. They discuss data in RePORTER as a resource as well as the wide range of other biomaterials available to the international research community, including cell lines, stem cells and DNA samples.
Watch the video.

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