Progress and Perceptions of Genetics Research at Feinberg

The human genome contains a wellspring of critical biological information, yet much remains to be understood — such as the effect of having certain genes, and what those genes might mean for a person’s future. As genetics research progresses at Northwestern University Feinberg School of Medicine and around the world, researchers, clinicians, and patients alike struggle to manage an ever-increasing and evolving information stream.

The Center for Genetic Medicine (CGM) at Northwestern University, founded in 2000 as a collaboration between the University, Northwestern Memorial Hospital, and the Ann & Robert H. Lurie Children’s Hospital of Chicago, has a mission to facilitate the development of new genetic knowledge and its application to medicine, while improving public understanding of genetics.

“We are developing ways to integrate genetic medicine into patient care,” said Maureen Smith, MS, CGC, director of NUgene project and assistant professor of NUCATS institute. “We are developing novel approaches to teach physicians and work with them around this new area of medicine.”

Today, physicians usually order genetic test results when a specific test is needed for a patient with a condition. Most genetic care happens in areas of medicine like obstetrics and gynecology and pediatrics, and is not as common in adult medicine.

CGM aims through various projects to understand what the experience is for researchers, clinicians, and patients to become informed.

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about genetic risks, how risk information is delivered, how these groups form opinions on it, and how they manage information as genetic testing becomes more common.

“Genetic information adds a different component to a patient's history. We want to better understand if it is helpful for physicians and patients to have genetic information? What do they do with the information and how does it impact patient care?” Smith said.

**Progress on eMERGE**

eMERGE, or the Electronic Medical Records and Genomics Network, which launched nationally in 2007 with funding from the National Institutes of Health, is one of the CGM’s landmark research projects.

Now in its second phase, the project is tracking patient and physician actions and responses with genetic information through electronic medical records (EMRs). One of seven sites nationwide, the Northwestern team focuses on methods for using the EMR as a means to determine phenotypes for genetics research. Some of the phenotypes include type II diabetes, height, LDL lipids, colon polyps, and diverticulosis, among others.

A supplemental project will look at pharmaco-genetic variants, or sequences of genes that are associated with how people respond to medication.

“We are really excited about eMERGE. Phase II looks at the genetic variant information we have and how we can put that information back into the electronic health record to help a physician manage a patient's care,” Smith said.

She added, “We are working with physicians to learn how they want to see genetic information in the electronic health record. So when a physician has a patient with a gene variant that affects response to a medication, they will have clinical decision support tools available to manage that patient.”

The project also aims to document and understand physician and patient concerns about genome sequencing and genetic testing information.

During phase one of eMERGE, the Center published significant results, including the discovery of a protective variant in African-Americans for LDL cholesterol, and confirmation of a variant found in type II diabetes in the African-American population.

**Public Perception of Genetics Research**

As projects like eMERGE work to push the boundaries of genetics research, the Center also investigates public and professional opinions of genetic testing.

Students in the graduate program in genetic counseling are currently seeking to understand the attitudes of researchers and clinicians toward genetic testing, noted Cathy Wicklund, MS, CGC, director of the Graduate Program in Genetic Counseling and associate professor in the Department of Obstetrics & Gynecology.

Wicklund is working with graduate student Elizabeth Ulm to gain a better understanding of genetics professionals’ perspectives on the use of genomic newborn screening and disclosure of results. As clinical use of genetic screening increases and costs decrease, they want to determine what conditions should be included in newborn screening panels, and what results genetic professionals feel should be disclosed to families. They also seek opinions on the details of disclosure, such as who professionals feel should disclose genetic results and when during the patient’s life cycle results should be disclosed.

In another study, Wicklund and graduate student Praveen Kaushik analyzed reactions towards direct-to-consumer (DTC) genetic testing, or genetics tests that are purchased directly from commercial companies.

The survey reviewed attitudes towards different types of DTC genetic tests, as well as perceived value and importance. While the majority of respondents were aware of DTC genetics tests, they thought genetic tests should not be available for all purposes. More than half disagreed that genetic tests are valuable for patients’ personal knowledge and for clinical knowledge.

Overall, the study found that while both genetics researchers and clinicians largely disagree with the use of DTC genetic testing, clinicians are more cautious about DTC testing than researchers.

Also, Wicklund and graduate student Alexa Hart assessed non-professional public opinion of the storage and use of newborn screening dried blood samples. By assessing public opinion in Illinois of the storage of dried blood spots from newborns for research, Hart determined that more than 70 percent of respondents supported research uses for dried blood spots. While high levels of support

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New PhD Students Arrive on Campus

This fall, new PhD students are arriving on the Chicago campus, including Driskill Graduate Program in the Life Sciences (DGP), Northwestern University Interdepartmental Neuroscience Program (NUIN), and Medical Scientist Training Program (MSTP) entering classes.

DGP welcomes 32 new PhD students. This year’s class includes individuals from Nigeria, Korea, South Africa, Sri Lanka, Nepal, Taiwan, and China, as well as the U.S. These students will complete lab rotations and courses during the first year, enabling them to explore many types of research before selecting a dissertation lab and project.

The new class of NUIN students comes from China, Ireland, and the U.S. The entering class includes 20 new PhD students. These students will complete coursework and research rotations in at least three different laboratories before committing to a single lab to conduct thesis research.

The MSTP welcomes 14 new students who will embark on a journey to earn both their MD and PhD degree at Northwestern. They will complete two years of medical school before starting their doctoral program in a lab. Once they earn their PhD, they will return to medical school to complete their Doctor of Medicine degree. This year’s entering class represents a group of American undergraduate institutions stretching geographically from California to New Hampshire.

“I came here because of a combination of the graduate school, the great research, and the location,” said first-year MSTP student Jon Anker, who was a biology major at Dartmouth College in New Hampshire. “It’s been a good transition into focusing on medicine and research and they do a really good job of advising, keeping you on track, and keeping you somewhat focused on both tracks rather than being a medical student sometimes and a researcher other times.”

On-campus orientations for all programs are taking place in early September.

A full listing of all DGP, MSTP, and NUIN students is available online.

Genetic research, continued from pg. 2

existed, Hart found that the consent process was important to participants. More than 40 percent of the public surveyed was not aware of newborn screening before the survey. Hart noted this result highlighted a need for greater education about this public health program.

Next Steps

“I think we have a lot to learn,” said Smith. “A patient comes in with a disease and we treat it, we do tests to understand it, to make sure we have the right diagnoses, and then we offer a treatment. Genetic medicine is a different way of looking at that process.”

Instead, Smith said, when a patient comes in with known genetic risk information, the physician will have information already available that can help prevent a medical condition or an adverse drug reaction; information that might change throughout different life stages.

The Center continues to investigate questions of how to deliver genetics information so patients can understand it, and how to develop tools so clinicians may use it appropriately.

“By developing these tools we can integrate the genetic and non-genetic information to pull it together in a way that makes sense and is useful for the physician and the patient at the time they need it,” she said.
During the past five years, Lee Miller, PhD, Edgar C. Stuntz Distinguished Professor of Neuroscience, professor in physiology and physical medicine and rehabilitation, has captured the world’s beauty and its curiosity all the same. An avid landscape photographer, Miller sits surrounded by scenes from Haiti, China, and Colorado, while maintaining a lab now globally recognized for re-animating the muscles of a paralyzed hand.

When the concept of a brain machine interface (BMI) was first published a decade ago, Miller began to anticipate the outgrowth of his basic science past. A physicist with a biomedical engineering master’s degree, McCormick ’84, he decided to pursue the basic science component of his studies further. After graduating with a PhD in physiology, FSM ’90, his post-doctoral research brought him to the Netherlands before returning to Feinberg as a research associate in 1992. Joining the faculty a year later, Miller continued with basic science research before shifting his grant application focus and migrating back to the biomedical engineering side of things about 10 years ago.

“My work with BMI started six or seven years ago,” Miller said. “My most recent research is really highly varied and multidisciplinary and illustrates how some components are only accomplished through collaboration with great science minds, while others depend on the technical knowledge of others. The past five years have been a difficult, very rewarding time in my career and my basic science past helped build an important critical foundation for the work I do today.”

What are your research interests?

The primary goal of the research we do is to understand the nature of the somatosensory and motor signals within the brain that control our arm movements. We study the language of these control signals and the networks of neurons that produce them.

Our current lab focus centers around signals recorded from the brains of monkeys trained to reach for objects and do other hand movements. In addition to exploring the brain signals necessary to make those movements, we have begun looking at the somatosensory parts of the brain that supply our sense of touch and body position.

Along with this basic research, we are working to develop neural interfaces that directly connect the brains of our monkeys with the outside world. These interfaces already allow human patients to operate a computer or a prosthetic device. A unique project in my lab is to bypass the injured spinal cord completely in order to reanimate paralyzed muscles through brain-controlled electrical stimulation. We are also working to restore the sense of touch and limb movement that is lost to spinal cord injury.

What is the ultimate goal of your research?

Most of the experiments in my laboratory involve recordings made directly from the brains of monkeys during behavior. In these experiments, we are able to study not only the intricate circuits comprising real networks of nerves and neurons, but also the signals produced by individual neurons during movement. Much of this work is done in collaboration with students and faculty from the biomedical engineering department and the neuroscience program.

The three fundamental goals of my research are to understand the nature of the brain’s own signals, to understand the mechanisms by which these signals are produced, and to develop applications of these basic principles that could be of therapeutic value to human patients.

The goal of our brain-computer interface research is to deliver messages from the brain directly to the muscles to enable voluntary and complex movement of a paralyzed hand. The muscles are activated through functional electrical stimulation (FES), a well-established clinical method that, uniquely in my lab, is controlled through signals from the brain. By bypassing the spinal cord, we see the opportunity to restore voluntary movement to humans with spinal cord injuries or amyotrophic lateral sclerosis.

Have you recently published any papers?

We recently had an article published in Nature, “Restoration of grasp following paralysis through brain-controlled stimulation of muscles.” We recorded the electrical brain and muscle signals using implanted electrodes while the monkeys grasped a ball, lifted it, and released it into a small tube. Those recordings allowed us to develop an algorithm or “decoder” that enabled us to process the brain signals and predict the patterns of muscle activity that occur when the monkeys grasp the ball.

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Next we gave the monkeys a local anesthetic to block nerve activity at the elbow, causing temporary paralysis of the hand. With the help of the special devices in the brain and the arm, the monkeys' brain signals were used to control tiny electric currents delivered to their muscles, causing them to contract, and allowing the monkeys to pick up the ball and complete the task nearly as well as they did before.

Who makes up your research team and what role does each individual play?

Christian Ethier, a post-doctoral fellow, was most critical to all aspects of the brain-FES project, and Emily Oby, a graduate student in neuroscience, assisted him closely, although the main focus of her work included basic studies of these motor control signals as well.

I currently have two technicians, Rebecca Friesen and David Bontrager, who assist in all of the projects in the lab, including the FES work.

The FES project in particular, has also benefited from a series of plastic surgery residents who have a protected research year in the midst of their residency. They spend some time assisting us in the more complex surgical procedures. Jason Souza is the current resident, and before him, Sonya Paisley Agnew and Elliot Hirsch assisted in the surgical procedures.

Post-doc Nick Sachs and biomedical engineering graduate students Stephanie Naufel and Matt Perich are also working on projects to restore mobility through brain recordings and FES. Post-docs Brian London, Boubker Zaaimi, and Paul Wanda, along with neuroscience graduate student Ricardo Ruiz Torres and biomedical engineering graduate student Brian Dekleva are working on experiments to understand and restore somatosensation through cortical recording and stimulation as well as a project to study how sensory and motor signals are processed during reaching movements.

What do you enjoy about mentoring young scientists?

I really enjoy classroom teaching and mentorship. As my lab has gotten larger, it is a bit frustrating at times to not be in the lab much more. At the same time, I enjoy being at the center of our operations, organizing them, and making them happen. This has replaced much of the hands-on work I used to do. A major challenge in mentoring students is that in their entire student life they have been learning to answer questions – and getting quite good at it. Now is the time for them to start asking the important, solvable ones, which is the crux of what science is all about.

Welcome New Faculty

Enid Montague, PhD, joins as assistant professor in general internal medicine and geriatrics.

Montague was previously assistant professor in industrial and systems engineering at the University of Wisconsin-Madison. She received her doctorate and master's degrees in industrial and systems engineering (human factors) from Virginia Tech, and her bachelor's degree in psychology from Old Dominion University in Norfolk, Va.

Montague’s research explores the role of trust in technology in systems. She looks at why humans trust or distrust technology, the effects of trusting attitudes on system performance, and designing for appropriate trust.

Frank Penedo, PhD, joins as Roswell Park Professor of Medical Social Sciences, and leads the Robert H. Lurie Comprehensive Cancer Center’s Cancer Control and Survivorship Research Program.

Penedo served on the faculty at the University of Miami since 2000, most recently as an associate professor in psychology. He also held a secondary appointment as an associate professor of psychiatry and behavioral sciences. Earning his bachelor's degree, master's degree, and doctorate degree in clinical psychology at Miami, Penedo has been honored with numerous awards over the past decade, including the Society of Behavioral Medicine Early Career Award in 2005 and its Distinguished Service Award in 2008. The principal investigator of nearly $8 million in National Cancer Institute grants, Penedo has published more than 100 articles and abstracts in his professional career.

His current research is focused on prostate cancer survivorship in Hispanic populations. It focuses on several questions, including the extent to which ethnic and sociocultural factors may promote or hinder chronic disease adjustment and health outcomes, whether sociocultural and psychosocial factors impact immune parameters in chronically ill populations, and the extent to which stress- and age-related decrements in immune and endocrine function can be buffered or exacerbated by psychosocial factors.
Staff Profile: Rebecca Lamarre
Program Manager, Medical Scientist Training Program

Where are you originally from?
I am a Hoosier, born and raised in Terre Haute, Indiana.

What is your educational background?
I have a bachelor’s degree in psychology and a master’s degree in student affairs administration in higher education, both from Ball State University, in Muncie, Ind.

Tell us about your professional background.
I have worked in higher education for several years in a variety of roles. During my graduate studies, I had the opportunity to work in financial aid and in international education at Ball State. After completing my degree, I worked at a community college in upstate New York as the international student services coordinator. I moved to Chicago in 2007 and worked in a temporary position in Northwestern’s Office of the Registrar for a short time before starting here with the Medical Scientist Training Program (MSTP) in 2008.

What is your favorite part of the job?
I really enjoy working with the students in the MSTP. They are such a diverse group of talented and dynamic personalities. I really admire the dedication and drive that they all possess to complete such an extensive training program. I am amazed by them every day and they definitely keep me on my toes.

What do you do in your spare time?
I am a huge fan of live music and music in general. I also love writing and try to squeeze in as much as possible. My absolute favorite thing to do in my spare time is to relax with my husband and three children at home.

Chicago Informatics Week Announced

Chicago Mayor Rahm Emmanuel has declared October 30 to November 7, 2012 Informatics Week in Chicago. Informatics Week is the first ever city-wide celebration of its kind.

It is designed to showcase Chicago’s diverse biomedical and health informatics education, training, research, and development entities, and to develop special event programming in conjunction with the world’s premier scientific meeting for biomedical and health informatics, the American Medical Informatics Association’s 2012 Annual Symposium, November 3 to 7. Planned events include lectures, seminars, tours of informatics research facilities, and other activities highlighting informatics in Chicago.

Justin Starren, MD, PhD, chief of the Division of Health and Biomedical Informatics at Feinberg, and Frank Naeymi-Rad, chairman and CEO of Intelligent Medical Objects serve as co-chairs of the Informatics Week Committee.

An events listing for Informatics Week is posted online.

Three NU Scientists Win Presidential Awards

Three scientists from Northwestern University Feinberg School of Medicine have been awarded the Presidential Early Career Award for Scientists and Engineers (PECASE), the highest honor given by the U.S. government to outstanding scientists and engineers who are in the early stages of their independent research careers.

The three scientists are C. Shad Thaxton, MD, PhD, who is developing next-generation therapeutic nanoparticles for heart disease and cancer, Steven Kosak, PhD, who studies the organization of genomes, and Charlesnika Evans, PhD, MPH, who researches the secondary complications of spinal cord injury and healthcare-associated infections.

“Discoveries in science and technology not only strengthen our economy, they inspire us as a people,” President Obama said. “The impressive accomplishments of today’s awardees so early in their careers promise even greater advances in the years ahead.”
Student Profile: Sin Yi Kong
Driskill Graduate Program in the Life Sciences

Where is your hometown?
I was born in Petaling Jaya, Malaysia and lived there for 17 years.

What is your educational background?
After completing high school in Malaysia, I briefly attended junior college in Singapore, then pursued my bachelor of science degree in biochemistry at the University of Chicago from 2005 to 2009. I enrolled in the Driskill Graduate Program at Northwestern University after graduating from the University of Chicago.

What is your research focused on?
One of the focuses of my thesis lab, the Deyu Fang lab, is to understand how epigenetic regulators modulate the immune response. The NAD+-dependent histone deacetylase Sirtuin 1 (Sirt1) in particular has been shown to suppress T cell and macrophage activation by deacetylating and turning off key transcription factors in the inflammatory pathway. Continuing in this line of study, my project is to study how an endogenous suppressor of Sirt1, Deleted in Breast Cancer 1 (DBC1), regulates the immune response through Sirt1-dependent and independent pathways. I rely on a mouse model with a systemic deletion of the DBC1 gene for most of my experiments. I am interested in investigating the signaling events involving DBC1 and Sirt1 in B cell activation, and the physiological consequence of the disruption of this gene in the context of the immune response.

What attracted you to the Driskill Graduate Program (DGP)?
When I decided to pursue a doctorate degree in the life sciences, I was attracted to basic science research; at the same time I wanted to be able to interact and learn from scientists with more clinical and translational research backgrounds. I felt that the DGP program has a good mix of basic science and clinical research communities. I am interested in a broad range of topics, especially in interdisciplinary research such as linking inflammation and cancer; the DGP umbrella program allowed me to explore different fields and customize my learning experience according to my interests. The campus being in the center of downtown Chicago is also a big bonus.

What has been your best experience at Feinberg?
Seeing my first paper published last year. I was extremely fortunate that a project I initiated during my rotation in the Fang lab developed smoothly and was ready for publication shortly after I joined the lab. As a student in research, there are so many opportunities for self-doubt; seeing a project “finished” and in publication was definitely satisfying and reassuring that I am on the right track.

How would you describe the faculty at Feinberg?
Most of the faculty members whom I have interacted with have all been very sincere in providing advice and mentorship. During my lab rotations as well as other interactions, the faculty members I have talked with seem genuinely excited about their research, and are keen to advise me on various aspects of my career.

What do you do in your free time?
When I get the time, I just like to relax at home or hang out with friends. I am also on a quest to find the best ramen place in Chicago.

What are your plans for after graduation?
I plan to complete a postdoc and hopefully attain a tenure track position in research. I am particularly interested in the role of inflammation in the promotion of cancer. In the far future, I would also like to collaborate or return to South East Asia to contribute to the higher education and research community there.
Sponsored Research

Tanya Simuni, MD
Arthur C. Nielsen, Jr. Research Professor in Parkinson’s Disease and Movement Disorders, and Professor in Ken and Ruth Davee Department of Neurology

Project title: Clinical Research Sites for the Network of Excellence in Neuroscience Clinical Trials (NEXT Sites)

Sponsor: National Institute of Neurological Disorders and Stroke

Stroke

The National Institute of Neurological Disorders and Stroke (NINDS) awarded Northwestern University a $1.5 million grant to participate in NeuroNEXT, a Network for Excellence in Neuroscience Clinical Trials. Tanya Simuni, MD, leads the site at Northwestern, which is one of 25 sites nationwide and the only in the state of Illinois to take part in this new seven-year $84 million initiative created to conduct phase II studies of treatments for neurological diseases through partnerships with academia, private foundations, and industry. The Northwestern grant is a collaboration between the Department of Neurology, Department of Pediatric Neurology (Leon Epstein, M.D., Co-PI) and Rehabilitation Institute of Chicago (Elliott Roth, M.D., Co-PI).

NeuroNEXT is a unique new consortium designed to expand NINDS capability to test promising new therapies, increase efficiency of phase II clinical trials, and respond quickly as new opportunities arise to test promising treatments for adult and/or pediatric populations across the spectrum of neurological disorders. NeuroNEXT will develop and implement at least seven clinical trials over seven years. This is one of the first NIH funded consortiums that will use the Central IRB model developed to increase the efficiency of launching new studies. The first study to be conducted by the consortium is the biomarker validation study in pediatric population with spinomuscular atrophy (SMA).

The NeuroNEXT model allows Northwestern not only to participate in collaborative studies but most importantly gives Northwestern researchers the opportunity to use the consortium infrastructure to submit their own ideas for neuroscience research. The program aims to support scientifically sound, possibly biomarker-informed, phase II clinical trials that provide data for clear go or no-go decisions. Additional information about the network and how to submit concept proposals can be found at www.neuronext.org.

If the concept proposals are positively reviewed, the network will establish Protocol Working Groups to provide assistance to investigators to design and finalize protocols and grant applications.

The NeuroNEXT coordinator at Northwestern, Michelle Morley, can be reached at 312-503-2465 or m-morley@northwestern.edu.

J. Julie Kim, PhD
Associate Professor in Obstetrics and Gynecology-Reproductive Biology Research

Project title: Influence of AKT Pathway on Progesterone Receptor Function in Endometrial Cancer

Sponsor: National Cancer Institute

In the U.S., endometrial cancer is the most common cancer of the female reproductive system, accounting for approximately six percent of all cancers in American women. In 2010, approximately 40,000 women were diagnosed with endometrial cancer and more than 8,000 women died from this disease. It is estimated that about $1.8 billion is spent in the U.S. each year on treatments for endometrial cancer (NCI). In the NIH Reporter database, there are only 21 individual research projects that include the terms endometrial cancer in its title compared to 741 projects in breast cancer. Thus, endometrial cancer is a severely understudied disease.

Endometrial cancer can occur in women of all ages. More than half of these cancers are diagnosed in postmenopausal women, about 20 to 25 percent are diagnosed before menopause and five percent of women are diagnosed before the age of 40 years.

A paradigm shift to younger ages is becoming evident due to an increase in risk factors such as marked obesity, diabetes, and hypertension. For example, it has been projected that the U.S. obesity rate may hit 42 percent by 2050. Each year in the U.S., excess body fat causes about 103,600 cancer cases; approximately 49 percent of these will be endometrial cancer. Thus, the statistics are in favor of increased incidence of endometrial cancer in younger women in the future.

Since the standard treatment for endometrial cancer is hysterectomy, this may not be an acceptable option for women wishing to preserve fertility. In addition, patients with multiple medical co-morbidities, often associated with obesity, will be poor surgical candidates.

Published data show that progestin therapy is highly
effective in treating hyperplasia without atypia, while only 50 percent of patients treated with progestins for endometrial carcinoma show a complete response. The reasons for the decreasing responsiveness to progestins in endometrial carcinoma are unknown, and no effective pre-treatment algorithm exists to predict which patients will respond. Despite the fact that progestins have been used in the clinical setting for decades and continue to be used for the treatment of endometrial neoplasias, its mechanisms of action remain unclear. Understanding these basic mechanisms is key in order to improve hormone-based treatments for endometrial carcinoma.

The most commonly mutated gene in endometrial cancer is PTEN, occurring in up to 50 to 80 percent of cases. PTEN controls the AKT pathway and when it is mutated the result is a hyperactivated AKT. AKT is overactive in many cancers and plays a central role in modulating survival, proliferation, and migration. Among the many proteins it phosphorylates, AKT can phosphorylate steroid hormone receptors, such as the estrogen receptor and the androgen receptor. However, no direct relationship between AKT and progesterone receptor (PR) has yet been shown.

We have a unique situation in endometrial cancer where PTEN mutations are prevalent and progesterone response is suboptimal. Our study will begin to address the possible implication of AKT in promoting the suboptimal response of progestin treatment in endometrial cancer in the clinic. For example, one characteristic of progestin resistance in endometrial cancer is the downregulation of PR. Therefore, we will determine the mechanism by which PR is downregulated which will provide key insights into why progestin treatment is not effective in all cases. Also, we will examine the effect of phosphorylation of PR on DNA binding, interaction with transcription factors and coregulators resulting in differences in gene regulation.

By investigating how AKT-mediated phosphorylation of PR can change its pattern of recruitment to genes and its regulation of genes, we can begin to understand why some endometrial tumors are resistant to progestins. We will use various in vivo models to demonstrate the significance of AKT on progesterone response of human endometrial cancer cells and tissue. Subcutaneous xenografts of cancer cell lines, renal capsule grafts of primary human endometrial tumor tissues from patients as well as the conditional PR.Cre. PTENf/f mice will be used to determine whether progesterone response changes upon inhibition of AKT in the tumors.

If our hypothesis is proven correct, testing inhibitors to the AKT pathway in combination with progestins for more effective treatment of endometrial cancer in the clinic can be seriously considered. Such combinatorial treatment regimens are easily translatable to the clinic, as progestin therapy is available for treating endometrial cancer and AKT inhibitors are in phase II clinical trials for recurrent endometrial cancer. Improving on existing hormonal treatments is a highly feasible option, and we anticipate that our studies will provide the preclinical evidence needed to move forward with clinical trials.

NIH News

NIH has announced the creation of a new Office of Emergency Care Research (OECR), which will be a focal point for basic, clinical, and translational emergency care research and training across NIH. OECR is housed in NIH’s National Institute of General Medical Sciences. OECR is being led on an acting basis by Walter J. Koroshetz, MD, deputy director of the National Institute of Neurological Disorders and Stroke.

The revised HHS financial conflict of interest (FCOI) regulations are now effective. Following implementation, NIH issued a notice concerning FCOI reporting of certain awards. According to the notice, “Most grantees have already submitted their annual progress report for FY12 noncompeting continuation awards and multi-year funded projects, which means that the Annual FCOI Report was due before the FCOI implementation date (i.e., 45 or 60 days prior to the start date). Therefore, out of synch reporting for this subset of FY12 awards will be necessary to capture FCOI reporting information. This one-time guidance is intended to shift the burden of out of synch reporting from the grantee to NIH staff. Therefore, NIH will not require grantees to submit FCOI reports for FY12 noncompeting awards issued on or after August 24 until requested by NIH staff.”

NIH released RFAs for the 2013 NIH Director’s Pioneer Award program and Director’s New Innovator Award program.

Applications for the NIH Director’s Pioneer Award program are due by October 9.

Applications for the NIH New Innovator Award program are due by October 17.
Research in the News

USA Today August 26
Multiple sclerosis’ link to stress isn’t clear
David Mohr’s research was featured.

CNN (National) August 24
Pairing angels with cancer patients
Steven Rosen was quoted.

Science August 24
New computer memory material goes easy on the juice
Sam Stupp was quoted.

ABC News (National) August 21
Cramming may be damned to your grades
Phyllis Zee was quoted was quoted.

New York Times August 20
How well you sleep may hinge on race
Mercedes Carnethon’s research was featured.

CNN (National) August 17
Scientists identify ‘super’ brains
Emily Rogalski’s research was featured.

► Rogalski’s research was also featured in US News & World Report, Newsday, Chicago Tribune, Chicago Sun-Times, ABC National News, NBC National News, FOX National News, WBEZ-FM (NPR), UP!, Sydney Morning Herald, Daily Mail (UK), The Telegraph (UK), Scotsman, and more

FOX Chicago August 15
Smart phone apps help users lose weight
Bonnie Spring was interviewed.

Chicago Tribune August 15
New class of drugs could help people with Alzheimer’s disease
Martin Watterson’s research was featured.

Prevention August 14
Diabetes and your weight: Are extra pounds safer than a healthy size?
Mercedes Carnethon’s research was featured.

More headlines

High Impact Factor Research July 2012


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.”
Funding Opportunities

Biobehavioral Research Awards for Innovative New Scientists (BRAINS) (R01)

More information

Sponsors: United States Department of Health and Human Services (HHS), National Institutes of Health (NIH), National Institute of Mental Health (NIMH)
Submission Deadline: October 23 (LOI September 23)
Upper Amount: $1.625 million

Synopsis: The BRAINS award is intended to support the research and research career development of outstanding scientists who are in the early stages of their careers and who plan to make a long term career commitment to research in specific mission areas of the NIMH. This award seeks to assist these individuals in launching an innovative clinical, translational, basic, or services research program that holds the potential to profoundly transform the understanding, diagnosis, treatment, or prevention of mental disorders. Each year, the program focuses on a specific area of research or research career development need. For FY13 and FY14, the BRAINS program will focus on the research priorities and gap areas identified in the NIMH Strategic Plan and the Research Domain Criteria project, such as: discovery of biomarkers and associated neural mechanisms that reflect core components of psychiatric disorders; or basic and/or clinical research aimed at developing circuit-level screening approaches to identify novel therapeutic agents for mental disorders.

Understanding Clinical Information Needs and Health Care Decision Making Processes in the Context of Health Information Technology (IT) (R01)

More information

Sponsor: United States Department of Health and Human Services (HHS), Agency for Healthcare Research and Quality (AHRQ)
Submission Deadline: October 5
Upper Amount: $2.5 million

Synopsis: Projects funded under this opportunity will address current knowledge gaps regarding our understanding of health care providers’ information needs and health care decision making processes, both individually and collectively, and as a health care team (composed of doctors, nurses, therapists, and administrative staff). To better understand provider needs, basic research is needed on how clinical work is actually done and how it could be done, while incorporating a variety of cognitive analyses (e.g., cognitive work analysis, cognitive task analysis), workflow analyses (e.g., hierarchical task analysis, sequence diagrams), and human-centered design evaluations.

Featured Events

9/13

Frances Feinberg Memorial Lecture
Presented by Richard Lifton, MD, PhD, Princeton University, Yale University
Date: Thursday, September 13, 4 to 5 p.m.
Location: Lurie Research Center — Hughes 303 E. Superior St. (Chicago campus)
Contact: Donna Ray, dir6@northwestern.edu
Kari Krueger, k-krueger@northwestern.edu
More information

9/14

Pediatric Grand Rounds
“Stem cells: From embryo development to disease models” presented by Janet Rossant, PhD, University of Toronto
Date: Friday, September 14, 8 to 9 a.m.
Location: Lurie Children’s Hospital Rooms 11-152 and 11-160, 225 E. Chicago Ave. (Chicago campus)
Contact: BVonRueden@luriechildrens.org
More information

9/25

Microbiology-Immunology Seminars
“New insights, through systems and reductionist approaches, for how pathogenic bacteria suppress host immunity,” presented by Jean Greenberg, PhD, University of Chicago
Date: Tuesday, September 25, Noon to 1 p.m.
Location: Lurie Research Center — Baldwin 303 E. Superior St. (Chicago campus)
Contact: ahauser@northwestern.edu
More information

10/3

Dermatology Grand Rounds
Presented by Paul Khavari, MD, PhD, Stanford University School of Medicine
Date: Wednesday, October 3, 8 a.m. to Noon
Location: 676 N. St. Clair St. — Dermatology Lecture Hall (Chicago campus)
Contact: tgougis@nmff.org
More information

10/5

Robert H. Lurie Comprehensive Cancer Center Lecture
“New clues in solving the riddle of cancer,” presented by Donald S. Coffey, PhD, Johns Hopkins Medicine
Date: Friday, October 5, 10 to 11:30 a.m.
Location: Lurie Research Center — Baldwin 303 E. Superior St. (Chicago campus)
Contact: 312-695-1392
More information

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