Breakthroughs

Feinberg School of Medicine Research Office

June 2014

Northwestern University scientists are exploring a novel therapy to treat highly aggressive brain cancers: a combination of a personalized vaccine, chemotherapy, and surgical technique.

Parsa: Science, Surgery Key to Solving Brain Cancer

What if brain cancer was a chronic disease rather than a ruthless killer?

"The solution to that transition is likely to be based upon a combination of chemotherapy, surgical technique, and novel vaccine development," said Andrew Parsa, MD, PhD, chair of Neurological Surgery. "With our vaccine work, we are not attempting to cure the disease, but focus on how the immune system can be used to fight back."

The vaccine Parsa speaks of—HSPPC-96—is a groundbreaking new therapy produced using a patient's own removed tumor tissue. It's unique to the individual, containing a precise genetic "fingerprint" of a patient's particular cancer, and is engineered to reprogram the body's immune system to target only cells bearing this fingerprint, thus killing tumor cells that may remain following surgery while reducing risk to healthy cells.

Parsa's research on brain tumor immunology has provided landmark insights crucial to the therapy's success, including the identification of an unknown link between tumor formation and immune-resistance in brain tumors. He is currently serving as study chair of the national randomized phase II clinical trial that investigates whether the HSPPC-96 vaccine is safe and if it can be made more effective when given with a drug (Avastin) known to shrink tumors. The trial is the largest of its kind to be funded by the National Cancer Institute.

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Northwestern Medicine®

Science, Surgery Key to Solving Brain Cancer

(continued from cover page)

Career Trajectory

A renowned neurosurgeon and author of more than 300 peer-reviewed articles, Parsa is as likely to be folding scrubs as tweaking a manuscript for publication.

"Early in my career I would say, 'I am a surgeon who does science,' but coming to Northwestern has crystalized the concept that I am a surgeon-scientist, and that's what I'll always be," said Parsa. "I knew from the time I was an undergrad that I wanted to be a physician. When I was working on my MD-PhD I realized that you can be a surgeon-scientist if you really focus your efforts surgically and scientifically on the same problem."

For Parsa, his fixation became the brain, particularly skull-based tumors. He initiated one of the first vaccine studies for brain tumor patients while still an MD-PhD student at State University of New York (SUNY) Downstate Medical Center.

"Collectively, my work with vaccines has given me terrific satisfaction in terms of moving something from the bench to the bedside. It's been the ultimate translational research experience," said Parsa, co-leader of the Translational Research in Solid Tumors Program at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. "In the realm of skull-based tumors, I also have worked closely with radiation oncology colleagues to devise treatment paradigms that are predicated upon not necessarily taking out as much tumor as possible, but being thoughtful about what tumor we leave behind."

This adaptive hybrid approach is a balancing act between removing more tumor—putting the patient at greater risk for surgical complications—and resecting less, which requires the patient undergo more potentially toxic radiation.

"The concept in essence is finding that sweet spot, where you've taken out enough tumor to relieve symptoms, while leaving a small target for radiation that can be controlled easily," said Parsa.

Andrew Parsa, MD, PhD, made a seminal finding in 2007 when he linked the loss of a tumor suppressor (PTEN) to immunoresistance.

Goal-Oriented Leadership

Parsa plans to lead neurosurgery with an open-door and a guiding philosophy.

"It's really important to me that everybody's clinical discipline feeds into their educational or research interests," he said. "That concept is something that on the surface looks straight forward but can be challenging and take time."

Surrounded by global leaders in fields from nanotechnology to three-dimensional printing, Parsa believes it's paramount for members of Northwestern's neurosurgery community to create a scientific concentration and develop it over time to elevate the knowledge base.

"I strive to make it clear to everyone I train and to my colleagues that you can do anything, including becoming a surgeon-scientist, if you put yourself in the right environment and thoughtfully select exactly what it is that you want to go after," he said. "Every resident is different, and I think the most important aspect of understanding how to mentor them is to drill down and understand what they really want to do and help them pursue that goal."

Parsa knows that his lab may not solve adaptive hybrid surgery or develop a full-proof cancer vaccine. And that's a big reason he finds teaching and mentoring so important.

"The reality is that the chance I create the algorithm for brain tumor management that changes a malignant cancer into a chronic disease is low, even though the odds are as high as they've ever been," he said. "What I want to guarantee is that one of the people I train, or one of the people they train, will have an opportunity to make that discovery."

CONTENTS

Congratulations to the Class of 2014 Research Graduates!

The Driskill Graduate Program in Life Sciences, Northwestern University Interdepartmental Neuroscience Program, Medical Scientist Training Program, and Clinical Psychology PhD programs have begun to confer doctorate degrees to the class of 2014 at ceremonies on the Chicago and Evanston campuses, held at various times throughout the year. The faculty and staff of Northwestern University congratulate these students on their well-deserved achievement.

Students who have been profiled on these pages during their time at Feinberg are linked to their web profiles.

Driskill Graduate Program (DGP)

Sebastian Ahrens
Kari Barlan
Amanda Boe
Michael Breen (MSTP)
Anne Marie Carias
Adam Caulfield
Margaret Caulfield
Kristen Dennis
Christine Falaschetti
Kamonwan Fish
Ayanna Flegler
Andrea Glasauer
Samuel Jenson
Andrew Karaba (MSTP)
Sara Karaba (MSTP)
Jenny Kerschner
Emily Klopp
Jennifer Krcmery
Lokesh Kukreja
Samuel Light
Sarah Mercer
Diana Monsivais
Guadalupe Navarro
Antonia Navarro
Janet Pavese
Jessica Queen (MSTP)
Stephanie Rangel
Simran Sabharwal
Chelsea Schiano
Elizabeth Sefton
Robin Skory (MSTP)
Craig Smuda (MSTP)
Lucas Sullivan
Eric Voll
Joshua Waitzman (MSTP)
LaTanya Williams
Catherine Willins
Larry Wong
Yuan Ye (MSTP)

Northwestern University Interdepartmental Neuroscience Program (NUIN)

Angela Anderegg
Katherine Blizinsky
Allison Bond
Jorge Cantu
Carmen Capo
Lishu Duan

Members of the Class of 2014, including MSTP graduates, celebrate following the spring Feinberg commencement.

Caroline Freitag
Tristan Hedrick
Rafiq Huda
Marisa Jackson (MSTP)
Jinah Kim
Jing-Nong Liang
Feliz Nunez
Janitza Ortiz
Bradley Patterson
Sam Perlmutter
Giulia Quattrocolo
Agila Somasundaram
Keith Summa (MSTP)
Marina Yasvoina
Lili Zhou

Clinical Psychology PhD Program

Elena Bassett de la Garza
Lev Gottlieb
Julia Rao

Additionally, the following MSTP students received their Doctor of Medicine degrees in 2014:

David C. Brooks
Anaar Eastoak-Siletz
Rebecca Farmer
Dominic Fullenkamp
Jack Graham
Boris Grin
Brian Hitt
Saahir Khan
Roger Warren Sands
Jessica Schulte

Important Summer Lab Safety Preparations

Northwestern University has posted four essential steps to follow with any volunteer, student, or visitor on campus:

- Register each individual with Human Resources by completing and submitting an Intern and Volunteer Intake Form.
- Complete the Lab Use Assumption of Risk and Release of Liability for Volunteers and Visitors to Risk Management.
- Add each individual to your ISIS lab safety profile. (If you have questions, simply contact ORS for help.)
- Assign tasks appropriate for individuals based on their experience, knowledge, skills, and abilities. Always begin with work well within their limitations before assigning more complex tasks. Carefully supervise daily activities and never allow them to work alone or after hours.

Northwestern has established minimum dress requirements for anyone working with potentially hazardous materials (biological, chemical, or radiological), systems under pressure, or high-risk equipment (e.g. laser, machinery, etc.) in all laboratories.

Read more safety preparations online.

Faculty Profile: Stephen B. Hanauer, MD

Professor of Medicine-Gastroenterology and Hepatology

More than one million Americans suffer from inflammatory bowel disease (IBD), divided between Crohn's disease and ulcerative colitis. A distinguished physician-scientist and international leader in the treatment of IBD, Stephen B. Hanauer, MD, and his colleagues have come so far in understanding and treating IBD that their work may become a model for treating other immune-mediated inflammatory disorders, such as rheumatoid arthritis, psoriasis, and lupus.

Hanauer joined Feinberg in January 2014 as the Clifford Joseph Barborka Professor of Medicine and the medical director of the Digestive Disease Center.

He serves as chair of the International Organization for Inflammatory Bowel Disease, secretary-elect of the American College of Gastroenterology, and is a member of the GI Specialty Board of Internal Medicine, the American College of Physicians, and American Gastroenterology Association. He previously served as chair of the Food and Drug Administration (FDA) Gastrointestinal Drugs Advisory Committee, where he authored the FDA's "Guidelines for Clinical Evaluation of Drugs for Patients with Inflammatory Bowel Disease."

Q&A

What are your research interests?
My research has been focused on understanding factors that influence the development and course of IBD, primarily to develop therapeutic approaches to optimize and personalize treatments that improve short and long-term treatment outcomes.

I have been engaged in numerous clinical trials regarding new drugs for IBD, including a variety of delivery systems for mesalamine, an anti-inflamatory drug, non-systemic corticosteroids, optimizing immunesuppressives including thiopurines and methotrexate, in addition to iologic agents including infliximab, adalimumab, certolizumab, golimumab, natalizumab, and vedolizumab. I also have clinical trials on treatments for severe colitis including cyclosproine.

What is the ultimate goal of your research?
The goal of my research is to improve the care for patients with ulcerative colitis and Crohn's disease. My research has been instrumental in developing and expanding treatment guidelines for ulcerative colitis and Crohn's disease.

What types of collaborations are you engaged in across campus?
My collaborations have been with both basic researchers to translate bench-to-bedside and bedside-to-bench discoveries as well to develop treatment algorithms with national and international multi-institutional clinical trials.

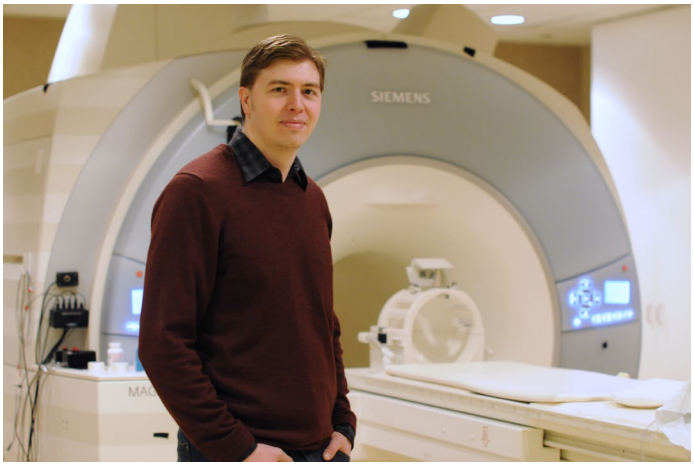
How did you become interested in this area of research?
I became interested in IBD at the University of Chicago, where I was mentored by Joseph Kirsner, MD, PhD. Helping young individuals cope with chronic, socially incapacitating GI disorders and to improve their outcomes is an incredibly rewarding experience. I now care for the children of many of my patients.

What kind of research do you think is needed to advance the understanding of ulcerative colitis, IBD, and other digestive diseases?
We need more clinical effectiveness trials comparing different classes of agent. Secondly, our safest and most effective (biologic) agents are best used early in disease to prevent progression, however, due to high costs, are used later when they are less effective and associated with more side effects.

Which honors are you most proud of, and why?
I have been recognized by the American Gastroenterological Association for both excellence in Clinical Research and Clinical Care, and by the Crohn's and Colitis Foundation for Clinical Research in IBD. I am proud, first and foremost, for recognition as a clinician, but the advances in treatment will impact even more individuals than the ones I treat.

Student Profile: Mark Hoggarth

Department of Physical Therapy and Human Movement Sciences and Biomedical Engineering Program



Mark Hoggarth, a second-year Doctor of Physical Therapy-PhD student in the Department of Physical Therapy and Human Movement Sciences, in coordination with the Department of Biomedical Engineering, studies motor vehicle induced whiplash injuries in the lab of James Elliott, PT, PhD, professor of Physical Therapy and Human Movement Sciences.

Hoggarth received his undergraduate degree in applied and computational physics and a master's degree in applied physics, both from DePaul University in Chicago. He chose to study at Northwestern University because of the program's focus on research and clinical practice.

Q&A

What is your hometown?
I was born and raised in Columbus, Ohio. However, I've lived in Chicago since 2002.

What are your research interests?
My research focuses on traumatic injury, imaging modalities, and neuroscience. I study whiplash injuries after a motor vehicle crash in the Neuromuscular Imaging Research Lab (NIRL) with James Elliott, PT, PhD. I'm very interested in neurological changes in the spinal cord following a traumatic injury.

Up to half of people with a whiplash injury never fully recover, and a quarter of people develop a chronic Whiplash Associated Disorder (WAD). WAD is characterized by complex clinical presentations of pain, weakness, hypersensitivity, dizziness, tinnitus, and problems swallowing, sleeping, and concentrating. Furthermore, most people developing chronic WAD have no radiological evidence of any pathology. Hence, my research is centered on developing quantitative radiological metrics to help identify those people who will transit to chronic WAD.

What exciting projects are you working on?
I'm excited to be working on a Magnetization Transfer (MT) imaging project right now. MT imaging is a quantitative way of looking at the myelin sheath surrounding neuronal axons in white matter. We're finding that people with chronic WAD have anomalous MT values in their spinal cord. As the mechanism underlying WADs are very poorly understood, any biomarker helping to distinguish those at risk of chronicity is very exciting.

What attracted you to the DPT-PhD program?
I love research, but I also love working with patients. The dual degree program will put me in a great place to have my own research agenda someday, while still being able to practice clinically. I'm rooted in translational research, which makes me want to get my research out of the lab and into the clinic as quickly as possible. Living in both the clinical and research world is a great way to make sure my work in the lab stays relevant to patient care.

What has been your best experience at Feinberg?
Working in the Center for Translational Imaging (CTI) has been a high point for my training thus far. Learning the ins and outs of the Magnetic Resonance Imaging (MRI) machines, helping people through their scans, and running scans has been a fantastic experience. Everything in my research and clinical concentration comes together when I'm scanning at CTI.

How would you describe the faculty at Feinberg?
I work with multiple research physical therapists (PTs) and PT/PhDs, and I think one of those most astounding things I see is the commitment to their patients and study subjects. From being genuinely interested in a patient's health to helping a research subject traverse the elevators and get to their car, the faculty here are models for great patient care.

What do you do in your free time?
I spend as much time as possible with my son…Do parents have free time? I enjoy suburban farming, lifting weights, and reading Ernest Hemingway, Annie Dillard, George R. R. Martin and Laura Numeroff.

What are your plans for after graduation?
My ideal job would be in academics, but in a place where I could have a partial clinical practice. I would also like to travel for a bit, and pursue research collaborations in the United Kingdom, Canada, and Australia.

Staff Profile: Tasneem Uting

Research Administrator, Preventive Medicine, NUCATS, Galter Library

Where are you originally from?
I'm originally from London, England, and moved to the United States when I was eight. We settled in Schaumburg, and at age 19, I moved to Chicago.

What is your educational background?
I have a Bachelor of Arts degree from Northeastern Illinois University.

Please tell us about your professional background.
I worked my way through college waiting tables at various places, and then worked at the University of Chicago in central and departmental roles prior to coming to Northwestern.

Why did you choose to work at Northwestern?
I had friends employed here, and heard what a great place it is to work. The school's location was also appealing since my commute would be cut in half. And, there were more opportunities at Northwestern that would help further my career.

What is your role within Feinberg?
I am the manager of research administration for the Department of Preventive Medicine, Northwestern University Clinical and Translational Sciences (NUCATS) Institute, and the Galter Library.

How do you personally help investigators at Feinberg?
Our main goal in Preventive Medicine is to help our faculty submit as many grants as they can successfully, engage with the Office of Sponsored Research at Northwestern and nurture that relationship, and reinforce that we are a team in the grant submission process.

I personally help investigators by submitting their grants and by establishing standard operating procedures for our area. In doing this, I have been able to help research administrators streamline their jobs, allowing them more time to catch errors, advocate for their principal investigators (PIs), and lessen PIs' obligations so they can concentrate on science. We try to take as much of the administrative burden away from investigators as possible using the checks we have put in place.

I've established clear post-award needs, and my team provides monthly updates to faculty in real-time; this helps PIs visualize grants in a fiscal way that will help them manage their studies proficiently. It also helps the department and PI stay compliant with effort and appropriate spending.

What is your favorite part of the job?
I love my job, all aspects of it. I am lucky enough to have a manager and chair that encourage professional development and consistently provide opportunities for growth. The culture in our department is hard-working but family-friendly, and my job allows me to have a work-life balance that I wouldn't trade for the world. This culture has encouraged loyalty and pride in the department, and my co-workers and peers are professional and a pleasure to work with—they are like family to me. There is a consistent influx of knowledge that you can only get in academia, and it is delivered by people who are passionate and who welcome challenges, and help me grow in my professional career.

What do you like to do in your spare time?
My spare time is filled by my two children—a boy, age five-and-a-half and a girl, 22 months. I wouldn't trade that for the world.

Welcome New Faculty

Sarki Abdulkadir, MD, PhD, joined as professor in Urology and director of international relations for the Robert H. Lurie Comprehensive Cancer Center.

Abdulkadir received combined undergraduate and medical degrees from Ahmadu Bello University in Nigeria. After a year of medical internship, he moved to the Johns Hopkins University in Baltimore, Maryland as a Howard Hughes Medical Institute Predoctoral Fellow, and received a doctorate degree in immunology. He subsequently completed a residency in clinical pathology integrated with a postdoctoral research fellowship in prostate cancer at Washington University School of Medicine in St. Louis, Missouri.

His research focuses on understanding the molecular mechanisms that drive prostate cancer initiation, progression, and recurrence, with the ultimate goal of developing therapeutic strategies that target these processes.

Research in the News

***The New York Times* May 29**
Vitamin E may harm, or help, your lungs
Joan Cook-Mills' research was featured.

Reuters May 26
Home walking program may help clogged leg arteries
Mary McDermott's research was featured.

- This study was also featured in the *Chicago Tribune* and on MSN.com.

***The Wall Street Journal* May 19**
Computer program advises adults with autism heading into job interviews
Matthew Smith's research was featured.

- Smith's research was also featured on NBC's Today Show and on FOX News (national).

***The New York Times* May 16**
Psst. Look. Over here.
Enid Montague's research was featured.

Windy City Live May 14
Food allergy researcher Ruchi Gupta
Ruchi Gupta was interviewed.

***Boston Globe* May 13**
Ex-Genzyme execs behind new drug company
Dimitri Kranic and Joseph Mazzulli's research was mentioned.

The Katie Couric Show May 6
How postpartum depression affects more than just moms
Craig Garfield's research was featured.

***US News & World Report* May 5**
In crashes that kill children, it's their driver who's often drunk
Kyran Quinlan's research was featured.

- Quinlan's research was also featured in *Time Magazine* and the *Philadelphia Inquirer*.

***Chicago Tribune* May 2**
Seniors can often simplify medication routines
Lee Lindquist's research was featured.

***US News & World Report* May 1**
Low vitamin D linked to aggressive, advanced prostate cancers
Adam Murphy's research was featured.

More media coverage available online.

Northwestern University
NUCATS
Clinical and Translational Sciences Institute

NUCATS Corner

Registar Offers New Features & Ease of Use

Investigators can now build their own research registries in the secure Registar platform developed here at Northwestern University. Registar collects information about research study participants or patients in a clinical practice. The system offers streamlined searching and reporting, and data can be exported easily to Excel for analysis. A new Registar feature is a screener tool that enables you to select and list patients that meet specific study or analysis criteria.

There is no cost or ongoing maintenance fee associated with creating a new Registar registry. Contact registar@nubic.northwestern.edu to start creating a registry today.

** Institutional Review Board (IRB) approval of the registry is required to create a Registar registry. Unlike Survey Monkey and Access, Registar is secure environment to safely house patient surveys and questionnaires. Only Northwestern University IRB-authorized personnel can access the registry.*

Core Facility Agreement Strengthens Universities' Ties

Northwestern University, University of Chicago, and the University of Illinois at Chicago have signed an agreement ensuring open access to research core facilities on all three campuses. The agreement is intended to give scientists from all three institutions greater choices of shared facilities in the Chicago area. Each of the three schools has between 20 and 60 core facilities, and offers a wide range of resources.

Read more.

Sponsored Research

PI: Norrina B. Allen, PhD, MPH Assistant Professor of Preventive Medicine

Sponsor: National Heart, Lung, and Blood Institute

Title: "Favorable Cardiovascular Health and the Compression of Morbidity in Older Age"

Individuals with favorable cardiovascular (CV) health, (i.e. having ideal levels of all major cardiovascular risk factors, including blood pressure, cholesterol, body mass index, not smoking and no diagnosis of diabetes), during middle-age were shown to have dramatically lower age-adjusted morbidity and mortality rates and healthcare costs than individuals with high CV risk factor levels. Among Framingham participants, the lifetime risk for cardiovascular disease has been found to be as high as 69 percent among men and women aged 50 years with multiple high CV risk factors, but is only five to eight percent for those in favorable CV health. Similar patterns are seen in cancer incidence.

In our prior work, favorable CV health profile has been associated with lower age-adjusted cardiovascular disease (CVD) and non-CVD mortality by 40 to 58 percent resulting in 5.8 to 9.5 additional years of life. Given the benefits of favorable CV health, recent American Heart Association 2020 strategic goals are aimed at improving the health of the nation by increasing the proportion of Americans in favorable CV health.

While it is known that favorable CV health delays the onset of cardiovascular disease and increases longevity, its impact on cumulative lifetime morbidity remains unknown. Recent findings among small, specialized populations, i.e., runners and alumni of the University of Pennsylvania, suggest that individuals with healthy behaviors postpone the onset of disability approximately twice as many years as they postpone death, resulting in a compression of morbidity into a smaller period at the end of life. A healthy lifestyle is associated not only with a smaller time with morbidity but also reduces the level or severity of morbidity. This compression of morbidity not only benefits the individual, but can result in substantial societal benefit with lower healthcare costs and utilization.

The over-arching goal of this proposal it to understand how favorable cardiovascular health at younger and middle ages may achieve the goal of prolonging the period of healthy life and reducing the lifetime burden of morbidity (from all major chronic diseases) at older age. To accomplish this aim we will take advantage of the current linkage of the Chicago Heart Detection Project in Industry Study (CHA; 39,522 men and women screened in 1967-1973) with Medicare claims data through 2010, which will provide us with more than 25 years of follow-up. In addition, we will extend the current Medicare linkage (through 2015) which will provide additional years of follow-up to track a very large proportion of CHA participants all the way to the end of their lifespan in order to observe complete morbidity and medical cost data.

The findings of this study will provide evidence critical to evaluating the long-term effects of national goals to improve cardiovascular health on later life morbidity and health care costs. The value of prevention strategies should be "based on a combination of cost and impact on patient well-being, including length and quality of life." This study will provide some of the first data addressing these issues. Findings from this study will provide policy makers with concrete estimates of health-care costs upon which to base cost-effectiveness evaluations and funding priorities. Thus, this study will have important implications on the current focus on improving cardiovascular health of the nation.

PI: Jason Wertheim, MD, PhD Assistant Professor of Surgery-Organ Transplantation and the McCormick School of Engineering

Sponsor: National Institute of Diabetes, Digestive and Kidney Diseases

Project: "Optimization and control of hepatocyte activity via biofunctional modification"

The increased demand for transplantable organs continues to far surpass the number of available donors and prevents the extension of organ transplantation to all patients in need. Despite the development of new medications to treat some forms of hepatitis, liver disease—and end organ damage in general—will continue to be a major public health problem in the foreseeable future, due to the obesity epidemic in the US leading to metabolic syndrome, nonalcoholic steatohepatitis, hypertension, and diabetes.

The increased incidence of obesity and its associated diseases will not just increase the need for transplantable bioartificia livers, but will likewise extend this need, and technology, to other organs and tissues.

Wertheim, a transplant surgeon in Northwestern's Comprehensive Transplant Center, received a K08 Mentored Clinical Scientist Research Career Development Award through the National Institutes of Health's National Institute of Diabetes

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Sponsored Research

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and Digestive and Kidney Diseases (NIH-NIDDK) in May. Though this award, Wertheim hopes to advance the fields of transplantation and tissue-engineered organs. "This is an outstanding opportunity to look at how liver progenitor cells develop within a 3D structure," Wertheim said. His immediate goal is to understand the influence of 3D culture systems on liver pathobiology and hepatocellular function, with the long-range goal of developing a tissue-engineered organ for therapeutic transplantation.

Wertheim's lab has previously developed Small bioArtificial, Micro-sized Scaffolds (SAMS) that are made from an acellular rat liver scaffold. This environment allows the interaction of hepatocytes with extracellular matrix molecules, growth factors, and other cells to be studied in a controlled manner. The lab has also developed innovative flow bioreactors that are perfusion culture systems where hepatocytes grow within whole-organ 3D liver matrices derived from decellularized rodent tissue.

The goals of this project are to advance upon preliminary data which indicates that the extracellular matrix in SAMS enhances the activity of hepatocytes developed using induced pluripotent stem cell technology (iPS- hepatocytes).

This grant award, and the assembled environmental and mentoring structure at Northwestern University, will combine liver stromal cells and leading-edge biofunctional peptides to evaluate critical cell-matrix and cell-cell relationships in the liver that influence hepatocyte development. The goals of this project are to advance upon preliminary data that indicates that the extracellular matrix in SAMS enhances the activity of hepatocytes developed using induced pluripotent stem cell technology. This proposal, and the assembled environmental and mentoring structure at Northwestern University, will use stellate cells and cutting-edge biofunctional peptides to evaluate critical cell-matrix and cell-cell relationships in a tissue engineered liver scaffold.

So You Think You Can Innovate?

Roberta Ness, MD, MPH

The Institute for Public Health and Medicine (IPHAM) welcomes faculty, staff, and students to attend "So You Think You Can Innovate?" presented by Roberta Ness, MD, MPH, dean and M. David Low Chair in Public Health at the University of Texas School of Public Health.

The seminar takes place on Thursday, June 19, from noon to 1 p.m. in the Robert H. Lurie Medical Research Center's Baldwin Auditorium. A live web stream will also be available via Adobe Connect. For those attending live, lunch will be provided, and CME credit is available.

Funding

Research Education Grants for Statistical and Computational Training in the Genetics of Addiction (R25)

More information

Sponsor: United States Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse

Submission deadline: August 21
Upper Amount: $2.5 million

Synopsis: This opportunity invites applications focused on research education for the development, testing, and application of new, innovative statistical and computational models to address genetics-based research problems in addiction. Applications must be focused on substance abuse research questions. Eligible participants may include undergraduate, graduate, and/or postdoctoral level students and may include both U.S. and non-U.S. citizens.

Breast Cancer Research Program (BCRP) - Era of Hope Scholar Award

More information

Sponsor: United States Department of Defense, Department of the Army, U.S. Army Medical Research and Materiel Command, Office of Congressionally Directed Medical Research Programs

Submission deadline: August 15 (Pre-app due August 1)
Upper Amount: $2.5 Million

Synopsis: This award supports individuals who are early in their careers and have high potential for innovation in breast cancer research. These individuals should be exceptionally talented scientists who have demonstrated they are the best and brightest in their fields through extraordinary creativity, vision, and productivity. They also should exhibit strong potential for leadership in the breast cancer research community, and be able to articulate a vision for the eradication of breast cancer.

Since the intent of this award is to recognize creative and innovative individuals rather than projects, the central feature is the innovative contribution that the principal investigator can make toward ending breast cancer. He or she should articulate a vision that challenges current dogma and demonstrates an ability to look beyond tradition and convention.

View more funding opportunities

High Impact Factor Research

April 2014

Bhattacharyya S, **Tamaki Z**, **Wang W**, **Hinchcliff M**, **Hoover P, Getsios S**, White ES, **Varga J**. FibronectinEDA promotes chronic cutaneous fibrosis through toll-like receptor signaling. *Science Translational Medicine*. 2014 Apr 16;6(232):232ra50.

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Chan CS, **Surmeier DJ**. Astrocytes go awry in Huntington's disease. *Nature Neuroscience*. 2014 Apr 25;17(5):641-2.

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Khare S, Ratsimandresey RA, **de Almeida L**, **Cuda CM**, Rellick SL, **Misharin AV**, **Wallin MC**, **Gangopadhyay A**, **Forte E**, **Gottwein E**, **Perlman H**, Reed JC, Greaves DR, **Dorfleutner A**, **Stehlik C**. The PYRIN domain-only protein POP3 inhibits ALR inflammasomes and regulates responses to infection with DNA viruses. *Nature Immunology*. 2014 Apr;15(4):343-53.

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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

Friday, June 13

Department of Physiology Seminar

"Development and Maturation of a Hippocampal Feedforward Inhibitory Pathway," presented by Chris McBain, PhD, National Institutes of Health.

Time: Noon to 1 p.m.

Location: Ward Building—5-230
303 E. Chicago Ave. (Chicago campus)

Contact: d-davidston@northwestern.edu
More information

Tuesday, June 24

Pulmonary and Critical Care Lung Symposium

This is an all-day event featuring a number of guest speakers that will showcase the research of faculty and trainees. The keynote speaker, Richard Morimoto, PhD, Northwestern University, will present "Maintaining Healthy Proteostasis in Aging and Disease" at 11:20 a.m., and a poster viewing will follow at 1:30 p.m. A full listing of speakers can be found online.

Time: 8 a.m. to 5 p.m.

Location: Prentice Women's Hospital, Canning Auditorium, 3rd Floor
250 E. Superior St. (Chicago campus)

Contact: jmaller@northwestern.edu
More information

Monday, June 30

Cell & Molecular Biology Seminar Series

"Regulation of Cell Architecture by Microtubule End-Binding Proteins," presented by Anna Akhmanova, PhD, Utrecht University, the Netherlands.

Time: Noon to 1 p.m.

Location: Lurie Research Center—Searle
303 E. Superior St. (Chicago campus)

Contact: b-jaron@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

The National Institutes of Health (NIH) recently announced a new policy requiring "a balance of male and female cells and animals in preclinical studies in all future applications." In *Nature*, Janine Clayton, NIH director of the Office of Research on Women's Health and associate director for research on women's health, and Francis Collins, NIH director, wrote, "The over-reliance on male animals and cells in preclinical research obscures key sex differences that could guide clinical studies. And it might be harmful: women experience higher rates of adverse drug reactions than men do. Furthermore, inadequate inclusion of female cells and animals in experiments and inadequate analysis of data by sex may well contribute to the troubling rise of irreproducibility in preclinical biomedical research."

Teresa Woodruff, PhD, director of Women's Health Research Institute at Northwestern University, was a driving force behind the new policy to include females—from cells to animals—in preclinical research.

Woodruff and the Institute's leadership council have been actively advocating for sex inclusion in all levels of research to NIH and Congress for several years including a pivotal article in the journal *Nature* in 2010.

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NIH's Sally Rockey, deputy director for extramural research, announced an imminent rollout of a new biosketch format. Rockey wrote, "The primary focus of the new NIH biosketch will be the magnitude and significance of the scientific advances associated with a researcher's discoveries and the specific role the researcher played in those findings. This change will help reviewers evaluate you not by where you've published or how many times, but instead by what you've accomplished."

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