Center of Cancer Nanotechnology Excellence Celebrates Five Years of Progress

The Northwestern University Center of Cancer Nanotechnology Excellence (CCNE) — a collaboration between the Robert H. Lurie Comprehensive Cancer Center of Northwestern University and the Northwestern University International Institute for Nanotechnology (IIN) — launched in September 2005 as a National Cancer Institute initiative aimed at advancing nanotechnology discoveries that carry potential clinical utility for cancer detection, diagnosis, and treatment.

“The National Institutes of Health (NIH) recognized the power of nanotechnology and wanted to put together a team of the best researchers in the field to discover its potential influence on oncology,” says Steven T. Rosen, MD, Genevieve E. Teuton Professor of Medicine at the Northwestern University Feinberg School of Medicine and director of the Lurie Cancer Center.

Rosen, who drives the clinical translational oncology efforts, joins nanoscience expert Chad Mirkin, PhD, George B. Rathmann Professor of Chemistry, professor of Chemical and Biological Engineering, Biomedical Engineering, Materials Science and Engineering, and Medicine, and director of the IIN, as co-directors of CCNE and co-principal investigators on the center’s central NIH grant.

TRANSMISSION ELECTRON MICROGRAPH SHOWS 100 NM LIPID VESICLES CONTAINING A HIGHLY CONCENTRATED COMPLEX OF ARSENIC TRIOXIDE. THIS IMAGE OF NANOBINS, A CCNE COLLABORATION, RECENTLY GRACED THE COVER OF CLINICAL CANCER RESEARCH

Continued on pg. 2
The center’s progress over the past five years results from its multidisciplinary teams of nanoscientists, cancer biologists, engineers, and clinicians performing research with the goal of developing novel nanoscale technologies for use in cancer diagnostics, imaging agents, and therapeutics. Each group retains a distinct research focus and pairs with an industry partner to develop clinical applications.

Success in advancing breast and prostate cancers, as well as other cancers of the pancreas and brain, is also due to the center’s ability to leverage and build upon the existing resources, relationships, and traditions of cross-disciplinary collaborations that come with its partnerships.

“The CCNE functions as a catalyst for connecting scientists with widely different backgrounds to use nanotechnology as a platform for developing better diagnostics and therapeutics for cancer,” says Vincent Cryns, MD, associate professor of medicine in the Division of Endocrinology and associate professor of Cell and Molecular Biology.

Rosen shares Cryns’ pride in the center and its ability to join together colleagues from the Chicago and Evanston campuses to solve problems and advance science.

“CCNE cultivates opportunities for investigators from varying disciplines to work together to make discoveries,” Rosen says. “Northwestern serves as an international leader in cancer nanotechnology research.”

Breakthrough Breast Cancer Therapies

Cryns says nanotechnology consistently proves its potential to fundamentally transform cancer diagnostics and treatments.

“Nanoparticles are inherently customizable in terms of their tumor-targeting elements and drug cargo, thereby providing unprecedented opportunities for developing genuinely personalized cancer medicines,” he says.

Cryns uses nanotechnology to study a genetically programmed cell suicide response called apoptosis, taking special interest in developing new cancer therapies that specifically activate apoptosis in cancer cells. His team created a number of mouse models of breast cancer using fluorescent-colored breast cancer cells that can be tracked in living mice to evaluate the impact of novel therapies.

Through the CCNE, Cryns teams up with chemists and material scientists to design and evaluate novel nanotechnology-based breast cancer therapeutics. Cryns and fellow CCNE member Thomas V. O’Halloran, PhD, Charles E. and Emma H. Morrison Professor of Chemistry and professor of Biochemistry and Molecular Biology and Cell Biology, recently co-authored a paper highlighting a new nanoparticle, nanobin, designed to move undetected through the bloodstream until it arrives at the tumor and delivers poisonous arsenic, blocking tumor growth by causing the cancer cells to die through apoptosis.

“Arsenic trioxide is an established and highly effective treatment for some blood cancers such as acute promyelocytic leukemia, but had not yet been effective against solid tumors because of its rapid clearance and toxicity,” says Cryns.

Recent findings point to the effectiveness of the nanobin platform in improving the therapeutic impact of arsenic trioxide in solid tumors such as breast cancer. Results also suggest that other chemotherapy drugs that have been shelved because of toxicity could be reformulated and reevaluated as cancer therapies.

Detecting Prostate Cancer with Precision

World-renowned as a nanoscience expert, Chad Mirkin’s research projects focus on controlling the architecture of molecules and materials one billionth of a meter in size. Mirkin and CCNE member C. Shad Thaxton, MD, PhD, assistant professor in the Department of Urology, recently published a paper containing new prostate cancer findings.

Using nanoparticle-based technology, Mirkin and Thaxton demonstrated which men (of those who have undergone surgical treatment for prostate cancer) are cured long-term or are
Update: Critical Power Supply Plan Phase I Completed

In the October 2009 edition of the FSM Researcher, the Feinberg School of Medicine Research Office and Northwestern University Facilities Management announced a multi-million dollar commitment to upgrade the current electrical system to provide sufficient emergency power for critical lab equipment in Ward, Morton, Searle, and Tarry buildings.

During the 2009 - 2010 academic year, the Feinberg Research Office and NU Facilities Management worked closely together to implement the Critical Research Equipment Power Supply (CREPS) plan, and are pleased to announce the completion of Phase I. During Phase I, the following objectives were accomplished:

- Installation of a new “quick connect” generator hook-up for a 1,500KW three-phase 277/480 volt 2200 amp diesel generator set (approximately 10 hours of run time at full load) at the Tarry Loading Dock. The generator is located on site and provides sufficient power for all vital equipment during an outage.
- Connection of new generator hookup to the existing Tarry Building switchgear
- Connection of a series of four main power feeds from the existing Tarry switchgear to existing Ward, Morton, and Searle switches for general power risers (e.g. electrical outlets in labs). These power feeds are switched manually and allow for greater redundancy in case of an outage.

In the event of an unplanned power outage, the generator trailer, which will be contracted on stand-by basis, will be brought to loading dock and set up within three hours of notice.

With an interim solution in place, the CREPS plan has now moved on to Phase II. The goal of Phase II is to create a permanent connection to link Ward, Morton, Searle, and Tarry buildings to Lurie building generators so that limited critical equipment could remain powered in the event of a power loss for any or all Com Ed grid feeds.

Feinberg is currently working with electrical engineering consultants to design a link from existing Lurie generators to the newly installed connecting feeders between Ward, Morton, Searle, and Tarry Buildings under a predetermined load-shedding protocol.

Funding for the CREPS plan comes jointly from the NU Facilities R&R Budget and the Feinberg Renovation Fund.

CCNE, continued from page 2

at risk for a reoccurrence of prostate cancer. The team’s research shows that an ultrasensitive PSA (prostate-specific antigen) test proves 300 times more sensitive than currently available commercial tests. The new test detects a very low level of PSA, indicating that the cancer spread beyond the prostate. The test may also pick up cancer recurrence at a much earlier stage, when secondary treatments like radiation and hormone therapy remain the most effective methods for a patient’s survival.

“This test may provide early and more accurate answers,” says Thaxton. “It detects PSA at levels in the blood that cannot be detected by conventional tests. It may allow physicians to act at the earliest and most sensitive time, which we know provides patients with the best chance of long-term survival.”

As result of the study, researchers assigned a PSA level number to a cure for the first time, as well as a number that indicates the propensity for disease recurrence and severity of the recurrence. These newly identified levels fell below those detected with the conventional PSA test, quantifying PSA values at less than 0.1 nanograms per milliliter.

For more information about the Northwestern University Center of Cancer Nanotechnology Excellence, contact Steven Rosen: s-rosen@northwestern.edu or (312) 908-5250.
Faculty Profile: Meet Sarah Rice, PhD
Assistant Professor of Cell and Molecular Biology

Even California’s famously mild climate could not keep Sarah Rice, PhD, assistant professor of Cell and Molecular Biology, on the West coast. After completing her doctorate degree in biophysics at the University of California — San Francisco and her post doctoral fellowship in biochemistry at Stanford University, she returned “home” to the Windy City in 2003, where she earned her undergraduate degree at the University of Chicago.

Dr. Rice enjoys teaching at Northwestern, having been nominated three times for the Joost award for outstanding instruction in the medical school. She has graduated two PhD students and currently mentors one PhD and one MD/PhD student. Outside of Feinberg, Rice is member of the Biophysical Society and one-time ad hoc member of the Macromolecular Structure and Function study section with the National Institutes for Health.

When not teaching and researching, Rice is an avid athlete. She has completed two half-Ironman races and six marathons. In 2009, she won her age group in the world’s largest triathlon, the Chicago Accenture Triathlon.

FSM Researcher recently caught up with Dr. Rice to learn about her research and current projects.

What are your research interests?

The long-term goals of my laboratory’s research are to understand the functions of molecular motor tails in detail, and to understand how the function of a motor’s tail, combined with the function of its head, enable it to fulfill its role in the cell.

Specifically, I am researching kinesin motor proteins; they actively transport a variety of cargoes to multiple destinations within cells. Kinesin motor-based intracellular transport is critical to cell survival and has been implicated in many diseases, such as cancer, Charcot-Marie-Tooth disease, and neurofibromatosis. We believe that an understanding of kinesin transport may lead to treatments for these diseases.

What research projects are you currently pursuing?

We have three main projects. First, we are trying to determine how the kinesin-1 tail selects its binding partners. The tail binds to the heads to shut down motor activity to microtubules and to some cargoes. We don’t know how the tail switches between these various activities. Second, recent evidence indicates that when kinesin motors move mitochondria, they are regulated by a completely different mechanism than the tail-head interaction that our laboratory has identified. We would like to determine how this works. Third, the kinesin family motor Eg5 is critical for mitosis and is phospho-regulated. We are trying to figure out how phosphorylation controls the activity of this kinesin family member.

What is the ultimate goal of your research?

To transport cargo inside cells, kinesin motors consume ATP energy and walk along filamentous tracks called microtubules. While Kinesin’s walking mechanism is well-understood, it is not yet clear how kinesin motors “know” when to start and stop transporting cargoes, and how they transport different cargoes to different cellular destinations. Our research team aims to address these questions.

Our initial goal has been to determine how kinesin motor proteins are turned off when they are not needed for cargo transport. We have discovered that part of the kinesin motor called the tail binds to the walking parts, called the head, to shut the kinesin motor down. In the course of this work, we made a surprising observation that in addition to shutting down the walking heads of the kinesin motor, the tail can also bind to the microtubule track. By performing both of these functions at the same time, the tail can hold an inactive kinesin motor in a “parked” state on the microtubule track. The cargo-binding kinesin light chains tend to counteract this parked state, and activate kinesin for cargo transport. These findings are a start in explaining how kinesin motors transport different cargoes to different intracellular locations.

Continued on pg. 5
Qinwen Mao, MD, PhD, joins as assistant professor in Pathology.

Mao earned her Doctor of Medicine degree and her doctorate degree in Physiology from the Fourth Military Medical University in China, and completed her residency in Anatomic Pathology and clinical fellowship in Neuropathology at University of Texas Southwestern Medical School. She completed her post-doctoral fellowship at the University of Iowa Carver College of Medicine's Center of Gene Therapy. Most recently, she served as an assistant instructor in Pathology at University of Texas Southwestern Medical School.

Her research interests mainly focus on frontotemporal dementia and its gene therapy.

Welcome New Faculty

Brady L. Stein, MD, joins as assistant professor in Hematology/Oncology.

Stein recently completed his fellowship in the Division of Hematology at Johns Hopkins Hospital, where he also served as an intern and chief resident. He received his Doctor of Medicine Degree from Emory University School of Medicine and a master's degree in health sciences from Johns Hopkins University.

His research interests include clinical investigation and clinical translation in the myeloproliferative and myelodysplastic syndromes.

Qinwen Mao, MD, PhD, joins as assistant professor in Pathology.

Mao earned her Doctor of Medicine degree and her doctorate degree in Physiology from the Fourth Military Medical University in China, and completed her residency in Anatomic Pathology and clinical fellowship in Neuropathology at University of Texas Southwestern Medical School. She completed her post-doctoral fellowship at the University of Iowa Carver College of Medicine's Center of Gene Therapy. Most recently, she served as an assistant instructor in Pathology at University of Texas Southwestern Medical School.

Her research interests mainly focus on frontotemporal dementia and its gene therapy.

Faculty Honor

The Alzheimer’s Association presented its 2010 Bengt Winblad Lifetime Achievement Award to Marsel Mesulam, MD, Dunbar Professor of Neurology and Psychiatry and Director of the Cognitive Neurology and Alzheimer’s Disease Center at Northwestern University, for his “extraordinary achievements in advancing Alzheimer research.”

Mesulam was one of four scientists recognized during the association’s 2010 International Conference on Alzheimer’s Disease.

“We are beginning to reap the benefits of Alzheimer’s scientific advancements made in the last two decades, including a robust pipeline of anti-dementia drug therapies and advances in early detection,” said William Thies, PhD, chief medical and scientific officer at the Alzheimer’s Association. “These leading researchers, who have been in the vanguard of scientific advancements in Alzheimer’s disease, have devoted their professional careers to greater understanding of this disease. Their dedication and commitment will help us defeat Alzheimer’s – the public health threat of the 21st century – and create a world where future generations will not have to experience this progressive and fatal disease.”

The association cited Mesulam’s research on the connectivity of the monkey brain, the organization of human cholinergic pathways, the representation of cognitive functions by large-scale neurocognitive networks, and the neurobiology of dementias among his outstanding achievements, and recognized that his work on cholinergic pathways has been groundbreaking in understanding Alzheimer’s. The Association also noted that Mesulam is a “world expert” in Primary Progressive Aphasia.

Rice, continued from pg. 4

What brought you to the Feinberg School?

Chicago is home. I wanted to live here since the first time I visited. I came here for college and returned as soon as I could after finishing my post-doctoral work. Northwestern’s medical school is the best location in the world. My colleagues and my graduate students are wonderful (Volodya Gelfand especially; we’ve published several papers together and he is a fantastic mentor for me and for my students). I’ve been extremely privileged to work with such incredible scientists and generally terrific people at Northwestern. However, the real draw over every other place in the world was the location.

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To learn more about Dr. Rice’s research, e-mail her at s-rice@northwestern.edu or visit the Rice lab online. Her student, Josh Waitzman, was recently interviewed in the Chicago Sun-Times after he earned the prestigious Hertz fellowship for his studies with Dr. Rice.
NIH News

The NIH issued a notice on the federal district court injunction blocking the federal funding of human embryonic stem cell research.

The notice states that grant awards that were funded on or before August 23, 2010, are not affected by the preliminary injunction order, and award recipients may continue to expend the funds awarded to them prior to the date of the injunction.

However, pending competing and non-competing continuation hESC awards and contracts are suspended until further notice, and the peer review of all pending competing hESC applications and proposals also are suspended.

More information

NIH has issued new funding opportunity notices for the NIH Director’s Transformative Research Projects (T-R01) Award Program, and the NIH Director’s Pioneer and New Innovator Awards Program. Visit the links to opportunity notices for submission deadlines.

http://commonfund.nih.gov/T-R01/
http://commonfund.nih.gov/pioneer/
http://commonfund.nih.gov/newinnovator/

Dr. Henry Khachaturian, Director of Policy and Liaison Activities, NIH Division of Loan Repayment, explains how independent investigators can use career development awards to support their research program in a new podcast, titled “Enhancing Your Research Capabilities through an Independent Career Award.”

Strategic Planning Meetings to Address NICHD’s Mission for the Next Decade

The Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), one of the 24 grant making centers and institutes at the National Institutes of Health (NIH), recently announced plans to undergo a collaborative strategic planning process in order to identify the most promising scientific opportunities of the next decade across the breadth of NICHD’s mission.

There will be a series of nine strategic planning workshops held in Bethesda, Maryland, during Fall 2010 and Spring 2011, each of which will discuss one of the following nine scientific themes:

- Development
- Plasticity
- Cognition
- Behavior
- Reproduction
- Pregnancy and Pregnancy Outcomes
- Developmental Origins of Health and Disease
- Environment
- Diagnostics and Therapeutics

Meeting dates and details have not yet been announced. Interested faculty members are encouraged to bookmark the NICHD’s Vision link and check back regularly for further information.

Grant Writing Collaborative

The grant writing collaborative provides support for junior faculty writing their first NIH grant proposal as an adjunct to other mentoring services they receive. Rick McGee, PhD, associate professor in Medical Education and Faculty Development, leads this two-to three-month process in which five to 10 faculty develop and revise their proposals with input and guidance from the group.

The group meets every one to two weeks for 90 minute sessions. When there is sufficient interest to justify multiple groups, faculty may be divided along clinical and laboratory research lines, but previous experience has shown this is not necessary for the process to be effective.

Interested individuals should contact McGee at r-mcgee@northwestern.edu or (312) 503-1737 with any questions or comments regarding this program.
Sponsored Research

Robert Schleimer, PhD
Roy and Elaine Patterson Professor
Chief, Allergy-Immunology

Project title: “Role of Epithelium in Immunity, Inflammation, and Disease”
Sponsor: National Heart, Lung, and Blood Institute

Chronic rhinosinusitis (CRS) is a disease of mucosal inflammation that affects 30 million Americans and drives the need for nearly 300,000 surgeries per year. People with CRS are frequently treated with antibiotics with little or no benefit, despite the clear increase in the presence of various species of bacteria or fungi in the nasal airways and sinuses of patients with this disease.

The Northwestern sinus group consists of a team of investigators led by Schleimer and Robert Kern, MD, professor in Otolaryngology-Head and Neck Surgery and Medicine-Allergy Immunology; Anju Peters, MD, associate professor in Medicine-Allergy Immunology; and Atsushi Kato, PhD, assistant professor in Medicine-Allergy Immunology. It includes several ENT surgeons, allergists and laboratory scientists attempting to understand the pathogenesis of CRS with the goal of developing new treatments. They have found evidence that people with CRS have apparent defects in the innate immune response that usually fights off infections on a daily basis. The restricted local mucosal immunity probably explains the increased presence of bacteria and fungi in patients with CRS.

The group is testing the idea that inhibition of signaling by STAT3 (a molecule that is known to mediate immune and protective responses) may underlie the mechanism of deficiency in innate immunity in patients with CRS and are testing this hypothesis in this grant just awarded by the NIH.

The proposed studies will test the central hypothesis that the immune barrier is compromised in patients with CRS, and that dysfunction of activation of STAT3 plays a role in this deficient response. It is hoped that successful completion of this work will yield valuable new insight into chronic rhinosinusitis and potentially lead the way to new therapeutic strategies.

Robin H. Steinhorn, MD
Raymond and Hazel Speck Berry Professor of Pediatrics,
Vice Chair of Pediatrics
Head, Division of Neonatology

Project title: “Redox Regulation in the Prenatal Pulmonary Vasculature”
Sponsor: National Heart, Lung, and Blood Institute

This translational science project will delineate the role of oxidant stress in the pathophysiology of neonatal pulmonary hypertension, a serious clinical problem that affects up to 10 percent of infants admitted to the Neonatal Intensive Care Unit.

We will utilize a unique model of pulmonary hypertension, and in collaboration with Paul Schumacker, professor in the departments of Pediatrics, Medicine, and Cell and Molecular Biology, we will use innovative tools to measure oxidant stress in cellular compartments. We hope that an improved understanding of the mechanistic basis for this syndrome will allow us to identify novel clinical approaches to managing the severe vascular dysfunction that characterizes neonatal pulmonary hypertension.

Core Fact

The Feinberg School of Medicine recently added small animal imaging to the Center for Advanced MRI. The new instrument, a 7T Bruker ClinScan, can accommodate mice and other animals up to the size of rabbits. A wide variety of imaging methods can be applied to any number of organ systems.

For more information, please contact Daniel Procissi at d-procissi@northwestern.edu or the CAMRI website.
New Clinical Trial: Molecular Staging of Endometrial Cancer

**Investigator:** Julian Schink, MD, Chief, Division of Obstetrics and Gynecology-Gynecologic Oncology, John and Ruth Brewer Professor of Gynecology and Cancer Research

**Sponsor:** National Cancer Institute

**Collaborators:** National Institutes of Health Clinical Center

This study will collect tissue samples from women with cancer of the endometrium (lining of the uterus). Researchers will use the samples to learn more about endometrial cancer and develop new treatments and methods of prevention.

Women with endometrial cancer who are suitable candidates for surgery and who have not had prior retroperitoneal surgery or pelvic or abdominal radiation therapy may be eligible for this study. Candidates will be screened with a medical history and physical examination, blood tests, and endometrial biopsy (surgical removal of a small tissue sample) or dilation and curettage (D&C).

Participants will undergo the standard surgical treatment for endometrial cancer: hysterectomy (surgery to remove the uterus) along with removal of both fallopian tubes and ovaries. Lymph nodes in the pelvis near the main blood vessel in the abdomen are also removed to determine if the disease has spread to these nodes. If cancer is found involving other sites, the cancer in those areas may also be removed; examination of the tissues will determine if further therapy beyond surgery is needed.

Some of the tissue removed during surgery, plus a urine sample collected from a catheter bag during surgery, and blood drawn before surgery and at follow-up visits six weeks and three years after surgery, will be sent to the GOG Tissue Bank in Columbus, Ohio. (This bank stores, processes, and distributes biological specimens from patients that agree to participate in the study.)

Follow-up visits are six weeks after surgery, then every three months for the first year, every six months for the next two years, and then annually for the next seven years, for a total 10-year follow-up. The visits will include an examination and questions about health status and treatments received between visits.

GOG-210 has developed the largest organized specimen and data collection of endometrial cancers, including rare types such as uterine papillary serous carcinoma (UPSC). Feinberg researchers in the Division of Gynecologic Oncology have partnered with the Gynecologic Oncology Group (GOG) to use endometrial cancer specimens collected under GOG-210 to study UPSC.

The goal of the study is to validate a novel tissue biomarker that predicts chemoresistance. Ultimately this will lead to improved therapeutic options for women with this deadly disease.

For more information on the trial, visit [www.clinicaltrials.gov](http://www.clinicaltrials.gov).

The Northwestern clinical trial can also be reached directly at (312) 472-4681.

Call for Abstracts

Registration is open for the **15th Annual Drug Discovery Symposium** on Wednesday, October 13, hosted by the Center for Molecular Innovation & Drug Discovery (CMIDD). The symposium will feature a keynote address by Frank Longo, MD, PhD, George & Lucy Becker Professor and Chair, Department of Neurology & Neurological Sciences, Stanford University School of Medicine.

To learn more about the event and register, visit the Symposium [web site](http://www.clinicaltrials.gov).

The CMIDD has also issued a call for abstracts for a poster session for work related to the field of drug discovery. The deadline is September 22, and awards will be presented to one graduate student and one postdoctoral fellow for Best Poster Presentation. Those who wish to participate may [submit an abstract](http://www.clinicaltrials.gov) online.

Staff Profile

**Vivi Frangidikis, Research Technician, Genomics Core Facility**

“What we do at the Core Facility is a stepping stone in helping Feinberg investigators find what they are looking for to advance their research.” [Read more about Vivi](http://www.clinicaltrials.gov).
Research in the News

CBS Evening News  July 14
Extra weight in the hips associated with greater cognitive decline in older women
Dr. Diana Kerwin’s research was featured.

Also reported in:
CNN  July 15
Reuters  July 14
UPI  July 16
Scientific American  July 14
US News & World Report  July 15
TIME  July 15
Web MD  July 14
Asian News International  July 15
Daily Mail (UK)  July 15
Globe & Mail (CAN)  July 16
Boston Globe  July 19

National Geographic  July 16
Human sperm gene traced to the dawn of animal evolution
Dr. Eugene Xu’s research was featured.

US News & World Report  July 21
Vaginal delivery may be OK after C-section
Dr. William Grobman was quoted.

Also reported in:
Wall Street Journal  July 22
Chicago Sun-Times  July 22
Atlanta Journal Constitution  July 26
Slate  July 23

Drug problem
Dr. Teresa Woodruff’s work is featured.

New York Times  July 28
Ask an expert about scleroderma
Dr. John Varga answers readers’ questions.

Financial Times  July 30
Geron given FDA go-ahead for stem cells trial
Dr. Richard Fessler is quoted.

High-Impact Factor Research
July 2010


Animal Corner

The Center for Comparative Medicine (CCM) recently made changes to the required Personal Protective Equipment (PPE) worn when working with animals. Below is a summary of the new requirements in various biosecurity areas of the vivarium. These changes became effective July 1.

► Barrier PPE
1. Disposable blue lab coat
2. Face mask
3. Gloves

► Conventional PPE – Rodent, Rabbit and Bird
1. Disposable lab coat
2. Face mask
3. Gloves

► Conventional PPE – Large Animal
1. Disposable lab coat
2. Gloves
3. Shoe covers if entering the animal’s pen

► Conventional PPE – Amphibians and Fish
1. Gloves

PPE for all other areas will remain the same. Please review the standard operating procedure (SOP) for a complete description of PPE required in various areas and a description of what is required when working with specific species.

Please note, the approved PPE for species must also be worn in the Procedure Rooms when animals are present. Also, remember to wear the appropriate PPE in your laboratory when animals are present.

For any questions or comments please contact CCM training office:
Carolyn Malinowski:
Phone (312) 503-0113
E-mail c-malinowski@northwestern.edu

Bob Williams:
Phone (312) 503-3483
E-mail r-williams3@northwestern.edu
Funding Opportunities

Treatment Trials and Drug Development

More information

Submission Deadline: October 1, 2010
Upper Amount: $900,000

Synopsis: The largest program at Stanley Medical Research Institute (SMRI) is the identification of medications to improve the treatment of schizophrenia and bipolar disorder. Although some medications have been available since the 1960s, they have proven to be only partially effective. Many affected with these diseases continue to have symptoms even when taking available medications, others find it difficult to take medications because of side effects.

The purpose of the Regular Treatment Trials program is to support the testing of medications to assess efficacy for treating schizophrenia and bipolar disorder, especially those that are unlikely to be tested by pharmaceutical companies because they are not commercially profitable.

Adverse Metabolic Side Effects of Second Generation Psychotropic Medications Leading to Obesity and Increased Diabetes Risk (RO1)

More information

Submission Deadline: October 22, 2010
Upper Amount: $2.5 million

Synopsis: The intent of this funding opportunity announcement from the National Institutes of Health and the Department of Health and Human Services is to support research that will increase understanding of the nature, rates, and pathophysiology of adverse metabolic effects of psychotropic medications; elucidate biomedical and psychosocial risk factors for the development of metabolic adverse effects of psychiatric therapeutics; and develop interventions to prevent or mitigate metabolic adverse effects across the lifespan.

The introduction of new medications targeting the symptoms of mental illness has led to improved clinical outcomes for many patients, and has significantly broadened treatment options available for illnesses such as schizophrenia, bipolar disorder, and depression. However, recent reports clearly indicate that many of the newer psychotropic agents are also associated with metabolic risks and side-effects burden, including weight gain, obesity, type 2 diabetes mellitus, metabolic syndrome, and cardiovascular disease.

More events

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