

2013



There's No  
Other Hospital  
Like It





Cover photo: (Center) CT scan of the chest. Image courtesy of Dr. Jack Yao, Radiology and Imaging Sciences, CC.



# 2013

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## Celebrating Collaborations



Partnerships have inspired the NIH Clinical Center research advances throughout its history. During the past 60 years, our staff, our patients, and NIH investigators have worked together toward some of the greatest scientific discoveries. In 2012, we turned significant attention to collaborating with the external community to strengthen our existing endeavors and explore new, exciting territory.

Most notably, the Clinical Center laid the groundwork for expanding engagement with outside investigators on the use of Clinical Center resources. A new NIH grant program will support partnerships between intramural and extramural researchers that engage our unique capabilities, such as pharmaceutical development, our advanced imaging technologies, and new studies involving our patients with rare diseases. We look forward to further opening the Clinical Center, America's research hospital, to these new research opportunities.

Two new collaborations will expand opportunities for patients as well. An agreement between the Clinical Center, the NIH, and Children's National Medical Center in Washington, DC, will enroll very young children in rare disease studies to examine the onset of genetic conditions. Another new partnership with the U.S. Department of Defense launched studies at the Clinical Center to study civilians and military service members with traumatic brain injuries. Information on the presentation of such injuries will help to better diagnose and treat the millions affected by blasts and accidents each year.

Our attention to professional development spans beyond the Clinical Center staff. Through partnerships with Project SEARCH and the Walter Reed National Military Medical Center, the Clinical Center supports a diverse and inclusive workforce, creating a better community for our staff and our patients. It has been an honor getting to know these courageous young men and women.

Although we face continuing resource constraints, our commitment to improving public health remains ever present. As we celebrate a milestone year in 2013, we recognize the significance of teamwork as the unifying thread in the noble tapestry of the NIH Clinical Center. Proudly, we welcome more partners into the fine fabric of our hospital. The synergy we create together will continue to drive our success.

John I. Gallin, MD  
*CC Director*



**OUR VISION** As America's research hospital, we will lead the global effort in training today's investigators and discovering tomorrow's cures.

**OUR MISSION** To provide a versatile clinical research environment enabling the NIH mission to improve human health by:

- investigating the pathogenesis of disease;
- conducting first-in-human clinical trials with an emphasis on rare diseases and diseases of high public health impact;
- developing state-of-the-art diagnostic, preventive, and therapeutic interventions;
- training the current and next generations of clinical researchers; and,
- ensuring that clinical research is ethical, efficient, and of high scientific quality.

There's No Other Hospital Like It



## Recent NIH Clinical Center Achievements

**In 2012, we:**

### **Clinical Research**

- Launched a new collaborative grant program that will further enhance the translation of scientific observations and laboratory discoveries into new approaches for diagnosing, treating, and preventing disease.
- Teamed with the Uniformed Services University and Walter Reed National Military Medical Center to develop innovative approaches to diagnose and treat brain injuries.
- Established the NIH Clinical Center—Food and Drug Administration Center for Drug Evaluation and Research Collaborative Task Force to streamline the investigational new drug (IND) application process, particularly for emergency INDs for investigational or repurposed drugs for life-threatening situations.
- Established a collaboration with NIH and Children's National Medical Center to conduct clinical research involving young children.

### **Patient Care and Safety**

- Streamlined admission and registration process by standardizing the information patients receive about their medical appointments from any of the NIH institutes.
- Expanded work in personalized medicine by implementing mutational analysis for diagnostics and pharmacogenomics to improve patient safety by using information about a person's genetics to choose drugs and drug dosages that are most likely to work best for them.

### **Training and Workforce Development**

- Welcomed the inaugural class of medical, dental, and veterinary students to the Medical Research Scholars Program.
- Conducted the first Clinical and Translational Research Course for Ph.D. students from basic science programs.
- Provided volunteer work experiences for recovering military service members who were wounded in combat to help them transition to civilian life through a collaboration with the Walter Reed National Military Medical Center.



## PATIENT ACTIVITY 2010–2012

	Year	Number	Change from Prior Year	
<b>Admissions</b>	<b>2010</b>	6,000	6.6%	—
	<b>2011</b>	6,082	1%	+
	<b>2012</b>	5,916	2.8%	—
<b>New patients</b>	<b>2010</b>	10,086	2.2%	—
	<b>2011</b>	10,696	6%	+
	<b>2012</b>	10,694	0.01%	—
<b>Inpatient days</b>	<b>2010</b>	56,502	1.5%	+
	<b>2011</b>	56,594	0.2%	+
	<b>2012</b>	54,971	2.9%	—
<b>Average length of stay (days)</b>	<b>2010</b>	9.4	7.6%	+
	<b>2011</b>	9.2	2%	—
	<b>2012</b>	9.3	1%	+
<b>Outpatient visits</b>	<b>2010</b>	96,664	0.3%	+
	<b>2011</b>	106,134	10%	+
	<b>2012</b>	105,176	0.9%	—

## CLINICAL RESEARCH ACTIVITY FOR 2008–2012

	Year	Number
<b>Active Protocols</b>	<b>2008</b>	1,449
	<b>2009</b>	1,451
	<b>2010</b>	1,443
	<b>2011</b>	1,513
	<b>2012</b>	1,530
<b>New Protocols</b>	<b>2008</b>	155
	<b>2009</b>	162
	<b>2010</b>	158
	<b>2011</b>	207
	<b>2012</b>	167
<b>Principal Investigators</b>	<b>2008</b>	478
	<b>2009</b>	480
	<b>2010</b>	474
	<b>2011</b>	489
	<b>2012</b>	482

# Championing Research



## Celebration of Science Visits NIH

Scientific and policy leaders convened in early September for the Celebration of Science, an event dedicated to reaffirming America's commitment to bioscience.

Spearheaded by FasterCures and the Milken Institute, the event included panels and presentations, activities on the NIH campus, and a Kennedy Center event honoring contributions to science.

"This gathering of experts aims to identify how academia, government, and industry can work together, knocking down some of those traditional barriers, focusing more on open innovation that will benefit the public," said NIH Director Dr. Francis S. Collins.

As part of the NIH program, attendees watched a live video of Collins visiting sites around the NIH campus, including the Clinical Movement Analysis Laboratory in the Clinical Center.

Actor and Dancing with the Stars champion John O'Hurley demonstrated capabilities of equipment in the Clinical Movement and Analysis Laboratory with NIH Director Dr. Francis Collins and Rehabilitation Medicine's Dr. Diane Damiano.



## Patient Finds Hope Through Hypoparathyroidism Study

When Daralin Severino developed hypoparathyroidism after her parathyroid glands were injured during surgery, her kidneys — and her life — were threatened by low calcium levels. Parathyroid glands regulate the body's calcium and phosphorus levels, and an imbalance can lead to problems with bones, muscles, skin and nerve endings.

Severino entered a clinical study at the Clinical Center led by Dr. Karen Winer of the National Institute of Child Health and Human Development. The trial compared the use of an insulin pump to deliver a synthetic human parathyroid hormone continuously versus twice-daily injections of the hormone. The continuous therapy, which better mimics the body's natural process, increased Severino's strength and stamina and helped her kidneys recover.

Today, the only approved treatment for hypoparathyroidism involves calcium carbonate and vitamin D supplements, which can damage the kidneys.

"Research on the use of replacement synthetic parathyroid hormone given by injection or the insulin pump, will hopefully provide an alternative to conventional therapy in the future," Winer said.



Patient Daralin Severino (left) found hope in a trial conducted by Dr. Karen Winer (right).

## ResearchMatch Connects Interested Volunteers with Recruiting Investigators

The Clinical Center joined a first-of-its-kind online network, ResearchMatch, that connects willing research volunteers with the investigators who are conducting studies that are right for them.

The system allows participating researchers to search for appropriate matches among the non-identifiable ResearchMatch volunteer profiles. Researchers can then send potential volunteers brief messages about their studies.

If volunteers want to learn more about the study, they can release their contact information to the research team. Volunteers are not obligated to participate in any study, can edit their profiles at any time, and can withdraw from the ResearchMatch system if they no longer want to be in the registry.

Joining the registry can reduce the time that volunteers spend searching for research studies and improve the chances of matching them with studies they are eligible for and interested in. ResearchMatch is a not-for-profit activity, and there is no fee to join. All ages and backgrounds are welcome.

ResearchMatch was developed and is hosted by a team at Vanderbilt University and is a collaborative effort among the national network of medical research institutions that are part of the NIH Clinical and Translational Science Awards program.



### Donor Search Coordinator Becomes a Stem Cell Donor

After coordinating unrelated stem cell donations from others for 10 years, Jennifer Wildner became a first-time donor in February with help from nurse Tamsen Sweigart.





### **NIH Dedicates a Special Day to Siblings of CC Pediatric Patients**

The fifth annual Sibling Day on July 17, 2012, recognized siblings of children participating in Clinical Center studies. The program highlighted the children's unique experiences and united groups that support siblings of pediatric patients throughout the year.

Brothers and sisters participated in therapeutic games, educational opportunities and demonstrations designed to help them share their expertise as super siblings and recognize them for their important role in the health care team. Siblings also examined a fake brain in the operating room, learned about medical photography and illustrations, and tried the mock MRI scanner to feel what their siblings go through. During an awards ceremony at The Children's Inn at NIH, siblings received certificates commemorating their participation and role as a "Super Sib, Super Star."

### **NIH Project SEARCH Provides Internships to Adults with Intellectual Disabilities**

Project SEARCH provides young adults with intellectual disabilities total workplace immersion and helps them build marketable skills. The NIH began a partnership with the program in 2010 and has counted success through employment of graduates and promotion of diversity and acceptance among NIH staff.



The NIH community honored the accomplishments, growth and determination of the NIH Project SEARCH 2011–2012 graduating class on June 8, 2012. The Clinical Center piloted the first year of the program, but this class saw 10 interns complete a 30-week unpaid internship in more than 15 worksites across the NIH.

In July, 12 interns in the NIH-Project SEARCH 2012-2013 class visited the NIH for an introduction to the program. Students in this class are placed in eight NIH institutes and centers located on and off campus.

Project SEARCH interns and their mentors marked the interns' graduation and successful completion of the program in June.



## CC Remembers Composer and Conductor Marvin Hamlisch

The Clinical Center mourns the loss of composer and conductor Marvin Hamlisch, who died August 6, 2012. A friend of Mrs. Lily Safra, whose donations support the Edmond J. Safra Family Lodge, Hamlisch performed an annual holiday concert for CC patients and visitors at the lodge or in the CC every year since 2005.

## Wounded Warriors

After CPL Mark Sackett stepped on an improvised explosive device as an infantryman in Afghanistan, he wondered what he would do after rehabilitation. Sackett spent four months in the Clinical Center Rehabilitation Medicine Department observing and helping the occupational therapy practice through the Wounded Warrior Project.

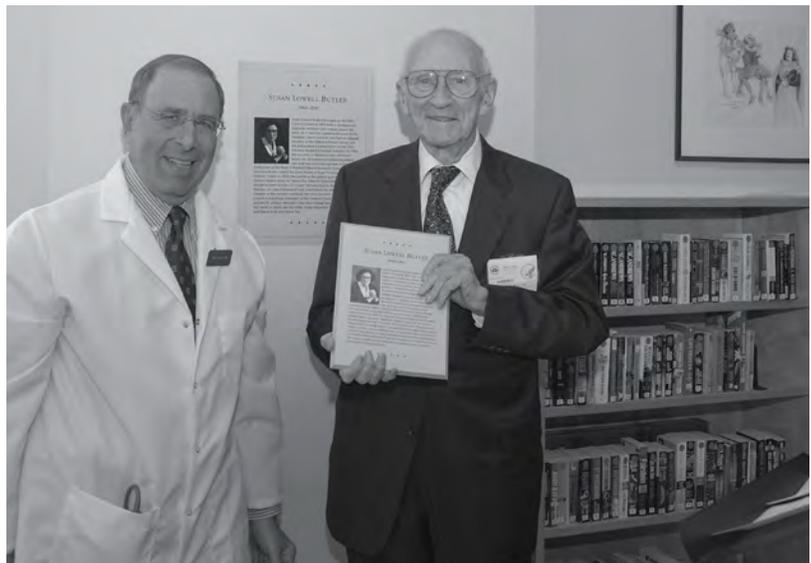
The project helps injured soldiers transition from military to civilian life with services that include vocational training and experience. Sackett uses what he learned at the CC in his current studies as he pursues occupational therapy at Lord Fairfax Community College. Three other Wounded Warriors have worked in physical therapy and information technology at the CC.

“Training is part of our mission,” said Colleen McGowan, deputy chief operating officer. “These soldiers have given so much, and they are excited to learn and contribute. We see it as a win-win for us and for them.”

The CC is involved with the Wounded Warrior Project through a collaboration with the Walter Reed National Military Medical Center.

## Longtime Advocate Susan Butler Honored

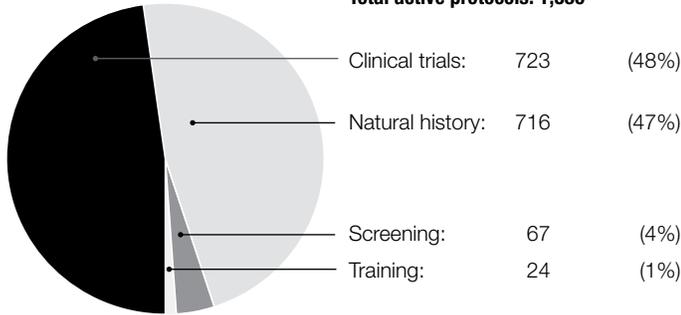
CC Director Dr. John I. Gallin presented Jim Butler with a plaque honoring the memory and contributions of his wife, Susan Lowell Butler, during a dedication ceremony on April 30, 2012. Susan became one of the CC’s most notable patient advocates, serving as an original member of the NIH Advisory Board for Clinical Research and faculty lecturer for the CC’s course, “Introduction to the Principles and Practice of Clinical Research.” She also contributed to the course’s textbook. In 2009, she served as patient greeter to President Barack Obama during his visit to the hospital. Mrs. Butler died in 2010. The plaque now hangs in the seventh floor atrium of the CC near the patient library.



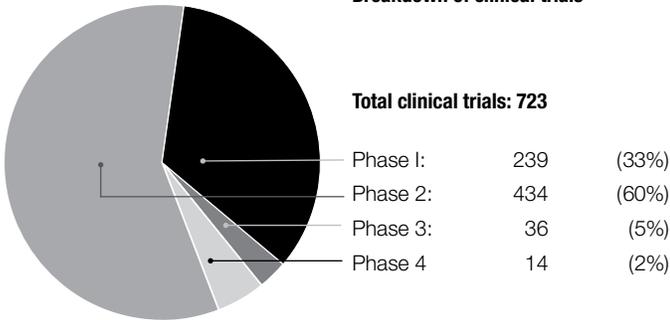


## PROTOCOLS BY RESEARCH TYPE (ONSITE INTRAMURAL PROTOCOLS, FISCAL YEAR 2012)

### Total active protocols: 1,530



### Breakdown of clinical trials



Clinical studies are medical research studies (or protocols) in which human volunteers participate. *Clinical trials* are studies developing or investigating new treatments and medications for diseases and conditions. *Natural history studies* investigate normal human biology and the development of a particular disease. *Screening studies* determine if individuals may be suitable candidates for inclusion in a particular study. *Training studies* provide an opportunity for staff physicians and other health care professionals to follow particular types of patients.

### Clinical trials phases

- Phase 0:** An initial first-in-human study (20–30 participants) under an exploratory IND (investigational new drug) for early identification of biologic and molecular markers in new clinical agents. There is very little agent exposure with no therapeutic or diagnostic intent.
- Phase I:** Researchers test a new drug or treatment for the first time in a small group of people (20–80) to evaluate its safety, determine a safe dosage range, and identify side effects.
- Phase II:** The study drug or treatment is given to a larger group of people (100–300) to see if it is effective and to further evaluate its safety.
- Phase III:** The study drug or treatment is given to large groups of people (3,000 or more) to confirm its effectiveness, monitor side effects, compare it with commonly used treatments, and collect information that will ensure safe usage.
- Phase IV:** These studies are done after the drug or treatment has been marketed. Researchers continue to collect information about the effect of the drug or treatment in various populations and to determine any side effects from long-term use.

### Information Technology Expands Access to Evidence-Based Knowledge for Clinical Decision Making



Many resources for health care providers are available online. However, providers often don't have time or don't know where to find the information they need.

Dr. James Cimino, chief of the Clinical Center Laboratory for Informatics Development, has developed an innovative solution to this problem using infobuttons. Infobuttons are icons in a clinical information system, such as electronic medical records. When a user clicks on the button, a window pops up with possible questions of interest, such as on drug dosage, implications of a test abnormality, or health behavior information. Clicking on one of the questions brings the user to an online resource with further information to answer that query. This information helps patients, clinicians and caregivers make informed clinical decisions.

The CC is collaborating with the University of Utah to develop a national resource — the Librarian Infobutton Tailoring Environment (LITE) — that allows infobutton managers at health care institutions to customize the infobutton questions for their audiences. This LITE resource will easily allow medical librarians and other infobutton managers to pull evidence-based knowledge from virtually any online information resource and choose the infobutton functions to meet the needs of their users.

“If widely adopted, infobuttons powered by LITE have the potential to touch as many lives as any research advance made at the Clinical Center,” said Cimino.

### Collaborative Program Studies Traumatic Brain Injury

Millions of people suffer a traumatic brain injury (TBI) every year in the United States. The worst of these injuries can lead to permanent brain damage or even death.

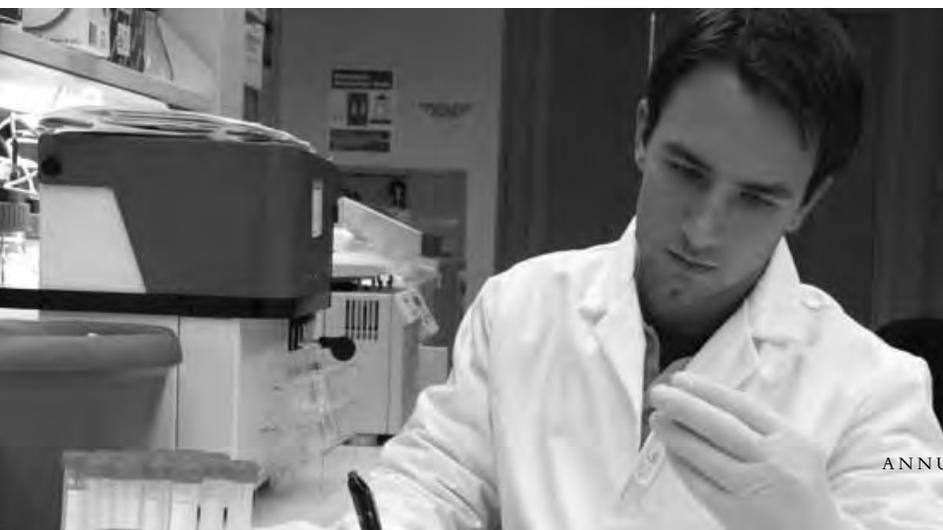
To better understand TBI and develop innovative approaches for diagnosis and recovery, researchers from the NIH and the U.S. Department of Defense have partnered to create the Center for Neuroscience and Regenerative Medicine (CNRM).

CNRM research covers the spectrum from basic biology studies to clinical trials and translational research. Researchers from the Clinical Center lead or co-lead the CNRM's diagnostics and imaging, neuroregeneration, and rehabilitation and evaluation programs. In addition, CC Director Dr. John I. Gallin is a member of the center's programmatic oversight committee.

One study, led by Dr. Leighton Chan of the CC Rehabilitation Medicine Department and Dr. Larry Latour of the National Institute of Neurological Disorders and Stroke, addresses a critical need to understand the immediate and long-term effects of TBI. Unlike most studies that collect data at only one point in time, this protocol collects brain images, blood samples, and other data over five years starting immediately after the injury. The study takes advantage of the CC's neuropsychological testing and imaging resources, including one of only a few whole-body simultaneous MRI/PET imaging machines in the world.

The team recruits brain injury patients who visit the emergency room of one of four local collaborating institutions. A parallel study recruits members of the military, enabling researchers to compare the effects of brain injury in wounded warriors and civilians.

“This study will let us give better information to patients and families on the long-term consequences of brain injury. The results could also help us determine which injuries might be amenable to certain treatments,” said Chan.



## Functional Electrical Stimulation Device Improves Gait in Children with Cerebral Palsy

Cerebral palsy is a group of disorders that can affect the ability to move and maintain balance and posture. People with cerebral palsy often wear braces to keep their ankles stable and help them walk. But braces can interfere with certain movements, and brace use over an extended period of time can cause muscle weakness and lead to a loss of mobility later in life.

Researchers in the Clinical Center's Rehabilitation Medicine Department (RMD) studied an electrical stimulation device to prevent foot drop and tripping when walking among children with cerebral palsy. Foot drop is caused by weakness or paralysis of the muscles involved in lifting the front part of the foot. This causes a person to drag the toe on the ground or slap the foot on the floor.

The WalkAide device is a cuff worn just below the knee where it stimulates the muscle on the front of the lower leg that lifts up the ankle and foot. In addition to its success in gait improvement, the RMD team found that electrical stimulation reversed some of the leg muscle wasting caused by the disorder and other less progressive treatment approaches. Also, in contrast to braces, the device preserved and, in several patients, increased muscle strength.

These results could lead to a new standard of treatment that strengthens weaker muscles to improve gait and helps children with cerebral palsy maintain their ability to walk in adulthood.

The laboratory studies an electrical stimulation device to prevent foot drop and tripping when walking in children with cerebral palsy.



## Collaboration between NIH and Children's National Medical Center Benefits Young Patients

A new agreement will increase insight into the early origins and development of rare diseases and help discover new treatments for these disorders.

The Translational Research in Pediatrics Program is a joint effort of the NIH, the Clinical Center, and Children's National Medical Center in Washington, DC. This program combines the clinical expertise and infrastructure of Children's National and the CC's state-of-the-art research facilities to support very young patients. This program will develop new studies addressing rare conditions at an earlier age.

The CC sees more rare disease patients than any place else in the nation, historically caring for those older than 2 years or who weigh more than 20 pounds. As researchers work to pinpoint the genetic causes of rare conditions and develop treatment options, they want to be able to intervene earlier in the course of diseases.

NIH investigators will identify a research collaborator at Children's National, and Children's National will offer access to its Clinical Research Center for outpatient visits. Children's National has authorized 20 inpatient hospital admissions under the program using private funds.

"We are grateful that Children's National is opening its doors to help us expand our research profile and establish new partnerships between our institutions that will make a difference in the lives of young children suffering from rare, and often life-threatening, disease," said NIH Clinical Center Director Dr. John I. Gallin.

The first partnership, between Dr. Charles Venditti of the National Human Genome Research Institute and Dr. Kimberly Chapman of Children's National, is evaluating methylmalonic acidemias, a group of rare inherited metabolic disorders.

## Study Shows Relationship between Abdominal Fat and Colon Cancer Risk

Almost all cases of colorectal cancer start from polyps, or abnormal growths in the lining of the colon. Identifying the risk factors for polyps can aid in preventing colorectal cancer, the second leading cause of cancer death in the United States.

Dr. Ronald Summers of Clinical Center Radiology and Imaging Sciences led a collaborative study with Walter Reed National Military Medical Center that found that patients with the most visceral adipose tissue, a type of abdominal fat, are twice as likely to have polyps as patients with the least visceral adiposity.

Summers' team used virtual colonoscopy, a technique that uses computerized tomography (CT) imaging to find polyps in the colon. Summers is one of the pioneers of the procedure.

His recent findings could identify patients who are at higher risk and may need colonoscopies more often to monitor for potentially precancerous polyps.

## A New Task Force Aims to Streamline the Clinical Trial Approval Process

Bringing a new drug to the marketplace is a complex, time-intensive process, but if approved, the new drug can dramatically change lives for the better. Clinical Center investigators develop new therapies with early pre-clinical safety studies and first-in-human clinical trials, and submit investigational new drug (IND) applications to the U.S. Food and Drug Administration (FDA). To facilitate and streamline filings for IND applications, the CC and FDA formed a joint task force co-chaired by Dr. Juan Lertora, director of clinical pharmacology at the CC and Dr. Anne Pariser, associate director for rare diseases in the Office of New Drugs at FDA.

Key goals center on early engagement between CC investigators and FDA scientific and regulatory staff on planned programs and regulatory requirements; training on IND-enabling requirements (including pre-clinical data and clinical safety monitoring plans); identifying best practices and areas for collaboration; and instituting a rapid resolution process when application issues arise.

“Ensuring that CC investigators have a comprehensive understanding of the regulatory requirements for conducting clinical trials will facilitate filings of IND applications, particularly emergency INDs where no other treatment exist,” said Dr. Lertora.

## Nutrition Experts Contribute to Research on Obesity and Cardiovascular Disease Risk

The Clinical Center Nutrition Department partnered with other NIH institutes to shed light on obesity and cardiovascular disease risk in children and minorities. Three studies leveraged the CC's unique resources, such as its metabolic research kitchen, as well as its collaborative contacts between NIH institutes and external research institutions.

One study, by researchers from the CC; the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); and the National Heart, Lung, and Blood Institute, focused on the relationship between insulin resistance—difficulty absorbing glucose—and endothelial dysfunction—improper function of the cells that line blood vessels. The conditions both contribute to risk of cardiovascular disease, and previous studies reported an association between the two.

African-American women are more likely than white women to have insulin resistance, so scientists theorized they would have more endothelial dysfunction. However, the recent NIH study found that endothelial function was similar in African-American and white women who had just eaten breakfast. Therefore, insulin resistance may not explain racial differences in endothelial function and cardiovascular disease risk among these women.

A team from the CC, the National Institute of Child Health and Human Development, the NIDDK, and the Uniformed Services University of the Health Sciences studied loss-of-control eating, which may lead to excess weight gain in youth. African-American and white children and teens were equally likely to experience loss-of-control eating. But of those with loss-of-control eating, African-American youth ate more calories than white youth. These findings may help explain the high rates of obesity in African-American youth.

The same team also adapted and evaluated a tool to measure emotional eating in children and teens. Youth with high scores on the tool—but not those with low scores—ate more calories during a meal if they felt unpleasant emotions. This tool could identify young people who are emotional eaters and thereby flag them for possible interventions.



## Genomic Technology Tracks a Life-threatening Infection

Bacterial infections that do not respond to antibiotic treatment have become common in hospitals worldwide. A team of Clinical Center and other NIH researchers used an innovative technology to track a multidrug-resistant infection in CC patients last year.

When a new patient was admitted to the CC with antibiotic-resistant *Klebsiella pneumoniae* bacteria in summer 2011, clinicians took every precaution to keep the infection from spreading. Despite staff efforts, over the ensuing six months 18 patients tested positive for the bacteria, and seven died from the infection.

“We were deeply saddened by their deaths,” said Clinical Center Director Dr. John I. Gallin. “We were determined to stop this infection in its tracks and do everything possible to protect our patients.”

That commitment involved tracking the bacteria’s transmission path in a novel way. Epidemiologists, microbiologists and researchers from the National Human Genome Research Institute united to survey CC patients for the bacteria. By finding subtle changes in the bacteria’s genes among patients through whole-genome sequencing and comparing findings with epidemiological data on patient location and care, these investigators reconstructed the infection’s trail.

The NIH is the first institution to use real-time, whole-genome sequencing to track this type of infection. These novel technologies will help document how the organisms are spread and should help stop infection transmission. These techniques also can provide insight about these bacteria and their drug resistance, thereby supporting the development of new antibiotics.

“The cooperation of the entire Clinical Center staff, and our patients and their families to stop transmission has been extraordinary,” said Gallin. “It’s a model for other hospitals, and we are pleased that this important scientific advance will help hospitals around the world control multidrug-resistant infections.”



Authors (first row left to right) Dr. Sara Hull, Dr. Christine Grady, chief of the Department of Bioethics, Dr. David Wendler, (second row left to right) Dr. Marion Danis, Dr. Joseph Millum, Benjamin Berkman, and Seema Shah

## Research Ethics Casebook

The Clinical Center’s Bioethics Consultation Service shares a collection of its most interesting and informative research ethics consultations and starts a dialogue on remaining open questions in *Research Ethics Consultation: A Casebook* published by Oxford University Press.

### CC Opens its Doors to Extramural Researchers

The NIH is taking steps to expand engagement with extramural investigators interested in collaborating with intramural researchers to use the unique resources of the Clinical Center.

“The NIH Clinical Center is truly a national treasure and opening its doors to a greater pool of researchers will welcome fresh perspectives and cultivate new opportunities for discovery that will translate to greater human health,” said NIH Director Dr. Francis S. Collins.

Starting in late 2013, a new NIH grant program, Opportunities for Collaborative Research at the NIH Clinical Center, will provide institute funding for research projects that take advantage of the unique resources and opportunities of the CC. NIH released the Notice of Intent to publish this funding opportunity announcement on July 26, 2012, and a funding opportunity announcement for the grant was released in November 2012.

To qualify for these grants, extramural researchers must collaborate with an NIH intramural researcher and utilize CC resources. A new website provides interested investigators with a catalogue of CC and NIH assets that are potentially available to extramural researchers. These resources include state-of-the-art imaging equipment, specialty clinics focused on a broad range of disorders, and support services for designing and managing clinical trials. An online toolkit also presents searchable descriptions of NIH studies currently underway at the CC, details on funding opportunities for extramural collaborators, and a step-by-step guide for identifying and collaborating with NIH intramural investigators.

Visit [clinicalcenter.nih.gov/translational-research-resources](http://clinicalcenter.nih.gov/translational-research-resources).

“The Clinical Center should be available for collaborations that will further enhance the translation of scientific observations and laboratory discoveries into new approaches for diagnosing, treating, and preventing disease,” said CC Director and NIH Associate Director for Clinical Research Dr. John I. Gallin.

In addition to the new grant program, extramural investigators may access CC resources through previously existing formal funding relationships, such as contracts, grants, and cooperative agreements. Administrative supplements to grants are also available for short-term Bedside-to-Bench Awards Program projects that involve partnerships between intramural and extramural investigators pursuing translational research projects.

The recommendation that the NIH allow external investigators to use the unique resources of the CC to stimulate a broader range of research came from the Congressionally mandated Scientific Management Review Board (SMRB). The SMRB is charged with examining the NIH’s organizational structure and providing recommendations for enhancing the agency’s mission. In 2010, this board formally recommended that the role of the NIH Clinical Center “should be to serve as a state-of-the-art national resource, with resources optimally managed to enable both internal and external use.”

*Report on NIH CC, 2010 available at:*  
<http://smrb.od.nih.gov/documents/reports/CC122010.pdf>



## Studies Advance Stem Cell Research

Stem cells have the amazing ability to transform themselves into different types of specialized cells, such as muscle, brain, and blood cells. Because of the unique properties of these cells, stem cell transplants offer exciting potential to treat diseases. Several research efforts at the Clinical Center are advancing stem cell research.

### *Labeling and Tracking Stem Cells*

A team from CC Radiology and Imaging Sciences (RIS), the National Institute of Biomedical Imaging and Bioengineering, and the Henry Ford Hospital in Detroit, Mich. developed a way to label stem cells for tracking once they are transplanted into a patient.

The researchers formed a complex of three drugs that when incubated into the stem cells labeled them for tracking by magnetic resonance imaging (MRI). By following the transplanted cells, researchers can tell whether the cells are reaching their targets.

“Less than 3 percent of intravenous transplanted cells get to their target. This brings up questions of cell dose, multiple doses, and dose timing and how to make cell therapy approaches more effective,” said Dr. Joseph Frank of CC RIS, who led the research.

A clinical study at the City of Hope Medical Center in Duarte, Calif. uses this method to test the transplant of neural stem cells on patients with a type of brain tumor.

### *A New Treatment for Complications of Stem Cell Transplantation*

Stem cell therapy sometimes causes complications, such as graft-versus-host disease (GVHD), where the transplanted cells attack the host’s body cells.

A research team led by the CC Department of Transfusion Medicine and the National Institute of Dental and Craniofacial Research is testing a promising new treatment using bone marrow stromal cells (BMSCs) to address complications of stem cell transplantation. BMSCs help regulate the immune system, which defends the body from attacks by foreign bodies such as bacteria or, in the case of GVHD, transplanted cells.

The research team is testing infusions of BMSCs on patients enrolled in a National Heart, Lung, and Blood Institute stem cell transplant clinical trial. The study will help researchers understand

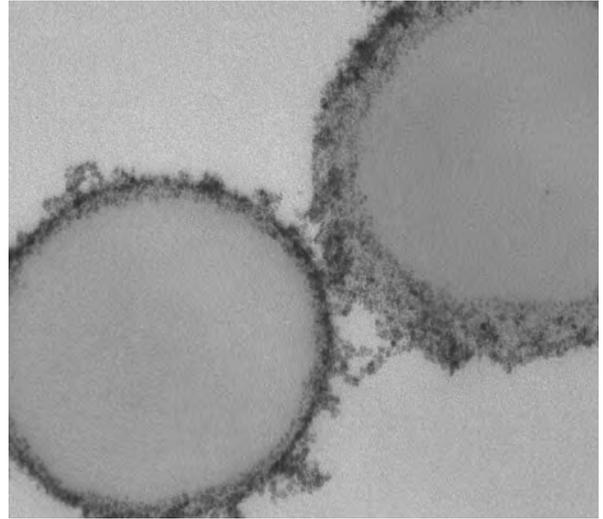
the potential benefits of BMSCs to treat GVHD, graft failure, and tissue injury after stem cell transplantation.

### *A Model Consent Form*

The CC Department of Bioethics, the Bioethics Core of the National Human Genome Research Institute, and the NIH Center for Regenerative Medicine developed a model consent form for using donated induced pluripotent stem cells (iPSCs) for research. iPSCs are derived artificially from natural biological cells by inducing a “forced” expression of specific genes. They can be stored in laboratories and cell banks and converted into many different kinds of cells.

The model consent form protects the interests of stem cell donors while advancing the opportunity for stem cell research. By signing the form, volunteers agree to allow their donated cells to be used for a broad range of foreseeable types of research. The form lists the circumstances under which stem cell donors might be contacted again about their donated stem cells, such as to get updates on their health or permission to use their cells for a type of research not covered by the consent form. This represents an innovative shift to a “sustained interaction” donor partnership model of consent.

NIH has shared the model consent form with other institutions that study stem cells. By helping to ensure that studies at different institutions use the same approach to collecting informed consent from stem cell donors, the model consent form advances the long-term goals of translational medicine and researchers’ ability to share stem cells with one another.



A complex of ferumoxytol, heparin, and protamine forms through electrostatic interaction and is used to incubate transplant cells for tracking with MRI.

# FY 2012 Bedside-to-Bench Funded Projects

In 2012 the Bench-to-Bedside award program was renamed to Bedside-to-Bench to emphasize the back and forth cycle, from the bedside to bench and back, putting the focus more on the patient volunteers without whom the translational process could not occur.

PROJECT	INSTITUTE(S)/INSTITUTION/INVESTIGATORS
<b>AIDS CATEGORY: PROJECTS FUNDED BY OFFICE OF AIDS RESEARCH (OAR)</b>	
Anti-PD-1 Antibody to Eradicate HBV in HBV/HIV Co-infection	<b>NIAID:</b> L. Barrett; S. Kottillil; A. Kohli; E. Meissner; <b>CC:</b> A. Suffredini; <b>SAIC-Frederick:</b> A. Osinusi <b>Nationwide Children's Hospital:</b> C. Walker
Inflammation and Function of P-gp in HIV Infection of Brain	<b>NIMH:</b> W. Kreisl; R. Innis; S. Kapetanovic; <b>NINDS:</b> A. Nath; <b>CC:</b> C. Morse; S. Penzak; <b>University of California, San Diego:</b> R. Ellis; S. Letendre; R. Heaton; B. Best
Targeting Lysyl Oxidase-like-2 to Inhibit Hepatic Fibrogenesis in HIV	<b>CC:</b> C. Morse; J. Kovacs; B. Wood; <b>NIAID:</b> E. Meissner; S. Kottillil; <b>NCI:</b> D. Kleiner; <b>NIDDK:</b> T. Heller; A. Gharib; <b>Inova Health System:</b> Z. Goodman; <b>University of Maryland School of Medicine:</b> R. Redfield; R. Talwani
Effect of HIV Superinfection on Disease Progression and Immune Response	<b>NIAID:</b> T. Quinn; S. Porcella; <b>Johns Hopkins University:</b> R. Gray; G. Kirk
<b>WOMEN'S HEALTH CATEGORY: PROJECT FUNDED BY OFFICE OF RESEARCH ON WOMEN'S HEALTH (ORWH)</b>	
Molecular Epidemiology of Postpartum Involvement of the Breast: Demonstration of Tools for Understanding Influences of Pregnancy on Breast Cancer Risk	<b>NCI:</b> M. Sherman; J. Faupel-Badger; S. Hewitts; J. Balkam; G. Gierach; K. Flanders; <b>CC:</b> D. Bluemke; <b>Johns Hopkins University School of Medicine:</b> A. Meeker; <b>University of Massachusetts Amherst:</b> K. Arcaro
<b>GENERAL CATEGORY: PROJECTS CO-FUNDED BY DEPUTY DIRECTOR FOR INTRAMURAL RESEARCH (DDIR) AND ICs</b>	
CD22 Chimeric Antigen Receptors Targeting Acute Lymphoblastic Leukemia	<b>NCI:</b> C. Mackall; A. Wayne; T. Fry; R. Orentas; W. Haso; <b>CC:</b> D. Stroncek; <b>University of Pennsylvania:</b> C. June; B. Levine; <b>Children's Hospital of Philadelphia:</b> S. Grupp
Defining the Functional Role of STAT4 in Human Systemic Lupus Erythematosus	<b>NIAMS:</b> J. O'Shea; <b>NHGRI:</b> D. Kastner; E. Remmers, <b>NIDCR:</b> G. Illei; <b>Cincinnati Children's Hospital:</b> J. Harley
<b>RARE DISEASES CATEGORY: PROJECTS CO-FUNDED BY OFFICE OF RARE DISEASES RESEARCH, NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES (ORDR/NCATS), THE DEPUTY DIRECTOR FOR INTRAMURAL RESEARCH (DDIR) AND ICs</b>	
T cell Adoptive Therapy for Viral Infection After Stem Cell Transplantation	<b>NHLBI:</b> J. Barrett; <b>NIAID:</b> D. Douek; <b>CC:</b> D. Stroncek; <b>Baylor College of Medicine:</b> C. Bollard
Choroid Plexus-Directed Gene Therapy for Lysosomal Storage Disease	<b>NICHD:</b> S. Kaler; <b>NHLBI:</b> R. Kotin; <b>Children's Hospital of Philadelphia:</b> J. Wolfe
Elucidation of Cancer Metabolism by Stable Isotope-Resolved Metabolomics	<b>NCI:</b> W. Linehan; <b>NICHD:</b> T. Rouault; <b>University of Louisville:</b> A. Lane; T. Fan
Treatment of Anti-NMDA Receptor Encephalitis	<b>NINDS:</b> A. Nath; I. Cortese; S. Jacobson; K. Roche; <b>CC:</b> D. Hammoud; <b>University of Pennsylvania:</b> J. Dalmau; R. Balice-Gordon
Metabolic Phenotyping of Parkin Mutation Associated Parkinson's Disease	<b>NHLBI:</b> M. Sack; <b>NINDS:</b> R. Youle; <b>University of Central Florida:</b> X. Han
Metabolic Phenotyping in Methylmalonic Acidemia: Markers and Drug Response	<b>NHGRI:</b> C. Venditti; E. Manoli; <b>NIDDK:</b> K. Chen; <b>Children's National Medical Center:</b> M. Tuchman
Developing and Validating Membrane Biomarkers in the Muscular Dystrophies	<b>NICHD:</b> J. Zimmerberg; P. Blank; P. Basser; G. Humphrey; <b>NINDS:</b> C. Bonnemann; <b>University of Massachusetts Memorial Medical Center:</b> R. Brown; <b>University of Maryland, Baltimore:</b> R. Bloch
<b>INSTITUTE FUNDED: PROJECTS FUNDED BY ICs</b>	
Blockade of Kisspeptin Signaling in Women	<b>NICHD:</b> A. Delaney; <b>Harvard Medical School:</b> S. Seminara; <b>Massachusetts General Hospital:</b> W. Crowley
Transcriptional Responses to LAIV in Bulk and Single Resident URT Cells	<b>NIAID:</b> K. Subbarao; <b>Stanford University:</b> H. Greenberg; A. Sen; X. He



## Training the Next Generation



These mentors have completed formal training in basic sciences, yet they have key roles as principal investigators in clinical research studies or as members of clinical and translational science teams.

Through lectures and interactive sessions, participants learned the principles of clinical and translational research design, implementation and analysis, and the processes of scientific and ethical review. Students participated in a mock institutional review board and learned how to file an investigational new drug application with the U.S. Food and Drug Administration. The course also included tutorials on NIH training and funding opportunities.

### Medical Research Scholars Program

The Medical Research Scholars Program for medical, dental and veterinary students welcomed its inaugural class in September 2012. This new training opportunity offers year-long mentored basic, clinical or translational research experiences with intramural (internal) investigators from across NIH.

“Medical discoveries of tomorrow depend on the students we train today,” said NIH Director Dr. Francis S. Collins. “This program will help ensure that there is a steady pipeline of scientists conducting the full range of biomedical research.”

The Medical Research Scholars Program’s academic curriculum includes lectures that highlight the continuum of scientific discovery, bioethics, science policy and emerging technologies. The program also provides training in designing and conducting clinical studies and an introduction to academic leadership.

The program is made possible through a public-private partnership supported jointly by the NIH and contributions to the Foundation for the NIH from Pfizer Inc., The Leona M. and Harry B. Helmsley Charitable Trust, the Howard Hughes Medical Institute, and other private donors.



### Clinical and Translational Course for Ph.D. Students

The Clinical and Translational Research Course for Ph.D. Students welcomed its first 16 students on July 9, 2012. These basic science doctoral students from throughout the United States and Puerto Rico spent two weeks on the NIH campus building a foundation in clinical and translational research. The course’s primary goal is to encourage young basic scientists to consider a career in that field.

Students met with Ph.D. role models from the NIH intramural research program.

The course and its curriculum were developed as a result of a recommendation from the CC’s Advisory Board for Clinical Research. Based on this successful pilot, the CC plans to officially launch the course as an annual program in 2013.



Faculty (middle standing from left to right) Dr. Jerry A. Menikoff, Dr. Pamela Shaw, Dr. Frederick P. Ognibene, Dr. John I. Gallin and Dr. Laura Lee Johnson presented the Introduction to Principles and Practice of Clinical Research course in India in conjunction with the country's Clinical Development Services Agency.

### Long-Distance Learning

Three Clinical Center training courses offered at remote sites have maintained high domestic and international participation rates. Students participate through live videocasting or by viewing archived content on the web.

**Introduction to the Principles and Practice of Clinical Research** covers epidemiology methods, study design, clinical protocol preparation, patient monitoring, quality assurance and regulatory issues. In 2011–2012, 1,337 students enrolled in the course, including 862 (64 percent) from 27 remote sites.

Clinical Center Director Dr. John I. Gallin and Deputy Director for Educational Affairs and Strategic Partnerships Dr. Frederick P. Ognibene edited a third edition of the supplemental educational tool for the course: *Principles and Practice of Clinical Research*, published by Elsevier in 2012.

Five faculty members collaborated with their counterparts in India to bring an abbreviated version of *Introduction to the Principles and Practice of Clinical Research* to that country in October 2012. More than 125 researchers from across India attended the week-long course with the aim of learning skills that they can bring back to their individual institutions, not only to practice themselves, but also to teach others.

**Principles of Clinical Pharmacology** focuses on drug development and the use of drugs to treat disease. The course enrolled 879 participants in 2011–2012, including 816 from remote sites.

In 2012, course faculty from the CC, the National Institute of Mental Health and the U.S. Food and Drug Administration edited and published the third edition of *Principles of Clinical Pharmacology*.

**Ethical and Regulatory Aspects of Clinical Research** covers the ethics of clinical studies. In 2011–2012, the course drew 345 participants, including 146 from remote domestic and international sites.





### **New Portal Will Give Patients Access to Their Electronic Medical Records**

Clinical Center patients will soon be able to review parts of their electronic medical records, access key information about the NIH and CC, and communicate securely with their care team through a new online portal, developed by a multidisciplinary team of Clinical Center and other NIH staff. The portal, scheduled to be completed in late 2013, will be accessible from any computer with an Internet connection.

Medical record information that patients will be able to view through the new portal will include:

- Selected clinical documentation and results (e.g., laboratory results, discharge instructions)
- Medication lists
- Appointments
- Patient demographic information collected at the time of registration/admission

While patients will not be able to change their electronic medical record information through the portal, they will be able to use the new system to communicate electronically and securely with their NIH care team. The patient portal will comply with the Privacy Act and other legal requirements that protect patient privacy and confidentiality.

### **Admissions Improvements Streamline Process and Communications**

The admissions redesign effort aims to improve the Clinical Center admissions process by reducing wait times, helping patients find their way around the NIH campus, and providing standardized communications materials. The Clinical Center's chief operating officer led the effort with a team comprised of representatives from the CC and from five NIH institutes, and a CC patient.

Through a multi-phase approach, the CC pilot-tested satellite admissions stations, which are now used when backups occur at the main admissions desk. This effort also included physical improvements to the main admissions waiting area. In addition, the NIH established more convenient operating hours for the campus patient entrance on West Cedar Drive. Streamlined communication materials and procedures are under development to standardize the messages sent to patients from across the NIH, which will further enhance the patient experience.

### **CC Plans a Hospital-Wide Patient Scheduling System**

Today, 47 areas of the Clinical Center use different processes and systems to schedule patient appointments.

To streamline the appointment process, a team of CC staff is deploying a single system — the Enterprise Scheduling System (ESS) — to coordinate scheduling of all patient appointments.

The team is designing the ESS to meet all stakeholders' needs and will test the system in early 2013. Once the ESS is ready to roll out, staff who schedule patient appointments will receive training on the new system.

The ESS will give CC patients a single itinerary that lists the times and locations of all their appointments as well as whom to contact to change an appointment. The ESS will also decrease wait times for patients who need a procedure, such as an MRI, by ensuring that the system has the medical order for that procedure before the patient arrives.

The CC plans to implement the system by the summer of 2013.





## Patient Tracking and Locating System Wins Award

U.S. Health and Human Services Secretary Kathleen Sebelius named the Patient Tracking and Locating System as a “Secretary’s Pick” in the HHSinnovates awards. The system is a suite of tools conceived and developed by the National Library of Medicine (NLM) to help hospitals manage the surge of patients during a disaster. The tool suite was tested during disaster drills by the public-private Bethesda Hospitals’ Emergency Preparedness Partnership (BHEPP).

The BHEPP’s mission is to develop a coordinated response to disasters that could be a model for other hospitals. The Clinical Center, the NLM, the Walter Reed National Military Medical Center, and Suburban Hospital Johns Hopkins Medicine are BHEPP members.

The portable, electronic Patient Tracking and Locating System provides real-time information on numbers of incoming patients, the severity of their injuries and their location within the hospital. This information will help personnel not only to make strategic decisions quickly about patient care but also to safely share information when patients move between hospitals.

## STAFF ACHIEVEMENTS



**Maureen Gormley**, chief operating officer, received the 2012 U.S. Department of Health and Human Services Secretary’s Award for Distinguished Service in recognition of her outstanding contributions to the CC. Gormley also earned the Eastern Regional Supervisor/Program Manager of the Year award from the International Public Management Association for Human Resources.



**Dr. James Cimino**, chief of the Laboratory for Informatics Development, received the Donald A.B. Lindberg Award for Innovation in Informatics from the American Medical Informatics Association.



**Dr. Barry Goldspiel**, deputy chief of the Pharmacy Department and chief of the Clinical Pharmacy Specialist Section, received the Donald E. Francke Medal from the American Society of Health-System Pharmacists for significant international contributions to health-system pharmacy.



**Dr. Scott Paul**, senior staff physiatrist in the Rehabilitation Medicine Department, was appointed special features and associate editor of *PM&R*, the scientific journal of the American Academy of Physical Medicine and Rehabilitation.



**Dr. David Sacks**, chief of the Clinical Chemistry Service in the Department of Laboratory Medicine, received the Outstanding Contributions in Education award from the American Association for Clinical Chemistry.



**Dr. Peter Herscovitch**, chief of the PET Department, was elected vice president of the Society of Nuclear Medicine and Molecular Imaging. He will assume the role of president in 2014.



**Dr. Patty Sengstack**, deputy chief information officer, was elected to the board of directors of the American Nursing Informatics Association.



**Dr. Harvey Klein**, chief of the Department of Transfusion Medicine, received the Karen Williams Memorial Award from the South Central Association of Blood Banks, which recognizes an independent expert in the area of blood safety.



**Dr. Diane Damiano** is investigator (tenure-track) and chief of the Functional and Applied Biomechanics Section in the CC Rehabilitation Medicine Department.



**Dr. Dima Hammoud** is investigator (tenure-track) and neuroradiologist in the Center for Infectious Disease Imaging, a joint initiative between Radiology and Imaging Sciences at the NIH Clinical

Center and the National Institute of Allergy and Infectious Diseases.

Jan. 4, 2013 marks the 30th anniversary of the Orphan Drug Act. In recognition of this important legislation, the U.S. Food and Drug Administration launched a poster campaign that highlights the NIH Undiagnosed Diseases Program (UDP) among 30 other group and individual heroes for their contributions to clinical, research, advocacy and regulatory progress within the rare disease community. The UDP team assembled for a group photo, including Dr. John I. Gallin, CC director (first row, second from the left), fellow UDP co-founders, Dr. William A. Gahl, UDP director and clinical director, National Human Genome Research Institute (first row, center) and Dr. Stephen C. Groft, director of the Office of Rare Diseases Research (first row, right), along with Dr. Cynthia J. Tiff, UDP director of pediatrics and NHGRI deputy clinical director (first row, far right).

## NEW APPOINTMENTS



**Dr. Christine Grady** was appointed chief of the Department of Bioethics and head of the department's Section on Human Subjects Research. Her research interests include research subject recruitment, incentives and vulnerability. Grady

continues as a commissioner on the President's Commission for the Study of Bioethical Issues (appointed April 2010).



**Dr. Andrew Mannes** was appointed chief of the Department of Perioperative Medicine. He plans to expand the department's educational programs.



**Dr. Karen Frank** was appointed chief of the Microbiology Service in the Department of Laboratory Medicine. Frank is a board-certified clinical pathologist who studies *Staphylococcus aureus* pneumonia. Prior to joining the CC, Dr. Frank was director

of Clinical Microbiology and Immunology Laboratories in the Department of Pathology at the University of Chicago Medical Center.



**Dr. Deborah Merke**, chief of the Pediatric Consult Service, received NIH tenure in October 2012, becoming senior investigator.



**Dr. Bruce Baum** was appointed director of the Medical Research Scholars Program under the Office of Clinical Research Training and Medical Education. He joined the OCRTE after concluding a 35-year research career at the NIH, including his role as clinical director for the National Institute of Dental and Craniofacial Research.

### International Visits

Three foreign groups visited the Clinical Center recently to learn about clinical research in the United States and build connections to professional communities across oceans.



Chinese translational researchers met with CC Director Dr. John I. Gallin (middle) and other staff during an October visit.



Dr. Frederick Ognibene (left), deputy director of Educational Affairs and Strategic Partnership and Denise Ford (second from left), Hospitality Services chief, welcomed Norwegian hospital presidents and led a tour of the CC in September.



Leaders from the Malaysian Ministry of Health and clinical research centers around the Southeast Asian nation visited with Dr. Frederick Ognibene (third from left), CC deputy director for Educational Affairs and Strategic Partnerships and other leaders at NIH in June for discussions on best practices.

## Organization and Governance

### ADVISORY BOARD FOR CLINICAL RESEARCH NATIONAL INSTITUTES OF HEALTH (2012)\*

#### Governance

The NIH Advisory Board for Clinical Research oversees the Clinical Center's resources, planning, and operations. The Board also advises on NIH's overall intramural program, including priority setting, the integration and implementation of research programs of the individual institutes and centers, and overall strategic planning for the intramural program.

Comprised of NIH clinical and scientific leaders and outside experts in management of health care and clinical research, the Board advises the NIH deputy director for intramural research and the Clinical Center director and reports to the NIH director.

#### **CHAIR: Martin Blaser, MD**

George and Muriel Singer Professor of Medicine  
Professor of Microbiology  
Director, Human Microbiome Program  
New York University Langone Medical Center

#### **VICE-CHAIR: Peter Markell**

Executive Vice President of Administration and Finance  
Chief Financial Officer and Treasurer  
Partners HealthCare System, Inc.

#### **Robert S. Balaban, PhD**

Scientific Director  
National Heart, Lung, and Blood Institute  
National Institutes of Health

#### **Josephine Briggs, MD**

Director  
National Center for Complementary and Alternative Medicine

#### **William L. Dahut, MD**

Clinical Director  
Chief, Genitourinary Section,  
Medical Oncology Branch  
National Cancer Institute

#### **Michael Rutledge DeBaun, MD, MPH**

Professor of Pediatrics  
Vice Chair for Clinical Research  
Director for Vanderbilt-Meharry Center of Excellence in Sickle Cell Disease  
Vanderbilt Children's Hospital

#### **Joe G. N. "Skip" Garcia, MD**

Vice President for Health Affairs  
University of Illinois Hospital & Health Sciences System  
Earl M. Bane Professor of Medicine,  
Pharmacology and Bioengineering  
University of Illinois at Chicago

#### **Alan Guttmacher, MD**

Director  
*Eunice Kennedy Shriver* National Institute of Child Health and Human Development

#### **Steve M. Holland, MD**

Chief, Laboratory of Clinical Infectious Diseases  
National Institute of Allergy and Infectious Diseases  
Deputy Director for Intramural Clinical Research  
National Institutes of Health

#### **Rebecca D. Jackson, MD**

Director, Center for Clinical and Translational Science  
Associate Dean for Clinical Research  
The Ohio State University College of Medicine

#### **Stephen I. Katz, MD, PhD**

Director  
National Institute of Arthritis and Musculoskeletal and Skin Diseases

#### **T. Jake Liang, MD**

Chief, Hepatology Service  
Chief, Liver Diseases Branch  
National Institute of Diabetes and Digestive and Kidney Diseases

#### **Elizabeth Odile Oflin, MD, MPH, FACC**

Associate Dean, Clinical Research  
Director, Clinical Research Center  
Chief, Cardiology Section  
Professor, Medicine  
Morehouse School of Medicine

#### **Sharon O'Keefe, RN, MSN**

President  
University of Chicago Medical Center

#### **L. Reuven Pasternak, MD, MPH, MBA**

Vice President for Health Systems and CEO  
Stony Brook University Hospital

#### **Steven A. Rosenberg, MD, PhD**

Chief, Surgery Branch  
National Cancer Institute

#### **Kate E. Walsh, MPH**

President and CEO  
Boston Medical Center

#### *Ex Officio Members*

#### **John I. Gallin, MD**

Director  
Clinical Center  
National Institutes of Health

#### **Michael M. Gottesman, MD**

Deputy Director for Intramural Research  
National Institutes of Health

#### **Maryland Pao, MD**

Chair, Medical Executive Committee  
Clinical Director  
National Institute of Mental Health

#### *Executive Secretary*

#### **Maureen E. Gormley, RN, MA, MPH**

Chief Operating Officer  
Clinical Center  
National Institutes of Health

#### *Senior Staff Support*

#### **Richard G. Wyatt, MD**

Executive Director  
Office of Intramural Research  
National Institutes of Health

\* As of December 31, 2012

## MEDICAL EXECUTIVE COMMITTEE MEMBERS (2012)\*

### NIH Clinical Center

*The Medical Executive Committee is made up of clinical directors of the NIH intramural clinical research programs and other senior medical and administrative staff.*

**Maryland Pao, MD**

(Chair)  
National Institute of Mental Health

**William L. Dahut, MD**

(Vice-Chair) National Cancer Institute

**James E. Balow, MD**

National Institute of Diabetes and  
Digestive and Kidney Diseases

**Richard Childs, MD**

National Heart, Lung, and Blood Institute (*Acting*)

**Josephine M. Egan, MD**

National Institute on Aging (*Acting*)

**Frederick L. Ferris, III, MD**

National Eye Institute

**William A. Gahl, MD, PhD**

National Human Genome Research Institute

**Clare E. Hastings, PhD, RN, FAAN**

NIH Clinical Center

**Markus Heilig, MD, PhD**

National Institute on Alcohol Abuse  
and Alcoholism  
National Institute on Drug Abuse

**David K. Henderson, MD**

NIH Clinical Center

**Ann R. Knebel, RN, DNSc, FAAN**

National Institute of Nursing Research (*Acting*)

**H. Clifford Lane, MD**

National Institute of  
Allergy and Infectious Diseases

**Henry Masur, MD**

NIH Clinical Center

**James E. Melvin, DDS, PhD**

National Institute of Dental and  
Craniofacial Research

**Deborah P. Merke, MD, MS**

NIH Clinical Center

**Frederick W. Miller, MD, PhD**

National Institute of Environmental  
Health Sciences (*Acting*)

**Avindra Nath, MD**

National Institute of Neurological  
Disorders and Stroke

**Robert Nussenblatt, MD**

National Center for Complementary  
and Alternative Medicine (*Acting*)

**Forbes D. Porter, MD**

National Institute of Child Health  
and Human Development

**Kenneth E. Remy, MD**

Clinical Fellow  
NIH Clinical Center

**Steven A. Rosenberg, MD**

National Cancer Institute

**Richard M. Siegel, MD, PhD**

National Institute of Arthritis and  
Musculoskeletal and Skin Diseases

**Carter Van Waes, MD, PhD**

National Institute on Deafness and  
Other Communication Disorders

**Srinivas Vourganti, MD**

Clinical Fellow  
National Cancer Institute

*Ex Officio Members*

**John I. Gallin, MD**

NIH Clinical Center

**Steven M. Holland, MD**

Deputy Director for Intramural Clinical Research

**Patricia A. Kvochak, JD**

Deputy NIH Legal Advisor

**Richard G. Wyatt, MD**

Office of Intramural Research, NIH

**Laura M. Lee, RN**

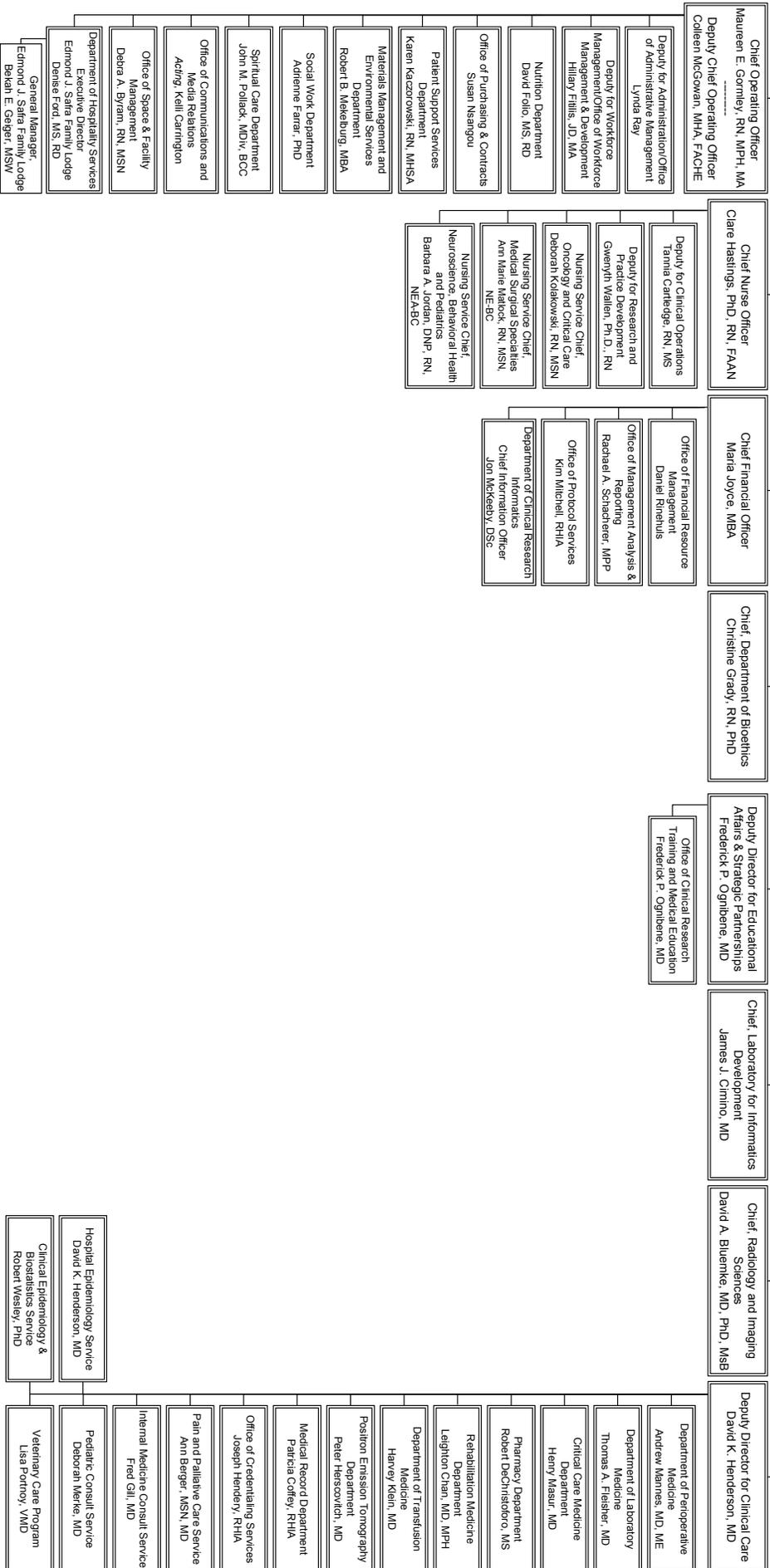
NIH Clinical Center

\*As of December 31, 2012

# NIH Clinical Center

Organizational Chart  
January 2013

DIRECTOR  
John I. Gallin, MD



# NATIONAL INSTITUTES OF HEALTH

National Cancer Institute (NCI)

National Eye Institute (NEI)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute  
(NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism  
(NIAAA)

National Institute of Allergy and Infectious Diseases  
(NIAID)

National Institute of Arthritis and Musculoskeletal and  
Skin Diseases (NIAMS)

National Institute of Biomedical Imaging and  
Bioengineering (NIBIB)

*Eunice Kennedy Shriver* National Institute of  
Child Health and Human Development (NICHD)

National Institute on Deafness and Other  
Communication Disorders (NIDCD)

National Institute of Dental and Craniofacial  
Research (NIDCR)

National Institute of Diabetes and Digestive and  
Kidney Diseases (NIDDK)

National Institute on Drug Abuse (NIDA)

National Institute of Environmental Health Sciences  
(NIEHS)

National Institute of General Medical Sciences  
(NIGMS)

National Institute of Mental Health (NIMH)

National Institute on Minority Health and Health  
Disparities (NIMHD)

National Institute of Neurological Disorders and  
Stroke (NINDS)

National Institute of Nursing Research (NINR)

National Library of Medicine (NLM)

Center for Information Technology (CIT)

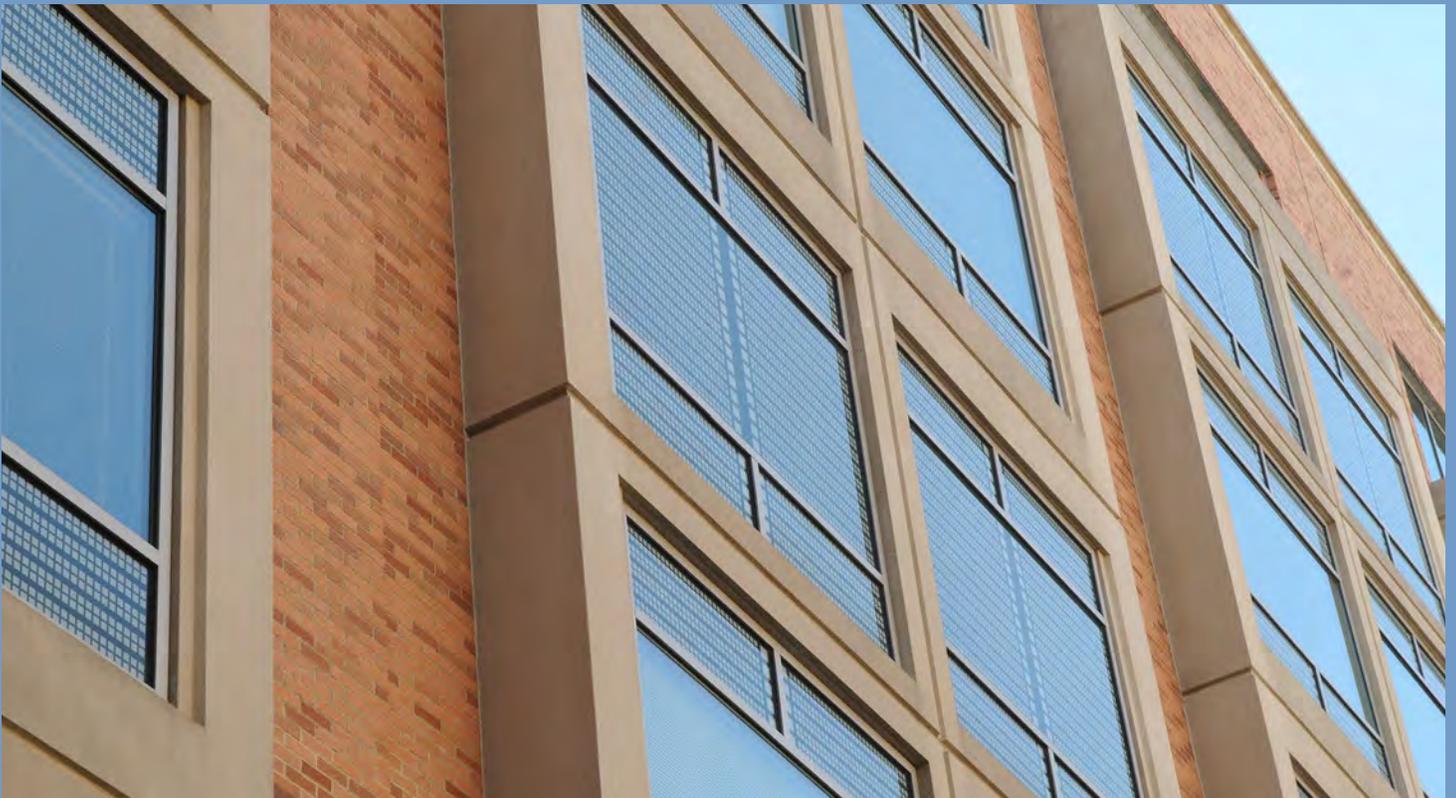
Center for Scientific Review (CSR)

John E. Fogarty International Center for Advanced  
Study in the Health Sciences (FIC)

National Center for Complementary and Alternative  
Medicine (NCCAM)

National Center for Advancing Translational Sciences  
(NCATS)

NIH Clinical Center (CC)





National Institutes of Health  
Clinical Center

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