November 2006

Clinical Center

Dr. John I. Gallin (right), CC director, with Dr. Summers, talked to the challenge participants about their experiences at NIH.

CC hosts young scientists in Discovery Channel Challenge

by Pat McNees

"People have two kinds of reaction to virtual colonoscopies," says Dr. Ron Summers, staff radiologist and senior investigator in the Clinical Center. "Either they're fascinated or they're grossed out."

The forty middle school students who competed in the Discovery Channel Young Scientist Challenge (DCYSC) in late October were not grossed out. Navigating their way through a virtual colon looked a little like playing a videogame: Spot the polyps! Working in eight teams of five students each, they listened to Summers' mini-lecture, got a hands-on experience detecting polyps with computer software, played around with a colonoscopy simulator, and finally produced a kid-to-kid video explaining the nature and benefit of a colonoscopy—all in 90 minutes.

In the movies, young science buffs rarely have social skills. Hollywood might have a problem stereotyping this group, which seemed as comfortable working in groups and appearing on camera as it did looking at zebrafish embryos under a microscope (a nearby challenge).

The adult talent looked equally at ease, especially after guiding eight teams in a row through the same challenge, thanks to the remarkable adeptness at people-moving displayed by the Discovery team. This was the first time NIH hosted the event, and NIH employees were amazed at how quickly—in two fairly last-minute days—the Discovery team transformed a few somewhat drab NHGRI labs on the 10th floor of building 10 into brightly decorated stage-set laboratories.

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Dr. Ruth Kirschstein, special advisor to the NIH director (left), talks with Susan Whitehead about the day the sculpture *Sky Horizon* was delivered to NIH. Whitehead, daughter of the late Edwin C. Whitehead, was at Clinical Center on Oct. 27 for a ceremony marking her family's gift of the sculpture to NIH. The piece is located below the Clinical Center on West Drive.

Nevelson work now officially a part of NIH

Susan Whitehead, daughter of the late Edwin C. Whitehead, was at Clinical Center on Oct. 27 for a ceremony marking her family's gift of the *Sky Horizon* sculpture to the National Institutes of Health. The steel work by Louise Nevelson was dedicated in 1988 and has been displayed here ever since courtesy of the Whitehead family.

The piece was selected in the mid-1980s when Dr. James B. Wyngaarden, then NIH director, established a committee to advise him on selection of a sculpture that would "stand as a reminder of the accomplishments of NIH to the health of mankind and a salute to those who made those accomplishments possible" to mark NIH's 1987 centennial anniversary.

Wyngaarden said of the sculpture, "This sculpture is symbolic of the soaring achievements in health-related research that have been made during the first

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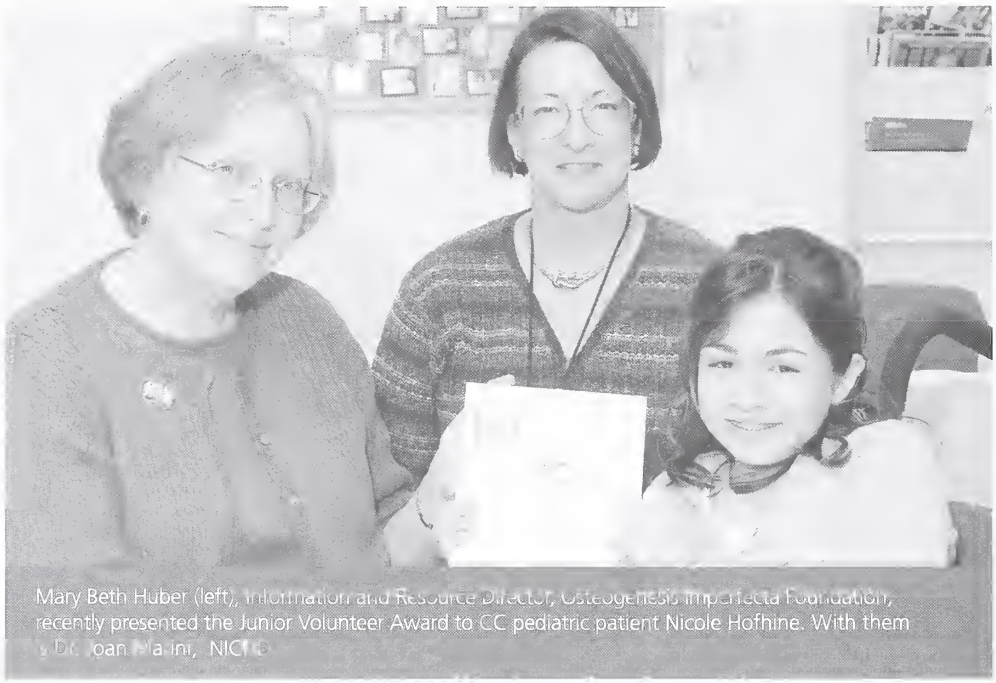
Pediatric patient receives OI Junior Volunteer Award

Twelve-year-old pediatric patient Nicole Hofhine from Camarillo, Calif., has been coming to NIH since she was one year old. Despite the challenges of living with osteogenesis imperfecta, Hofhine, a cheerful preteen, is an active volunteer with the Osteogenesis Imperfecta Foundation.

The Foundation recently recognized Hofhine for her leadership as an active volunteer by naming her the first recipient of the Pete Dohm Junior Volunteer Award. Dohm was active in local and national foundation programs in his early teens and later served on the board of the directors and other committees of the OI Foundation.

The award honors a volunteer who best exemplifies the qualities of volunteer service to the foundation and to the OI community. Hofhine was recognized for her advocacy work and for her role in explaining OI to the cast and crew of ABC Television's *Extreme Makeover: Home Edition*, a show that features home remodels for deserving families. *Extreme Makeover* featured a family with a child with OI, and Hofhine's explanation of the disease helped the crew with educational awareness of OI.



Mary Beth Huber (left), Information and Resource Director, Osteogenesis Imperfecta Foundation, recently presented the Junior Volunteer Award to CC pediatric patient Nicole Hofhine. With them is Dr. Joan Marini, NICHD.

OI, also known as brittle bone disease, affects about 20,000 to 50,000 people in the United States and is characterized by unusually fragile bones that break easily. For more information on OI visit NIH website at http://www.niams.nih.gov/bone/hi/osteogenesis/oi.htm ■

Wendell appointed nurse manager for 3NE

Elizabeth (Betsy) Wendell has joined Nursing and Patient Care Services as the nurse manager for the Medical Oncology/Hematology/Transplant (3NE) patient care unit. Wendell's management experience includes critical care and oncology. She explains that she was seeking a new challenge and an opportunity to be involved in new treatments for cancer when she saw the CC's advertisement for the nurse manager position.

Wendell graduated from University of Maryland in 1981 with a BSN and then received from the University an MS in general administration, speciality in health care, in 1992. Both the Oncology Nursing Society and the American Association of Critical Care Nurses have designated her as a certified nurse.

When asked for her early impressions, Wendell says, "Since joining Nursing and Patient Care Services, I have been so impressed with the phenomenal teamwork and strong collaboration between the physicians and nurses, the vision and strength of our nursing executive leadership team, and the the partnership and problem-solving between nursing and the partners team. The nurses on 3NE are so dedicated to patients and families."

A native of Massachusetts, Wendell enjoys gardening, reading, and visiting New England. Her husband and two daughters, ages 11 and 8, share her with five cats and a dog. *–Cynthia Herringa* ■

***Clinical Center News* online:**

www.cc.nih.gov/ccc/ccnews/current/

news

Clinical Center News
National Institutes of Health
Department of Health and Human Services
6100 Executive Blvd, Suite 3C01
Bethesda, MD 20892-7511

tel: 301-496-2563 Fax: 301-402-2084

Published monthly for Clinical Center employees by the office of Clinical Center Communications, Colleen Henrichsen, chief.

News, articles ideas, calendar events, letters and photographs are welcome.

CC News reserves the right to edit story submissions for length and appropriateness.

Nevelson work now officially a part of NIH *continued from page 1*

At the sculpture with the CC in the background are (from left) John Burklow, NIH associate director for communications and public liaison, Susan Whitehead, and Dr. John I. Gallin, Clinical Center director.

health century—progress that will extend its reach only through meeting the challenges of the next."

Whitehead, who died in 1992, purchased the piece. He founded the Whitehead Institute for Biomedical Research and the Technicon Corporation. In his later years, he was a founder and chairman of the board of Research!America. "My father was enormously proud it was here (at NIH)," said Susan Whitehead. "It's a privilege for me and my family to make this gift." ■

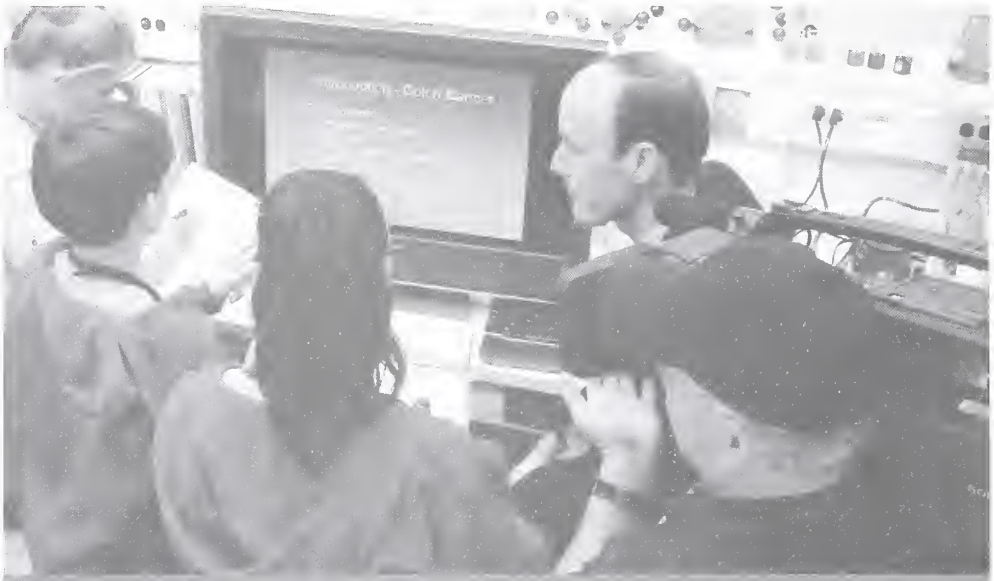
Sky Horizon originally was located at the Clinical Center's front entrance on Center Drive. It went into storage for safekeeping during construction of the Hatfield Clinical Research Center and was eventually relocated to its present location at the end of West Drive.

Facts about the art work and the artist:

- The piece was once lit at night, rendering the black metal ghostly white.
- In 2001, the U.S. Postal Service issued stamps in celebration of the fine arts that featured five of Nevelson's works.
- On the committee that helped select *Sky Horizons* for NIH were representatives from the National Endowment for the Arts, the Hirshhorn Museum and Sculpture Garden, and the Corcoran Gallery of Art.
- There's a public square on Maiden Lane in the Wall Street area of Manhattan featuring seven of Nevelson's large metal sculptures, *Shadows and Flags*. In the late 1970s, the square was named Louise Nevelson Plaza in her honor. It's reported to be the first public place in the city named after an artist.
- The sculpture is 30 feet tall and is made of Cor-ten steel, a surface that doesn't reflect what's around it.
- It was delivered to NIH on a flat-truck along with a blue-print for assembly.
- Another location was considered for Sky Horizon, in front of building 1.
- Sky Horizon was the last major outdoor piece created by Nevelson, who died in 1988.

CC hosts young scientists *continued from page 1*

"It was indeed a challenge to turn the empty lab into a television-friendly learning arena," said Steve Jacobs, or Judge Jake, science educator and creator of the Discovery program, "Jake's Attic." Jacobs develops and administers the challenges. "I tip my hat to the creative ability of the Discovery production team. However, I fall to my knees in praise of the volunteers from the NIH staff. It is not difficult to make television shine when working with such jewels. The people at NIH are truly amazing. Just amazing. I stood in awe of their scientific expertise, and even more, their ability to communicate an excitement for their work. They are just the inspiration we needed for motivating young people to consider careers in science and medicine."



Dr. Ron Summers (right), CC microbiologist and senior investigator, worked with the Discovery Channel on a challenge based on the virtual colonoscopy. After their session with Summers, the students had to produce a three-minute kid-to-kid video explaining the nature and benefit of a colonoscopy.

The 40 finalists who competed in the Clinical Center on October 24-25 were selected from the top 400 national semifinalists, based on the scientific merit of their original science project and their ability to communicate its goals.

Nurturing the next generation of scientists

The Young Scientist Challenge is a national science contest for students in grades 5 through 8. Discovery Communications, Inc., launched the competition in partnership with Science Service to nurture the next generation of U.S. scientists at that critical age when interest in science begins to decline. To enter the contest, students must first compete in a local or regional science fair affiliated with Science Service.

The 40 finalists who competed in the Clinical Center on October 24-25 were selected from the top 400 national semifinalists, based on the scientific merit of their original science project and their ability to communicate its goals. The semifinalists had been chosen from among over 1,900 entrants representing 273 affiliated science fairs from 47 states, the District of Columbia, Puerto Rico, and the Virgin Islands. For two days the Final 40 competed in complex, team-based, hands-on challenges. They competed as teams but were judged individually on their performance in challenges, understanding of the science process, teamwork, and ability to communicate about science, including their original science project. It always comes down to finalists who "possess the ability to inspire and inform others of the delights of scientific discovery," says Judge Jake.

Disease detectives

This year's theme, "Disease Detectives," featured a series of challenges in which the finalists investigated the causes and impact of global health concerns, from avian flu to obesity. NIH collaborated with DCYSC in the final round of the 2006 challenge and hosted this year's program. The scientists leading the challenges worked with Steve Jacobs to formulate and design the experiments, built around current health issues. The finalists were given eight fairly formidable tasks to accomplish, in small teams, in segments of 90 minutes or less.

Sharing fairly tight lab space with Summers was Dr. Milton English, from NHGRI, with whom the students examined zebrafish embryos under a microscope, learning why these tiny creatures are popular for genetics studies. In a lab across the aisle, "Katrina

CC hosts young scientists *continued from page 4*

Revisited," one team was collecting, analyzing, and trying to identify samples of safe vs. noxious molds, infestations, and chemicals (there was a traffic jam at the microscope). In the neighboring lab space, "Avian Flu," finalists were expected to determine which of many "samples" was Avian influenza, to determine the projected path of the outbreak, and to figure out the best way to distribute limited supplies of flu vaccine.

"Eat and Be Healthy" was staged downstairs in the old visitors information center. At a table full of various types and quantities of food common in a teenager's diet, finalists had to select a combination that represented healthy portions and came close to a designated calorie count.

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>
> –Steve Jacobs, or Judge Jake, science educator and creator of the Discovery program, "Jake's Attic.

Skill challenges

Over in the Natcher Building, students were engaged in "skill" challenges. In the "Lab Tech Relay," teams went through a daunting timed relay of ten standard lab function activities, which required measuring, identifying, and in other ways testing knowledge and problem-solving abilities. It helped to be able to recognize various rocks, minerals, animals, plants, or parts thereof, or know something about physics, biology, astronomy, geology, or microbiology. But common sense was also important. On one table were all the parts needed to put together a simple optical instrument and project an image, which was the goal. This challenge had all the excitement of a horse race—and despite hints to make use of every item on the table, the team we observed did not notice or pick up the instruction manual lying there.

The "Chemistry Classic" was a student favorite. After hearing instructions on delicate measuring techniques, teams were given three solutions and a tableful of measuring beakers and asked to create a timeable change of solution colors, from clear to intense orange to complete black—the Old Nassau (or Halloween) Reaction, based on a classic exercise from an early Princeton chemistry lab. Watching the students' excitement as various combinations created no, slow, or instant color changes, depending on the sequence and quantity of chemicals added, made some of us wish we could go back to school and learn science all over again.

"It was exciting to see the next generation of scientists in action," said CC Director Dr. John I. Gallin. "I hope many of them will come to work at NIH and pursue a career in clinical research." Summer internships for high school students is one way NIH tries to encourage young scientists.

Making science awesome

"The opportunities are greater now than they were when I was a kid," says Summers, who in seventh grade learned about physics and science through the "discovery" approach to learning science provided in the Intermediate Science Curriculum Study (ISCS). Instead of yawning through the old "chalk-and-talk" approaches, in which often-bored students memorized facts delivered through lectures and textbooks, students in discovery-science classes spend far more time engaged in inquiry-oriented activities that require interpreting data, suggesting hypotheses, conducting experiments, working on projects, and sharing results.

The new approach, which the Discovery Challenge exemplifies, is more likely to provoke the occasional "Awesome!" Summers, for example, could see that his mini-lectures held less appeal for these science buffs than the challenge's hands-on activities, but the students had to pay attention because toward the end of their 90 minutes on the colon they had to produce a three-minute kid-to-kid video explaining the nature and benefit of a colonoscopy. Watching how they functioned as teams was almost as interesting as hearing the different messages they came up with.

Scholarships of $20,000, $10,000, and $5,000 went to the students taking first, second, and third place; the rest of the finalists were awarded $500 each. More exciting, judging by their expressions, was an unusual bonus award. The International Astronomical Union, which is the group responsible for recently demoting Pluto from planet to dwarf planet, is way behind in its responsibility for naming astronomical objects—so they named some of the objects after the forty students, and some after their teachers. The students all got certificates indicating where their celestial bodies are.

The Discovery Channel's show about the Discovery Challenge will air in February. Read more about the winners, the science projects of the Final 40, a dozen or more additional awards (including a "dream science trip"), and the Challenge itself at http://school.discovery.com/sciencefaircentral/dysc/ ■

Focused ultrasound surgery discussed at Doppman Memorial Lecture

Dr. Ferenc Jolesz delivered the Sixth Annual John Doppman Memorial Lecture for Imaging Sciences and detailed technology that he said will change the field of medicine.

Jolesz discussed MRI-guided focused ultrasound surgery, which he considers a new direction in medicine that will affect many specialties such as surgery, radiology, and radiation therapy.

Focused ultrasound surgery is an image-guided and non-invasive technique. Highly focused ultrasound waves heat up and destroy a target, a tumor, or uterine fibroid for example, without destroying the surrounding tissue. The focused energy can also be used to break down the blood-brain barrier or deliver local therapeutics. Magnetic resonance imaging, Jolesz said, adds critical elements, the ability to target accurately and the ability to monitor temperature in real-time. Similar techniques are being developed for targeted drug delivery in preclinical studies and early clinical trials here in the CC's Diagnostic Radiology Department.

CC Director John I. Gallin (left) and Dr. Brad Wood present a certificate of appreciation to Dr. Ferenc Jolesz (center) at the conclusion of his presentation at the Sixth Annual John Doppman Memorial Lecture for Imaging Sciences.

Jolesz is the B. Leonard Holman Professor of Radiology at Harvard Medical School and Vice Chairman for Research and Director of the Division of MRI and the Image-Guided Therapy Program in the Department of Radiology at Brigham and Women's Hospital in Boston. He noted that three NIH entities support his Image-Guided Therapy Program, NIBIB, NCI, and NCRR.

The John Doppman Memorial Lecture honors the late Dr. Doppman, who chaired the Clinical Center's Diagnostic Radiology Department from 1972 to 2000.

The special, named lecture is part of the Clinical Center's Grand Rounds series and was held Oct. 25. In opening remarks, Dr. John I. Gallin, CC director, said Doppman's "accomplishment in this institution is the paradigm he set for how to lead in interventional radiology."

Dr. Brad Wood, who benefited from Doppman's teaching, also delivered opening remarks. "When I face a professional decision, I often ask myself 'What would Dr. Doppman do?' He was my benchmark," Wood said. "He was an insightful, inspirational friend to many of us."

Jolesz, too, described the privilege of knowing Doppman and said "I think his vision survived in this place and around the world. He was a real pioneer and a visionary in our field of radiology." ■

Research volunteers needed

Mood and Anxiety Disorders. NIMH is seeking healthy volunteers between the ages of 18-65, with no current or past history of psychiatric illness, no history of head trauma with loss of consciousness, and who are not currently taking medication. Compensation is provided. Call: 1-866-MAP-NIMH at 1-866-627-6464 or TTY: 1-866-411-1010

Typhoid fever vaccine. A Clinical Center study (06-CH-O070) seeks healthy volunteers ages 18-45. Compensation provided. Call 1-866-444-2214 or TTY: 1-866-411-1010.

Anthrax vaccine. A Clinical Center study (04-CH-0283) seeks healthy volunteers ages 18-30. Compensation provided. Call 1-866-444-2214 or TTY: 1-866-411-1010.

Rheumatoid arthritis. A Clinical Center study seeks (03-AR-0133) adults 18 or older with rheumatoid arthritis. Compensation is provided. Call 1-866-444-2214 or TTY: 1-866-411-1010.

Kidney transplant. Patients needing kidney transplantation may participate in reduced immunosuppression studies at the Clinical Center. Call 1-866-444-2214 or TTY: 1-866-411-1010. ■

NEW CLINICAL RESEARCH PROTOCOLS

The following new clinical research protocols were approved in October:

- Safety and Tolerability of MEDI-545 in Patients who Have Mild Systemic Lupus Erythematosus (SLE) with Cutaneous Involvement, 07-AR-0009, Gabor G. Illei, M.D., NIAMS
- Phase II Study of Metastatic Cancer that Overexpresses p53 Using Lymphodepleting Conditioning Followed by Infusion of Anti-p53 TCR-Gene Engineered Lymphocytes, 07-C-0003, Steven A. Rosenberg, M.D., NCI
- A Phase 1/2a Study Evaluating the Safety, Pharmacokinetics and Efficacy of ABT-263 in Subjects with Relapsed or Refractory Lymphoid Malignancies, 07-C-0006, Wyndham H. Wilson, M.D., NCI
- Hypnosis as a Pain and Symptom Management Strategy in Patients with Sickle Cell Disease, 07-CC-0011, Gwenyth R. Wallen, Ph.D., CC
- Exploring Decision Making of Hispanics and African Americans with HIV/AIDS Participating in Clinical Trials, 07-CC-0015, Migdalia Rivera-Goba, R.N., CC
- Effects of Calcitriol vs. PTH Replacement Therapy on Bone in Patients with Hypoparathyroidism, 07-D-0016, Karen K. Winer, M.D., NIDCR
- Rituximab in the Treatment of Refractory Adult and Juvenile Dermatomyositis (DM) and Adult Polymyositis (PM), 07-E-0012, Frederick W. Miller, M.D., NIEHS
- Pilot Study of Topical Dexamethasone 0.01% Solution for Prevention of Oral Chronic Graft Versus Host Disease, 07-H-0005, Matin M. Imanguli, D.D.S., NHLBI
- Autologous Transplantation of Genetically Modified Cells for the Treatment of X-Linked Chronic Granulomatous Disease, 07-I-0017, Elizabeth M. Kang, M.D., NIAID
- Enhancing Motor Memory Encoding by Action Observation, 07-N-0010, Leonardo G. Cohen, M.D., NINDS
- The Use of Magnetic Resonance Imaging to Investigate Cortical Damage in Patients with Multiple Sclerosis and Correlation with Cognitive Dysfunction, 07-N-0014, Francesca Bagnato, M.D., NINDS

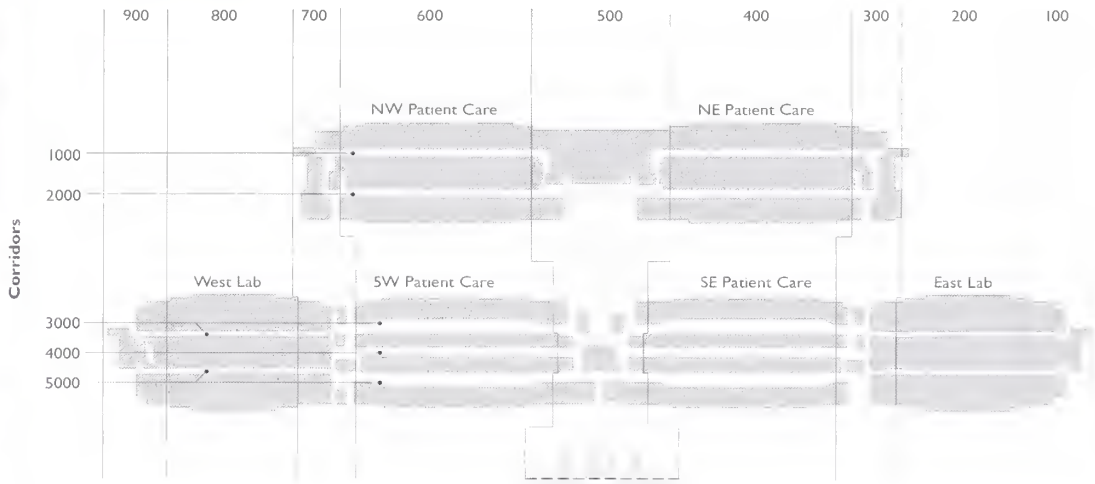
Getting Around the Mark O. Hatfield Clinical Research Center

There are 5 major corridors labeled 1000 to 5000 running north to south. Each room is numbered from 100 to 900 running east to west.

Floors 1, 3, 5, and 7 are for patient care. Floors 2, 4, and 6 house offices and interstitial (infrastructure) space.

Finding a Room

Each room has a 5-digit room number. The first digit of the room number is the floor; the second number is the corridor along with each room number.



Upcoming Events

Clinical Center Grand Rounds and Great Teachers Lectures

December 6
Ethics Rounds

Inappropriate Surrogates:
What Should Clinicians Do?
Ned H. Cassem, M.D.
Professor of Psychiatry,
Harvard Medical School
Massachusetts General Hospital
Lecture will be videocast,
http://videocast.nih.gov

December 13
Contemporary Clinical Medicine: Great Teachers

Drug Addiction:
Neurobiology of Disrupted Free Will
Nora D. Volkow, M.D.
Director, NIDA
Lecture will be videocast,
http://videocast.nih.gov

No Clinical Center Grand Rounds are scheduled December 20 and 27. They will resume Wednesday, January 3, 2007.

January 10, 2007
Contemporary Clinical Medicine: Great Teachers

Diabetes
C. Ronald Kahn, M.D.
President and Director,
Joslin Diabetes Center
Mary K. Iacocca Professor of Medicine
Harvard Medical School

February 14, 2007
Contemporary Clinical Medicine: Great Teachers

Transplantation
Hans Sollinger, M.D., Ph.D.
Folkert O. Belzer Professor of Surgery
Chairman, Division of Transplantation
University of Wisconsin, Madison

March 14, 2007
Contemporary Clinical Medicine: Great Teachers

Translation, Replication, and Credibility of Research Findings
John P. A. Ioannidis, M.D., Ph.D.
Professor and Chairman,
Department of Hygiene
and Epidemiology
University of Ionnanina
School of Medicine, Greece

April 11, 2007
Contemporary Clinical Medicine: Great Teachers

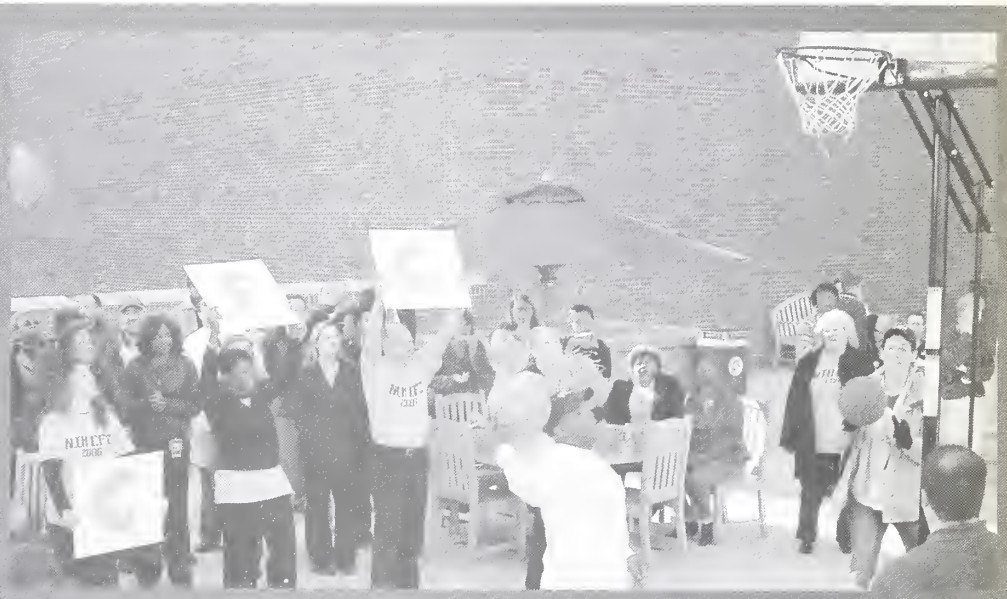
Mysterious Cases
Lawrence M. Tierney, Jr., M.D.
Professor of Medicine
University of California at San Francisco

May 9, 2007
Contemporary Clinical Medicine: Great Teachers

How Doctors Think
Jerome Groopman, M.D.
Beth Israel Deaconess Medical Center
Dina and Raphael Recanati
Chair of Medicine
Harvard Medical School

June 20, 2007
Contemporary Clinical Medicine: Great Teachers

Fourth Annual John Laws Decker Memorial Lecture
2006 Distinguished Clinical Teacher Awardee
Elaine Jaffe, M.D.
Laboratory of Pathology, NCI



CC staff celebrate Midday Madness

(Above right) Clinical Center staff gathered at the Southeast patio on Oct. 26 to celebrate "Midday Madness"—part of this year's NIH Combined Federal Campaign (CFC). The theme for the 2006 NIH campaign is basketball, and October's "madness" featured 20 Clinical Center staff in a free-throw contest moderated by Dr. David Henderson, deputy director for clinical care, and Maureen Gormley, chief operating officer. Alicia Costa (above left), Office of Finance Resource Management, won the hair-raising competition by landing nine baskets in 30 seconds. The event included a charity fair featuring 11 local and national organizations to raise awareness of the CFC campaign. The national CFC effort, which started Oct. 3, will end on Dec. 31. NIDCR hosts this year's NIH-wide effort. Want to know about options for participating? Talk to your departmental keyworker or go online, http://cfc.nih.gov/cfc/