

# nih record



ABOVE • Poster Day drew a host of visitors to Bldg. 45. See more photos on pp. 6-7.

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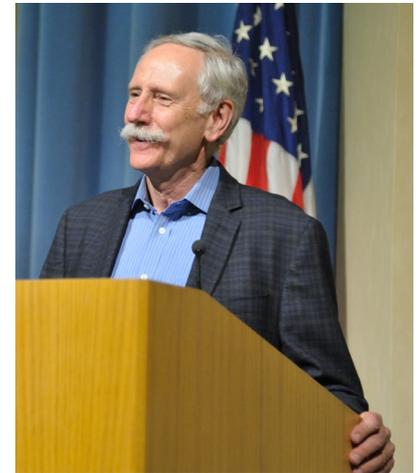
## Willett Sharpens Scope of Diet/Cancer Link

By Rich McManus

Soft-spoken, data-driven and painstakingly careful about the accuracy of his recommendations, Dr. Walter Willett gives no outward appearance of opposing the American Way of Fun. It's just that virtually every credible study of the causes of human cancer with which he is familiar tends to oppose the lifestyle of, say, Texas troubadour Jerry Jeff Walker, who once sang, "I like to smoke and drink and have fun, jump in my car and see how fast it'll run."

Willett visited NIH July 25 as a guest of NCI's Cancer Prevention Fellowship Program. In a talk he titled "Diet & Cancer: The Fourth Paradigm," he explained that every 10 years or so for the past 40 years, a new paradigm has emerged in the science of determining diet's link to the incidence of cancer.

The distinguished Harvard nutritionist and epidemiologist gave an overview of that era, arguing that the field's focus would most profitably turn toward an examination



Dr. Walter Willett at NIH on July 25

SEE WILLETT, PAGE 4

*Biology Mates with Other Sciences*

### Suresh Touts Multidisciplinary Approach

By Stacy Weiner

High-speed video cameras that track cells, a computer model that mimics a human organ and microscopes that detect biological structures smaller

than a human hair—such advances all are possible when scientists from diverse fields join together to tackle human disease.

At his July 25 lecture, "The Study of Human Diseases at the Intersections of Physical Sciences, Engineering and Biology," National Science Foundation director Dr. Subra Suresh discussed cutting-edge collaborations to explore the mechanism, diagnosis and treatment of disease. In what NIH director



NSF director Dr. Subra Suresh speaks at NIH.

SEE SURESH, PAGE 8

### Poster Day Shows Off Strengths of Young Minds

London may have hosted the Olympic Village this summer, but NIH on Aug. 9 held the intellectual equivalent—the annual poster day for students in the NIH Summer Internship



James K. Wang (l) explains his poster to a visitor.

Program, sponsored by the Office of Intramural Training & Education. Lithe minds rather than bodies were the emphasis at the 3-session, day-long event in Natcher Bldg.

Because the day featured youngsters just starting their research careers, it was not uncommon to see braces, hair dyed purple or blue and the green school blazers worn by members of the Physician Scientist Training Program, a summer internship for minorities that enrolls

SEE POSTER DAY, PAGE 6



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NIH...Turning Discovery Into Health



**International Expo Set for Sept. 28**

The 8th NIH International Opportunities Expo and Career Fair, sponsored by the visiting fellows subcommittee of the NIH fellows committee, is scheduled for Friday, Sept. 28. It will be held at Natcher Conference Center from noon to 4:30 p.m. The expo focuses on opportunities for postdoctoral fellows and graduate students interested in pursuing careers abroad. In addition to concurrent talks that explore research, funding and career opportunities overseas, fellows have a chance to network and interact with science and technology representatives from multinational research organizations, government and industry. For details visit [www.training.nih.gov/international\\_expo\\_2012](http://www.training.nih.gov/international_expo_2012).

**Conference on 'Sustainable Laboratories'**

The 2012 international conference "Sustainable Laboratories: Choosing the Right Equipment" will be held Dec. 13-14 at Natcher Auditorium. It will address energy conservation in the laboratory, including choosing "green" equipment in biomedical and animal research. Sponsored by the Division of Technical Resources, Office of Research Facilities, the conference is free but registration is required. Register at the conference web site [http://orf.od.nih.gov/PoliciesAndGuidelines/Choosing\\_the\\_Right\\_Equipment.htm](http://orf.od.nih.gov/PoliciesAndGuidelines/Choosing_the_Right_Equipment.htm). For questions, email [orfdtrconference@mail.nih.gov](mailto:orfdtrconference@mail.nih.gov).

**NIHITS To Retire in September**

The NIHITS (NIH Integrated Training System) legacy system is being retired in September. As a result, the procedures for internal training payments (NIH Training Center classes) and external training payments (external vendors) are changing. The Office of Human Resources and NBS have collaborated to develop a two-pronged solution for the NIH community. Key updates are as follows:

**Internal Training Payments**

Registration for NIH Training Center (NIHTC) classes is now handled through the LMS (HHS Learning Portal) rather than NIHITS. OHR collaborated with NBS to develop a custom financial interface with the LMS. The NIH community is no longer able to register for NIHTC classes through NIHITS; all employees should use the registration and approval process in the LMS instead.

**Getting Help**

For transition help, clarification of roles/approval chains and related support in your IC, contact your IC representatives to the transition working group. Go to [http://trainingcenter.nih.gov/lms\\_ICWorkgroup-Participants.html](http://trainingcenter.nih.gov/lms_ICWorkgroup-Participants.html) to find out who represents your IC.

- For LMS "How-do-I-do-this?" questions, use the tip sheets and manuals posted on NIHTC's web site at [http://trainingcenter.nih.gov/lms\\_tip\\_sheets.html](http://trainingcenter.nih.gov/lms_tip_sheets.html).

- For LMS technical problems and system access, contact the HRSS help desk at (301) 451-1436 or [hssystemssupport@od.nih.gov](mailto:hssystemssupport@od.nih.gov).

- For inquiries about NIHTC policies, procedures and classes (including to cancel or reschedule training), contact NIHTC at (301) 496-6211 or [training1@od.nih.gov](mailto:training1@od.nih.gov).

- For other questions regarding the LMS transition not addressed above, contact the NIH LMS Team at [LMSSupport@mail.nih.gov](mailto:LMSSupport@mail.nih.gov).

**External Training Payments**

The last day to use NIHITS to obligate external training payments to non-NIH vendors (e.g., Graduate School) and track orders is Sept. 7. This date closely aligns with regular NIH procurement schedules.

Around Oct. 11, ICs will have the option of using a new process involving iProcurement. Throughout this time, external training services can also be procured through IC purchase card procedures.

**Getting Help**

In preparation for this transition, OHR continues to communicate with representatives to the NIHITS-LMS IC transition working group on the latest updates. Members of the group will guide their IC through changing internal business processes. Visit [http://trainingcenter.nih.gov/lms\\_ICWorkgroupParticipants.html](http://trainingcenter.nih.gov/lms_ICWorkgroupParticipants.html) to find out who is representing your IC.



**NIAMS's Katz Presents Lupus Leadership Award**

*Dr. Stephen Katz (third from l), director of the National Institute of Arthritis and Musculoskeletal and Skin Diseases, presented the Lupus Foundation of America's National Policy Leadership Award to the U.S. House of Representatives Congressional Lupus Caucus co-chairs: (from l) Reps. Tom Rooney (R-FL), Jim Moran (D-VA), Ileana Ros-Lehtinen (R-FL) and William Keating (D-MA). The award was given for their leadership to ensure that members of Congress understand the impact of lupus and actively support the advancement of lupus research and awareness. The presentation was made at the LFA's Butterfly Gala. Also pictured (r) is co-presenter Shannon Boxx, U.S. women's national soccer team player and Olympic gold medalist, who is living with lupus.*

PHOTO: KAYE EVANS-LUTTERODT

## Partake in the Pioneer Award Symposium, Sept. 13-14

On Sept. 13-14, researchers recognized for their exceptional innovation will gather for the 8th annual NIH Director's Pioneer Award Symposium. The event will feature presentations and poster sessions on high-impact projects from diverse disciplines.

Here are some of the top reasons to attend this special symposium:

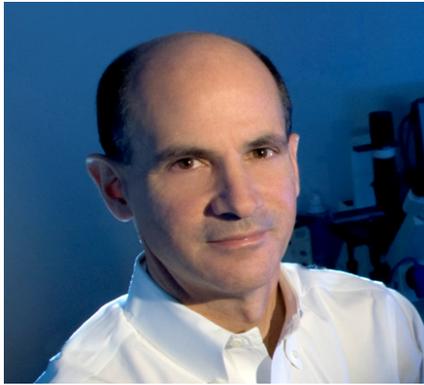
**Big Challenges, Bold Approaches.** Part of the NIH Common Fund's high-risk research program (<http://commonfund.nih.gov/highrisk/>), the Pioneer Award supports scientists who tackle major research questions in novel—and potentially transformative—ways. The meeting will also host a number of recipients of the NIH Director's New Innovator Award, a similar program supporting projects from promising early career investigators.

**Spectrum of Science.** Grouped by area of inquiry, the 2007 “graduating class” of Pioneer Award recipients will discuss the outcomes of their 5-year projects. Their talks will run the gamut from tools and new frameworks for studying the physical behaviors of the cellular cytoskeleton to the role of social and environmental factors in autism.

**Copious Connections.** The meeting is filled with opportunities for informal interactions with the 200-plus awardees who will attend.

**Free and Easy.** The event will take place at the Doubletree Bethesda Hotel & Executive Meeting Center, just outside the NIH campus at 8120 Wisconsin Ave. Attendance is free and open to all, with no registration required. So you can savor the whole symposium or drop in at selected sessions. The agenda, with links to research summaries and publications, is available at <http://commonfund.nih.gov/pioneer/Symposium2012/>.

For reasonable accommodation or more information, call Shan McCollough at (301) 594-3555 or email [pioneer@nih.gov](mailto:pioneer@nih.gov).



## Rando Asks ‘Is Aging Reversible?’ At Mahoney Lecture

Dr. Thomas Rando of Stanford University School of Medicine will examine the provocative question “Is Aging Reversible? Resetting the Aging Clock” at the annual Florence Mahoney Lecture on Aging on Sept. 12. The lecture, cosponsored by the NIH Director's Wednesday Afternoon Lecture Series and NIA, will be given at 3 p.m. in Masur Auditorium, Bldg. 10.

Professor of neurology and neurological sciences at Stanford, Rando and his colleagues focus on the biology of skeletal muscle stem cells in adult muscle homeostasis, aging and disease. Groundbreaking work from his lab shows that the age-related decline in skeletal muscle stem cell function is due primarily to influences of the aged environment rather than to intrinsic aging of stem cells. In addition, Rando and his team concentrate on the pathogenesis and treatment of muscular dystrophies, with particular emphasis on cell and gene therapy.

“Dr. Rando has been a major force in demonstrating the existence of factors in the circulatory system that speed up or slow down aging,” said NIA director Dr. Richard Hodes. “The identification of these factors will be instrumental in our search for a better understanding and, ultimately, interventions to promote healthy aging.”

Rando earned an A.B. degree in biochemistry in 1979 and an M.D.-Ph.D. in cell and developmental biology in 1987 from Harvard University. He completed his clinical training in neurology at the University of California, San Francisco, and postdoctoral training in the department of molecular pharmacology at Stanford University, where he was a Howard Hughes physician postdoctoral scholar.

In addition to his faculty appointment, Rando is director of the Glenn Laboratories for the Biology of Aging at Stanford. At the Veterans Affairs Palo Alto Health Care System, he is director of the Center for Tissue Regeneration, Repair and Restoration at the Research Rehabilitation and Development Center of Excellence, where the focus is the emerging field of regenerative medicine. He is also chief of neurology service at VA Palo Alto. In addition, he was founding director of the Muscular Dystrophy Association Clinic at Stanford University Medical Center.

The recipient of numerous awards, Rando has been recognized throughout his career by academic and professional societies and grants institutions. He has received a Paul Beeson Physician Faculty Scholar in Aging designation from the American Federation for Aging Research, the Ellison Medical Foundation Senior Scholar Award and a “Breakthroughs in Gerontology” Award from the American Federation for Aging Research.

In 2005, Rando received an NIH Director's Pioneer Award for his innovative work on the connection between stem cell biology and the biology of aging.

Rando's presentation is NIA's 26th annual Mahoney Lecture, named in honor of Florence Stephenson Mahoney (1899–2002), who devoted the last half of her life to successfully advocating for the creation of NIA and increased support for NIH.

There will be a reception and an opportunity to talk with Rando in the NIH Library immediately following the lecture.

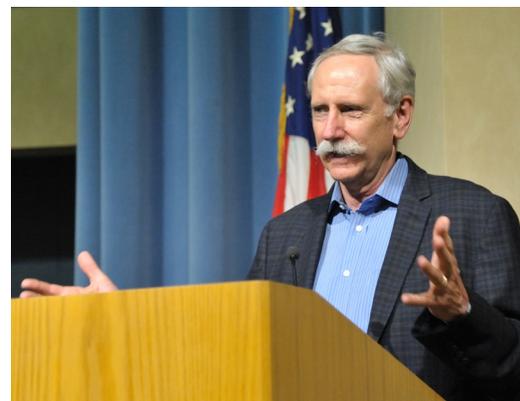
## WILLETT

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of energy balance, or the problem of being overweight and under-active.

The idea that diet and cancer were linked emerged in the 1960s, he said, with barbecued meats considered a chief carcinogenic culprit.

"I don't think we've totally resolved this question," said Willett, conceding that lack of a good biomarker for carcinogenesis hampers the hypothesis. "However, we would have seen it by now if [barbecued meats] were a major cause of cancer." Score one for Texas BBQ.



*Willett emphasized the long time frames required in getting reliable data about cancer, a disease that takes years to develop.*

PHOTOS: ERNIE BRANSON

time has essentially "buried the low-fat paradigm," he said.

Next up was the fruit-and-vegetable paradigm, which the National Cancer Institute embraced some years ago with its "5 servings a day" recommendation, which at the time was thought to offer as much as a 50 percent reduction in risk of major cancers.

"That was really a big promise that they made," Willett said, "but a series of prospective studies have not supported the initial recommendations of that paradigm...the trends have not been significant."

The fruit-and-vegetable dietary emphasis was helpful in preventing cardiovascular disease, he noted, but was not noticeably effective against cancer.

"That doesn't mean there's absolutely no benefit from fruits and vegetables," he qualified—lycopene (found in tomato products) does seem protective against prostate cancer, he reported, but the effect is modest. "In the big picture, these benefits get lost...It's not a totally closed door, but clearly it's not going to be a major solution to cancer prevention."

The fourth paradigm—energy balance—seems, Willett said, to have legs. "This one is, I think, here to stay." Gaining weight during one's adult years is risky; a stable weight is better than an increase, he said.

Body mass index measures in both men and women, especially waist circumference, are clearly predictive of cancer risk. "Increases in adiposity lead to a steady elevation of cancer risk of many kinds," Willett said. "Very clearly, there is a relationship that's been supported now in dozens and dozens of studies done across many countries."

In fact, because overweight and obesity have become so common, they account for about the same number of cancers as does smoking. How-

*The fourth paradigm—energy balance—seems, Willett said, to have legs. "This one is, I think, here to stay." Gaining weight during one's adult years is risky; a stable weight is better than an increase, he said.*

In the early 1980s, in a survey of causes of cancer death in the U.S., British scientists Richard Doll and Richard Peto found tobacco at the top of the list, but estimated that some 35 percent of cancers were dietary in origin. "They were quite unclear about the magnitude of that estimate and what the cause was," noted Willett.

Comparisons of cancer incidence and mortality rates across countries showed large differences, as great as 10- or 20-fold. Scientists also found that when immigrants came to the U.S. from abroad, they tended to adopt the cancer rates common in their new environment, which was typically higher in rates of animal fat consumption than immigrants' countries of origin.

"This was very critical evidence that genetic causes are not behind high rates of colon, breast, prostate and other types of cancer that we experience," Willett observed. So what is it that's causing variation in cancer rates from country to country? "These findings have been a huge stimulus to do more studies," he said.

A number of large cohort studies and randomized trials such as the Women's Health Initiative and the Nurses' Health Study have failed to find much of an association between fat intake in midlife and later on the incidence of breast cancer. Although Willett said some of the studies were probably not measuring dietary fat effectively, the sheer weight of evidence over

ever, for an individual, smoking is still riskier than being obese, Willett said.

Throughout his talk, Willett emphasized the long time frames required in getting reliable data about a disease that takes years to develop. “Seven years is a short period of time,” he said, when studying the incidence of cancer in humans.

Back in 2003, a World Health Organization subcommittee on nutrition and cancer recommended a BMI of 18.5-25, increased physical activity and virtually no consumption of alcohol as prudent means of avoiding cancer. “A lot more is likely to be added to that list,” Willett said.

He concluded with five observations:

✔ The estimate [made by Doll and Peto] is still reasonable that 30-35 percent of cancer is due to nutritional factors, but much of this is related to overweight and inactivity.

✔ Alcohol consumption does increase the risks of breast and other cancers.

✔ Low folate intake likely contributes to colon, and possibly other cancers.

✔ Considerable evidence supports a role of high dairy consumption and low intakes of calcium, lycopene and vitamin D in human cancer.

✔ We still have much to learn. Studies of diet during childhood and long-term follow-up will be important.

During a brief Q&A, Willett debunked the notion that the resveratrol found in red wine offers any health benefit.

“The idea that red wine is beneficial is French winemakers’ propaganda,” he said. “It’s the alcohol in wine that offers cardiovascular protection...You’d need a couple of gallons [of red wine] a day to reach the levels [of resveratrol] used in experiments showing benefit.”

Not that any number of American singer/songwriters haven’t tried. 🎵

## NIH Is Involved in Research Triangle Park Growth

Research Triangle Park (RTP) is North Carolina’s most recognizable district for research and development, but to keep up with competition from domestic and international research clusters, RTP planners want to bring in more retail, residential, hotel and educational facilities.

Since NIEHS has been a long-time resident of RTP, Liz Rooks, executive vice president and chief operating officer for the Research Triangle Foundation of North Carolina, came to the institute recently to give an overview of the plan and answer questions about the future of the park.

As Rooks explained, in 1959, North Carolina had the second lowest per capita income in the U.S., surpassing only Mississippi. With an economic system based on small-scale farming and three low-wage industries—textiles, tobacco and furniture manufacturing—then North Carolina Gov. Luther Hodges charged a committee of businessmen, academicians and community leaders to come up with a way to improve the state’s economy.

“We had three strong universities, but the graduates of those schools, particularly those in math and science, were leaving because they couldn’t find jobs here,” Rooks added. “The committee’s idea was to bring research industry here and, with that, the Research Triangle Foundation was born.”

A few small companies relocated to the area, but job growth was slow until 1965, when NIEHS became the first major tenant to announce that its campus would come to RTP. Since then, the RTP community has grown to include more than 170 companies with more than 39,000 full-time workers. With an annual payroll of \$2.9 billion, this 7,000-acre economic engine is poised to drive North Carolina and the region into a new era of prosperity.

Rooks said the foundation board surveyed RTP companies on the park’s strengths and weaknesses and enlisted the help of a prominent New York architecture and urban design firm to develop a 50-year master plan (see [www.rtp.org/about-rtp/planning-and-progress](http://www.rtp.org/about-rtp/planning-and-progress)).

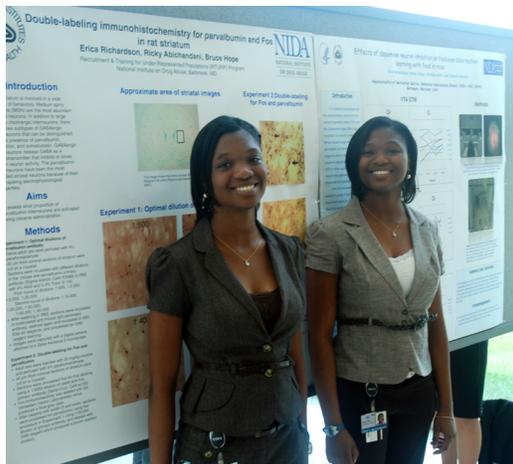
The plan has several overall goals such as retaining existing tenants, continuing to attract large and small companies and recruiting a broad range of new tenants, which should bring a variety of hotels, restaurants, specialty shops and housing to RTP. The designs also include commuter rail stations and developing common open spaces that preserve and enhance the park’s natural beauty.

Rooks said that multiple projects will be phased in over time and that the foundation will continue to work to build a better, stronger RTP.—Robin Arnette



*Bldg. 2 is one of several NIEHS structures in Research Triangle Park. RTP is 7 miles long and 2 miles wide, with NIEHS overlooking the lake in the center of the park. The master plan calls for making nodes within RTP more walkable.*

PHOTO: STEVE MCCAIG



At Poster Day 2012 (from l) Erica J. Richardson (l) and her sister Erin A. Richardson participated for the first time in Poster Day this summer. They will enter Maryland's Stevenson University this fall; in the next two photos, exhibitors defend their work.

PHOTOS: RICH MCMANUS



## POSTER DAY

CONTINUED FROM PAGE 1



Above, Safiyya Correia (r) of NIDA describes her work to a visitor to her poster. Below, 11th graders (from l) Natasha Ceballos, Alexis Berry and Candace Johnson are members of the Physician Scientist Training Program and exhibited at Poster Day.

7th graders and trains them every summer through senior year of college.

PSTP trainees spend the summers after grades 8 and 9 learning basic science techniques and the fundamentals of lab bench work at Southern Methodist University. Following grades 9 and 10, the kids study at the University of Pennsylvania. "We basically live like college kids," said Alexis Berry.

The Philadelphia native explained that 11th graders, such as herself, and the 30 other members of her class split into 2 groups: half studied at NIH's Bethesda campus this summer while the others worked for NIA and NIDA at the Bayview campus near Baltimore.

When they are seniors next summer, most will do research at the University of Texas Southwestern Medical Center in Dallas or work in Seattle's pharmaceutical industry.

"After that, we are expected to make use of the connections we have made at all the summer internships and find our own research positions," said Natasha Ceballos, of the U.S. Vir-



Above, NIDCR summer intern Daniel Zemel (l) explains his summer science.

gin Islands. PSTP students can also go back and mentor people in grades below them, said Candace Johnson of Fulton, Md.

All three of the young women plan on medical and/or research careers, they declared.

In all, some 760 students participated in Poster Day, hailing from schools in 45 states, plus the Virgin Islands, D.C. and Puerto Rico.—Rich McManus



Nikki Boggess (l) worked in NIA's Laboratory of Genetics and offers an explanation of her work.



Above, Juliet Arcila-Rojas of NIDA makes her work clear to a visitor. Below, Hanna X. Lee of NICHD has the same work to do, albeit with a younger attendee.



Above, NIDA's Jennifer Cha (l) enjoys dialogue with a visitor; below, Ceballos (l) of the U.S. Virgin Islands explains her poster to an attendee.



Dr. Jaime Miranda, director of CRONICAS Center of Excellence for Chronic Diseases at the Universidad Peruana Cayetano Heredia in Lima, Peru, presents his experience as a Latin American investigator in achieving sustainable research support.

### Bogotá Learns Fundamentals of Grant Writing

NCI's Center for Global Health recently held a regional grant writing and scientific peer review workshop in Bogotá, Colombia. The 2-day workshop called on experienced faculty from NIH and other science-funding organizations as well as regional researchers. Beatriz Londoño, Colombia's minister of health and social protection, said the workshop successfully paralleled Colombia's Research Week, which was "focused on the coordination and promotion of international cooperation in science, technology and innovations."

The workshop introduced participants to methods for identifying funding opportunities and writing competitive research proposals. It was designed to provide a solid foundation in the fundamentals of grant-writing.

Perry Holloway, deputy chief of mission at the U.S. Embassy in Bogotá, said, "The ministry of health and social protection has been an ideal partner in Latin America in supporting such a capacity-building event."

The workshop attracted just under 400 applications. Sixty participants were selected, including investigators and science administrators from Colombia and neighboring countries including Bolivia, Ecuador and Peru, among others.

Jose Ramirez, a participant from Medellín, Colombia, said the workshop helped him better understand "how the American funding system [with regard to] health research works." He hopes the workshop will become a regular program.

Holloway said the event seems to have galvanized interest among the public health, scientific and research communities to continue "future exchanges in scientific capacity development across Latin America, with the goal of addressing mutual health priorities and building research capacity through collaborative science."

Dr. Ted Trimble of NCI agreed. "We hope to work with our partners to co-sponsor similar workshops in other regions of the world," he said.



## SURESH

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### Above, l:

Suresh (l) enjoys a reception in the NIH Library following his July 25 lecture. With him are Dr. Michael Gottesman (c), NIH deputy director for intramural research, and Dr. Roderic Pettigrew, NIBIB director.

### Above, r:

Suresh emphasized the role of computational modeling and simulation in tackling complex biological questions.

PHOTOS: BILL BRANSON

Dr. Francis Collins called a “historic moment,” Suresh described his own research as well as the work of other scientists on such deadly diseases as malaria and cancer.

“Hopefully, I’ll convince you...that it is at the intersections of all these very different disciplines that the biggest advances are likely to be made,” said Suresh, who served as dean of the Massachusetts Institute of Technology’s engineering school.

Of course, he noted, these intersections are not new. But recent advances mean “we can now go to the cell level and molecular level and the single DNA level” with great precision, Suresh said. “That, combined with the revolution in genomics and genetics, gives us an opportunity to... ask questions that we may never have asked before.”

One such question is how disease triggers physical changes in cells. Suresh has applied this question to a type of malaria, *Plasmodium falciparum* malaria, and its effect on red blood cells.

Usually, red blood cells can squeeze through very narrow blood vessels, but malaria reduces the cells’ flexibility. When measured conventionally, the flexibility appeared to decrease by around 3 to 5 times. Using advanced engineering tools, however, Suresh’s team learned that the cells’ flexibility can, in fact, decrease up to 50 times when probed over the full range of possible stages.

Collaborations provided other insights into malaria, which is responsible for approximately 700,000 deaths each year. Previous research on the flickering, or fluctuations, of red blood cells yielded unclear results, Suresh explained. “The problem was we couldn’t do a full field experiment” to monitor the range of changes, he said. “We decided to fix that.”

Suresh’s team used a technique that is well known in physics but was never applied to biology. Com-

binning laser technology with mathematical equations, the researchers were able to monitor cell fluctuations in the nanometer (or billionth of a meter) range closely in just a millisecond. They could then determine that cells infected with *P. falciparum* malaria definitely lose their ability to flicker.

Suresh’s team also wanted to visualize malaria’s effect on red blood cells’ ability to flow through the tiny blood vessels of the brain. Therefore, using a tube 1/30th of the thickness of a human hair and a high-speed video camera, the researchers taped the cells’ journey. Healthy cells easily slid through, but malaria-infected cells clearly got stuck.

Such work could play a role in detecting malaria, Suresh noted. “Can we design a device that is the size of a thumbnail [and] carry it to a remote hospital in a developing country where you take a drop of whole blood, put it in this microfluidic device and [find out] if a person has malaria?” The answer is yes, he said, though such a tool might cost a dollar or two instead of the 10 cents he had hoped.

Suresh also emphasized the role of computational modeling and simulation in tackling complex biological questions. Today, for example, computer simulation of a spleen means researchers don’t need the actual organ to explore how it works to remove a parasite.

Suresh concluded by thanking his colleagues and in doing so illustrated the potential reach of interdisciplinary collaboration. His list of coworkers included engineers, biologists, physicists and medical doctors from three different continents.

To watch a videocast of this lecture, go to Past Events at <http://videocast.nih.gov>. 📺

# milestones



## Murray Joins NIH in Disease Prevention Role

Dr. David M. Murray of Ohio State University's College of Public Health has been named NIH associate director for disease prevention and director of the Office of Disease Prevention.

"This is an exciting time for research in disease prevention and health promotion, which is gaining more and more visibility at the NIH," said NIH director Dr. Francis Collins, who announced the appointment. "I am confident that Dr. Murray's experience will be a strong complement to the mission of the ODP."

Murray is a professor and chair of the division of epidemiology in the College of Public Health. He has taught courses on writing NIH research grants, served on more than 45 grant review panels and worked on more than 40 NIH-funded grants and contracts, including many multi-center trials. Much of Murray's research has focused on the design and analysis of group-randomized trials and evaluating the effectiveness of public health intervention initiatives. He is a fellow in the American Association for the Advancement of Science, has written more than 230 articles in peer-reviewed journals, served on the editorial board for *Preventive Medicine* and was the first chair of the community-level health promotion study section at NIH.

His experience lends itself to the mission of the ODP to assess, facilitate and stimulate research on disease prevention and health promotion and disseminate the results of this research to improve public health.

"I believe that we can best advance the nation's health by ensuring that disease prevention and health promotion programs are based on good science, that they are carefully designed and evaluated, that effective interventions are disseminated and that ineffective interventions are identified and discarded," said Murray.

He earned a B.A. in psychology from Denison University and a Ph.D. in psychology from the University of Tennessee. He is expected to join NIH in September.

## NIAID's Green Receives Mentor Award

Fellows at the National Institute of Allergy and Infectious Diseases recently bestowed the institute's Outstanding Mentor Award on Dr. Kim Y. Green, chief, caliciviruses section, Laboratory of Infectious Diseases (LID). The award is given annually to a faculty member who encourages inquiry, innovation and critical analysis and most closely exemplifies the spirit of a quality mentor.

Describing Green as a "gifted researcher with an acute intellect," Dr. Karin Bok, a postdoc in Green's lab, went on to add that Green is viewed by her fellows as a mentor who follows rigorous ethical standards and ensures that her trainees do so as well. A large part of her success is the "constant support of a mentor who cares about my career advancement and success," says Bok. "I am confident that [Green] has had an enormous positive impact on my career and will continue to do so."

Green explained that much of what she learned about mentoring came from her own mentor, Dr. Al Kapikian, also in LID. She added that "it takes a good mentee to make a good mentor. I have been fortunate to have wonderful fellows and students over the years. This is truly a highlight of my career."

Eugenio Abente, a graduate student in Green's lab, remarked that "despite the many challenges of tight budgetary constraints and an increasingly competitive field, Dr. Green has constantly led by example: true to the science, always available and continually supportive." He added that mentoring skills often seem to be transmitted vertically. In addition to Green, others "willing to impart their wisdom on me, share their knowledge and truly want me to succeed are...her mentor, Dr. Al Kapikian, and her mentee Dr. Karin Bok," he said.

In addition to her mentoring duties, Green pursues opportunities to advance women in science. She is the NIAID representative to the NIH working group on women in biomedical careers and this past year was on the committee to organize a workshop honoring the institute's women scientists.—**Marci Karth Better**



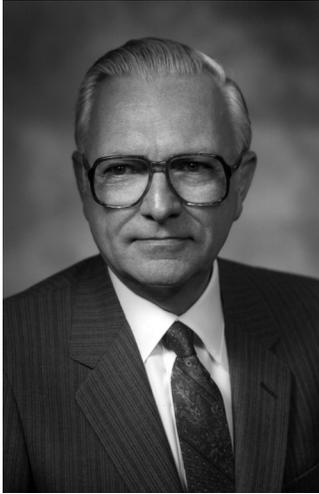
NIAID's Dr. Kim Y. Green (front, second from r) was recently named Outstanding Mentor. On hand for the award were (rear, from l) Eugenio Abente, Dr. Stanislav Sosnovtsev, Dr. Gabriel Parra Gonzalez and Dr. Carlos Sandoval Jaime. In front are (from l) Dr. Rachel Dexter, Dr. Wendy Fibison and Dr. Karin Bok.

## Katz Highlights NIH Imaging Research at Congressional Briefing

NIAMS director Dr. Stephen Katz (r) recently participated in a panel discussion on osteoarthritis (OA) at a congressional briefing organized by the Coalition for Imaging



and Bioengineering Research (CIBR). He was joined by (from l) four-time Super Bowl champion L.C. Greenwood from the Pittsburgh Steelers, who has OA; CIBR President Renée L. Cruea; and NYU Langone Medical Center researcher Dr. Michael P. Recht.



*Dr. David B. Scott, who served as director of NIDR (now NIDCR) from 1976 until his retirement in 1981, died June 8 at Atlantic Shores retirement community in Virginia Beach, Va.*

## Former Dental Institute Director Scott Mourned

Dr. David B. Scott, 93, former director of NIDR (now NIDCR), died June 8 at Atlantic Shores retirement community in Virginia Beach, Va. He served as director of the dental institute from 1976 until his retirement in 1981, his second tenure working at NIH. He was one of the original 13-member staff of the institute when it was established by Congress in 1948, and was a dental researcher whose career saw work in myriad subjects, from fluoridation to dental forensics.

“Dr. Scott’s work set the stage for much of the research we do today,” said Dr. Martha Somerman, director of the National Institute of Dental and Craniofacial Research. “His dedication to research and to training the next generation of researchers left an indelible mark on the field of dental and craniofacial science.”

Scott was internationally recognized as an expert on calcified and mineralized tissues. He was among the first to use electron microscopy to study the structure of tooth enamel and dentin and used the electron microscope to investigate sodium fluoride’s action on enamel. He also served as an examiner for the landmark project in Grand Rapids, Mich., that demonstrated the benefits of water fluoridation to prevent tooth decay. Scott additionally became one of the nation’s first few recognized authorities on dental forensics.

Under his leadership, NIDR placed a greater emphasis on periodontal disease in the extramural research program and on clinical studies. He expanded behavioral and social science research at the institute, established a branch for studying noninvasive diagnostic techniques and also created a clinical investigations and patient care branch, which coordinated patient treatment with institute clinical research.

“Dr. Scott was a very special man. He was internationally respected for his science and leadership, but carried it with such grace and ease that all were comfortable in his presence,” said Dr. Michael Roberts, who was recruited by Scott to NIDR as head of the dental clinic’s patient care section. “He was a wonderful man with a great sense of humor, a kind word for all, a thoughtful and probing scientist and a leader you considered it an honor to follow.”

David Bytovetzski Scott was born May 18, 1919, in Providence, R.I., and earned a B.A. in physical biology from Brown University in 1939 and his D.D.S. from the Baltimore College of Dental Surgery, University of Maryland, in 1943. The following year, he added an M.S. from the University of Rochester, where he was a Carnegie fellow in dental research.

Scott served as a commissioned officer in the Public Health Service from 1944 to 1965. He arrived at NIH in 1944 and worked in the dental research section and then NIDR when it was established in 1948. He served as chief of NIDR’s Laboratory of Histology and Pathology from 1956 to 1965, when he retired from PHS. He then joined Case Western Reserve University, serving on the dental and medical school faculties, and later as dean of the School of Dentistry.

On Jan. 1, 1976, he returned to NIDR as director, resuming active duty with the PHS and becoming a rear admiral and an assistant surgeon general. Scott held the post until the end of 1981, when he retired a second time.

He received numerous awards, including those recognizing his contributions to forensic dentistry and to research in mineralization. He was awarded several honorary degrees and also held memberships in a number of dental associations.

Scott was predeceased by his first and second wives, Mary Elizabeth Motter of York, Pa., and Nancy Moss Hamann of Cleveland; his son, Steven; and his stepson, William C. Hamann. He is survived by two sons, David and his wife, Susan, of Spotsylvania, Va., and Peter and his wife, Linn, of Hampton, Va.; his stepdaughter, Heidi Hamann Fortune of Midway, Utah; five grandchildren and two great-grandchildren.

## NIAID Virologist Receives Lifetime Achievement Award

Dr. Bernard Moss, chief of NIAID’s Laboratory of Viral Diseases, was recently awarded a lifetime achievement award in virology at the International Poxvirus 2012 conference.

Moss has been a leader in poxvirus research since the 1960s and has trained many of the investigators currently in the field. He and colleagues discovered much of what is known about the biology of vaccinia, the virus used in the smallpox vaccine. He and colleagues also developed a method for using poxviruses as vaccine vectors, a technology that has led to several USDA-approved animal vaccines for diseases such as rabies and feline leukemia. This pox-vector technology is being used in candidate HIV vaccines that currently are in clinical trials, as well as in experimental vaccines for malaria, tuberculosis and influenza, and potential treatments for cancer.

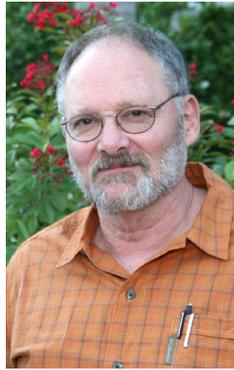
Moss has received numerous awards and prizes including the Dickson Prize for Medical Research, the Invitrogen Eukaryotic Expression Award, the ICN International Prize in Virology, the Taylor International Prize



in Medicine and the Bristol-Myers Squibb Award for Distinguished Achievement in Infectious Disease Research. He has been elected to the National Academy of Sciences, the American Academy of Microbiology and the American Association for the Advancement of Science. He also has served as president of the American Society for Virology.

### NIDCD Program Director Davis Dies

Dr. Barry Davis, father, friend and mentor, passed away on July 3 at age 65 after a long illness. Born in San Pedro, Calif., he received his B.A. in 1968 in psychology from Miami University, Oxford, Ohio, and his Ph.D. in 1975 in the neurosciences from the University of Rochester Medical School. He then held positions as an associate professor at the University of Alabama followed by the University of Maryland at Baltimore. During that time, he studied the gustatory, or taste, areas in the brainstem of rodents, research that was continuously funded by NIH.



In 1999, Davis left academia to join NIH as director of the taste and smell program within the National Institute on Deafness and Other Communication Disorders, where he worked with the chemosensory community for 14 years. His research interests included the anatomical, physiological and biochemical similarities and differences among brain structures involved in the processing of taste and smell.

“Before coming to NIDCD, Barry was a successful scientist in his own right,” said NIDCD director Dr. James F. Battey, Jr., “making significant contributions to our understanding of the anatomical organization of the gustatory system.”

As a program director, Davis’s broad understanding of the field helped move NIDCD forward in surprisingly innovative and productive ways. On a personal level, as many grantees who worked with him would attest, he was someone who did not mince words. But he was revered for his fairness, honesty and his direct and candid style.

Davis was affiliated with the American Association for the Advancement of Science, the Society for Neuroscience and the Association for Chemoreception Sciences (AChemS), where he actively participated in meetings, led workshops and advised junior investigators. He was an advocate for AChemS research endeavors and participated in NIH-wide initiatives that helped to expand AChemS resources within NIH. In 2009, Davis received the AChemS Distinguished Service Award in recognition of outstanding service to the chemical sciences research community.

According to Dr. Judith Cooper, NIDCD deputy director, “Barry was an invaluable program officer, serving as a strong and fair advocate for his research community, which held him in the highest regard. In addition, he was a leader in numerous institute activities and served the broader NIH on various committees, including the Pain Consortium, the NSF/NIH Collaborative Research in Computational Neuroscience Initiative and the U.S.-Japan Brain Research Program. He will be terribly missed by all of us.”

Dr. Charles Greer, a research associate of Davis’s and former president of AChemS, said, “His advocacy for the chemosensory community was unparalleled. His knowledge of the leading questions, his understanding of the techniques and his personal relationships throughout the field heralded a new era for chemosensory representation at NIH.”

Davis is survived by his son, Kyle Tucker-Davis, a recent graduate of the U.S. Naval Academy.—Phalla Keng



*Above (from l), Annette and Nicole Rangoussis and Kayla Cesone examine the beating heart of a live chick embryo; below, Andrew Long (r) captures the attention of student adventurers in a session on the physics of simple machines, co-taught by Farhoud Faraji (not shown).*

### Volunteer Teachers Sought for AIS

Adventure in Science (AIS), a non-profit science education program for children, is planning its 20th year at NIH and is looking for volunteer teachers. The program, which meets on Saturday mornings October through March in Bldg. 10, is designed to show 8-11 year-olds the fun of science using hands-on activities—from building (and launching) model rockets to dissecting frogs.

AIS teachers are mostly volunteers from the NIH community, from postdocs to institute directors. This is a great opportunity to exercise your teaching skills with an enthusiastic audience. You can volunteer for only one Saturday or for several. Further information about teaching in AIS can be found at [www.adventureinscience.org](http://www.adventureinscience.org) in the section “About Us.”

If you are interested in volunteering, contact Vathani Arudchandran, (301) 827-1813, ([Arulvathani.Arudchandran@fda.hhs.gov](mailto:Arulvathani.Arudchandran@fda.hhs.gov)) or Ed Max, (301) 827-1806, ([edward.max@fda.hhs.gov](mailto:edward.max@fda.hhs.gov)). Enrollment is currently full for children in the program beginning this fall. Registration for the following year’s program will open next spring, and will be announced on the web site.



## Annual Flu Shot Can Protect You, Patients and Family

NIH will kick off its free flu vaccine clinic for all staff (including contractors) on Monday, Sept. 10.

With a particularly susceptible population of immune-compromised patients, the Clinical Center requires all patient-contact staff—employees and contractors—to get the flu vaccine. Immunizations are available, but not required, for all other NIH staff.

The free vaccine clinic will be held on the 7th floor of the north Clinical Research Center atrium. Take the west elevators near the north entrance hos-

pitality desk to the 7th floor. Dress in clothing that will let you quickly expose your upper arm; changing areas will not be available. Following vaccination, the Occupational Medical Service will send an email with a questionnaire and certificate of immunization.

The best way to reduce your risks of getting sick or getting others sick is to get the flu shot every year, said Dr. Tara Palmore, deputy hospital epidemiologist. Planning to stay home once you feel ill may not be enough.

“Most healthy adults can infect others 1 day before symptoms develop,” Palmore said. “So actually even if they stay home when they get sick, they may have already transmitted [flu].”

Those who submitted written physician documentation of a medical contraindication form last year need not do so again.

Also, staff ages 65 and older will be offered a high-dose vaccine that stimulates a stronger immune response. This population tends to develop lower levels of protective antibodies with a traditional dose vaccine.

For more information on the flu vaccine, visit [foiltheflu.nih.gov](http://foiltheflu.nih.gov).

## Cintrón To Keynote Hispanic Heritage Month Program, Sept. 20

Dr. Nitza M. Cintrón, University of Texas Medical Branch, will deliver the keynote address at NIH's 2012 Hispanic Heritage Month observance on Thursday, Sept. 20 from 11 a.m. to noon in Masur Auditorium, Bldg. 10. The national theme for the month is “Diversity United, Building America's Future Today.” A former project scientist for the Space Shuttle program's Spacelab mission, Cintrón will discuss the theme's relevance in health and medical science. Dr. Carlos Zarate of NIMH will give opening remarks.



Sign language interpreters will be provided. Individuals who require reasonable accommodation to participate should contact Gerard Roman at (919) 541-3430, through the Federal Relay Service at 1-800-877-8339 or via email at [roman@od.nih.gov](mailto:roman@od.nih.gov).

Last Name	Date	Day/Location	Morning	Afternoon
A thru G	9/10	Monday 10-CRC*	8–11:30	12:30–3:30
H thru O	9/11	Tuesday 10-CRC	8–11:30	12:30–3:30
P thru Z	9/12	Wednesday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/13	Thursday 10-CRC	6–11:30	12:30–7
Any letter	9/14	Friday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/17	Monday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/18	Tuesday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/19	Wednesday 10-CRC	6–11:30	12:30–7
Any Letter	9/20	Thursday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/21	Friday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/22	Saturday 10-CRC	6–8:30	6–8:30
Any Letter	9/24	Monday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/25	Tuesday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/26	Wednesday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/27	Thursday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/28	Friday 10-CRC	8–11:30	12:30–3:30
Any Letter	9/29	Saturday 10-CRC	6–8:30	6–8:30
Any Letter	10/1	Monday EPN**	8:30–11:30	1–3
Any Letter	10/2	Tuesday EPN	8:30–11:30	1–3
Any Letter	10/3	Wednesday EPN	8:30–11:30	1–3
Any Letter	10/4	Thursday Rockledge***	8:30–11:30	1–3
Any Letter	10/5	Friday Rockledge	8:30–11:30	1–3
Any Letter	10/9	Tuesday NSC ≈	8:30–11:30	1–3
Any Letter	10/10	Wednesday NSC	8:30–11:30	1–3
Any Letter	10/11	Thursday Twinbrook III ≈≈	8:30–11:30	1–3
Any Letter	10/23	Tuesday Poolesville/103 Bldg. 110	8:30–10:30 a.m.; 11 a.m.–1 p.m.	

\*10-CRC: 7th Fl. Atrium, East Side  
 \*\*EPN: 6130 Exec. Blvd, 1st Fl. Rm. C – F, H  
 \*\*\*Rockledge I: 6705 Rockledge 4th Fl. Cafeteria  
 ≈Neuroscience Center: 6001 Exec. Blvd. 1st Fl. A1/A2  
 ≈≈Twinbrook III: 12735 Twinbrook Pkwy., Rm. 2E06