

THE N I H R E C O R D

Still The Second Best Thing About Payday

Friends of the Clinical Center Fills Gaps for Patients

By Jane DeMouy

At 11 a.m. any day of the week, Christine Brake, executive director of the Friends of the Clinical Center (FOCC), is likely to be considering a request from a Clinical Center social worker. A patient from Michigan has



FOCC board member Joanne Pomponio (l) and Executive Director Christine Brake

been unable to work during his 3-month treatment at NIH, and has no money for rent and utilities at home. The Patient Emergency Fund can't handle needs like

SEE FOCC, PAGE 4

A Slam-Dunk Case

Economist Cutler Says Research Investments Are Well Repaid

By Richard Currey

When anticipating a presentation by a Harvard-based economist and former presidential advisor, one might imagine an event bordering on the impenetrable. Not so with Dr. David Cutler, whose humor and personable style spiced a lecture grounded in practical, everyday realities. His recent talk, "Making Sense of Medical Care" offered a version of health economics that was plain-spoken and in the service of a central



SEE CUTLER, PAGE 8 Dr. David Cutler

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Hurray for Hollywood

Prime-Time Television Show Offers NIH Opportunity

By Carla Garnett

Striding purposefully down a bustling city street, a businessman stops suddenly in mid-cell phone conversation and collapses to the sidewalk. Up close, his complexion takes on a bluish tint. Moments later the man is seen in an isolation unit of an emergency room, an oxygen mask affixed to his face. In walk several physicians, barking orders sharply to the hospital's staff and interrogating the patient. Sounds like a medical mystery NIH researchers solve on a routine day at the Clinical Center, right? Perhaps not, but when NBC decided to develop its new prime-time drama *Medical Investigation*, the show's writers and producers deliberately chose the National Institutes of Health as the government agency employing its fictional team of physician-detectives. The story of how—within a few short months—NIH came not only to welcome the drama and aid in its development, but also to embrace the power of Hollywood is something of an ongoing mini-documentary itself.

SEE PRIME TIME, PAGE 6

Participate in 'National Wear Red Day'

Wear Red to Support Awareness of Heart Disease in Women

Friday, Feb. 4 is National Wear Red Day—a day when thousands of Americans nationwide, including federal employees, will take women's health to heart by wearing red to show their support for women's heart disease awareness. More women die of heart disease than all cancers combined, yet less than half of women know that heart disease is their biggest health threat and most fail to make the connection between its risk factors and their personal risk of developing heart disease.

National Wear Red Day is an annual event held on the first Friday in February, sponsored by the National Heart, Lung, and Blood Institute. The event is part of The Heart Truth, NHLBI's national awareness campaign for women about heart disease. The centerpiece of the campaign is the Red Dress—the national symbol for women and heart disease awareness. The dress works as a visual red alert to get the message heard loud and clear: "Heart Disease Doesn't Care What You Wear—It's the No. 1 Killer of Women."

NIH'ers enthusiastically celebrated the first National Wear Red Day in February 2004. Stephanie Glezos Bell, NIH presidential

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management fellow, said: "I really like the red dress campaign, and I was very excited to get [NIH director] Dr. Zerhouni's message about National Wear Red Day. I forwarded it to everyone in my



NHLBI staffers turned out in red on Feb. 6, 2004, and plan to do it again in 2005.

office and was so excited to see the majority of people here wearing red today—both men and women. I just wanted to let you know that it really did raise awareness in our office!"

For 2005, the Office of Personnel Management will help spread the word to federal employees and encourage them to wear red on Feb. 4 to unite in the national movement to

give women a personal and urgent wake-up call about their risk of heart disease.

Everyone can participate in National Wear Red Day by showing off a favorite red dress, shirt or tie or by wearing the Red Dress pin. Encourage your family, friends and coworkers to do the same. To help you plan a celebration, the Wear Red Day Toolkit and Red Dress pin are available at www.hearttruth.gov.

Join in and help spread the word about women and heart disease. Send your best picture (electronic file) of your Wear Red Day celebration to Ann Taubenheim at NHLBI. ■

NINR Launches New Web Site

The National Institute of Nursing Research has launched a new web page that highlights the work of its Division of Intramural Research. The site focuses on the division's two principal intramural areas of interest: the Symptom Management Laboratory and Research Training. Visitors can learn about NINR's unique symptom management laboratory and its program of basic, clinical and translational research in that field. Also, present and future nurse scientists will find cutting-edge research training opportunities at this site. The new pages can be accessed at <http://ninr.nih.gov/ninr/>. ■

Healthy Volunteers Sought

The Mood & Anxiety Disorders Program, NIMH, is looking for healthy volunteers, not on medication, with no current or history of psychiatric illness, between the ages of 18 and 65, for a multitude of studies. These may include PET scans, MRI, psychological interview, neuropsychological testing, and other procedures depending on the project in which you choose to participate. Stipend available. Call 1-866-627-6464 for more information. ■

Nine Complete NIGMS's PRAT Program

Nine postdoctoral fellows recently completed the NIGMS Pharmacology Research Associate (PRAT) program. PRAT supports training at NIH or FDA laboratories for individuals with backgrounds in the basic or clinical sciences who wish to obtain advanced experience in an area of pharmacology, or for those who are already pharmacologists to gain experience in new fields.

This year's graduating fellows and the institutes in which they worked are: Dr. Frank I. Comer, NCI;



Recent PRAT graduates include (from l) Dr. Jennifer Swisher, Dr. David Williams, Jr., Dr. Benjamin Kagan and Dr. Kate Prybylowski.

Dr. Kristi A. Egland, NCI; Dr. Benjamin L. Kagan, NIDDK; Dr. Daniel E. Kolker, NICHD; Dr. Franklin W. Outten, NICHD; Dr. Kate L. Prybylowski, NIDCD; Dr. Byrn B. Quimby, NICHD; Dr. Jennifer F. Swisher, NIDCR; and Dr. David C. Williams, Jr., NIDDK. ■

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NIH Record Office
Bldg. 31, Rm. 5B41

Phone (301) 496-2125
Fax (301) 402-1485

Web address
<http://www.nih.gov/nihrecord/>

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Editor
Richard McManus
rm26q@nih.gov

Assistant Editor
Carla Garnett
cg9s@nih.gov

♻️ *The Record is recyclable as office white paper.*

Pardes To Give Shannon Lecture

On Thursday, Jan. 27, Dr. Herbert Pardes, president and chief executive officer of New York-Presbyterian Hospital and its health care system since December 1999, will deliver the 8th annual James A. Shannon Lecture at 3 p.m. in Masur Auditorium, Bldg. 10. His talk is titled, "Ensuring Excellence in U.S. Medical Research and Health Care."

Medical research and health care are in an unparalleled level of centrality and profile in the United States. Policy decisions in these fields are complicated by the broad array of forces in and out of

health that have an effect. The intertwining of the nation's productivity, the nation's economy and international relations with programs and policies in medical research and health care have never been greater.

The nation has valued its leadership in medical research and care, but great challenges exist to the ability to sustain that leadership. The primary issues and pressures that create these challenges

and a plan for policies and programs to respond will be the focus of this presentation.

Pardes is nationally recognized for his broad expertise in education, research, clinical care and health policy, and for his ardent advocacy of support for academic medicine.

During the Carter and Reagan administrations (1978-1984), he served as assistant surgeon general and director of the National Institute of Mental Health. Pardes, whose training is in psychiatry, left NIMH in 1984 for Columbia University and the College of Physicians & Surgeons, where he chaired the department of psychiatry. In 1989, he became vice president for health sciences at Columbia and then dean of the faculty of medicine. He managed major changes in the education of physicians, enhanced clinical and basic science research and assumed a national role as an advocate for education, health care reimbursement reform and support of biomedical research.

In December 1999, he moved to New York-Presbyterian Hospital, where he has embraced a clinical mission to provide each patient with the highest quality care delivered in the most compassionate manner.

Pardes is on the editorial boards of numerous medical and psychiatric journals and has written

more than 100 articles and chapters on diverse topics in mental health. He has been involved in many international collaborations, working with governments in India, China, Egypt, Israel and the former Soviet Union.

He also chaired the intramural research program planning committee of the NIH (1996-1997) and served on several presidential committees. He has earned numerous honors and awards.

The Shannon lecture was established by the NIH Alumni Association in 1997 to honor the former NIH director (1955 to 1968), and to promote public discussion of issues that affect the mission of NIH research. ■

NIMH Training Program Draws Women, Minorities

A National Institute of Mental Health training program to expand the pipeline and diversity of new researchers in geriatric mental health has turned out to be not only a huge success in generating a cohort of motivated trainees to enter the field, but has also attracted an abundance of women and ethnic minorities.

The Summer Training on Aging Research Topics-Mental Health (START-MH) Program provides mentored research opportunities to undergraduate, graduate and medical students across the United States.



Fellows at the START-MH conference poster session

The program was piloted in 2003 and extended into a 5-year grant in 2004 to be conducted by the division of geriatric psychiatry at the University of California, San Diego and VA San Diego Healthcare System.

START-MH offers competitive scholarships to

students who may be interested in aging and mental health research. In its first year, the program attracted 85 student applications. Thirty trainees were selected to participate with 30 primary mentors—all established investigators in the field. In the second year, the number of applicants jumped to 159. More than 75 percent were women and more than a third came from ethnic minority groups. Thirty-two applicants were selected and paired with 38 mentors; some students had co-mentors. The grant funding was used primarily for stipends to the trainees so that they would not need to find other summer employment.

Each trainee spent 10 weeks in the mentor's research lab. Labs ranged from basic science to clinical research to epidemiology. At the end of the summer, each trainee prepared a poster presented at a weekend-long mini-scientific meeting at UCSD. For most students, the workshop was their first experience attending a professional meeting.

More information about the program and guidelines for applicants can be found at <http://startmh.ucsd.edu>. ■

FOCC, CONTINUED FROM PAGE 1

this. Can FOCC help?

Brake reviews the outstanding bills, any previous help to the patient and seeks a decision from the FOCC board, most of them volunteers who work at NIH. If the answer is yes, as it most often is, a check can be sent out directly to the landlord or utility company within 24 hours.

Families are often overcome with gratitude. "They're just amazed this could happen. But that's what we're here for—to be a bridge for people with financial emergencies stemming from their treatment at NIH," Brake says.

With an annual budget of under \$80,000, the FOCC is the smallest and probably the least-known NIH charity. "People often confuse us with the Children's Inn," adds Brake. The Patient Emergency Fund provides



Steve and Lynn Muska keep their spirits up with help from the Friends of the Clinical Center.

help with bare essentials such as travel money or emergency cash for food, but can't address the broader needs of families who have lost income because the breadwinner got sick or because of unusual illness-related expenses. When there's nowhere else to turn, CC social workers go to the Friends, a CFC-supported charity.

In the past year, FOCC has paid rent, phone bills, car payments and travel for a mother who needed to come to NIH to escort her disabled son home after his treatment. When an African boy needed a wheelchair, FOCC found a donor and paid the shipping charges to the boy's home country. Patients leaving an alcohol abuse protocol usually transition back to the community through a halfway house. FOCC often covers the 2 months' rent. They picked up the tab for storage of personal effects for a homeless woman being treated for terminal cancer, and made it possible for a family from the Dominican Republic to spend time with their terminally ill son in a rented apartment near NIH.

"The Friends of the Clinical Center was a godsend to us," says Lynn Muska, whose husband, Steve, was diagnosed with melanoma in 2002. He was first treated at Johns Hopkins in their home city, Baltimore. Because Steve's surgeon, Julie Lange, was a former NIH fellow, she and Steve's oncologist suggested an NIH protocol when the cancer returned in 2003.

"I had no idea what NIH did before we came here. I've never seen a hospital run like this place is," says Lynn. "The dedication is incredible. I tell everybody how wonderful NIH is." The Muskas are a

perfect example of how financial disaster can strike a second blow after a diagnosis of serious illness.

Steve Muska's illness cost him a lot of time off from his job as IT director for a small company. Eventually, he was laid off, just 2 months before more tumors came to light. After he completed an NCI protocol, a PET scan revealed two tumors in his bowel. Lynn Muska is CFO for the same company, but her travel to Bethesda and a downturn in business reduced her income substantially, just when they needed it most. Steve couldn't collect unemployment because he wasn't capable of looking for work, a requirement for unemployment support.

"We have a pretty healthy mortgage," Lynn says, largely because they remodeled their house to accommodate Steve's aging mother, who moved in with them 7 months before Steve's melanoma was diagnosed. "Steve couldn't work. My pay was cut, gas prices were going up and the mortgage, car and homeowner's insurance were all due at the same time. We were really feeling the crunch. If we had had to pay for Steve's medical supplies, I'd be selling the house." It was an FOCC moment. The Friends came through with a mortgage payment of nearly \$1,600.

"We had always been so blessed. We never thought we'd need money, but God has sent so many wonderful people to help us out," Lynn Muska says, holding back tears. "I hate to ask for help unless I can return it at some point," she adds. "When we're working again, FOCC goes right to the top of our list of contributions."

Steve had to spend Christmas at NIH and Lynn needs work with a better salary in the new year. But the new NCI protocol he's just completed has shown success in shrinking tumors, and Lynn will find a new job when Steve's better, she says. "NIH keeps our hope alive. We met a patient who's been coming to NIH for 22 years. She hasn't beaten the cancer, but the cancer hasn't beaten her. We feel Steve's got a good chance."

FOCC gets about a third of its budget from CFC contributions. The rest comes from an annual golf tournament and fund-raisers run by the R&W such as the NIH Outdoor Film Fest. ■

NIH Paddling Club To Start

R&W is helping organize a new NIH Paddling Club to promote paddling sports at NIH, both for competition and leisure. The club plans a boat racing team with 20 paddlers, a steerer and a drummer to provide stroke rhythm. The club also offers chances to learn how to kayak, row, canoe and paddle outrigger canoes. Members will be able to learn how to build their own canoes and kayaks. An organizational meeting is planned for late February. For more information, contact David Winter at dwinter@niaid.nih.gov. ■

Woolley Shows There's a Thirst for Medical Information

By Abhijit Ghosh

A call for increased dialogue between the media and NIH was delivered to attendees at the 20th meeting of the advisory committee on research on women's health, sponsored by the Office of Research on Women's Health recently in Wilson Hall.

Mary Woolley, president of Research!America, presented findings from a 2004 nationwide poll of 1,000 women conducted in collaboration with *Parade* magazine.

"Research on women's health has never been a higher priority, and there has never been stronger support for research voiced by the American public," she said.

A key finding showed that the public is not aware of where health research is conducted in America. According to Research!America, nearly 95 percent of the American public could not name NIH as the federal agency that funds most medical research paid for by taxpayers.

This suggests an opportunity for better communication, Woolley observed. According to the study, 65 percent of Americans want more information about medical research.

"Younger people get their news from late-night television talk shows," Woolley reported. "People who vote and influence elected officials are much more likely to read newspapers and watch television news."

She suggested that media-science roundtables be conducted several times a year, in which local reporters and researchers talk about covering news in science and about how to facilitate such conversations. This would improve communication of medical information to the public.

The report also generated insight and opportunities for researchers about public attitudes. For example, most women (82 percent) do not know what causes cervical cancer, thus providing significant opportunities for education. Depression tops the list for potential impact on the quality of women's lives, followed by cancer and heart disease.

In a related note, efforts to raise awareness of heart disease in women show evidence that the campaign has made inroads; 47 percent of women surveyed were aware that heart disease is the leading cause of death for women. Nearly half of the women polled understand that atherosclerosis begins to develop

before menopause.

Women, however, have different opinions about the average age at which menopause begins; 38 percent say it starts between ages 46 and 50 while 23 percent think the age is between 41 and 45.

"There is an opportunity here for additional education about this topic," said Woolley.

The poll also provided insight on advocacy and support for research on women's health. Some 81 percent indicated it was "very important" for the U.S. to invest in research designed to improve the health of women. More than half the women said they would be willing to pay \$1 more a week in taxes for research that could lead to a cure for human papillomavirus infection and other sexually transmitted diseases. According to Research!America data, less than 1 cent of each U.S. tax dollar is spent on prevention research.

"Stakeholders in research must raise their voices loud and clear in order to be heard," says Woolley. ■

NIEHS Launches Center for Rodent Genetics With 'Resequencing Project'

A new \$13-million "Resequencing Project" will map the DNA of 15 mouse strains important to lab research on human health. The project is the first for NIEHS's new Center for Rodent Genetics, an



Dr. Bill Schrader

extension of ongoing efforts to understand the genetic basis for differences in drug response and other environmental factors.

NIEHS's deputy scientific director Dr. Bill Schrader, who directs the center, said knowing the organization of the mouse genome is a key component in identifying those gene-environment interactions that are linked to disease in humans.

Nearly all human genes have counterparts in mice.

Almost 200 human diseases are affected by exposure to environmental substances. Researchers hope to gain a better understanding of the complex interplay among genes that results in the development of disease.

The mouse strains will be sequenced in parallel, and inter-strain comparison will begin immediately. Their entire genomes are expected to be complete within the next 2 years.

The Resequencing Project will be conducted through a 2-year contract with Perlegen Sciences, Inc. of Mountain View, Calif. ■

Attention Female Baseball Players

The Recreation and Welfare Association is starting a Women's Baseball Club to promote and support baseball-playing opportunities for women. The new club would field a team in the Eastern Women's Baseball Conference. Players range in age from 15-55 with most of the players in their 20s to 40s. Many previously played slow-pitch softball and have made the transition to baseball.

Each EWBC team plays one game per weekend, early May through September. All teams have pre-season practices and scrimmages in the spring; some practice once a week during the season. We are looking for 15-20 players to field a team; coaches/managers (of either gender) are also needed. If interested contact Susan McCarthy at (301) 594-8785 or mccarths@mail.nih.gov.

PRIME TIME, CONTINUED FROM PAGE 1

NIH Star Rising?

The first hints that a show relating to NIH was in the works came early last summer when press officer Don Ralbovsky of the NIH Office of Communications and Public Liaison took a call from television researchers who wanted to know what kinds of vanity plates might be displayed on the vehicles of NIH staff. The request was thought unusual, but was answered and filed like every other inquiry. Next, however, promotions for the show began to appear as well as tidbits and ads in various entertainment media. When Calvin Jackson, OCPL



"... a slick thriller...well-made and zippy." — Los Angeles Times

NEXT ON MEDICAL INVESTIGATION

SPIKED **SHOW**
10pm 2005-01-07 ALL NEW!

SEASIDE TOWN ENGULFED WITH DEADLY MYSTERY DISEASE THAT ATTACKS HUMANS AND SEALS ALIKE — After a surfer and a female volleyball player fall ill to a deadly mysterious disease in a seaside town, Dr. Connor (Neal McDonough) and his rapid-response team fly in and



Want to learn more about these medical mysteries? Visit the CDC and NIH sites each week!

NBC's web page for its show *Medical Investigation* includes links to NIH and CDC web sites (lower r), which provide factual information on the show's fictional stories.

public affairs specialist, was contacted by NBC publicists working for *Medical Investigation*, the vanity plate query took on new meaning.

"They wanted to do some filming on location here," Jackson says, "and they wanted to do an interview with [NIH director] Dr. [Elias] Zerhouni." Although NIH Associate Director for Communications John Burklow nixed the interview—fearing it might be interpreted as a federal endorsement

of a television show—he recognized that "such interest in NIH presented a potential opportunity to educate a substantial number of viewers about medical research and the nature of the work done here." He assembled a team to look into the show and its implications for NIH.

"We knew we had two choices...do nothing or do something," says Judy Stein, communications director at the National Eye Institute. "We decided to do something. We felt that if we had the opportunity to help the show with information about the NIH and the many diseases and disorders we deal with, important public health information might get out through the show."

Once Jackson obtained a copy of the show's pilot, titled "Blue Man Syndrome," NIH communication officials were even more convinced that it would be in the agency's best interest to take an active role in helping to inform the show's writers and producers about NIH.

Attention to Details

"It became very clear that much of the show's portrayal of NIH staff and activities really more resembled that of CDC," Stein says. "This made us

uneasy, and we knew that the folks at CDC were not happy about it either."

In addition, several specific images and scenarios needed correction or at least clarification, if the show was to reflect NIH more accurately.

"There were some things about the pilot that made us squirm," Stein admits, recalling the initial episode. "There was the NIH helicopter that the NIH team jumped into to fly off to where the disease outbreak was taking place. The NIH logo appeared, but it was upside down. In a hospital scene with people who might be very contagious, no one even wore masks. But on the other hand, we thought that the TV program made the NIH staff look a lot cooler than they actually are. And, at the beginning of the pilot, words on the screen read, 'The National Institutes of Health, the nation's foremost medical research center, has for the last hundred years been on the cutting edge of disease prevention, diagnosis and cure.' You can't buy publicity like that."

Mutually Beneficial

Communication specialists at the National Cancer Institute had already seen the wisdom of cooperating with Tinseltown, says science writer Michael Miller, NCI project officer overseeing Hollywood, Health

HH&S-CDC-NIH Partnership

Helping Hollywood Get It Right

Although the formal partnership between NCI, CDC and Hollywood, Health and Society (HH&S) is only a few years old, the results and impact of the relationship have already been duly noted—and put under the microscope.

Information compiled by HH&S from January 2003 to June 2004, for example, lists nine major and six minor storylines about cancer—and that's counting only prime-time shows. According to a 2001 Porter Novelli survey, "57 percent of regular TV drama viewers learned something about a disease or how to prevent it" from such a show. Add the recipients of the 2004 Sentinel for Health Awards (given to writers/producers by HH&S and judged by dozens of medical and health education professionals; this year's finalists include soap operas such as *The Young and the Restless*, sitcoms like *Grounded for Life* as well as prime-time dramatic series such as *Law & Order: SVU* and *Judging Amy*). Then, factor in the more than 30 additional inquiries or consultations HH&S logged between September 2003 and October 2004. Multiply that by millions of viewers and the formula amounts to exponential opportunities for NIH to disseminate health research and disease-prevention messages.

and Society (HH&S). HH&S was launched in 2002 by the University of Southern California and provides the entertainment industry with accurate and timely information for health storylines (see sidebar).

Begun in partnership with the USC Annenberg School of Communication's Norman Lear Center, HH&S is funded via an interagency agreement between CDC and—since 2003—NCI. Miller says the arrangement offers several communication benefits, including “increased awareness of issues related to cancer by millions of TV viewers, and a chance for NCI to proactively correct misinformation and to advance important health messages.”

HH&S invited Jackson, Stein and CDC representatives to visit L.A. and get acquainted with several of the minds behind the scripts for *Medical Investigation*. By the date of the meeting, the show had already filmed seven or eight episodes, and was doing well in the ratings for its Friday night time slot. Before the show created indelible and potentially misleading images of the agency, NIH's team wanted the opportunity to give writers and producers an accurate NIH overview and pitch realistic story ideas about medical research topics.

“The show staff was medically well informed, serious about their work, interested in what we had to say, and anxious to get the episodes medically and

scientifically correct,” Stein recalls. “When asked why the show was about ‘NIH’ as opposed to CDC, the producer explained that they wanted to use NIH because it was a ‘blank slate,’ that many people were not familiar with it and most people already knew about CDC. So, they felt that they could present it to the public without any preconceived notions.”

The NIH'ers also offered source material such as the NLM web site MedlinePlus and contact lists for information on specific health conditions and disorders.

“They knew a lot about some of the separate entities, but didn't realize they were all part of NIH,” Jackson says. Within hours of the meeting's end, email inquiries and phone follow-ups confirmed that Hollywood's avid interest in NIH—and medical issues and research topics, in general—is strong and growing stronger. In fact, *Investigation* storylines have aired in the past few weeks on anthrax and on infections stemming from use of spa products, two concepts within NIAID's expertise. HH&S also recently requested details about an NIMH-related plot, NBC's *ER* has included segments featuring NCI's 5-a-Day Program and the upcoming ABC-TV program *Gray's Anatomy* has also worked through HH&S to develop its storylines.

In just one indication that the interest is mutual, NIH added a special link to its web site for facts about *Medical Investigation*, offering in-depth information about diseases highlighted in the weekly show and introducing real medical investigators at NIH and CDC. Late last year, the successful show was picked up for another season—more than a dozen new occasions for NIH to be centerstage during prime-time.

“Overall NIH involvement in the entertainment industry is important,” Stein concludes, “and an expanded and more proactive role is being considered, one that provides all NIH institutes with the opportunity to help the industry get factual scientific information and important health messages to the public.” ■

R&W Invites Leader/Members

The R&W Association, soon to mark its 60th year of service to employees, recently changed its bylaws, eliminating its executive council and replacing it with an advisory council. The change is intended to increase broader leadership from its membership. The advisory council will meet four times a year, with the main objectives of informing employees of R&W programs and assisting at some events as volunteers. If you would like to participate, email your name, work address, work affiliations and phone number to either Randy Schools at schoolsr@ors.od.nih.gov or the R&W Association at nihrw@ors.od.nih.gov. ■



Dr. Paul A. Sheehy has been appointed deputy associate director for extramural activities at NIGMS. He will help oversee the management of research and training grants and develop grant-related policies. He has worked at NIH since 1985. For the past 4 years, he has been a program director in the NINDS neurodegeneration cluster, where he managed projects ranging from individual research grants to large-scale clinical trials. Prior to that, Sheehy served for 10 years as a scientific review administrator at NINDS. He began his NIH career as a senior staff fellow in the NINDS Laboratory of Neurophysiology. He served on a number of trans-NIH working groups, including those with responsibility for human embryonic stem cells, imaging and dietary supplements.

Owing to the public's ever-increasing health consciousness and to the growing popularity of shows featuring medical issues, NIH is vigorously pursuing more ways to help the entertainment industry present the topics realistically and accurately. Recently, NCI held a symposium on HH&S to enlist more NIH'ers in efforts to reach out to Hollywood and to help identify experts who can speak authoritatively on various topics of interest to show executives.

“We've found pretty conclusively that if we have experts to meet with the entertainment community, to visit with the staff of *ER* or *Medical Investigation*, for instance, then we have a much better chance of educating them, making sure that they get the stories right, that what they present in their dramas is accurate, and also get some of the messages that we feel are important incorporated into their shows,” said Michael Miller, a science writer in NCI's press office and the NCI project officer overseeing HH&S. NCI helps fund HH&S through an interagency agreement with the Centers for Disease Control and Prevention.

To learn more about HH&S, visit the organization online at <http://www.learcenter.org/html/projects/?cm=hhs>.

CUTLER, CONTINUED FROM PAGE 1

message: The national investment in biomedical research has been well worth the cost.

Cutler spoke to a packed Natcher auditorium, fueling his talk with three interconnected assertions: increases in medical spending over the last 50 years have been largely driven by technological advances which, in turn, have enabled health benefits of far greater value to society than their cost—and that we are, as a nation, rich enough to afford future increases in spending.

Cutler noted that the “long version” of his talk, including the research and data that support his assertions, can be found in his book *Your Money or Your Life: Strong Medicine for America's Healthcare System*. The book has received positive reviews.

Medical Research: Worth the Investment

That medical research is worth its cost is a

message well-received at NIH, but Cutler did not assume he was preaching to the choir. In covering specific examples, such as heart disease or low birth weight, he showed how innovations that might have once appeared to be extravagant have been proven fiscally sound in terms of the value of lives saved, improved health and enhanced productivity for millions of people.

Although Cutler acknowledged that some of the fiscal woes of health care are attributable to factors such as physician salaries, hospitalization expenses and drug costs, he noted that medical advances—new understandings, techniques and equipment—account for most of the nation's increased health care spending since 1950. So—have these costs paid off? To answer the question, he used the example of heart disease, noting that the standard of care for heart attacks in the early 1950s was, simply enough, putting the patient on bed rest for as long as 6 months. Bed rest was a very low-cost option. It was also, of course, of little use in ameliorating heart disease.

Two decades later, in 1970, the national investment in clinical investigation had connected hypertension and smoking to heart disease. Coronary artery bypass procedures were becoming available, albeit in limited circumstances. The costs for research and care remained moderate at that point.

Several decades plus a few years brings us to today. After large infusions of capital in research and technology development, we have cardiac care that would appear futuristic, even impossible, to a

practicing physician (or a heart attack patient) in the 1950s. Many more survive heart attacks than ever before, and return to productive lives and work after recovery. And the research and care costs are now significant.

Cutler then put the question bluntly: Was it worth it? Was there anybody in the audience, he asked, who would claim that the investment involved in moving cardiovascular knowledge and care to its current point had not been worth it?

Worth It—But How Best To Spend?

The measurable benefits in terms of survival, recovery and return to productivity of heart patients is, of course, very substantial as of 2005. So the answer to Cutler's question, in the light of today's knowledge, is that cardiovascular R&D costs over time have indeed been worth it.

But Cutler acknowledged that we can't know, beyond any doubt—any more than policymakers or legislators or scientists could in 1950—that a large national investment in a particular line of biomedical inquiry will yield vast benefits.

Econometric evidence based on research outcomes over the last half-century, however, tells us that in general and across the board, the financial risk in medical innovation is easily justified by the results.

A prevailing need, then, is to improve our understanding of where—and at what disease targets—investment is best directed. To improve investment targeting, Cutler called for a “true health account”—an equation balanced by “inputs” (sound data on medical spending, individual behaviors that affect health and environmental factors that either exacerbate or improve health) and “outputs” (data on population health by disease and demographic groups).

A True Health Accounting

Cutler went on to present cost-benefit analyses on low birth weight infants and the management of depression, demonstrating the basics of economic and statistical concepts confirming that investment in medical innovation has been (and will continue to be) justified.

In comparing the value of improved health produced by medical advances with the costs of those advances, he emphasized that understanding the dollar value of medical care requires measuring the health of the population—an aspect of his “true health account” that is integral to better targeting of health care R&D dollars. To do this, he discussed what he called the “nation's health capital,” the dollar value of health a person will have over the course of his or her remaining life. It is by comparing changes in health capital with increases in medical spending that Cutler confirmed that, by virtually all measures, increased medical technology



Meeting organizer Dr. Ron Abeles (l) of the Office of Behavioral and Social Sciences Research chats with Cutler at the Natcher Center.

has been worth its cost.

What emerged in his presentation was a striking insight: the direct economic value of lives saved due to medical advances is extraordinary. Calculating the number of lives saved with a predicted dollar value per life saved, the value derived from cardiovascular innovation alone equals nearly \$3 trillion per year. This represents a rate of return on investment in excess of a 100-1, a profound national dividend.

A bottom line informing Cutler's insights and call to action was his plea for universal health insurance. "There's not much point in having marvelous medical care," he said, "if most Americans cannot afford it." He observed that much of the economic advantage conferred by medical advances is lost if cutting-edge care is widely unavailable to those who might benefit the most.

Improving the Return on Investment

Cutler not only emphasized the benefits in innovation but also called on us to think about our health care assets and how we finance those assets in a new light. Old thinking, he suggested, will not produce new results. He concluded by urging economists and policymakers to get "out of the box" in approaching health care spending. ■

NCI Launches Nanotechnology Seminars

The National Cancer Institute will host a new lecture series featuring innovative perspectives on current research and development efforts in nanotechnology applied to cancer diagnosis, treatment and prevention, presented by leaders from both the cancer and nanotechnology research communities.

The inaugural lecture, to be held on Thursday, Jan. 27, will feature Dr. Esther Chang, professor of oncology and otolaryngology at the Lombardi Comprehensive Cancer Center. Her lecture, titled "Tumor Targeting Nanodelivery Systems: Expanding the Potential for Cancer Therapy and Diagnosis," will be held from 2 to 3 p.m. in balcony B, Natcher Bldg. The presentation will also be webcast at <http://videocast.nih.gov>. Sign language interpreters will be provided. For more information on the lecture, visit http://nano.cancer.gov/events_nanotech_seminar_series.asp. ■

Malaria Vaccine Study Needs Volunteers

Healthy men and women ages 18-45, without previous history of malaria or receipt of a malaria vaccine, are needed to participate in a study on the safety and effectiveness of a new investigational malaria vaccine at Walter Reed Army Institute of Research in Silver Spring. Health screening and financial compensation provided. Call 1-866-856-3259 toll free or (301) 319-9335/9320, or visit www.wrairclinicaltrials.com. ■

NIAID's Woodford Retires

Joyce Hunter Woodford began her career with the National Institute of Allergy and Infectious Diseases in 1989, working for the budget office. Her background in finance was invaluable to the institute and her contributions to NIAID were numerous. Aside from her duties as financial manager, Woodford always sought to become involved in minority health issues. Her interest in these matters came not only from the influence of her father, who worked in an NIH intramural lab, but also from Woodford's own personal commitment. Her strong sense of duty also included mentoring many co-workers.



Joyce Woodford

Woodford joined NIAID's Office of Research on Minority and Women's Health in 1994, in the Office of Special Populations and Research Training. She developed, or was a key player, in several initiatives. She made the Introduction to Biomedical Research Program run smoothly for all the years she was associated with it. Together with Dr. Richard Asofsky, she worked tirelessly on this program, and is responsible for giving opportunities to many young minority scientists in the U.S.

Woodford was also the catalyst behind the development and implementation of the mentoring program, Bridging the Career Gap, in 1992.

The publication *A Partnership for Health: Minorities and Biomedical Research* came about because of Woodford's collaboration with Dr. Lawrence Prograis, and describes NIAID's initiatives in minority health, for which she and Prograis received a PHS award. The document is published every 2 years and is distributed to members of Congress and within HHS and NIH.

Woodford spearheaded the Asofsky Scholars in Research program, which addresses the pipeline of minority high school and undergraduate students interested in science. Most recently she was involved in middle school science fairs and career fairs in local Maryland counties. Woodford will be remembered fondly for her enthusiasm, her commitment, her professionalism, as well as for her warmth and laughter. ■

Ever Have Postpartum Depression?

If you have a history of postpartum depression (PPD) following the birth of any of your children, consider participating in a PPD study with NIMH. The study seeks to examine if your PPD was caused by hormonal changes during or after pregnancy. The study is recruiting female participants between the ages of 20-45 years old. Call Linda Simpson-St. Clair, (301) 496-9576 (TTY 1-866-411-1010). ■

Asian/Chinese Volunteers Needed

The department of transfusion medicine (Blood Bank) at the Clinical Center seeks healthy volunteers (male and female) 18 years of age and older to participate in a research apheresis study that assesses the influence of ethnic background on immune response. Volunteers are needed who were born in China, including Taiwan, Hong Kong and Singapore or first generation offspring of parents who were born in these countries. Two visits are required and compensation is available. Call Rose Werden, (301) 402-0757, Mon.-Thurs., 2-4 p.m. or email rwerden@mail.nih.gov.

Curious About Art Therapy?

Whether you're interested in working toward a degree in art therapy or just adding to your repertoire, you might be interested in taking Art Therapy Techniques, a 2-credit course taught through the Foundation for Advanced Education in the Sciences. The class is taught by Leslie Milofsky, a board-certified art therapist who works at a Washington, D.C., public school special education center and teaches at George Washington University and Maryland College of Art and Design. Classes are held Tuesdays from 5:30 to 7:30 p.m., Jan. 25 through May 10. For more information, Milofsky can be reached at (301) 270-3063 and the registrar can be reached at (301) 496-7976.

NIH To Accept Electronic Grant Applications

Interim eRA (Electronic Research Administration) director Dr. Israel Lederhendler urged 282 NIH participants at a recent eRA Symposium to imagine themselves as principal investigators getting ready to submit electronic applications for the first time. In remarks at the Natcher Center meeting, he announced that NIH would begin accepting modular R01, R03 and R21 electronic grant applications beginning Feb. 1.



Dr. Israel Lederhendler

The symposium, titled "The eRA eXchange: Making the Electronic Connection," informed the internal community about what grantees will experience with the new NIH electronic submission process. In particular, NIH'ers learned how commercial service providers are assisting research institutions with their transition to e-applications. The symposium also updated staff about new Center for Scientific Review automated procedures that will use e-applications to best advantage.

In his keynote address, Kenneth Forstmeier, director of the Office of Research Information Systems at Pennsylvania State University, provided a perspective from the grantee community. He praised government efforts to modernize and standardize the application process. Nevertheless, Forstmeier called for a single application form, a single federal logon ID and a single grants administration system. Accommodating multiple grantor systems is a huge burden for research institutions and federal agencies, he said.

Dr. Brent Stanfield, acting CSR director, spoke about the benefits of two eRA initiatives: applications on CDs for reviewers and Internet assisted review (IAR). NIH implemented CDs and IAR to reduce waste, improve service to its clients, provide user tools, and, with electronic receipt, eventually shorten the review cycle.

Stanfield also spoke about the potential use of knowledge management tools to help refer applications to institutes and centers and review groups, to identify candidate reviewers, to suggest assignments for reviewers and to help applicants identify study sections appropriate for their applications.

Dr. Suzanne Fisher, who directs receipt and referral for CSR, compared the R&R process for handling traditional paper applications with the new process. She estimates that NIH will receive 80,000 applications in 2005, up from 35,000 in 1985. Automation will help NIH handle the increasing workload and reduce errors. Integrated checks and audits should

free candidates to devote more time to science, she noted.

The symposium also informed staff about recent Grants.gov and National Science Foundation FastLane activities. Rebecca Spitzgo, Grants.gov program manager, provided an update on the new central web site for finding and applying for federal research grants. She said all federal grant-making agencies now post announcements to Grants.gov; the site is getting 1.4 million hits/week.

NSF's Daniel Hoffher shared his agency's 10-year experience with implementing the FastLane grants administration system. In 2004, NSF accepted 43,500 electronic applications (99.99 percent) through the system. Designed by its users, FastLane supports the full grant life cycle.

For more information visit <http://era.nih.gov/era/workshop4/>. ■

NIH Opens 'Learning Portal'

NIH is in the process of adopting and implementing a new learning management system called the HHS Learning Portal. The Learning Portal is a joint initiative between HHS University and the Office of Personnel Management to implement the GeoMaestro training software package for all of HHS. This will help the department support and manage training and education via the Internet.

Some of the benefits are: training opportunities in a variety of media such as web- and computer-based training, traditional classroom training, self-paced/self-study courses, group learning sessions; online registration for courses and automated approval process.

The biggest advantage of the Learning Portal is having access to its vast library of free online courses 24 hours a day, 7 days a week. All you need is Internet access and you can search through and take over 2,000 courses. Visit the site at <http://learning.hhs.gov>. ■

R&W Scuba Club Is Organizing

The first meeting of the R&W Scuba Club will take place Wednesday, Jan. 26 at 6 p.m. in the FAES House at the corner of Cedar Ln. and Old Georgetown Rd. The club will promote safe diving and offer opportunities to develop a network of dive buddies. The club will also sponsor classes, seminars and dive trips to sites both local and exotic. An online bulletin board is also planned. Beginning classes will form for those interested in trying the sport. Also foreseen are lessons in underwater photography, diving medicine, fish identification and dive travel. For more information, contact Jane Spencer, (301) 910-1916.

Abrams To Lead Office of Behavioral and Social Sciences Research

Dr. David B. Abrams has been selected as NIH associate director for behavioral and social sciences research and director of the Office of Behavioral and Social Sciences Research. A professor of psychiatry and human behavior, professor of community health and codirector of transdisciplinary research at Brown Medical School's Butler Hospital, Abrams has been at Brown University in Rhode Island since 1978. He is also the founding director of Brown's Centers for Behavioral and Preventive Medicine at the Miriam Hospital.



Dr. David B. Abrams

Abrams received his master of science and Ph.D. degrees in clinical psychology from Rutgers University, and completed his internship and postdoctoral training at Brown. He has held leadership positions in national and international professional societies, including serving as president of the Society of Behavioral Medicine. He has also been chair of NCI's review group report on cancer control and a member of NCI's board of scientific advisors.

Abrams' areas of expertise include integrating fundamental sciences with translational applications and policy research; addressing issues along the entire wellness-disease continuum; examining health needs and behaviors in a diversity of populations, including the underserved; and crossing life span transitions.

In his new role, he will lead agency-wide initiatives in behavioral and social sciences research and facilitate collaborations across socio-behavioral and biomedical disciplines. As third director of OBSSR, Abrams succeeds Dr. Raynard Kington, now NIH deputy director. ■

Recently Diagnosed with a Rheumatic Disease?

To understand the genetic and environmental factors related to these illnesses, NIEHS is seeking families in which an adult or child has been diagnosed within 4 years with rheumatoid arthritis/juvenile rheumatoid arthritis, systemic lupus erythematosus, systemic sclerosis or dermatomyositis or polymyositis. These families also need to have a twin or sibling of the same gender (who is within 4 years of age of the person with one of these diseases) and who does not have an autoimmune disease. Enrollment is at the Clinical Center or in a local doctor's office. The study includes a thorough evaluation and compensation is available. For more information call 1-800-411-1222. ■

Grantees Win Award for Inventions

Two long-time NIH grantees, Dr. Barry M. Trost and Dr. Thomas E. Starzl, recently received the 2004 John Scott Award. Trost, an organic chemist at Stanford University, was honored for discovering new methods of chemical synthesis that create environmentally friendly molecules useful for drug development. Starzl, a professor of surgery at the University of Pittsburgh, was recognized for his outstanding contributions to organ transplantation, including establishing the principles of immunosuppression.



Dr. Barry M. Trost



Dr. Thomas E. Starzl

Since the 1960s, Trost has received grants from NIGMS, NCRP and NCI, and Starzl has been funded by NIDDK (and its predecessor), NCRP and NCI.

The 170-year-old John Scott Award honors individuals whose inventions have contributed in some outstanding way to the "comfort, welfare and happiness" of humanity.

Previous winners include Jonas Salk, Marie Curie and Thomas Edison. The \$15,000 prizes were presented to Trost and Starzl at a ceremony held in Philadelphia. ■

NIH Chamber Singers Hold Auditions

The NIH Chamber Singers perform a wide variety of a *cappella* music for NIH patients and staff, and for the public. The group of "happy amateurs" is currently recruiting a few new voices for its spring concerts. Rehearsals begin in January. If you are interested in auditioning, contact Susan Hauser at hauser@nlm.nih.gov for details.

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features Dr. Mary-Claire King on Jan. 26; her topic is "Genomic Analysis of Breast and Ovarian Cancer." She is American Cancer Society professor, departments of medicine (medical genetics) and genome sciences, University of Washington School of Medicine.

There will be a special Thursday lecture on Jan. 27 when Dr. Herbert Pardes, president and CEO of New York-Presbyterian Hospital, gives the James A. Shannon Lecture (see story on p. 3).

On Feb. 2, Dr. Richard J. Davidson, William James professor and Vilas research professor of psychology and psychiatry, and director, W.M. Keck laboratory for functional brain imaging and behavior, University of Wisconsin, will lecture on "The Pervasive Import of Affect: Gleanings from Affective Neuroscience."

For more information or for reasonable accommodation, call Hilda Madine, (301) 594-5595.

Gene Study Seeks Volunteers

Researchers at the University of Maryland are looking for volunteers willing to give their DNA a workout as part of an exercise study focusing on changes in blood pressure and other risk factors for cardiovascular disease. You must be a generally healthy, sedentary, non-diabetic male or postmenopausal female between 50-75 years of age. Participants receive a physical exam, cholesterol and diabetes blood tests, cardiovascular assessment and aerobic capacity tests, 6 months of supervised exercise training, diet analysis and nutrition counseling, body composition analysis and bone density measurements. A short telephone screening can determine initial eligibility. For more information contact Dr. Dana Phares or any Team Gene staff member at (301) 405-2571, dphares@umd.edu.

Focus on Women

Seminar Explores Obesity Research, Stigma

"We need to fight obesity, not fat people," declared Dr. Marlene Schwartz of the Yale Center for Eating and Weight Disorders at a recent seminar on obesity in women's health sponsored by the Office of Research on Women's Health. Four speakers discussed their research findings.

Schwartz led an interactive exercise by having the audience complete a quick test of weight bias. The results reflected, according to Schwartz, internalized attitudes influencing how a person treats others. Such bias has wide-ranging impact, including health providers, teachers and the community. Schwartz said the origin of such bias can be traced to cultural values; we tend to place a high value on thinness and reinforce messages such as, "If only you work hard enough," from the diet and beauty industries.

Schwartz showed explicit bias from health care providers who viewed obese patients as non-compliant and lacking self-control.

Dr. Robert Kuczmarski of the Division of Digestive Diseases and Nutrition, NIDDK, discussed the special needs and concerns of women in the context of the increasing prevalence of obesity in the U.S.



Dr. Marlene Schwartz of Yale and NIDDK's Dr. Robert Kuczmarski were recent ORWH panelists.

Many prevalence estimates have been made using the Body Mass Index (BMI)—a calculation that measures weight in relation to height and is closely associated with degree of body fat. In general, a person with a BMI of 18.5 to 24.9 is considered of healthy weight; a person with a BMI of 25 to 29.9 is considered overweight, and a person with a BMI of 30 or more is considered obese. The location of excess fat is also important, especially for women. According to Kuczmarski, carrying extra weight at the waist brings a higher risk of health complications than extra weight on the hips and thighs.

The basic mechanism of becoming overweight or obese is a result of energy imbalance—either too much energy intake and/or too little energy expenditure, Kuczmarski explained. Current research indicates that with 70 percent of women employed, they are finding little time for exercise. This leads to an increasingly sedentary lifestyle with accompanying energy imbalance. He suggested that small



Dr. Lewis Kuller of Pitt and Dr. S. Bryn Austin of Children's Hospital, Boston, also offered views.

weight loss (10-15 percent of body weight) may reduce obesity-related co-morbidities such as type 2 diabetes, irregular menses and pregnancy complications.

Dr. S. Bryn Austin of the division of adolescent medicine at Boston's Children's Hospital discussed research combining obesity prevention and eating disorders prevention initiatives in adolescent girls. In the Planet Health Study, the primary conclusion was that girls in the intervention group were less than half as likely as girls in the control group to adopt disordered weight-control behavior. Austin suggested a classroom initiative focusing on nutrition, physical activity and reduced television viewing.

Dr. Lewis Kuller of the University of Pittsburgh emphasized the role of waist circumference as an indicator of health problems. As women age between 40 and 55, they generally gain 1-2 pounds per year. According to Kuller, this change may be partially due to estrogen deficiency. Weight gain from premenopause through postmenopause is common and heightens risk of illness. An elevated BMI for postmenopausal women is a major risk factor for uterine and breast cancer, Kuller said.

The next talk in the ORWH-sponsored Women's Health Seminar Series is "Women and Sleep Disorders" on Mar. 31. Talks in the series are archived at <http://videocast.nih.gov/>.—Abhijit Ghosh ■

Presentation on Well-Being, Feb. 4

A presentation titled, "A Scientific Perspective on the Inner Subtle System: Qualities of Each Energy Center," will be held Friday, Feb. 4 from 6 to 7:30 p.m. in the CRC, Rm. 7-1580. Topics include awakening of dormant energy (kundalini), achieving thoughtless awareness, stress relief, improved concentration and physical and spiritual well-being. The talk is sponsored by the rehabilitation medicine department's recreation therapy section. ■

Program Builds Better Clinical Researchers

When Dr. Doug Shaffer headed to Kenya for a year in 2001, his hope was to have a lasting impact on future research and human subjects protection in his role as director of clinical research for the Indiana University-Moi University College of Health Sciences. While in Africa, he wrote a letter to Clinical Center director Dr. John Gallin. "I see more poverty, death and suffering than at times is bearable, but a day does not go by where I am not thankful for the opportunity to be here."

In the same correspondence, Shaffer, the first NIH graduate of the NIH-Duke Training Program in Clinical Research, continued, "If my research career ended today, I want you to know that one of the more remarkable benefits with far-reaching impact which the training program in clinical research may have will come to fruition here in Kenya."

Shaffer entered the NIH-Duke program at its inception in 1998. Then a second-year clinical fellow with NHLBI, he credits the program with his career advancement.

The program, a partnership between the Clinical Center and Duke University Medical Center, offers NIH physician-scientists formal academic training in the quantitative and methodological principles of clinical research. Graduates receive a master of health sciences in clinical research, a professional degree

awarded by Duke; there is also a non-degree option for qualified students who want to pursue specific areas of interest. The Duke program, established in 1986, is one of the nation's first training programs in clinical research. NIH's collaboration with Duke is the first time that the program was made available for long-distance learners. NIH students attend classes via videoconferencing in the CC.

Since 1998, 105 students from 15 NIH institutes and centers have entered the training program. Of those, 34 have graduated and 44 remain active in the program. At least one institute, NIDDK, has developed a mentored clinical research training program with the NIH-Duke program at its core.

For NIDDK investigators Dr. Jeffrey Kopp and Dr. Kristina Rother, the program is an opportunity to learn how to do better clinical research.

Kopp conducts basic research on the mechanisms of focal segmental glomerulosclerosis (a scarring kidney disease) and treats patients on related

research protocols. His team is studying new ways to use old medications and is working to develop new treatments for focal sclerosis. Although he's been doing clinical research for a while, he wanted to be better informed and trained. "I wanted to improve my clinical research skills. I'm also a mentor and knew the program would help me be a stronger one. The courses give extensive in-depth formal theory and practice instruction. You are taught to ask the right questions, get the right research subjects, how to do research ethically and obtain a clinically useful result," he said.

Rother is a pediatric endocrinologist. As a senior staff clinical investigator, she's researching ways to help people with type 1 diabetes. She works with children to keep their insulin-producing cells alive in hopes of giving the children healthier, longer lives. Her basic research training was solid with regard to laboratory science but she did not have much experience in applied clinical research.

"Like many things in life, as a self-taught person you're proud of your accomplishments but you do not have a firm basis. The NIH-Duke program makes you think in a wider horizon by teaching new ways of achieving your goals or finding out what you need to know about a specific condition. You learn about many alternative approaches," said Rother. She spoke of the informed consent form. "You typically don't have the luxury of discussing in depth practical, ethical, philosophical and other aspects of the consent form and process. But this training program makes you think—what about kids, prisoners, soldiers—you learn about all the considerations."

The NIH-Duke program enables clinical investigators to conduct state-of-the-art clinical research. That, according to Dr. Louis Simchowicz, director, Office of Fellow Recruitment and Career Development, NIDDK, is the overall value of the program. "The knowledge gained from the didactic course work and the clinical research project are invaluable in developing the credentials of the next generation of physician-scientists in medical schools and academic health centers. The program is emblematic of the future training and career development pathway for those who will lead the way in cutting-edge translational and patient-oriented research."

Applications for the 2005-2006 academic year are available through the CC Office of Clinical Research Training and Medical Education (Bldg. 10, Rm. B1L403) and must be submitted by Mar. 1. For more information call (301) 496-9425. ■



NIDDK pediatric endocrinologist Dr. Kristina Rother studies ways to help people with type 1 diabetes.



Pediatric nephrology research fellow Mari Hayakawa (l) and PHS Commander Jeffrey Kopp review an autoradiograph report in an NIDDK laboratory.

Nobel Laureate, Neuroscience Pioneer Axelrod Mourned

By Jennifer Loukissas

Nobel laureate Dr. Julius Axelrod, an NIH veteran of over 50 years, died in his sleep Dec. 29, 2004. He is probably best known for his work on brain chemistry in the early 1960's that led to modern-day treatments for depression and anxiety disorders. In 1970, he shared the Nobel Prize for Physiology or Medicine for discovering how brain cells communicate with each other.

Axelrod, known to his colleagues as "Julie," came to NIH in 1949 to the then National Heart Institute (now NHLBI). In 1954, before moving to NIMH to begin a new career in neuroscience, he returned to school to complete his Ph.D. in pharmacology; he needed the credential in order to open his own lab where he continued to work for over 40 years. In 1996, NIH awarded him the title scientist emeritus.

"Dr. Axelrod made contributions to the fields of neuroscience and pharmacology that did much to improve the lives of countless millions of individuals who benefit daily from the medications that his insights made possible," said Dr. Elias Zerhouni, NIH director. "Our understanding of the biological basis of human behavior owes much to the work of this gifted and dedicated scientist who will be greatly missed by his friends and colleagues at NIH."

NIH deputy director for intramural research Dr.

Michael Gottesman said of Axelrod, "He was an NIH icon—the model of a brilliant and compassionate scientist whose work on neurotransmission revolutionized modern neurobiology and medicine. His intellectual independence and courage have inspired generations of NIH trainees and scientists and he will be much missed on the campus."

Axelrod's Nobel Prize-winning research explained how neurotransmitters operate in the brain, forever altering the design of modern antidepressant drugs. His work laid the foundation for the treatment of anxiety and depression. He coined the phrase "re-uptake" inhibitors, referring to the "re-uptake" mechanism in brain cells that regulates the level of neurotransmitters available, influencing how neurons communicate. This revolutionary understanding of the brain's chemistry led to the modern generation of antidepressant medications—selective serotonin reuptake inhibitors (SSRIs).

"Dr. Axelrod was one of the giants. His contributions to the fields of mental health and neuroscience make possible current breakthroughs on mood and anxiety disorders, and many other areas of re-

Axelrod in an interview with the NIH Record on how he chose research over a postal career (Feb. 19, 1991 issue)



search," said Dr. Thomas Insel, NIMH director. "He will be greatly missed, but his legacy lives on in the work of others."

Colleagues say Axelrod had a remarkable approach to discovery, not only because of the breadth and depth of his interests, but also his attitude in the lab. He mentored and trained more than 70 scientists, many of whom went on to become leaders in brain research. Axelrod was a founding member of the now 40-year-old NIGMS Pharmacology Research Associate program (PRAT) to support post-doctoral fellowships in the pharmacological sciences at NIH and FDA.

"Axelrod's laboratory was an active training program for many of today's leaders in pharmacological research," said colleague and friend Dr. Ruth Kirschstein, senior advisor to the NIH director. "He was one of the key people responsible for its success and the perennial first choice mentor for students coming in to the program. There wasn't a year when he didn't have a fellow through the PRAT program."

One of his most distinguished protégés, Dr. Solomon Snyder of Johns Hopkins Medical School and co-discoverer of the brain's opiate receptor, called Axelrod "a humble giant of neuroscience and pharmacology. Most will agree that his contributions to our understanding of how drugs act in the brain was greater than any other scientist of the last half of the 20th century. Julie never tooted his own horn, preferring the lab to the lecture circuit. Indeed, at a banquet honoring Julie following his receipt of the Nobel Prize, he quipped, 'It seems these honors are a conspiracy to keep me out of the lab.'"

Axelrod's studies of brain chemicals were far from his only laudable success in science. Before coming to NIH, he helped discover the pain-relieving properties of acetaminophen, better known by its brand name, Tylenol.

Axelrod took a circuitous route through science, initially hoping to be a physician. But he was rejected from all the medical schools to which he



Dr. Julius Axelrod enjoys lunch at a 1987 event in honor of NIH's 100th anniversary.



applied; there were strict quotas on the number of Jewish applicants, he told the *Record* in 1991. Refusing to accept defeat, Axelrod began his career by using his degree in biology to test vitamin supplements for the New York City department of health's laboratory of industrial hygiene. While at that lab, he took courses towards his master of science degree in chemistry. He wrote his master's thesis on the chemical breakdown of enzymes in cancerous tumor tissues.

In 1949, Axelrod arrived at the National Heart Institute, where he studied the tissue distribution and metabolism of caffeine, amphetamines, ephedrine and narcotic drugs. In 1953, he delved into diabetes research where he described a new class of enzymes in liver microsomes that metabolized drugs by a variety of pathways—all before receiving his Ph.D.

Following the completion of his doctoral studies, he promptly set out to direct research in a lab of his own at NIMH. His early work there focused on the metabolism of lysergic acid diethylamide (LSD) and other psychoactive drugs. He went on to revolutionize the field of pineal gland research, discovering melatonin as the gland's key hormone. Axelrod and his collaborators from NIDDK described the mechanism for glucocorticoid formation and showed that congenital non-hemolytic jaundice is due to a defect in glucocorticoid synthesis.

Until his retirement in 1984, Axelrod worked on research projects that sought to elucidate the relationship between drugs and behavior. His research suggested that mental states were the result of complicated physiology and brain chemistry, rather than the sole result of psychological or environmental factors. For years after his official retirement, Axelrod continued to have an active research program as an unpaid guest researcher; he was still coming to his lab regularly in mid-December 2004. He conducted research on transduction of neurotransmitter signals in cells, and more recently, he had been involved in studies on the natural ligand of the cannabinoid receptor anandamide. His many contributions still influence the work of his colleagues.

Reflecting about his mentor and friend, long-time NIMH co-worker Dr. Michael Brownstein says Axelrod was special: "It wasn't only that he had a capacity to enjoy other people's novel findings, he had a special appreciation for data and biology. He showed me that science could and should be fun. There was nobody who was more genuinely buoyant about the scientific enterprise than Julie. He loved to read and think about science, and talk about data. His magic was not in doing experiments that required lots of technical finesse; it was in doing work that anyone could have done—if they'd had the ideas. What separates the giants from the rest is the capacity to ask great questions." ■

NIH Training Center Classes

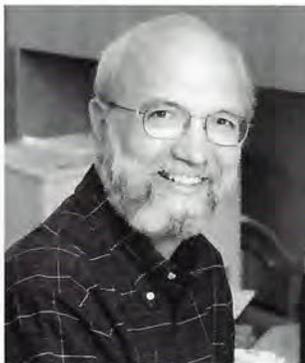
The Training Center supports the development of NIH human resources through consultation and provides training, career development programs and other services designed to enhance organizational performance. For more information call (301) 496-6211 or visit <http://LearningSource.od.nih.gov>.

Management Seminar Series	2/17, 3/17
Purchase Card Training	1/31, 2/8
Travel for NIH Travelers	1/31
Delegated Acquisition Training Program	2/1-4
NIH Domestic Travel (NBS Travel System)	2/1-3
Fellowship Payment System	2/7
Professional Service Orders	2/7
Intercultural Communications at the NIH	2/8
Simplified Acquisitions Refresher	2/9
Purchase Card Processing System	2/10

CIT Computer Classes

All courses are given without charge. For more information call (301) 594-6248 or consult the training program's home page at <http://training.cit.nih.gov>.

Budget Tracking	1/25
Genetics Computer Group (GCG) Sequence Analysis	1/25-27
Data Warehouse Query: Human Resources	1/26
Introduction to mAdb	1/27
Data Warehouse Analyze: Human Resources	1/27
nVision Travel	2/1
Data Warehouse Query: Property Management	2/2
Data Warehouse Query: Research Contracts and Grants	2/3



NIEHS's Dr. Allen Wilcox got top ratings for characteristics postdoctoral trainees rated as very important or extremely important to their success: mentoring, direction and visions, funding and grants, assistance in finding employment and networking.

Science magazine, which conducted an online survey of postdocs last spring, listed Wilcox among the top principal investigators who mentored postdocs. Respondents rated 12 characteristics of their principal investigator, and five characteristics of institutes hosting postdocs. Science recently listed NIEHS as the third best place in the U.S. for postdocs.



Heping Cao, a research fellow on the Environmental Biology Program at NIEHS, received the Acres of Diamonds Award at the recent Minority Trainee Research Forum meeting in Miami. The award was recognition for Cao's oral presentation and poster: "The Anti-Inflammatory Tristetraprolin Is a Low Abundance, Inducible, Stable, Cytosolic, and Hyper-Phosphorylated mRNA-Binding Protein" (by Cao and Perry J. Blackshear) and "Immunological Characterization of Tristetraprolin as a Low Abundance, Inducible, Stable Cytosolic Protein" (by Cao and Jane Tuttle).

NIEHS's 'Kids Pages' Touch Lives

Last November, the NIEHS Kids Pages got more than 3.5 million hits. In all, there are 1,079 pages that use music and games to teach kids about science. That's a lot of outreach.

But for Marcia Soward, program coordinator at NIEHS who created the pages, it is not the volume of hits that is important, it's the difference the pages can make in someone's life. Like the 12-year-old girl who needed some information for a science-fair project, for example. She turned to Soward for direction.



Marcia Soward, program coordinator at NIEHS, created the popular Kids Pages web site.

Using the resources Soward provided, the child completed a project on the sugar content in "sugar-free" candy. Her project included the scientific method—the familiar question, hypothesis, variable, control, materials, procedure and conclusion. The girl won first place in the seventh grade science fair and went on to represent her school at the next level.

Then there was a television screenwriter who wanted information he could use in a CSI episode. As it turned out, his proposed plot was too farfetched, but he only discovered that by contacting Soward, who referred him to NIEHS researchers.

Then there was the little girl who emailed Soward asking her to add Power Rangers songs to the site. While the Power Rangers have no connection to the environment or health, Soward saw no harm in adding the songs and did so. Soon, she got a thank-you note back from the little girl. The girl's brother, it seems, has cerebral palsy and cannot do things that are physically demanding. But he loves the Power Rangers and was delighted with the addition to the site.

In 2003, Soward responded to more than 1,300 inquiries through the Kids' Pages. She was closing in on that number as 2004 ended.

The pages feature games and puzzles, music, stories and information—all with a science twist or lead-in. Soward spent a lot of time in the late 1990s setting the site up and writing content and lead-ins. Now, it only takes a few hours a week to update the content and respond to inquiries.

There is also a whole series of kids pages in Spanish. Biologist Lisa Padilla-Banks volunteered to translate some of the pages into Spanish. Soward said she also gets help from other staffers, who take the time to explain puzzles to people when they don't understand them.

Visit the Kids' Pages at <http://www.niehs.nih.gov/kids/home.htm>.—Colleen Chandler ■



NIEHS's Dr. Dale Sandler has been selected for Organic Style magazine's Environmental Power List of 50 "heroes" who are doing their part to make the planet a better place. Sandler is the NIEHS chief of epidemiology and principal investigator of the Sister Study on breast cancer. The magazine editors identified people they consider "eco-superstars" from a variety of fields, and looked for specific achievements by each. The list

was published in the November 2004 issue of Organic Style. Sandler is ranked 18 for her work with the Sister Study, which recently began nationwide recruiting for 50,000 sisters of breast cancer victims. The study will work to identify environmental causes of breast cancer.

Dr. Richard Rodewald has joined NIGMS as a program director in the Division of Cell Biology and Biophysics. He will oversee research grants in the areas of cell biology and imaging. Prior to joining NIGMS, he spent 4 years as a scientific review administrator at the Center for Scientific Review, where he managed the study section for postdoctoral fellowships in cellular and developmental biology. Prior to that, he was a faculty member in the department of biology at the University of Virginia. His research there focused on immunoglobulin transport and kidney function.



NIHSeniorHealth.gov, a web site with formats and topics specially tailored to the needs of older people, has won a 2004 Industry Innovators Award from the International Council on Active Aging (ICAA), the world's largest trade association for the senior fitness



and wellness industry. NIA educational research specialist Stephanie Dailey (l) and head of NLM's reference section Joyce Backus (r) join ICAA Chief Executive Officer Colin Milner to accept the award. The ICAA presented six such awards at its recent "Active Aging 2004" conference in Orlando. The award-winning site at <http://www.nihseniorhealth.gov> is a joint project of NLM and NIA.