

THE NIH RECORD

Still The Second Best Thing About Payday

Diverse Roads Lead to NIH

By Susan Athey

Like many at NIH, they have come from across the country—Colorado, California, New Jersey, even right here in Maryland—to work alongside top-notch scientists and scientist-administrators. But they have something else in common: They are former participants in NIGMS programs aimed at increasing the number of underrepresented minority biomedical scientists.

The institute's Division of Minority Opportunities in Research (MORE) supported these students-turned-scientists at various stages of their education by providing them with training opportunities, mentors and role models, lab equipment and supplies, and often, their first experience in a research lab.

SEE MINORITIES, PAGE 4

BIO President Feldbaum To Speak, Mar. 19 in Masur Auditorium

On Friday, Mar. 19, the National Cancer Institute will present a talk by Carl B. Feldbaum, president of the Biotechnology Industry Organization (BIO), titled, "Biotechnology and NCI: Partners in Bringing

Patients the Next Generation of Cancer Therapy." The talk will be held from 2 to 3 p.m. in Masur Auditorium, Bldg. 10, as part of the NCI Director's Seminar Series.

Carl Feldbaum overview of the biotechnology industry, including its record of developing cancer therapies and also discuss the importance

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'No Wrong Time To Do Right Thing'

Zerhouni, Staff Present 'Roadmap' to Bethesda Campus Audience

By Rich McManus

Launching a communications campaign to keep his Roadmap for Medical Research initiative well-explained and well-justified, NIH director Dr. Elias Zerhouni addressed the home team—campus employees—as part of a nearly 2-hour presentation in Lipsett Amphitheater on Feb. 20. A week later,



NIH director Dr. Elias Zerhouni offers details on implementing the Roadmap.

Zerhouni and the panel he has named to lead portions of the three-element map gave a similar presentation to an extramural audience at the Marriott in Pooks Hill. These events—along with a dedicated web site, a Roadmap intranet and a listserv—combine to keep stakeholders and the public updated on Roadmap

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Now 'Powered by Google'

NIH Changes Search Engine, Improves Relevance of Results

By Carla Garnett

Ever been looking for something specific online, typed a term into a search engine and received thousands of irrelevant "hits?" Those results would then require hours of sorting and sifting—often in vain—for the original item. As any Internet user will attest, the best thing about having so much data at your fingertips can also be the worst thing. It's an all-too-common dilemma shared by people seeking information as well as those providing it: How to effectively narrow the World Wide Web.

Recently the team that maintains the search function for NIH's web site put several finder products to a relevancy test. The result is that NIH's online searches are now "powered by Google," arguably one of the most popular tools on the net.

"In the early days, search products were more or less comparable to each other," explains Dennis Rodrigues, chief of the Online Information Branch in the NIH Office of Communications and Public Liaison, which has primary responsibility for the main NIH web site. "One product produced results pretty much as well as

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NIH Golf Association Seeks Members

The NIH Golf Association (18-hole coed league) is looking for new members for the 2004 season. We currently have six teams of up to 25+ players each and schedule eight spring/summer stroke-play outings, plus up to five match-play end-of-summer outings each year at local courses (all mid-week and play is optional). We cap the year off on Oct. 11 at Holly Hills Country Club with an outing including golf/cart/food for all members and their guests. Prizes and trophies are awarded and handicaps are maintained from 0-40, so all interested golfers are welcome. For more information contact Howard Somers at (301) 496-8477 or visit <http://www.ncih.gov/nihga/> for more information.

FELDBAUM, CONTINUED FROM PAGE 1

of collaboration between industry, NCI and academic centers. He is also expected to discuss such issues as conflict of interest and the taxpayer's fair rate of return on the investment in research.

Feldbaum has been a leader in biotechnology and government. After receiving his bachelor's degree in biology from Princeton University and his law degree from the University of Pennsylvania, he was assistant special prosecutor on the Watergate case. He was later chief of staff to Sen. Arlen Specter (R-PA), assistant to the Secretary of Energy, and inspector general for defense intelligence in the Department of Defense. Feldbaum eventually founded and was president of the Palomar Corp., a national security think tank in Washington, D.C.

Feldbaum was honored with the Distinguished Civilian Service Medal from Defense Secretary Harold Brown in 1979 and received the Best of Biotech 1995—Special Recognition for an Individual award, given by 140 biotechnology CEOs "for leadership of the Biotechnology Industry Organization, which has emerged as a truly effective platform for the industry." He is a member of the Biotechnology Hall of Fame and received the Christopher Medal for his book *Looking the Tiger in the Eye: Confronting the Nuclear Threat*, designated by the *New York Times* as a notable book of the year in 1988.

As president of BIO, Feldbaum represents more than 1,000 biotechnology companies, academic institutions, state biotechnology centers and related organizations in the U.S. and 33 other countries. BIO members are involved in the research and development of health care, agricultural, industrial and environmental biotechnology products.

Feldbaum's lecture will be webcast at <http://videocast.nih.gov>. Sign language interpretation will be provided.

The next lecture in the NCI Director's Seminar Series, scheduled for Sept. 16, will feature Dr. Julie Gerberding, director of the Centers for Disease Control and Prevention, speaking from 1 to 2 p.m. in Masur Auditorium.

For more information, or for reasonable accommodation, contact Kate Haessler at (301) 348-1662 or the Federal Relay at 1-800-877-8339. More information about the series can be found at <http://cancer.gov/directorscorner>.

Weight and Insulin Study

The Uniformed Services University of the Health Sciences is conducting a study examining weight and stress responses to exercise in African American and Caucasian men and women between the ages of 18 and 45. Volunteers will be compensated for their participation. Call (301) 295-1371 or email humanperformancelab@usuhs.mil.

Dr. C. David Allis, an NIGMS grantee since 1984, recently received the third annual Wiley Prize in the Biomedical Sciences. The international award recognizes "contributions that have opened new fields of research or advanced novel concepts or their applications in a particular biomedical discipline." Allis is the Joy and Jack Fishman professor in the laboratory of chromatin biology and epigenetics at the Rockefeller University in New York City. According to Dr. Günter Blobel, chair of the Wiley Prize awards jury, Allis is being honored for his "significant discovery that transcription factors can enzymatically modify histones to regulate gene activity." This fundamental work led Allis to propose the existence of a "histone code" of gene regulation. Allis will receive a \$25,000 grant from the Wiley Foundation and deliver an honorary lecture at an Apr. 21 ceremony at the Rockefeller University.



Stopping Your HRT? Worried About Mood?

The Behavioral Endocrinology Branch, NIMH, is investigating whether mood, anxiety and irritability accompany hormone replacement therapy (HRT) withdrawal. Participants should be ages 45-60, with a past history of perimenopausal mood symptoms responsive to estrogen therapy (ET) or HRT, who are currently on ET or HRT and in good physical health. For information call Linda Simpson-St. Clair, (301) 496-9576.

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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/news/NIH-Record/archives.htm>

Editor
Richard McManus
rm26q@nih.gov

Assistant Editor
Carla Garnett
cg9s@nih.gov

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McEwen To Speak on Chronic Stress, Disease Risk at NCCAM Lecture, Mar. 31

Did you know that daily, low-level stress—a hallmark of modern living—can significantly increase the risk for development of serious disease later in life? The hormones released by the neuroendocrine system produce subtle injuries to the body's immune system over time, setting in motion a cascade of effects that can make "burn-out" in our older years more than a figure of speech. Scientific understanding of this process has advanced substantially in recent years, establishing the framework for developing solutions and treatments to help combat the debilitating effects of the human "rat race."



Dr. Bruce McEwen

On Wednesday, Mar. 31, one of the leading researchers in the field, Dr. Bruce McEwen, will address "From Molecules to Mind: Stress, Individual Differences and the Social Environment" as the first guest speaker in the 2004 series of Distinguished Lectures in the Science of Complementary and Alternative Medicine, hosted by the National Center for Complementary and Alternative Medicine.

The lecture will take place at noon in Masur Auditorium, Bldg. 10. McEwen is Alfred E. Mirsky professor and head of the Harold and Margaret Milliken Hatch laboratory of neuroendocrinology at the Rockefeller University.

Co-author of a new book for a lay audience titled *The End of Stress as We Know It*, McEwen obtained his Ph.D. in cell biology from the Rockefeller University, where he was appointed as professor in 1981. He is a member of the National Academy of Sciences, the Institute of Medicine, the American Academy of Arts and Sciences, and a fellow of the New York Academy of Sciences. He is also a member of the MacArthur Foundation Research Network on Socioeconomic Status and Health, in which he is helping to reformulate concepts and measurements related to stress and stress hormones in the context of human societies.

McEwen will detail the complex, sometimes deleterious role that the neuroendocrine and autonomic nervous systems play in the communication between the brain and the rest of the body. He will explain the concept of "allostatic load" resulting from hormones associated with stress. These hormones protect the body in the short run and promote adaptation. In the long run, however, allostatic load causes pathophysiologic changes in the body that can lead to disease, as will be illus-

trated for the immune system and in the regions of the brain involved in fear and cognitive function.

All are invited to attend the lecture. It will also be webcast on <http://videocast.nih.gov>. For reasonable accommodation, contact Terence Hope at (301) 402-9686, or the Federal Relay at 1-800-877-8339. ■



Dr. Charles J. Hackett was recently appointed chief of NIAID's Asthma, Allergy, and Inflammation Branch, Division of Allergy, Immunology and Transplantation (DAIT). Previously, he was chief of the molecular and structural immunology section in the Basic Immunology Branch, DAIT. Hackett received his doctoral degree from Wayne State University and was a postdoctoral fellow at the National Institute of Medical Research, Mill Hill, London. Before coming to NIH, he was on the staff of the Wistar Institute and then director of cellular immunology at ImmuLogic Pharmaceutical Corp.

'Share the Health' Expo Set, Apr. 24

"Share the Health: NIH's Premier Health and Fitness Expo" will be held on Saturday, Apr. 24 from 10 a.m. to 3:30 p.m. at Montgomery Blair High School, 51 University Boulevard East, Silver Spring.

Expo events will include interactive exhibits and health seminars led by NIH scientists, free health screenings, the 2004 NIH Healthy Games—NIH's own version of the summer Olympics, sports clinics, wellness workshops and a wealth of free health information for all ages. Activities for children and teens such as hands-on lab experiments, competitive games and a moon bounce will also be featured.

Sponsored by the NIH Office of Community Liaison, the event promotes community health through the prevention of disease. Share the Health allows people of all ages to learn, experience and discover new ways to lead a healthier life.

NIH physicians and scientists will speak about obesity and nutrition, the benefits of strength training, the effects of drugs and alcohol on the brain, dental hygiene, diabetes, bone health, eye anatomy, music therapy, preventing sports injuries and infectious disease prevention. Robot "Holly Heart" offers health tips on keeping your heart healthy. Other workshops and presentations include the art of relaxation, acupuncture, Tai Chi exercise and Reiki therapy.

Special guest speaker Mattie Stepanek, a local 13-year-old best-selling poet and the Muscular Dystrophy Association's national goodwill ambassador, offers an inspirational message for people of all ages. Stepanek, who suffers from a rare form of muscular dystrophy, has been featured on shows such as *Oprah*, *Larry King Live* and *Good Morning America*.

Local hospital staff will offer free health screenings to help community members discover if they are at risk for stroke, high blood pressure, skin problems, osteoporosis or obesity. And NIH information officers will provide the latest in health research through a variety of fun and interactive exhibits.

For more information or to register for this free event, call (301) 650-8660 or visit <http://sharethehealth.od.nih.gov>.

MINORITIES, CONTINUED FROM PAGE 1

Working a "Dream Job"

Dr. Brandi Mattson calls her job at NIH a "dream postdoctoral position." She spends her days doing molecular neuroscience research in a NIDA lab in Baltimore, where her work focuses on integrating the behavioral and molecular aspects of drug abuse, specifically how the brain changes when stimulated by drugs. Mattson hopes this research will aid in the understanding of how drugs of abuse work and assist in developing new treatments for addiction.

But performing experiments and a love of science are nothing new to Mattson—they are something she traces back to childhood.

"By the time I was 5, I already had my own microscope and histology slides," she said.

An avid violin and piano player, Mattson's "other" love—of music—got her accepted into two of the top 10 music schools in the country with full scholarships. But her passion for science won out, ultimately landing her as an undergraduate at Southwestern University in Texas and later at the University of Colorado (CU), Boulder. While attending CU, Mattson was diagnosed with multiple sclerosis. Refusing to let her illness stand in the way of her dreams, she moved back home to be closer to her network of support and enrolled in the University of Southern Colorado, Pueblo, where she finished her bachelor's degree in psychology with minors in mathematics and sociology.

The first in her family to earn a bachelor's degree, Mattson continued her education at Rutgers, where she earned a Ph.D. in behavioral and neural sciences in 2002.

Throughout her college education, NIGMS's Minority Biomedical Research Support (MBRS) Program was behind Mattson just about every step of the way. Her first experience with MBRS was right after she finished high school, when she enrolled in a small summer program for high school graduates offered by the University of Southern Colorado. It was this program that gave Mattson her first opportunity to work in a research lab.

"I really enjoyed it and I came back the following summer to do more research," she said.

Mattson continued as an MBRS participant at both the University of Southern Colorado and Rutgers. She credits the program for providing her with research supplies, mentors and opportunities to attend national scientific meetings.

"Without the MBRS program, graduate school would have been much more difficult for me to complete," she said. "The program provided me with a network of mentors—both faculty and students—to advise me on my research and plan my long-term career goals, and to support me in my non-scientific endeavors. Even though I no longer



Postdoctoral fellow Dr. Brandi Mattson studies how the brain changes when stimulated by drugs in a NIDA lab in Baltimore.



West Coast transplant Dr. David Cerna studies the effect of radiation on cancer in an NCI lab.

participate in the program, I still have the same mentors to turn to. I am fortunate that my mentors will be there for the duration of my career—as advisors and research collaborators."

As to what the future holds for Mattson, we'll just have to wait and see. She plans to be at NIH for another year and a half, and then hopes to move back west and possibly do some biotechnology research and look for a faculty position.

"My goal is to continue conducting medical research and unraveling the mysteries of neurological and psychiatric diseases," she said.

Realizing One's Potential

Some people are just not born farmers. Growing up in a farming family on the central coast of California helped Dr. David Cerna realize this early on.

"I decided being a farm laborer wasn't for me," he said, adding that this was a major influence in his decision to attend college.

During his undergraduate years at the University of California, Santa Cruz, Cerna was exposed to biomedical research through the NIGMS Minority Access to Research Careers (MARC) Program.

"One of the great things about the MARC program was that it gave me one-on-one time with my professors and instructors—this is something I wouldn't have had the courage or the opportunity to do otherwise," he said.

Also the first in his family to attend college, Cerna received a stipend, tuition assistance and funds for books through the MARC program. He says this support was a "great relief" to his parents back on the farm.

Cerna went on to finish his undergraduate degree in biology at Santa Cruz and credits the MARC program with helping him to recognize his potential.

"Getting involved with MARC helped me to realize that I wanted to do something more than getting a bachelor's degree, so I applied for and was accepted into a Ph.D. program at the University of California, Davis," he said. He received his Ph.D. in biochemistry and molecular biology in 2003.

Cerna now does cancer research at NCI through the Cancer Research Training Award (CRTA) Program. He is studying why certain drugs make cancer cells more sensitive to radiation therapy. The goal is to find and establish "molecular targets" for use in the potential design of new drugs and to shed light on the effect of radiation on cancer.

"Working at NIH is great," Cerna said. "Having the opportunity to perform real-life research that is directly correlated to patients is the best part," he added, noting that all his previous research was done on non-human models, like yeast or *E. coli*.

After his term in the CRTA program ends, Cerna hopes to stay on the east coast and find a faculty

position or a job in industry.

"My ideal job would be one that allows me to perform my own research, and hopefully this research will have direct application in patients."

Hooked on Research

Dr. Senator Hazelwood credits the MBRS program with introducing him to research.

"My interest in science didn't begin until I was an undergraduate student at Rutgers," he said, "and this was a direct result of my involvement with MBRS."

Hazelwood's initial plan was to get a medical degree, but MBRS sparked his interest in research as well.

After completing a bachelor's degree in chemistry at Rutgers, Hazelwood went on to Temple University School

of Medicine, where he completed his medical degree in 2000. During medical school, he also worked at NIH for 2 years as a Howard Hughes fellow. He was hooked.

"That experience was wonderful. NIH is unique: Everyone is concentrating on research here on campus—you're free to walk down the hall and collaborate with other scientists—and this gives you an edge you don't find anywhere else," he said.

Hazelwood received further postdoctoral training at Children's Hospital of Philadelphia and interned in general surgery at the State University of New York Downstate Medical Center. But he always hoped to return to NIH at some point during his training. He applied to the Intramural Research Training Award (IRTA) Program, designed to give junior scientists the opportunity to further their development as researchers, and returned to NIH in September 2003.

Today, when he's not fishing the Northeast waters or trying his hand at boating, he's working in an NIDDK lab where he studies the role of receptor signaling in breast cancer.

"My research involves examining the signaling pathway of sigma receptors, which are a novel class of drug-binding proteins that have been implicated in various biochemical, physiological and behavioral processes. These receptors are highly expressed in breast tumor cell lines, while there is little or no expression in normal breast tissue," Hazelwood explained. "These receptors represent a potentially novel approach for understanding and treating breast cancer."

After his IRTA fellowship ends, Hazelwood hopes to further his medical training, perhaps in general surgery or internal medicine.

"My ultimate goal is to be an academic clinician—

to be a researcher and a practicing M.D. in an academic environment."

Giving Back

Dr. LaShawn Drew spends her days administering grants for the very program that helped her obtain her doctoral degree. As a program director in the NIGMS MORE division, Drew manages training grants and fellowship programs at colleges and universities across the country.

"I am not only responsible for maintaining some of our current science programs, but I am also charged with thinking of new ways to help meet the mission of the MORE division," Drew said of her new position.

She joined the division last fall after directing the NIH Academy for 3 years. Her NIH experience also includes working as a chemist in NEI for a couple of years after receiving her bachelor's degree in natural science from Spelman College, as well as doing predoctoral and postdoctoral research at NIDDK.

Drew, who admits to once starting a kitchen fire during an at-home science project in the 7th grade, says she accepted the job with MORE because she "wanted to give back" to the organization that aided her scientific career.

A former MBRS program participant at Howard University, Drew earned her Ph.D. in biology in 1998. She credits MBRS with giving her the opportunity to conduct experiments and inform the scientific community about her research on sickle cell anemia, something of great importance to her since the disease afflicts several family members.

"The program also allowed me to present my research at national scientific conferences, while meeting other students and scientists much like myself, in a field where too few underrepresented professionals exist," she added.

Drew says she made the move from bench research to program administration in the hopes of making a difference.

"I believe science administration is where I can make the greatest impact to aid NIH's goals and ensure the training of underrepresented researchers is met. Helping students become competitively trained, helping faculty develop into professional researchers capable of obtaining grant awards and providing mentorship to students, and helping academic institutions develop outstanding science programs are important processes that I participate in through my work in MORE," Drew said. "I am very excited about this task and have several ideas brewing," she added. ■

More on MORE

Dr. Clifton Poodry, director of the MORE division, is pleased to see former MORE participants choose NIH for research experiences and, in some cases, for their careers.

"These shining examples are evidence that NIGMS programs aimed at increasing the number of underrepresented minority researchers have an impact—that we are motivating and inspiring the next generation of biomedical scientists," he said, quickly noting that these are just a handful of the MORE success stories here at NIH.

"There are other former MORE participants working at NIH, and there are even more at other federal agencies, at colleges and universities, and at companies throughout the United States and elsewhere," he added. "We are proud of them all."

For more information see <http://www.nigms.nih.gov/minority/>.



Dr. Senator Hazelwood



Dr. LaShawn Drew

ROADMAP, CONTINUED FROM PAGE 1

status and progress, said NIH deputy director Dr. Raynard Kington, who introduced the employee session.

The old Roger Miller hit "King of the Road," was playing in the background as Zerhouni and various institute and center, as well as OD, staff gathered for the in-house presentation. As laid back and comfortable as Miller's tune is, it didn't hint at the forcefulness with which Zerhouni presented the Roadmap. Twice he underscored a dramatic statistic: the total NIH budget translates to \$90 per year for each American while each citizen's health care costs average

\$5,500 per year, and are rising at a rate of 10 percent each year.

"There's no way you can win this race against time...without new approaches," he declared. "The health care system is in great disarray." He later confided that the disparity in investment versus cost keeps him up at night: "I go to bed thinking we spend \$90 for every American every year, and that health care costs are five, six times higher than the



NCCAM director Dr. Stephen Straus listens to fellow panelist Dr. Amy Patterson, director of NIH's Office of Biotechnology Activities.

PHOTOS: ERNIE BRANSON

Panels Offer First Semester Roadmap Report Cards

Even though the Roadmap for Medical Research only slightly involves the NIH intramural science programs (chiefly as a means of training clinical researchers), the initiative nonetheless claims the time of many campus employees, mainly those involved in administration and extramural programs. From a plethora of new centers to be established nationwide to the exercise of such arcane funding mechanisms as T-90s and P-20s, the Roadmap already has laid some substantial asphalt, and the pavers are just getting started.

"I'm just a member of the road crew," quipped NIMH director Dr. Thomas Insel as he and NIGMS director Dr. Jeremy Berg presented report cards on New Pathways working groups they cochair devoted to molecular libraries and imaging (Insel) and bioinformatics (Berg).

Insel decried the lack of small molecules and probes for research on cellular function. "There is no public database of chemical information, no GenBank for chemicals," he said. His group, composed of 44 members from 20 institutes and centers, envisions a "PubChem" database to be hosted by NLM's National Center for Biotechnology Information. It would hold information on some 500,000 small molecules. His group also plans a consortium of 8-10 screening centers, including one intramural site called the NIH Chemical Genomics Center, to be housed tempo-

rarily in Bldg. 50 then move to a dedicated facility at Twinbrook. "The goal is an NIH tool kit, not a drug factory," Insel said, addressing misconceptions that NIH is to be involved in drug discovery.

Zerhouni explained the rationale and timing for the Roadmap, crediting both employees and outside advisors with establishing a collegial, cooperative atmosphere during its development. "It has been very touching for me to see so many scientists from inside and outside of NIH coming together" for what he called an unprecedented exercise. He acknowledged much "trepidation and anxiety" on the part of institutes and centers for launching such a wide-ranging initiative in the agency's post-budget-doubling era, but said his plan's reception in Congress, the Bush administration and around the country has been encouraging since it debuted last fall.

He listed five reasons for the Roadmap: We're in a time of "revolutionary and rapid changes in science," Zerhouni said. "There are more data and more challenges in my own particular field of radiology than ever before in the past 10 years"; the increasing breadth of NIH's mission and growth; the complexity of NIH as an institution comprised of many units; the compartmentalized structure of the NIH bureaucracy, with its division by organ, lifespan, disease and scientific discipline; and the

rarely in Bldg. 50 then move to a dedicated facility at Twinbrook. "The goal is an NIH tool kit, not a drug factory," Insel said, addressing misconceptions that NIH is to be involved in drug discovery.

Berg's group is funding four National Centers for Biomedical Computing in FY 2004, with another four expected in the future. They are to focus more on software development than "big-iron" hardware, he said, and are committed to use of open-source code. The latter requirement has prompted concerns about intellectual property rights, a worry that Insel also addressed with respect to the development of useful biologics (vs. therapeutics) in his group's molecular library. "It's a thorny issue and it's not yet entirely resolved," Insel said.

Berg added that two Centers of Innovation in Membrane Protein Production are to be funded in 2004.

The Roadmap working groups are all chaired by IC directors, and NIDCR director Dr. Lawrence Tabak, along with former CSR director Dr. Ellie Ehrenfeld, discussed Multidisciplinary Research Teams of the Future, which is going to require abandoning the old "rugged individualist—you only eat what you kill" approach, said Tabak, in favor of diverse teams who somehow learn to share credit in a new way.

Ehrenfeld described NIH's version of the MacArthur Foundation's "genius" awards—the Director's Pioneer Award, which basically funds

rapid convergence of science.

Zerhouni said he feels particularly keenly the need for a cogent answer to those who ask what NIH did with a doubled budget.

He listed a series of Roadmap imperatives: accelerated pace of discovery; more rapid translation of research from bench to bedside, and back; novel approaches; and new strategies, of which the Roadmap is the premier example.

There are many gaps in our understanding of basic biology, Zerhouni laments; "You can't translate a language that you don't understand."

Explaining how the Roadmap was developed, Zerhouni again thanked a wide cadre of NIH'ers, and said planners consulted extensively. The IC directors have held two retreats so far, he reported, at which Roadmap workgroup output has been reviewed.

He called the Roadmap a "framework of priorities," a "vision for a more productive, efficient system, not just a collection of slogans," and "a set of initiatives central to extending benefits to patients."

Zerhouni briefly described the Roadmap's three main elements. For "New Pathways to Discovery," he emphasized the need to unravel the staggering complexity of biological systems. He put a slide of

IC directors (from l) Dr. Lawrence Tabak, Dr. Jeremy Berg and Dr. Thomas Insel participate in panel.



people with outstanding prospects rather than a specific research plan. NIH expects to award 5-10 of these yearly, said Ehrenfeld. "They will be very prestigious."

The third panel that reported to employees, on Re-engineering the Clinical Research Enterprise, included NIAMS director Dr. Stephen Katz, NCCAM director Dr. Stephen Straus, and Dr. Amy Patterson, who directs NIH's Office of Biotechnology Activities. Katz conceded that "almost the number one priority for us is what we call 'harmonization'—there is too much variability in rules and regulations [governing research with human subjects] both between and within agencies."

Patterson put it another way: "There are too many traffic signals along the road from the bench to the bedside."

The full report cards for the Roadmap working groups, updated regularly, are available at www.nihroadmap.nih.gov.

cell cycle activity, donated by NIDDK director Dr. Allen Spiegel, next to a diagram for rocket design, illustrating how complicated even the functions of a single cell can be. He said scale, not just intricacy, is also a problem—the molecular library he envisions will have to characterize at least a half million molecules to be truly useful.

He used the story of Gleevec's discovery as a cancer drug to illustrate how insufficient it is to rely on happenstance to move science forward. Originally studied in some other context, Gleevec was only utilized against cancer after someone realized it had potential anti-cancer properties. "Are we going to rely on haphazard events to lead us to new therapies?" Zerhouni asked.

Turning to "Multidisciplinary Research Teams of the Future," Zerhouni said the way scientists are organized today is not optimal for tackling the complexity and scale of biological problems. He encouraged pilot programs, and "take-a-chance" initiatives. "I believe in self-assembly of scientific teams," he said, "and I can't dictate what that is." He said it is important to resist rigidity and ingrained cultural templates.

With regard to the third element, "Re-engineering the Clinical Research Enterprise," Zerhouni said, "I personally believe that clinical research is a new core discipline, not an old one, and needs to be treated as such...There is power in having better ways of culling out clinical reality."

Zerhouni said the Roadmap is a trans-NIH enterprise involving pooled resources, and open competition for all. Its funding history is on an uphill climb, from 0.34 percent of the 2004 budget (or \$128 million) to 0.63 of the FY 2005 budget (or \$237 million), climaxing at 0.9 percent of the budget in the effort's sixth year.

Answering concerns about timing, Zerhouni said, "There is no wrong time to do the right thing." One recognizes the greatness in an institution not by what it does when things are easy, he said, but by how it behaves in the face of challenges. He concluded with thanks to all the IC directors "who have supported this effort magnificently," and particularly credited NIDCR's Dr. Dushanka Kleinman, newly appointed to the role of NIH assistant director for roadmap coordination, as being "a breath of fresh air."

Kleinman then moderated an extended session during which the Roadmap's three elements were briefly described by members of some of the 9 working groups charged with implementing the initiative. As the session ended, she asked those with further interest to contact either their designated IC Roadmap liaison or to send email to the Roadmap web site at www.nihroadmap.nih.gov.

To view the entire Roadmap session for employees, visit videocast.nih.gov. ■



Dr. Dushanka Kleinman, the new NIH assistant director for roadmap coordination, moderated the panel discussion.

SEARCH ENGINE, CONTINUED FROM PAGE 1

another. As search technology became better over the years, our expectations grew and the bar became higher. Over time, Google emerged as a far superior product."

With so many search products on the market, determining which one was best for the NIH community could have posed a problem. However,

Rodrigues, who serves as the gatekeeper for data placed on the main site, found that there was really no contest between best-known products.

"The Google Corporation set up a test for us," he said. "I used a battery of about 25



Now 'powered by Google': The team that tends to the NIH web site search engine includes (standing) Dennis Rodrigues of the Office of Communications and Public Liaison and (seated, from l) Ginny Vinton, George Cushing and Bing Chao of the Center for Information Technology.

terms, looking for the ideal result. For instance, if I typed in 'melanoma,' what pages would be listed first? What would be among the top 10 results? We also looked into Inktomi's search product, which runs on the firstgov.gov web site. We thought we might be able to save money if we piggybacked on their use agreement. [However], we found that Google returns more relevant results for NIH's needs. It was the complete winner in every race we had."

According to Ginny Vinton, home page technical coordinator at NIH's Center for Information Technology and head of the team that keeps the NIH search engine in operation, there are more than 200 servers for the 242,000 documents that require indexing on the NIH site. Deciding to change the tool used to locate these items is no small undertaking.

On any given day, upwards of 19,000 searches are conducted on NIH's site, Vinton reports. The days logging the most searches are Tuesday through Thursdays. NIH can trace a significant amount of its traffic to visitors who use global search services like Google or Yahoo.

"We had been thinking about various products for quite a while," Rodrigues admits, explaining that the search engine NIH had used for several years had begun to show its age.

In addition, the 3-person CIT technical team—which along with Vinton includes George Cushing and Bing Chao—that tends to the main NIH site sought a product that would be responsive to the questions and concerns of clients.

"I realized we should make the switch one day

when I called the team and realized they were all already using Google to search the web," Rodrigues recalls, explaining that the search engine is "primarily to assist those using our public sites."

NIH launched its Google package on Feb. 9. The use agreement includes a back-up appliance for emergencies.

"We want to have a product ready to take over if the first one fails for any reason," explains Vinton. Both the primary and backup appliances are indexed once a week.

Another benefit to Google is that selected pages can be elevated in relevancy with relative ease. As the point of contact when people are unhappy with the NIH site, Rodrigues says that one of the complaints heard most often from NIH'ers was that they had conducted a search to see if their site came up on the return list. Frequently, because the word or title they were searching for was not recognized by the search engine, their site would not, in fact, be listed or would be so far down on the relevancy list that people looking for it would give up before locating the information.

"For instance, if the words on the page are in the form of graphics, a search engine will miss them," explains Rodrigues, who would then consult with Vinton and Cushing in an effort to find a solution that might improve the search results for that particular page. Because fruitless searches were beginning to occur with regularity, the troubleshooting process was becoming ever more time-consuming for team members, each of whom has other duties.

"We could adjust the algorithms so that additional weight was added to a title, keywords or a body of text," Vinton says, "but we never got the relevancy we desired."

Over time, Rodrigues adds, web authors who create pages with search engines in mind will be pleased with Google's ability to rank their pages in ways that offer the most benefit to users.

"One of the things we learned with the previous engine was that it didn't always follow convention," Rodrigues says. "Often it was counterintuitive to the way people would use it. We wanted a product that uses natural language to come up with reasonable results. Another consideration we had was that the product have an effective technology so that we could create web pages that work with it."

As web technology continues to develop at an exponential pace—according to recent tech news, Google already has a new rival in the search field, Grokka—the next dilemma for Rodrigues becomes how long NIH sticks with Google.

"Our goal is to find solutions that are reliable, robust and provide the best possible results for our users," he concludes. "Our next move depends on how long Google can meet the needs of our customers." ■

New Web Site on Careers

NIH'ers Make Headlines at 'LifeWorks'

By Cynthia Delgado

What do a patent lawyer, a biophysicist and a dentist have in common? Give up? They are featured NIH success stories at the Office of Science Education's new career exploration web site, LifeWorks (<http://science.education.nih.gov/LifeWorks>). With this resource, middle school and high school students, their parents and career/guidance counselors can explore more than 100 health and medical science-related careers. Considering that nearly 50 percent of the occupations projected to grow the fastest in the next 10 years are in the health and medical sciences, according to the U.S. Bureau of Labor Statistics, LifeWorks makes a timely debut this month.

NIH professionals are highlighted on the front page of LifeWorks. Site visitors can read interviews about their careers and view photos of them on the



Dr. Steven Hausman

NIDCR's Dr. Sunil Wadhwa is an orthodontist who doesn't like "putting people in pain."



job and at play. Career planners may be inspired by the counseling psychologist who sings jazz on the weekends, or the registered nurse who volunteered to take blood pressures at the 2003 National Black Family Reunion held on the Mall. Students can learn how NIAMS's deputy director Dr. Steven Hausman combines his science education with a knack for administration, and a passion for new technologies. Those with a penchant for all things

mechanical may be especially drawn to the equipment used by an orthodontist, respiratory therapist or medical technologist. People of a more creative persuasion will enjoy reading about a science writer or the typical day of a museum curator.

The site's rich content is derived from the Department of Labor's (DOL) cumulative data on jobs spanning the

entire country. The data includes job descriptions, salaries, job outlook and other career specifics. NIH success stories complement the DOL data, and exemplify the diverse career options in the sciences, and the unique pathways leading to success.

LifeWorks promotion is scheduled to correspond with ESTME (Excellence in Science, Technology, and Mathematics Education) Week (<http://www.estme.org/>), Mar. 15-19. Coordinated by the Department of Education, ESTME Week is a national celebration intended to increase public awareness of federal science and math education programs and opportunities. During the week, more than 20 participating federal agencies hold events to excite K-12 students about learning science and math. OSE plans to send colorful LifeWorks posters and related materials to more than 60,000 middle school and high school counselors across the country. ■



Craig Kalman is a certified employee assistance consultant and the "Moose" in "Three Down & the Moose," a group that performs in local clubs.

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>.

Travel for NIH Travelers	3/17
Basic Time and Attendance Using ITAS	3/23-24, 4/27-28
NBS Travel System for Organizational Administrators	4/5-6
Purchase Card Processing System	4/12
Domestic Travel	4/13-15
Professional Service Orders	4/14
Purchase Card Training	4/15
NIH Foreign Travel	4/19-20
Introduction to NIH Property Management	4/20-21
Fellowship Payment System	4/26

Healthy Volunteers Needed

If depression has never been a problem for you and the fall and winter seasons do not affect how you feel very much, you may be eligible to participate in a research study. We are looking for volunteers with good mental health, 18 years or older. If you qualify, participation involves a 3-4-hour visit including questionnaires. Participants will be compensated for their time. For more information, call the Mood Laboratory at the Uniformed Services University, (301) 295-3241. ■



CC's Keisha Potter is a registered nurse and a community volunteer.



In retirement, Audrey Warner plans to enjoy life with her family and friends, write a book and travel.

NINDS's Warner Retires After 35 Years of Service

By Shannon E. Garnett

Audrey Warner, a program assistant in the Neurodegeneration cluster of the NINDS Extramural Division, recently retired after 35 years of federal government service—all with NIH.

"Anyone who has even briefly met Audrey knows what a warm and loving person she is," said Dr.

Paul Sheehy, a program director in the cluster. "Working with her has been one of the highlights of my NIH experience."

Warner began her NIH career on Apr. 21, 1968 as a clerk typist in the psychiatric nursing department of the Clinical Center. Six months later she became a unit clerk in that same department, and remained there for 1 year.

In 1970, she accepted the position of travel clerk—which included timekeeping and procurement duties—in the Epilepsy Branch, NINCDS (now NINDS). And in 1999 she changed positions, becoming a program assistant in the cluster.

In addition to her regular duties as program assistant, Warner used her keen organizational skills to maintain and coordinate the Eugene Streicher library, located at the Neuroscience Center building on Executive Blvd. The library—used not only by NINDS employees, but also by staff from other institutes in the building—houses scientific journals, daily newspapers, reference manuals, NIH event information, pamphlets and other scientific material.

Warner also created a support staff manual, which includes information on NINDS and NIH grant award mechanisms, submission dates and deadlines, staff training opportunities and communication and administrative skills for all new program assistants and administrative staff in the Extramural Division.

To many in the division, Warner was also informally known as the support staff photographer—not only documenting the annual support staff retreats, but also capturing historical memories of people and events at NINDS. She maintained the photographs in a large photo album for all the staff to enjoy. However, to most NINDS'ers Warner was more affectionately known as "Mama Audrey" for her strong faith, and the love and warm smiles she extended to all who crossed her path, as well as for her positive attitude.

"Without God, it would have been impossible for me to make this journey for 35 years," said Warner. "NINDS has been like an extended family and NIH is my second home. Here I have made friends with many people and we have developed a strong bond. I will truly miss everyone."

According to Warner, throughout her career she has witnessed many "great and wonderful changes at NIH and NINDS," both scientific—including new drugs to treat epilepsy, the development of the

cochlear implant, and the development of t-PA to treat stroke—and administrative—including the different timekeeping systems, from paper punch cards to TAIMS (the first computerized system) to ITAS.

Friends, family and colleagues past and present gathered recently in the Streicher library to honor Warner and bid her good luck. At the party, her photo album was displayed and brought a lot of laughs and joy to those who attended.

In retirement, Warner plans to enjoy life with her family and friends, and spend extra time doing church activities. She will also write a book and travel. ■

Career Fair for Foreign Fellows, Mar. 19

The first-ever Career Fair for NIH Visiting Fellows will take place on Friday, Mar. 19 from 1 to 5 p.m. in the atrium of the Natcher Bldg. Dr. Michael Gottesman, NIH deputy director for intramural research, will welcome the participants at 2 p.m.

The event will bring visiting fellows together under one roof with international scientific experts, representatives of foreign universities or programs, embassies and other organizations to help the fellows gain insight and information about their careers and scientific prospects after they complete their training at NIH. The sponsors hope that it will address a critical need, particularly for fellows from developing countries, by highlighting opportunities for them to pursue research careers in their own countries, and by providing information on skill-building resources available to them as they navigate the transition after NIH.

All visiting fellows are invited and encouraged to attend. Sponsors include the NIH visiting fellows committee, the NCI Fellowship Office, the Fogarty International Center and the National Institute of Environmental Health Sciences. Further information is available from Sonja Madera, (301) 496-2075, email maderas@mail.nih.gov. ■

Depression Study Needs Volunteers

If you currently experience symptoms of depression, you may be eligible to participate in a research study. Symptoms include sadness, losing interest in your activities and changes in eating and sleeping patterns. Interested volunteers, 18 years or older, may be eligible to participate. If you qualify, participation involves a 3-4-hour visit, including questionnaires. The study does not include treatment, but we provide referrals. You will be compensated for your time. For more information, call the Mood Laboratory at the Uniformed Services University, (301) 295-3241. ■

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>.

Hands-on ECB Early Concurrence Workshop	3/17
What's New in PowerPoint 2002/2003?	3/17
nVision Travel	3/17
Remedy - NIH Central Service Ticket System	3/18
How to Write an IT Security Plan (SP)	3/18
NCBI's Blast Quick Start	3/18
Basic Security for Unix Workstations	3/18
What Is the NIH Portal?	3/23
Building Rich Internet Applications Using Flash MX 2004	3/23
Analyzing Microarray Data Using the mAdb System	3/23-24
Using Photoshop to Work w/Scientific Images	3/25
Network Security and Firewalls	3/26
Introduction to mAdb	3/26
MOS Certification: Word XP Expert Test Prep	3/26
Creating Presentations w/PowerPoint for Mac	3/29
Using SQL to Retrieve DB2 and Oracle Data	3/30-31
Secure .NET Development	3/30
NCBI's MapViewer Quick Start	4/1

R&W Holds Charity Night at Circus

For the seventh year, the NIH R&W is hosting "Premiere Opening Night of the Ringling Bros. and Barnum & Bailey Circus" at the MCI Center on Wednesday, Mar. 24 at 7 p.m. The event benefits the NIH Charities.

Hundreds of children and families in local hospitals, school programs, county social services programs and more will be on hand. Take your friends, family, coworkers or a date to the evening designed for children of all ages. Great seats are available at a discount including lower level \$15.50 (reg. \$25), ends \$12.50 and upper level seats for only \$8. In addition to the show, each ticket purchase also includes the Three Ring Adventure beginning at 6 p.m. This special offer allows you to participate in circus skits and gives you a chance to meet the clowns, acrobats and many more of the performers who make the circus "The Greatest Show on Earth." To purchase tickets, call the R&W activities desk at (301) 496-4600 or Julie Harris at (301) 496-6061. Large groups are also welcome. ■

Healthy Volunteers Needed

The Vaccine Research Center is looking for healthy volunteers, 18 to 44 years old, to participate in studies of experimental vaccines for infectious diseases. The VRC is currently seeking volunteers for a study of an investigational Ebola vaccine. Volunteers will have medical examinations and blood tests to see if they are eligible for the studies. Financial compensation is provided. To volunteer, or for more information, call 1-866-833-LIFE (toll-free) or TTY: 1-866-411-1010. ■

NLM Offers Exhibit-Based Play

All NIH'ers are invited to attend *Changing the Face of Medicine: Celebrating America's Women Physicians*, an original play based on the current exhibition at the National Library of Medicine.

Over the last 150 years, women in medicine have challenged discrimination and prejudice to build careers as doctors, scientists and leaders in public health. Bringing new perspectives to the profession, they have made important breakthroughs that benefit us all. *Changing the Face of Medicine* (the play) tells the stories of some of the women featured in its companion exhibition and brings their tales to life. This original piece highlights the biographies of these women in three 15-minute acts with four actors playing parts beyond their respective genders and ethnicities. Also, there will be a 10-minute question-and-answer session at the end of each performance.

The plays will be staged in Lister Hill Auditorium, on the first floor of Bldg. 38A. Performances are Tuesday, Mar. 23, 12:30-1:30 p.m.; Wednesday, Mar. 24, 12:30-1:30 p.m.; and Wednesday, Apr. 21, 6:30-7:30 p.m. Send your RSVP for the play or inquiries about the exhibition tours to educator@nlm.nih.gov or phone (301) 496-5963. A sign language interpreter will be available for each performance. If other special accommodation is needed or if you have any questions, contact the exhibition educator at the number above or email jiwon_kim@nlm.nih.gov. ■



Dr. Antonia Novello, one of the featured physicians in the play *Changing the Face of Medicine*, was the first woman—and the first Hispanic—to be appointed Surgeon General of the United States.

Events Mark Women's History Month

The theme for this year's Women's History Month is "Women's Work and Women's Health: A Celebration of Knowledge and Achievement." The month of March will feature a number of commemorative events, including:

Wednesday, Mar. 17, 10 a.m. to noon, "Remembering the Journey: A Middle Eastern Round Table Discussion on Women and Science," cosponsored with Fogarty International Center, at the Stone House.

Tuesday, Mar. 23, 11:30 a.m. to 1 p.m., "Women in Science: Past Progress and Persistent Challenges," Dr. Kimberlee Shauman, assistant professor of sociology, University of California at Davis, in Wilson Hall, Bldg. 1.



Ten years ago, NIH consolidated 11 different telephone help lines into one centralized "Help Desk" named the Technical Assistance and Support Center (TASC), operated by the Center for Information Technology. From its humble beginnings, with less than a dozen people handling about 700 calls per month, TASC has evolved into the NIH Information Technology (IT) Help Desk with more than 60 staff handling approximately 1,000 calls per day. This growth parallels the dramatic expansion of information technology at NIH. As computer technology has advanced and expanded, so has the need for technical help. For the past 10 years, the goal of the NIH IT Help Desk has remained the same—to provide all customers with courteous, timely and high-quality support. There is no doubt that the coming years will witness many more advances in IT. The staff of the NIH IT Help Desk (above) look forward to being there to help the NIH workforce and to resolve the IT glitches and inevitable surprises that will continue to challenge us in our 21st century workplace.

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features the G. Burroughs Mider Lecture (which had been postponed back on Jan. 14) on Mar. 24; the topic is "Retroviral Insertional Mutagenesis: A Roadmap for Navigating the Cancer Genome." Speakers are Dr. Neal G. Copeland, director, Mouse Cancer Genetics Program, NCI, and Dr. Nancy A. Jenkins, senior investigator in the same program.

On Mar. 31, Dr. Wah Chiu will lecture on "Structural and Digital Biology of Macromolecular Complexes." He is Alvin Romansky professor of biochemistry and director, National Center for Macromolecular Imaging, Baylor College of Medicine, Houston.

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

Garden Club Sprouts to Life, Offers New Program Format

With spring fast approaching, gardeners with "day jobs" at NIH start dreaming of planting, pruning and putting in their gardens once again. The NIH Garden Club also hopes to emerge from hibernation. Since the start of security activities, the club has been virtually unable to bring in the usual monthly guest speakers. A group of core members met recently and decided to see if there would be interest in a new program format: quarterly meetings, plant swaps in spring and fall, field trips to local gardens and information exchange via an email list. Interested NIH'ers should visit the Garden Club web site at <http://www.ncgov.org/r&w/garden/> and complete the information form. ■

Update on Bldg. 30 Fire

NIDCR employees, temporarily displaced by a fire that occurred in Bldg. 30 on Feb. 1, were scheduled to return to their labs and offices in mid-March. The fire marshal's investigation, repairs, cleaning, air quality testing and reactivation of all safety systems were to be complete by then.

During the transition, approximately 10,000 mice had to be temporarily housed in Bldg. 14G. Although NIDCR staff were eager to move back to Bldg. 30, many were able to continue their research at alternate locations during the interim.

Thomas Bugge (wearing headlamp) of NIDCR's Oral and Pharyngeal Cancer Branch, and Yasuo Yoshida, a scientist in the Oral Infection and Immunity Branch, pitch in to salvage research material. NIDCR director Dr. Lawrence Tabak's lower body can be seen at the top of the stairs.



NIDCR intramural scientists (from top) Guy Lyons, Oral and Pharyngeal Cancer Branch; Mi-Young Son, matrix metalloproteinase section; and Pamela Robey, acting scientific director and chief of the Craniofacial and Skeletal Diseases Branch, remove material from Bldg. 30 in wake of Feb. 1 fire. Building inhabitants will be able to return to Bldg. 30 sometime in mid-March.