THE NIH RECORD

Still The Second Best Thing About Payday

Katz Sees Directorship as Chance to Make a Difference

By Robert Bock

"I viewed it as a tremendous challenge," said NIAMS director Dr. Stephen Katz about accepting his institute's directorship in 1995. "It was an opportunity to take all that I had learned in science and medicine and make a greater impact than I ever had before."

He came to NIAMS from the National Cancer Institute, where he served as chief of the Dermatology Branch, a position he continues to hold. An expert in cancerous and inflammatory disorders of the skin, Katz has demonstrated that skin is a critical part of the immune system. In particular, his work has focused on Langerhans cells. These outermost sentries of the immune system occur in the outside layer of the skin, but frequently report back to immune cells within the body.

SEE **KATZ**, PAGE 8

Rowley To Give Pittman Lecture

Dr. Janet D. Rowley, who is internationally recognized for her work on leukemias and lymphomas, will present the NIH Director's Margaret Pittman Lecture in the Wednesday Afternoon Lecture Series, Wednesday, Apr. 26, at 3 p.m. in Masur Auditorium, Bldg. 10. The title of her talk is "Cancer Cytogenetics: Is it Passé?"

Dr. Janet Rowley

Following the development of banding techniques in the 1970's, Rowley and her colleagues led the way in characterizing a wide variety

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HIGHLIGHTS

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Campus' Major Unseen Construction Project—'NIH Business System'

By Rich McManus

There is a large construction project on campus that began last September and will likely last for the next 5 years, consuming the attention of hundreds of workers, costing an estimated $50 million over 5 years, and affecting the daily activities of at least 5,000 NIH'ers. Unlike the turned earth, diverted traffic and unsettled parking prompted by construction of the new Clinical Research Center and laboratory Bldgs. 50 and 40, this project—the NIH Business System (NBS)—is going up without the usual signs visible to the average employee. And unlike the new buildings, the new system will eventually affect everyone who works at NIH.

If you purchase a pipette, prepare travel papers, pay bills, loan or move a piece of equipment, or seek the advice of an outside expert, you use a piece of infrastructure often taken for granted called the Administrative Data Base, or ADB, which has been around for the last 22 years. An invention of technical wizards at the former Division of Computer Research and Technology (now CIT), it was once a novel tool for handling the approximately 150,000 transactions a day in such fields as inventory, procurement, property, travel, human resources and central accounting.

SEE **BUSINESS SYSTEM**, PAGE 6

Oxygen Atom Makes Difference

Sugar Chemistry, At Least, Separates Man from Primate Ancestors

By Rich McManus

There is a ubiquitous sugar molecule on the cells of humans that differs only by the lack of a single oxygen atom from a cousin sugar commonly found on cell surfaces of our nearest genomic ancestors, the great apes. Thus far, it is the sole genetic difference—species-wide—distinguishing man from chimp, orangutan, gorilla and bonobo. And from all other mammals studied so far.

The sugar in question is sialic acid, which has long been known to take two major forms—Neu5Ac and Neu5Gc. While both have been found in all mammalian cells, including apes, the latter appears only in trace amounts in humans, probably due to meat consumed in the human diet. Thus, while humans are missing this common form of sialic acid, their closest evolutionary cousins—the great apes—express it in amounts similar to other animals.

SEE **HUMAN VS. PRIMATE**, PAGE 4

Dr. Huber R. Warner has been named associate director of the Biology of Aging Program at the National Institute on Aging. BAP funds basic research to identify and characterize the genetic and environmental factors that play a role in aging and are risk factors for age-related pathology. Warner expects the program to expand its research in the areas of functional genomics, stem cells, use of microarray analysis, and gene and cell replacement therapy. He joined NIA in 1984 to manage the Molecular Biology Program, and the following year was promoted to chief of the Molecular and Cell Biology Branch. In 1988, he became deputy associate director for the BAP. He spent 20 years at the University of Minnesota as a professor in the department of biochemistry before moving to NIA.

ROWLEY, CONTINUED FROM PAGE 1

of specific translocations associated with subgroups of leukemias and lymphomas. Her research demonstrated the fundamental role of somatic genetic alterations in the pathogenesis of human tumors and their clonal development. Subsequently, her laboratory and many others have utilized modern molecular techniques to identity and characterize the altered growth regulatory genes at the sites of these chromosomal abnormalities, in both hematopoietic and solid tumors. The results are already being widely used in diagnosis, prognosis and patient management, and recently have demonstrated that their ultimate promise is leading to specific therapies.

In addition, Rowley is a forerunner in applying the polymerase chain reaction, fluorescence *in situ* hybridization, and other molecular techniques to clinical work. The precision and sensitivity of such tools have brought about a revolution in clinical oncology. This is especially important in establishing an accurate diagnosis and prognosis, along with a reasonable treatment plan.

Rowley has served on numerous boards, including most recently as chair of the board of scientific counselors for the National Human Genome Research Institute, as well as the National Cancer Advisory Board, National Cancer Institute and the American Board of Medical Genetics. She is a past president of the American Society of Human Genetics and is presently on both the scientific and medical advisory boards of the Howard Hughes Medical Institute. She is also a member of a number of societies including the National Academy of Sciences. Rowley is the cofounder and coeditor of the journal *Genes, Chromosomes and Cancer* and sits on the editorial boards of numerous scientific publications.

She has received many honors and awards, including the Charles S. Mott Prize from the General Motors Cancer Research Foundation, the Albert Lasker Clinical Research Award, and the National Medal of Science, presented by President Clinton.

Rowley has been a visiting scientist at Oxford and distinguished visiting professor at Memorial Sloan-Kettering Cancer Center and the Mt. Sinai School of Medicine. She has received honorary degrees from a number of institutions.

The lecture series honors Dr. Margaret Pittman, who was named, in 1958, chief of the Laboratory of Bacterial Products in the Division of Biologics Standards, which was part of NIH at the time. She is recognized for her significant contributions to microbiology, including work on the development of pertussis and tetanus toxin vaccines. She was also the first woman to hold the position of lab chief at NIH.

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

STEP Plans Session on Addiction

A Science for All session entitled "Addiction: Old Problems, New Science," will be presented by the staff training in extramural programs committee on Thursday, Apr. 27 from 9 a.m. to noon in the Neuroscience Center Bldg., 6001 Executive Blvd., Conf. Rm. C.

Alcoholism, caffeine and nicotine dependence, and various forms of drug abuse have major social and economic influence today, touching nearly everyone's family or associates. The session will explain what is meant by addiction, dependence and abuse; what is known about the development and underlying mechanisms of addictive disorders; and current strategies for prevention and treatment. The featured speakers will be: Dr. Mark Goldman, University of South Florida; Dr. George Koob, Scripps Research Institute; and Dr. Marc Schuckit, University of California, San Diego.

All NIH'ers are welcome. Seating is on a first-come, first-served basis. No advance registration is necessary. Inform the STEP office at 435-2769 about any need for sign language interpretation or reasonable accommodation by Monday, Apr. 24.

Managing the Writing of Others

If you spend seemingly endless hours rewriting material that comes across your desk, you may want to attend "Managing the Writing of Others" to learn a writing, coaching and reviewing process. Using the techniques from the class, you will reduce the time you spend reworking documents and increase writing productivity. For course details, visit http://trainingcenter.od.nih.gov/.

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NCI, Japan Society Present Symposium on Cancer Research

The United States-Japan Cooperative Cancer Research Program, jointly sponsored by NCI and the Japan Society for the Promotion of Science, recently presented a symposium entitled "Common Frontiers in Cancer Research" at the Natcher Conference Center. The purpose was to bring researchers and scientists together from the United States and Japan to share their expertise and insights about cancer research.

Dr. Joe Harford of NCI welcomed the audience and acknowledged the contributions that the Japanese have made not only to science but also to the Tidal Basin, referring to the cherry trees presented by the Japanese that bring thousands of visitors to D.C. every year. He said NCI supported 124 Japanese visiting scientists during fiscal year 1999—more than from any other country. Dr. Shiro Miwa, director of JSPS, spoke about the organization's 5-year plan initiated with NCI to train young cancer researchers through an exchange of personnel. This exchange allows Japanese and American scientists the opportunity to share information and cutting-edge laboratory techniques, the tools of collaborative cancer research.

Among members of the U.S.-Japan Cooperative Cancer Research Program steering committee are NCI's Dr. Joe Harford (l) and Dr. Shiro Miwa.

On the symposium's first day, Dr. Robert Weinberg of MIT, the 1997 recipient of the highest science honor in the U.S., the National Science Medal, spoke on "Creation of Human Cancer Cells with Defined Genetic Elements." The focus of his research has been on the distinct defects in regulatory circuits that govern normal cell proliferation and are disrupted when a cell becomes cancerous. Weinberg explained that his current research took advantage of the recent isolation of the hTERT gene, which encodes the human telomerase. Telomerase is an enzyme that becomes active in cancer cells, enabling unlimited replication. According to Weinberg, greater understanding of the role of telomerase in cancer cell growth may provide insights for new prevention and treatment strategies. His construction of a cancer cell with defined genetic elements represents a turning point for cancer genetics, introducing a new tool to the research. It may now be possible to test the proposition that the development of all types of human tumor cells are governed by a finite number of critical mutations.

Other distinguished speakers discussed various genetic and molecular approaches to cancer research as promising methods for cancer treatment. They provided an overview of cancer genetics, biomarkers/early detection, apoptosis and angiogenesis. Discussions on the first day of the symposium included the identification of the functions of specific genes that are amplified in the late stages of cancer and the study of the function of tumor suppressor genes. During the second day, discussion shifted from genetics to cell biology. Speakers discussed investigation of the genes responsible for apoptosis control in human cancers and the proteins that regulate cell death during apoptosis, as well as molecular approaches that make cancer cells more susceptible to cancer drugs. Dr. John Reed of the Burnham Institute explained that using small molecular approaches to restore the balance of cell life and cell death via the apoptotic pathway may make cancer cells more susceptible to cancer drugs and thus easier to eradicate.

Dr. John Reed discusses the balance of cell life and cell death.

The organization responsible for bringing these speakers to the NIH, the U.S.-Japan Cooperative Cancer Research Program, was launched in 1974 with an agreement between NCI and JSPS. The cooperative program supports research in three areas: basic, clinical and epidemiology/behavioral science. Since its inception, the cooperative program has held 250 scientific meetings and supported 400 exchanges. The program now typically sponsors one seminar per year as well as one major symposium, whose location rotates between the two countries each year. The cooperative program has been instrumental in establishing a close relationship between researchers that has significantly contributed to the progress made in recent years in cancer research and treatment. For more information on JSPS, visit http://www.jspsusa.org.—Clare Collins

R&W Holds Spring Bazaar

Mark your calendars for the Spring Bazaar on Wednesday, May 10 from 10 a.m. to 3 p.m. on the patio outside Bldg. 31. Crafters will be selling a variety of handmade items such as jewelry, quilts, pictures, clothes and much more.

National Institute on Aging clinical director Dr. Darrell R. Abernethy recently received the Rawls-Palmer Award from the American Society for Clinical Pharmacology and Therapeutics at its annual meeting in Los Angeles. The award supports a lectureship to provide continuing medical education in an effort to translate modern pharmacology research to patient care. A board-certified internist, clinical pharmacologist, and expert on the management of hypertension in the elderly, Abernethy leads NIA's expanded efforts to translate laboratory findings to clinical practice. His research focuses on the control of vascular tone by angiotensin, endothelin, calcium and their inhibitors.

HUMAN VS. PRIMATE, CONTINUED FROM PAGE 1

This difference is the outcome of years of study of what separates great ape DNA from human DNA. The investigation was launched 25 years ago with publication of a paper showing that the DNA sequences of man and great ape differ very little, only by 1 to 1½ percent. More recent studies have reduced the figure further, to about 1 percent. Though many have investigated similarities in the genomes of the two species, relatively few have looked into what sets us apart, what makes humans human.

In a talk provocatively titled "Explaining Humans: A Window into the 1% Difference," Dr. Ajit Varki, a pioneer in the field of glycobiology at the University of California, San Diego, brought both biochemical rigor and catholicity of research tool use to this topic; he is as willing to seek clues from a fossil show in Arizona as from Yerkes Regional Primate Research Center, where he spent a month cataloguing many differences between humans and great apes.

Varki said he was happy to be "at the mecca of the genome," and immediately complicated the dominant paradigm of molecular biology (DNA to RNA to protein) with a marvelously intricate cartoon introducing the roles of lipids (fats) and saccharides, or sugars, in mediating all kinds of inter and intracellular activities.

"The structure and function of the saccharides has largely been left behind in the molecular biology revolution," he noted, then suggested folks could catch up on the field by reading a textbook he edited—*Essentials of Glycobiology*. "If you buy the book, I get two bucks," he quipped.

Varki said sugar chains are found everywhere on the cell surface, "like the leaves of the Amazonian forest" in their density and variety. One important family of sugars, sialic acids, have proven essential for cells' ability to recognize other cells as "self," or nonself, and to serve as receptors for pathogens. The most common form of the acid is known as Neu5Ac, which can be found throughout all mammalian cells, including those of humans. Its chemical cousin Neu5Gc, which differs by addition of a single oxygen atom, is found only in trace amounts in humans but is a major sialic acid in all great apes. Varki's group discovered that this is because of a genetic mutation that is shared by all humans on the planet. His lab has recovered only traces of Neu5Gc from human tissues including the spleen and liver, and from testes (prompting a woman in Varki's lab to joke that this is "the last vestige of the great ape"). But these trace amounts may originate from human consumption of animal foods, Varki speculated.

Varki has estimated that about 1 percent of the primate genome is involved in the biosynthesis and recognition of sugar chains, perhaps more. But by no means does he suggest a single sugar accounts for the myriad differences between man and ape. "Very little is known about glycan diversity in nature," he said. The field is considered "too descriptive and nonmechanistic" to attract funding nowadays. "Charles Darwin couldn't get funding in this kind of a climate," he jibed, taking aim at the popularity of mechanistic rather than naturalistic inquiry (though he is quick to acknowledge that NIH funds his work with a MERIT grant).

Showing various evolutionary charts, Varki explained that "human evolution is more of a bush than a ladder—we're a twig that emerged fairly recently." Man diverged from the orangutan about 12 million years ago, from the gorilla about 8 million years ago, and from the bonobo and chimpanzee about 6 million years ago. "Humans are actually closer to chimps than chimps are to gorillas," he noted.

While there is similarity on a gross level, things are quite different at structural and functional levels, Varki continued. "For instance, we give seminars, and (the great apes) don't," he said, jokingly. His lab compared proteins from the plasma of a diverse range of humans with those of the great apes, and discovered, as expected, great similarity, except with respect to sialic acid and a protein called transthyretin, which can influence thyroid hormone metabolism.

"An intriguing finding is that even in the chimpanzee and other mammals, Neu5Gc is found in very low levels in the brain," Varki observed. "There seems to be some reason why this sugar is 'not wanted' in the brains of mammals. Humans, of course, have completely eliminated it, by a systemic genetic mutation."

A "friendly competition" between Varki's lab and counterparts in Japan is therefore teasing out the consequences, for anatomy and behavior, of mice prompted to produce only the human form of sialic acid (the Japanese group—using mice modified to have the same gene deletion that results in humans producing only Neu5Ac) or transgenic mice raised to overexpress the enzyme that leads to Neu5Gc production in the brain (Varki's group).

The effort to dissect the 1 percent difference in the genomes of man and ape is not terribly far from the headlines—a few days before Varki's Mar. 16 talk, researchers in Blacksburg, Va., announced the cloning of five piglets, which is an effort to supply organs for human transplantation eventually. Varki concluded his talk by noting that "all attempts at xenotransplantation of organs from other primates to humans have failed for reasons yet unknown." He speculated that the difference he has found may account, at least in part, for these failures. Until the mysteries of the 1 percent are better understood, those pigs might be good only for pork sandwiches. ■

Liu Gives NCI 'Partners in Research' Lecture

As part of NCI's Office of Management series, "Partners in Research," Dr. Edison Liu recently presented a lecture on "Molecular Oncology and Treatment Selection" to members of the administrative staff.

He began by describing past tumor classification practices, then introduced techniques in cancer genetics currently used in the identification of this disease. He showed how such techniques have discovered genetic mutations in subpopulations of patients with breast cancer or multiple myelogenous leukemia. "This information gives oncologists a better understanding of how to treat the patient," said Liu. "Rather than basing diagnosis and treatment on symptoms and pathology slides, doctors are beginning to identify molecular symptoms—genetic patterns distinctive for certain cancer types." These findings suggest that specific gene abnormalities could render tumor cells responsive to certain therapeutic interventions. "Molecular abnormalities will not only tell us who will do well or not, but also how to treat that person and at what level of chemotherapy," said Liu.

He has been studying the human epidermal growth factor receptor 2 (HER-2), an oncogene that can be overexpressed in as many as 25-30 percent of women with breast cancer. In his research, he has found that patients administered Herceptin, a molecularly targeted chemotherapeutic agent, have responded well to high-dose drug treatment. Another molecular symptom under study is the Ras+ gene. Mutations in this gene are found in many patients with multiple myelogenous leukemia. According to Liu, recent research implicates this mutation as a marker for a good responder to lower doses of chemotherapy.

According to Liu, these new technologies in cancer diagnosis are based on well-characterized biological and genetic differences among tumor cells that tell precisely how aggressive a tumor will be and how best to treat it. For a given treatment, doctors will be better able to predict which patients will do well and which will do poorly. Liu ended his lecture expressing hope that NCI's sophisticated databases and technology will help cancer research to progress from single marker identification to discovery of multiple markers and eventually of genetic fingerprints for all cancer types.

Dr. Edison Liu discusses the benefits of molecular cancer research.

When he arrived at NCI in 1996 as director of the Division of Clinical Sciences, he established a molecular signaling and oncogenesis section. Within the past 3 years, Liu has been elected to the board of directors of the American Association for Cancer Research, chaired the NIH committee on extramural/intramural investigations in the Clinical Center, and cochaired the Clinical Center advisory council. He will receive the 24th AACR-Richard and Hinda Rosenthal Foundation Award Lecture this month for his discovery that HER-2 status determines response to adjuvant chemotherapy with Doxorubicin.—**Stacey Kolesar**

Drug Shown Safe, Effective in Youth with Juvenile Rheumatoid Arthritis

Enbrel (etanercept) has been shown to be a safe and effective drug in the treatment of children and teenagers with polyarticular juvenile rheumatoid arthritis (JRA), according to clinical trial results reported in the *New England Journal of Medicine*.

In this trial, 69 children, ages 4 to 17, were injected with Enbrel twice a week; 74 percent responded with measurable improvement when treated for 3 months. At the end of 3 months of treatment, on average, there was a 56 percent decrease in the number of joints with active arthritis, a 75 percent decrease in the amount of joint stiffness and a 63 percent decrease in the amount of joint pain. All measures of arthritis impact—symptoms, joint abnormalities, ability to perform daily functions and laboratory tests—were dramatically improved. The drug was well tolerated.

The trial was coordinated at the National Institute of Arthritis and Musculoskeletal and Skin Diseases Multipurpose Arthritis and Musculoskeletal Diseases Center at Children's Hospital Medical Center of Cincinnati. Its success is the culmination of many years of basic research supported by NIAMS and other NIH components.

"These findings show a significant—often profound—improvement for most children with JRA when treated with Enbrel compared to placebo," said Dr. Daniel J. Lovell, principal investigator and lead author. "Before Enbrel, many children with severe JRA had a poor response to existing treatment options. Often, they would have to stop attending school. Now, there is hope for these children."

JRA is a type of arthritis that causes joint inflammation and stiffness for more than 6 weeks, beginning when the child is 16 years of age or less. There are three types of JRA: polyarticular (affecting five or more joints), pauciarticular (affecting four or fewer joints) and systemic, also called Still's disease (joint swelling, fever, rash and organ involvement).—**Janet Howard**

BUSINESS SYSTEM, CONTINUED FROM PAGE 1

"For its time, it was cutting-edge," says Colleen Barros, executive officer at the National Institute on Aging, and the leader tapped by NIH Deputy Director for Management Tony Itteilag to head the analytical effort to decide to renew or replace the ADB. "This software, now including 1.5 million lines of code, was built in the 1970's, based on the COBOL computer language and IMS database software," Barros explains. Housed on a mainframe computer, the ADB is maintained and tuned for the NIH business community by CIT.

NIA Executive Officer Colleen Barros has held down her regular job while juggling leadership of the new NIH Business System for the past 8 months.

"The ADB has been an absolutely critical piece of NIH infrastructure—a really first-rate product and service offered by the men and women who designed and maintained it," Barros said. "You won't see the ADB credited on papers published in *Cell* or *Nature*, but it has supported the daily activities that are associated with NIH's progress during its growth years. It has served NIH well."

But like its physical counterpart Bldg. 10, the ADB has become technologically obsolete, cumbersome and expensive to maintain. Where Bldg. 10 has sprouted new wings and additions on all sides, eventually exhausting its capacity to adapt, the ADB has similarly bulged with new features as information technology (IT) has exploded in the past decade. Also, the generation of engineers that built ADB is now retiring, and today, only four or five people support the behemoth.

"The business community at NIH knows that the ADB has been its lifeblood, but realizes that a next-generation version is overdue," said Barros. "With electronic commerce and the World Wide Web in our everyday lives, the ADB seems even more aged and in need of serious attention. Personal computers, the 'mouse' that sits on our desk, the 'dot-com' revolution, and buying airline tickets online—none of those existed when the ADB was designed, and it would take significant resources to upgrade to today's standards."

As it became apparent that something had to be done, officials at CIT approached the NIH executive officers about the need to address shortcomings in ADB. "These things are always a matter of money," notes Barros. "We all realized that a 'fix' would be very expensive and very challenging technically."

Itteilag asked Barros to lead a study of the business options available to update NIH's administrative computing systems. In September 1999, Barros began a project to write a "business case" for this substantial investment. Two choices quickly emerged: buy, on the commercial market, what is known as an Enterprise Resource Planning (ERP) package, or develop a homegrown, or proprietary, customized application such as the ADB.

Almost 200 people from all parts of the NIH administrative and business communities formed workgroups and, under guidance of a steering committee chaired by Itteilag (and including the executive officers, the scientific community and OD functional managers), a process was crafted to identify the requirements of a new system as well as the best avenues for meeting those requirements. For the option associated with commercial products, major vendors responded with proposals, and demonstrations of their ERP packages. Each product had to comply with standards established by the Joint Financial Management Improvement Program, a government-wide certifying body.

"We had a really intense set of demonstrations over the course of 2 weeks, then we evaluated all of the proposed software packages," Barros said. "Each working group, including representatives from the scientific community, gave its assessment. That phase is concluding now. All involved are to be congratulated for their commitment and seriousness of purpose demonstrated throughout this period—they were doing this plus their regular jobs simultaneously and worked extremely hard during this period."

"The business community at NIH knows that the ADB has been its lifeblood, but realizes that a next-generation version is overdue," said Barros.

At the same time, CIT considered the feasibility of evolving the ADB into a next-generation system. "The phase I business case includes both options," reports Barros. "Later this month, NIH will decide which to choose."

NBS planners have also been interviewing academic medical centers, commercial ventures and other federal agencies for lessons learned and hints on how to proceed. "The limitation with other federal agencies is that their uses thus far are more focused on finance and accounting," Barros observed, "and less on travel, property, procurement, acquisition, research-and-development contracts" and other fields more typical of NIH. "We need a more holistic approach."

Like the public, which is doing more of its shopping and banking online, NIH is being drawn into the boom in e-commerce. "It is affecting procurement dramatically," Barros pointed out. "Our scientists want goods and services in the fastest way possible, and we need an administrative system that meets that need."

New products for e-commerce have built-in,

automated data analysis, tracking, financial reconciliation, and reporting functions that the ADB simply can't deliver without major rebuilding.

Barros credits the very people who invented the ADB (including Emmett Ward of CIT and his staff) with being the first to prescribe a successor to their creation.

"When it became obvious that new technology was outstripping their ability to keep pace, they were the first to propose a change," she said. "It was a reflection of their professionalism that they set aside ego and pressed for the consideration of alternatives. Once again, they did the heroic thing and looked for what works best and would serve the community best, just as they had done in the 1970's."

Whichever option is selected at the end of April, the NBS will continue to operate as a major enterprise-wide system along with a number of other large "enterprise systems" at NIH including CCRIS (the medical information computer system for the Clinical Center and CRC), IMPAC II, and the human resources system (which itself has undergone major HHS revision and will one day have to "marry up with NBS," according to Barros). And the many thousands of NIH'ers who use the system will need training on ADB's successor, a process that may take as long as 5 years.

"This is a big, complex, expensive effort," said Barros. "It will embed lots of best practices from the commercial community into a more comprehensive system that will reflect potentially new ways of doing business. There will be a tremendous amount of computing power behind a very friendly user face. We're going to make it easy for the occasional user, as well as for the user who needs the system's full power for his or her job."

To learn more about NBS, and progress of its implementation, visit its web site at http://nbs.nih.gov/.

African-American Volunteers Needed

The Heart Disease Risk Factors in African Americans Study is investigating the relationship of obesity to heart disease risk factors in healthy, nondiabetic African American men and women ages 18-55 who are normal weight, overweight or obese. New participants are needed. Specifically, the study is looking at risk factors for triglyceride concentration and the triglyceride-related risk factors of unhealthy cholesterol, good cholesterol and body fat distribution. There will be a series of four outpatient visits to the Clinical Center. Participants will have body fat analyses, an electrocardiogram, blood tests including cholesterol profiles, an oral glucose tolerance test and an intravenous glucose tolerance test. If interested, call 402-7119 for more information. All subjects will be compensated for their participation.

Hoover Named NCCAM Executive Officer

Camille Hoover was recently appointed executive officer for the National Center for Complementary and Alternative Medicine. She will serve as an administrative partner to the director, Dr. Stephen E. Straus, identifying opportunities and leading the design and implementation of innovative business and management systems.

Camille Hoover

"Camille's vast experience makes her particularly sensitive to human resource and interpersonal issues, as well as providing her important insights into the patient's perspective and needs in medical research," Straus said.

Hoover began her career as a social worker at Johns Hopkins Hospital in 1986. Two years later, she joined NIH's Clinical Center as a social worker for the Surgery Branch of the National Cancer Institute. In this capacity, she developed a comprehensive social work program for more than 1,000 patients participating in branch protocols while she served as a field instructor for master's level social work interns, and as a member of the NCI intramural review board. In 1991, Hoover was selected for the Management Intern Program, providing an opportunity for her to switch from clinical to administrative work.

Building on her skills as a social worker, Hoover expanded her talents by becoming administrative officer for NCI's Surgery Branch in 1992. In 1995, she was promoted to manager of one of NCI's largest Administrative Resource Centers, where she was responsible for the leadership and oversight of more than 700 program staff within the Division of Clinical Sciences. Dr. Edison Liu, director of the division, commented on Hoover's style: "She is a cross between Mother Teresa and Gen. Norman Schwartzkopf...a strange but wonderful mix of comfort and command, of gentleness and drive."

Hispanic Employee Organization Recruits

The NIH Hispanic Employee Organization is a group of Latinos who work at NIH. There are no dues; the organization's purpose is to address issues that affect Hispanics in general and those at NIH in particular. All at NIH, including employees, fellows, IRTAs, contractors, etc., who share these interests, are eligible for membership. The NIH-HEO meets every third Wednesday of the month from noon to 1:30 p.m. in Bldg. 10, Rm. 8N241 (Aurbach room). To receive the agenda for meetings and other notices, join NIH-HEO by sending email to NIH-HEO@list.nih.gov or by contacting Ray Mejia at 496-9972. Detailed information may be found at: http://list.nih.gov/archives/nih-heo.html and http://mrb.niddk.nih.gov/ray/file/.

KATZ, CONTINUED FROM PAGE 1

Although at the top of his own research field when he assumed the NIAMS directorship, he faced the immediate challenge of learning rapidly about the institute's other component areas: arthritis and other rheumatic diseases, and disorders of muscle and bone.

"It was a steep learning curve," he said. "But I did what I always do: read voraciously, talk with people, ask lots of questions—and read voraciously."

He also credited his staff with quickly bringing him up to speed. The nature of managing science, he said, is first to understand the science itself. His program staff, he said, has done an excellent job of filling in gaps in his knowledge.

"There's no way you can be an expert in everything," he said. "But, because of the expertise of the people around me, I can now make decisions from a scientifically knowledgeable standpoint."

Katz said the focus of his institute is translating basic scientific advances into practical means to benefit patients. Recent successes from this approach include finding that osteoporosis in older women can be prevented with much lower doses of estrogen than previously thought, and the development of a new arthritis drug that targets the causes of the disease, not just its symptoms.

"Our work in this institute touches nearly every human being," Katz said. "Skin diseases, osteoporosis, arthritis, sports injuries, low back pain—what family do you know that isn't affected by one of these?"

He said NIAMS' mission traverses the human life span, dealing with disorders that are common, chronic, costly and sometimes disabling.

"Even if you improve life an inkling, with so many people affected, you've made a tremendous impact," he said.

Katz said that when he became NIAMS director, he and the staff undertook a thorough review of all programs, keeping some as they were, making modifications in others, and changing still others completely. As change is often unwelcome, this remodeling hasn't always been easy for him.

The transition from scientist to leader of an institute, however, was easy for him, he said, because he has frequently held leadership positions during his career. At various times, he has served as president and board member for both the Society for Investigative Dermatology, and the Association of Professors of Dermatology; secretary-general of the World Congress of Dermatology; and secretary-treasurer of the Clinical Immunology Society. In 1997 he was named to a 5-year term as president of the International League of Dermatological Societies.

In leading his institute, he said, he tries to set a good example, to be fair to the people who work for him, to listen to what they have to say, and to encourage laughter.

"An organization without laughter is not worth being in," he said. "Although we need to be serious, we can't be so serious that we forget what we're here to do."

In running any large organization, he said, leaders must know where the organization is today, where it was yesterday, where it will be tomorrow, and where it will be 5 to 10 years from now. But while a clear purpose is important in charting a scientific organization's course, scientific discovery demands spontaneity as well.

Dr. Stephen Katz

"In science, you can't stick to a road map, because new roads are popping up all the time," he said. "You have to be willing to take a chance."

Openness, too, plays a crucial role in his management practices. Katz said the only secrets in his organization are those that must be kept confidential as part of the scientific review process.

"My staff can ask me any questions they want," he said. "They may not always agree with me, but I should always be able to explain my actions."

Katz relies heavily on communicating often with both the scientific and non-scientific public. His schedule is brimming with speaking engagements to such diverse groups as the American Academy of Orthopedic Surgeons and patient advocacy groups for arthritis, fibromyalgia and skin diseases.

"Sometimes the patients' groups are as perceptive as the people who know the science, because they may see a bigger picture," he said. "Who can argue with people affected by these diseases?"

Like many other institute directors, Katz also runs a laboratory of his own. The research process, he said, helps clarify his sense of purpose in carrying out his duties.

"As an active scientist, I get the sense of how hard it is to make substantive advances in knowledge."

Born in New York City, he would sometimes cut classes to attend Brooklyn Dodgers' games. Later in his childhood, he moved to the Washington, D.C., area. He earned a B.A. *cum laude* from the University of Maryland, an M.D. from Tulane University Medical School, and a Ph.D. in immunology from London, England.

After work, Katz likes to spend time reading, and attending the theater and opera. His diverse musical tastes run the gamut from opera to hard rock, and

Chamber Singers' Spring Concerts

All are invited to join the NIH Chamber Singers for spring concerts featuring a wide variety of material ranging from jazz to sacred Russian music. Two performances are scheduled: Thursday, Apr. 27, Bldg. 10, 14th floor auditorium at 7:30 p.m.; and Friday, May 5, Bldg. 10, Masur Auditorium at noon. For more information about the group, see the web site at http://www.recgov.org/r&w/chamber/default.htm.

he plays guitar for the NIH band, The Directors.

Keeping such a demanding schedule isn't easy, he admits. He said he is helped in large measure by his staff and his secretaries—all of whom he is grateful to. The secret, though, to keeping on top of it all, is to give his full attention to whatever needs it.

"You need to be able to compartmentalize your life," he said. "You have to be able to focus completely on what you're doing at the moment."

(The author is press officer for the National Institute of Child Health and Human Development and a member of the NIH Management Cadre class of 2000. This article resulted from an assignment to study science and leadership at NIH. Information about the cadre program is available at http://mcp.nih.gov/.)

Mobile Mammography Screening Begins May 2

The George Washington University Breast Care Center will be visiting NIH for its spring 2000 mammography screening. All NIH employees, their families and others associated with NIH (such as IRTAs, visiting scientists, contractors, volunteers) are eligible to participate. The screening dates and van locations are as follows:

Bldg. 31 (Lot 31D)	May 2, 18
Bldg. 10 (Lot 10H)	May 10, 17
EPN/EPS	May 16
(Parking lot behind complex)	
Rockledge	June 7
(Visitor parking behind RKL I)	
Bldg. 45 *(front of building)*	May 9, July 12

The van will be onsite from 9:30 a.m. to 3:45 p.m. taking prescheduled appointments. Each screening is conducted by a female technologist; a board-certified radiologist specializing in mammography will interpret the films. Appointments should take about 20 minutes and will cost $138. GW will bill some insurance companies directly or payment can be made by cash or check at the screening (check with your insurance company for reimbursement). To see if your insurance is accepted or to make an appointment, call (202) 994-9999.

Calling Computer Users in Offices

Individuals working full time and using a computer keyboard a minimum of 3-4 hours a day are needed for a research study on the role of workstyle in occupational health. Volunteers with and without upper extremity symptoms (fingers, hands, wrists, forearms, elbows, shoulders and neck) are needed to participate in 2-hour focus group interviews. Focus groups are being conducted by researchers at Georgetown University Medical Center. Compensation will be provided and groups will be scheduled at convenient times and locations. For more information, call Stacy Chambers at (202) 687-2392.

Four Join NIAAA Advisory Council

Four new members have been appointed to the National Advisory Council on Alcohol Abuse and Alcoholism. They are:

Dr. Alpha Estes Brown, senior minister of Community United Methodist Church, and chair and founder of the Cause Children Count Coalition, Inc., in Washington, D.C. He has served in various adjunct and clinical faculty positions related to alcohol and other drug issues and currently is adjunct assistant professor at the George Washington University School of Public Health.

NIAAA director Dr. Enoch Gordis (front, r) and deputy director Dr. Mary Dufour welcome new members to their institute's council. They are (standing, from l) Dr. Alpha Estes Brown, Dr. Richard A. Deitrich and Dr. Reuben Gonzales. Not shown is new member Sheryl Ramstad Hvass.

Dr. Richard A. Deitrich, professor and vice chairman of pharmacology, University of Colorado School of Medicine, and faculty research associate, Institute for Behavioral Genetics, University of Colorado. For nearly 30 years, he has lectured on the subject of alcoholism in society.

Dr. Rueben A. Gonzales, associate professor, department of pharmacology, University of Texas, Austin. In addition to teaching on topics in pharmacology and neuroscience to graduate and pharmacy students, his research activities include the use of microdialysis techniques to explore the neurochemical basis of alcohol-induced behavior.

Sheryl Ramstad Hvass, commissioner, Minnesota department of corrections. She is a strong advocate for the provision of alcohol and other drug treatment to offenders and is a national leader in the field of alcoholism and corrections policy.

BLT Presents Spring Musical

The Bethesda Little Theatre will present its spring musical, *A Loverly Evening in Camelot*, featuring the music of Lerner & Loewe. Come hear songs from several Broadway hits including *Camelot*, *Paint Your Wagon*, *My Fair Lady*, *Brigadoon* and *Gigi*. The show opens Friday, May 5 and will continue for three weekends. Friday and Saturday evening performances will be May 5, 6, 12, 13, 19 and 20 at 8 p.m. Sunday matinee performances will be May 7 and 14 at 3 p.m. All performances are in Masur Auditorium, Bldg. 10. Ticket prices are $10 for adults, $8 for seniors and $5 for children 12 and under. Tickets may be purchased at NIH R&W stores or at the door. Group discounts are available. Patients and their families are invited to attend all performances free of charge. For ticket information, call Elaine at (301) 589-0720 or see http://www.recgov.org/r&w/blt. BLT is an R&W organization whose proceeds benefit NIH charities.

NHLBI Mourns Robin Hill

By Susan Czajkowski

Dr. Dana "Robin" Hill, a psychologist and social science analyst in the behavioral medicine scientific research group at the National Heart, Lung, and Blood Institute, died Mar. 3 after a year-long struggle with breast cancer. Hill, who was 44 years old, is being mourned by her many colleagues and friends at the institute not only for her dedication to her work and her many professional accomplishments, but also for her kindness, generosity of spirit and positive outlook that profoundly affected the lives of everyone who had the privilege of knowing and working with her.

Dr. Dana "Robin" Hill

Hill was born in Kinston, N.C., and earned her B.A. in psychology from Dartmouth College in 1978. In 1984, she received a master's degree in psychology from the University of the Pacific, and graduated with a doctorate in medical psychology from the Uniformed Services University of the Health Sciences in 1989. She also served a psychology residency at Johns Hopkins Hospital in Baltimore. She assumed her position as social science analyst at NHLBI in 1989.

At NHLBI, Hill managed a variety of research programs concerned with psychosocial factors and health, and was known to many behavioral and social scientists for her work in stress and coping with chronic illness, minority health, women's health, smoking cessation, obesity prevention and maintenance of behavior change. She was the project officer for the Raynaud's Treatment Study, an NHLBI multicenter clinical trial that assessed temperature biofeedback and calcium-channel blockade treatments for Raynaud's syndrome. In recognition of her exceptional efforts in the study, she won an NIH Award of Merit in 1997.

Hill was active in many professional organizations, including the American Psychological Association's task force on women's health and the Society for the Psychological Study of Social Issues, serving on the society's fellowship committee and as chair for its 1993 program at the American Psychological Association convention in Toronto. She was a member of the editorial board of the *Journal of Asian-American and Pacific Islander Health* and a reviewer for numerous health-related journals. She also belonged to a number of civic and community organizations, where she worked to promote a variety of social justice issues; most recently she was a member of Action in Montgomery, a coalition of houses of worship that promote social issues. She also enjoyed Irish literature and Celtic music, and was quite knowledgeable about the history of Ireland.

Dr. Peter Kaufmann, leader of the behavioral medicine research group at NHLBI, observed, "Robin was an extraordinary individual whose special character touched so many of us that it was difficult to believe that she wouldn't ultimately 'win' her battle with cancer. The institute will miss her competence, her energy, her dedication, and above all, her unyielding conviction in the fundamental goodness of all people." At her funeral services, held at the Unitarian Universalist Church of Rockville, her family, friends and colleagues echoed these sentiments, reflecting on Hill's ability to see the good in everyone, her kindness and consideration for others, and her devotion to friends and family.

Survivors include her husband of 14 years, See-Yan Lam of Olney; her son, Benjamin Hill-Lam; her parents, Thomas and Rita Hill of Richmond; and three siblings, Artie Hill, Morgan Hill and Karen Hillman, all of Richmond. A memorial fund in Hill's name is being planned. Contributions may also be made in her name to the charity of one's choice.

Renewal of NIH Parking Permits

NIH General Parking Permits for campus employees whose last names begin with H, I and J will expire on the last day of May 2000. In order to obtain a new General Parking Permit, an employee must visit the NIH Parking Office in Bldg. 31, Rm. B3B04. Hours are 7:30 a.m. to 4 p.m., Monday through Friday. Off-campus employees will be issued the "Off Campus Employee Parking Permit." These permits allow you to park at the NIH Bethesda campus or leased facilities that require an NIH parking permit in the general employee parking lots. Remember, when applying for new/renewal permits, you must bring a valid NIH identification card, valid driver's license and a valid vehicle registration certificate.

FAES Announces Chamber Music Series 2000-2001 Schedule

The Foundation for Advanced Education in the Sciences Chamber Music Series announces the following 2000-2001 program schedule. The location for all concerts is Masur Auditorium, Bldg. 10. Concerts start at 4 p.m. on Sundays. For ticket information, call FAES at 496-7975.

Oct. 1	Brentano String Quartet
Nov. 5	Thibaud String Trio
Nov. 19	Ysaye String Quartet with Jean Claude Pennetier and Regis Pasquier
Dec. 3	Auryn String Quartet with Peter Orth, piano
Jan. 28, 2001	Wolfgang Holzmair, baritone
Feb. 4	Trio di Parma
Feb. 18	Tokyo String Quartet
Mar. 11	Ignat Solzhenitsyn, piano
Mar. 25	Winners of the Paolo Borciani String Quartet Competition

Day of Prayer Set, May 4

A National Day of Prayer will be observed Thursday, May 4 by the Noontime Christian Fellowship, which will hold a prayer vigil on the lawn in front of Bldg. 1 from 11:45 a.m. to 1 p.m. The guest speaker will be Minister Kevin Williams of Love & Faith World Outreach Church, Fort Washington, Md.

HRDD Training Tips

The Human Resource Development Division, OHRM, will offer the courses below. Hands-on, self-study, personal computer training courses are available through the HRDD's User Resource Center at no cost to NIH employees. For details, visit HRDD online at http://trainingcenter.od.nih.gov/ or call 496-6211.

Administrative Systems	
IMPACT II Institute Center Operations	5/2
Foreign Travel	5/11
Travel for Administrative Officers	5/8
Basic Time and Attendance Using ITAS	5/8
Communication Skills	
Scientific and Technical Briefing	4/27
Speaking on the Job Part I: Presenting Yourself (Frederick)	5/1
Scientific and Technical Editing	5/2
Writing Workshop	5/4
Scientific and Technical Writing	5/9
Computer Applications and Concepts	
Introduction to MS Excel 98 Office 98	4/27
Introduction to MS Excel 97 Office 97	5/8
Introduction to MS Word 98 Office 98	5/8
Intermediate MS Excel 97 Office 97	5/10
Adobe PageMaker Production 2	5/15
Financial and Procurement Management	
Delegated Acquisition Training Program (DELPRO)	5/15
Management, Supervision & Professional Development	
How to Give Constructive Feedback	5/4
Assertive Leadership	5/9
Emotionally Intelligent Leadership	5/10
Facilitation Skills	5/15
How to Develop Team Skills for Success	5/15

CIT Computer Classes

All courses are on the NIH campus and are given without charge. For more information call 594-6248 or consult the training program's home page at http://training.cit.nih.gov.

Functional MRI Data Analysis using SPM in MEDx	4/21
Active Server Pages Workshop	4/24-25
Seeking Information on the Web	4/25
Basic Security for Unix Workstations	4/25
Introduction to the Helix Systems	4/25
BRMUG - Macintosh Users Group	4/25
VMWARE	4/26
Advanced Sequence Analysis Using GCG	4/26-27
Using FileMaker Pro on the Web	4/27
Avoiding Pitfalls in Statistical Analysis	4/28
MEDx - MRI Analysis with Multiple Regression	4/28
Windows 2000 for System Administrators	5/1
Introduction to HTML	5/2
The NIH Contractor Performance System Update	5/2
Advanced Oracle PL/SQL for Application Developers	5/3-5
Parachute for Windows 95/98	5/4
Data Warehouse *Query*: HR Personnel Costs	5/4

'Scientific and Technical Briefing' Course

Researchers, engineers and other technical professionals who present scientific research or other complex information may be interested in a 2-day course, "Scientific and Technical Briefing," offered by NIH's Human Resources Development Division. Learn how to deliver presentations that are strategically organized and polished. For course details, visit http://trainingcenter.od.nih.gov/.

NAGMS Council Member Neer Dies

Dr. Eva J. Neer, a member of the National Advisory General Medical Sciences Council, died on Feb. 20 at her home in Massachusetts of complications due to breast cancer. She was 62.

Neer, who had battled breast cancer for 11 years, was a professor of medicine at Harvard Medical School, and a senior biochemist in the department of medicine at Brigham and Women's Hospital, also in Boston.

Her research focused on understanding the molecular basis for cellular responses to external signals and analyzing the function of G proteins. In 1998, she was awarded the FASEB Excellence in Science Award for "her pioneering contributions to knowledge of cellular signal transduction mechanisms, and her leadership as mentor and educator in the biochemical and biomedical sciences."

Neer was a member of the National Academy of Sciences and the Institute of Medicine as well as a fellow of the American Academy of Arts and Sciences. She earned a B.A. in English literature from Barnard College, and an M.D. from the Columbia University College of Physicians and Surgeons.

Dr. Eva J. Neer

She is survived by her husband, Robert Neer, and two sons, Robert Jr. and Richard A.

In addition to being an NAGMS Council member since 1998, Neer had been an NIGMS grantee for the past 17 years. She had also received research support for shorter time periods from FIC, NIAMS and NINDS.

A scholarship fund has been established in her memory. Contributions should be sent to the Eva J. Neer Fund, Harvard University, c/o Recording Secretary, 124 Mt. Auburn Street, Cambridge, MA 02138. Checks should be made payable to the Eva J. Neer Fund.

Rowley Reflects on Science Career

The Bethesda chapter of AWIS (Association for Women in Science) is holding a series of talks cosponsored by NIH's Office of Research on Women's Health and Office of Community Liaison. The final talk in the series, to be held at 5 p.m. Tuesday, Apr. 25 at the Cloister (Bldg. 60) chapel, is titled "Reflections on a Scientific Career." Speaker is Dr. Janet Rowley, Blum-Riese distinguished service professor of medicine, University of Chicago; she is also this year's NIH Margaret Pittman Lecturer.

'Metals in Medicine' Meeting

The National Institute of General Medical Sciences and several other NIH components are hosting a meeting, "Metals in Medicine: Targets, Diagnostics, and Therapeutics," to be held June 28-29 in the Natcher Conference Center. Meeting participants will explore the role of metals in the development of therapeutic drugs and *in vivo* diagnostic agents. The meeting is free. For a printable meeting flyer and a list of speakers, topics and registrants, visit the Metals in Medicine web page at http://pub.nigms.nih.gov/MIM/, where online registration is available and encouraged by May 1. For more details, contact meeting organizer Dr. Peter Preusch (594-5938 or preuschp@nigms.nih.gov).

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features Dr. Janet D. Rowley, who will give the NIH Director's Margaret Pittman Lecture on Apr. 26. Rowley is Blum-Riese distinguished service professor, departments of medicine and of molecular genetics, cell biology and human genetics, University of Chicago (see story, p. 1). Her topic is "Cancer Cytogenetics: Is It Passé?"

On May 3, Dr. Barry R. Bloom, dean of the faculty and professor of immunology and infectious diseases, Harvard School of Public Health, will discuss "A View of Public Health and Biomedical Research." This is the NIH Director's R.E. Dyer Lecture.

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

Representatives of the Montgomery County bomb squad, part of the county fire marshal's office, visited NIH Mar. 31 to give routine in-service training talks on explosive devices to members of the NIH Police. In the photo above, Cpl. Robert Buchanan of NIH models a bomb search suit in the company of Capt. Sam Hsu of the bomb squad. The 52-pound military suit costs almost $10,000. The suit doesn't offer much protection from a bomb's blast, Hsu noted, but does offer thermal protection. Below, Lt. Brian Anderson of the bomb squad demonstrates a "disruptor," (bottom, r) a robot-mounted, laser-sighted shotgun-like tube capable of shooting air, water (at a stunning 1,000 feet per second), shot or slugs. It is used to incapacitate many types of explosives, and is particularly effective in blasting the ends off of pipe bombs.

Rolling through a series of Irish and bluegrass tunes on a sunny day on Bldg. 6's patio recently was a group known, for the moment, as the Bldg. 6 Boys. They are (from l) Jim Tomlin of CIT on mandolin, Steve Stahl of NIAMS on guitar, Mike Kacergis of NICHD on mandolin, and banjo picker Jim Rice of OD. The group spends two lunch breaks a week entertaining themselves and passersby in the vicinity of Bldg. 6.