

THE NIH RECORD

Still The Second Best Thing About Payday

Nobelist Carlsson To Give Director's Lecture, Apr. 3

When the Nobel committee awarded the 2000 Nobel Prize in Medicine to Arvid Carlsson and his fellow neuroscientists Paul Greengard and Eric Kandel, it was a



Dr. Arvid Carlsson

long-awaited recognition of the fundamental contributions Carlsson has made to advance understanding of synaptic transmission.

On Wednesday, Apr. 3, at 3 p.m. in Masur Auditorium in Bldg. 10, Carlsson will return to NIH, where he once spent a sabbatical leave, to give the Director's Lecture entitled, "A Paradigm Shift in Brain Research." He will discuss his work and the impact it has had in the research world and in the area of

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Historian's Perspective

NIH Offered Haven from Antinepotism Rules

By Buhm Soon Park

Today, scientific couples working in the same institution are not rare. But that was not the case 50 years ago, especially in the universities, which adopted "antinepotism rules." The main purpose of the rules was to protect institutions from favoritism, and yet they were practiced primarily as a genteel form of discrimination against married women. No serious challenge had existed against the antinepotism rules until the 1960s, when the American Association of University Women began to publicize their unfairness.

With no official record for the employment of scientific couples at NIH, it is difficult to assess the extent, if any, to which the

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Teenage Inventor Brings Sign-Translating Glove to NIDCD

By Jennifer Wenger

For George de Mestral, inventor of Velcro, the notion came to him as he removed large prickly burrs from his clothing after a walk in the woods. For Bette Graham, secretary



Ryan Patterson demonstrates his award-winning glove.

extraordinaire who developed White-Out, a nagging wish to eliminate typing errors and a talent for painting helped spark her idea. And for high schooler Ryan Patterson, inspiration struck one hot August afternoon in the unlikely setting of a fast-food restaurant over an order of burgers and fries.

"I was trying to think of a science fair project to do, and

"I thought, 'What have I seen over the past year that I can try to improve? What needs to be done?'" recalled Patterson, an 18-

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Past, Present Pioneers Celebrated

NIH Black History Month Program Reverses People Who Paved the Way

By Carla Garnett

If history, as some have suggested, is the final frontier for desegregation, then the keynote for this year's NIH African American History observance could very well be going boldly where few have gone before. Take his latest book, for instance.

Keynote speaker Roger Wilkins, historian and Pulitzer Prize-winning journalist, said he was inspired to write *Jefferson's Pillow: The Founding Fathers and the Dilemma of Black Patriotism* by three people—the late black educator W.E.B. Dubois, the late Supreme Court Justice Thurgood Marshall, and Amy T. Wilkins, his daughter.

Wilkins explained that in the days of Black Power, circa the 1960s, he

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Keynote speaker Roger Wilkins



Dr. Sherry Stuesse has joined the Center for Scientific Review as a scientific review administrator of the brain disorders and clinical neuroscience 5 study section and the brain disorders and clinical neuroscience fellowship study section. She comes to CSR from the North-eastern Ohio Universities College of Medicine, where she was a professor in its neurobiology and pharmacology department. Her research there focused on the central nervous system pathways that mediate cardiac function and on brain stem and spinal cord organization. She also studied neurochemical mechanisms related to chronic neuropathic pain. Stuesse received her Ph.D. in biology from the State University of New York in Albany, studying neurotransmission at the junction of motor neurons and skeletal muscle cells.

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treatments for Parkinson's disease, depression and schizophrenia.

NINDS' recent 50-year celebration recognized Carlsson's contributions to neuroscience, beginning with his early time at NIH. He was associate professor of pharmacology at the University of Lund in Sweden in 1955 when he took a 6-month sabbatical to work in Bernard Brodie's laboratory at NIH. At the time, Brodie and his researchers were investigating an unusual compound called reserpine, an herbal remedy that had been used in India for centuries, and which studies at the time had shown to lower blood pressure and relieve psychotic symptoms.

In addition, Brodie's researchers were looking at the hallucinogen LSD, because its effects appeared to mimic psychoses and its molecular structure was similar to that of serotonin—a chemical known to be in the brain. Before Carlsson arrived, Brodie and his team had reported that reserpine blocked the action of LSD in the brain by lowering levels of serotonin. At NIH, Carlsson studied the release of serotonin in blood platelets exposed to reserpine.

Carlsson stepped into an area of research that was ripe with the potential for discoveries. The presence of chemical transmission in the brain wasn't yet understood; most neuroscientists still thought that neurons communicated by electrical signals. But the actions in the brain of serotonin, and other compounds known as catecholamines, suggested that another mechanism had to be involved.

When he returned to Sweden, Carlsson assembled a research team and began intensive study of serotonin and another brain chemical, dopamine. His work led to the identification of serotonin as a neurotransmitter, and the introduction of the concept of chemical neurotransmission. His discoveries paved the way for a paradigm shift in understanding synaptic transmission as being both electrical (via action potentials) and chemical (via neurotransmitters).

Carlsson didn't confine the scope of his work to basic research. He and his colleagues in Sweden used the principles of chemical neurotransmission to narrow the search for compounds that could block the re-uptake of neurotransmitters in the synapse. Carlsson focused first on dopamine, which he proposed as a neurotransmitter involved in the control of motor functions. Applications of this theory resulted in development of levodopa—the first drug to treat Parkinson's disease symptoms.

Turning to serotonin, Carlsson introduced the first selective serotonin re-uptake inhibitor, zimelidine, which led to the later development of such drugs as fluoxetine (Prozac) and sertraline (Zoloft), medications that revolutionized the treatment of depression and de-stigmatized mental illness.

Carlsson continues to work on the biochemistry of

Parkinson's disease and schizophrenia through his research firm, Carlsson Research Inc. He is also a professor emeritus in pharmacology at the University of Göteborg.

The lecture is part of the NIH Director's Wednesday Afternoon Lecture series. For information and reasonable accommodation, contact Hilda Madine, 594-5595. ■

Forum on Importance of Sleep

The staff training in extramural programs will present a Science for All Forum titled, "Wake Up and Smell the Coffee: The Importance of Sleep on Performance and Health," on Thursday, Mar. 28, from 8:15 a.m. to 12:45 p.m. in the Natcher Conference Center's main auditorium.

How does lack of sleep affect job performance, health and quality of life? What's actually happening during this mysterious time? Sleep is fundamental to all of us and is essential for our daily functions. Sleep or lack thereof significantly affects us physiologically, psychologically and may play a role in the prevention and treatment of obesity, cardiovascular disease, diabetes and cancer. Although critical to our health and productivity, sleep is a subject often overlooked in the research missions of many institutes.

The session will explore the importance of sleep for health. Topics will include factors that affect sleep including lifestyle choices, drugs and disorders. Information will be provided to help you improve your sleep and suggest potential directions for new research. Attendees earn ESA credit. ■

N I H R E C O R D

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HHS, Park Association Form Partnership

HHS recently signed a memorandum of understanding (MOU) with the National Recreation and Park Association (NRPA) to promote greater use of community-based health education and physical activity programs in recreation and park facilities. The effort is being undertaken to help fight the national epidemic of obesity and physical inactivity.

Physical inactivity and obesity are the top two leading health indicators for Healthy People 2010. They increase the risk for heart disease, Type 2 diabetes, certain cancers and other illnesses. Both have increased dramatically in the U.S. in recent years. According to recent statistics, less than a third of American adults engage in the recommended 30 minutes of moderate physical activity on most days of the week, while 61 percent of adults are now overweight or obese.

Besides the NRPA, those signing the MOU were the



Shown at the MOU-signing event are (front, from l) NHLBI director Dr. Claude Lenfant, NRPA President Marvin Billups, HHS assistant secretary for health Dr. Eve E. Slater, and HHS assistant surgeon general and acting deputy assistant secretary for disease prevention and health promotion Dr. Woodie Kessel. In the second row are (from l) NIDDK director Dr. Allen Spiegel, President's Council on Physical Fitness and Sports Executive Director Lisa E. Oliphant, and director of the CDC's Washington office Donald Shriber.

President's Council on Physical Fitness and, for HHS, NHLBI, NIDDK and CDC.

The MOU calls for HHS and NRPA to improve public health by encouraging Americans to become physically active and reduce overweight and obesity. The new partnership's efforts will include the creation of community programs for children, families and seniors, as well as the removal of environmental barriers to physical activity such as those for the disabled.

NRPA is a nonprofit group that represents more than 170,000 indoor and outdoor facilities. NHLBI has collaborated with NRPA for almost a decade. The two established a Hearts N' Parks program, which now offers physical activity and nutrition education activities through 50 magnet centers across the country. The new MOU will expand on that effort and provide more opportunities for Americans to engage in physical activity. ■

Dr. Eric Bailey of the National Center on Minority Health and Health Disparities delivered a lecture Feb. 20 titled "Tracing the Roots of Black Folk Medicine: A Cultural Anthropological Approach" during NLM's African American History Month celebration. During



the presentation in which audience members participated, Bailey discussed the history of several herbal and nontraditional medical practices and beliefs used by African Americans during slavery, when common therapies were unavailable to them. Many of the medicines, he said, were combinations of remedies and folklore blacks brought with them from Africa or learned from American Indians; some of these complementary and alternative medicines are still used today. Sponsored by NLM's History of Medicine Division, Bailey's talk was based on dozens of oral histories he has compiled and gave insight on the cultural perspective and significance of folk medicine traditions to the medical history of America.

FARE Abstract Competition for Fellows

The ninth annual Fellows Award for Research Excellence (FARE) 2003 competition will again provide recognition for outstanding scientific research performed by intramural postdoctoral fellows. Winners of FARE will each receive a \$1,000 travel award to use for attending and presenting their work at a scientific meeting. One-quarter of the fellows who apply will win an award.

Fellows who apply to FARE submit an abstract of their research, which will be evaluated anonymously on scientific merit, originality, experimental design and overall quality/presentation. The travel award must be used between Oct. 1, 2002, and Sept. 30, 2003.

The FARE 2003 competition is open to postdoctoral IRTAs, visiting fellows and other fellows with fewer than 5 years total postdoctoral experience in the NIH intramural research program. In addition, pre-IRTAs performing their doctoral dissertation research at NIH are also eligible to compete. Visiting fellows/scientists must not have been tenured at their home institute. Questions about eligibility should be addressed to your institute's scientific director. Fellows are asked to submit their application, including abstract, electronically, from May 1-31 via <http://felcom.nih.gov/FARE>. Winners will be announced by the end of September 2002. More information is available on the web site above. Questions may be addressed to your institute's fellows committee representative.

Tae Kwon Do Beginner's Class

The NIH Tae Kwon Do School is offering a beginner's class for adults and mature teens starting Apr. 8. The class will meet in the Malone Center (Bldg. 31C, B4 level, next to the NIH Fitness Center) from 6 to 8 p.m. on Mondays and Wednesdays, and will continue for about 2 months until participants can be integrated into the regular school training. Dues are \$40 per quarter and a uniform costs \$30. Interested persons are welcome to watch regular training sessions. For information call Andrew Schwartz, 402-5197 or visit <http://www.recgov.org/r&w/nihtaekwondo.html>.

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antinetopism rules were practiced at NIH. Based on available sources, NIH's first scientific couple was Jerald G. Wooley and Bernice E. Eddy, who married in 1938 when both worked as bacteriologists in Bethesda. Subsequently, there were Julius and Florence White, John and Elizabeth Weisburger, and Herbert and Celia Tabor.

Perhaps no example can better illustrate the effect of the antinetopism rules in academia than the case of Earl and Thressa Stadtman.

They first met in 1943 at the University of California in Berkeley when both worked as research assistants in the department of food technology.

They married that year and enrolled in the graduate program of the department of biochemistry after the war. After completing their doctoral studies in 1949, both under the supervision of Horace A. Barker, they moved to the east coast for their postdoctoral training: Earl worked in Fritz Lipmann's laboratory at the Massachusetts General Hospital as an Atomic Energy Commission fellow; and Thressa secured a position as a research assistant in Christian Anfinsen's laboratory at Harvard Medical

School. In 1950 they looked for academic jobs, following the lead of Earl who attracted interest from such schools as Berkeley, Yale, Tufts and Indiana. The Institute of Radiobiology and Biophysics at the University of Chicago made the most concrete offer of an assistant professorship with an annual salary of \$5,000.

Earl Stadtman was particularly attracted to the research opportunity at Chicago, and yet he could not accept an offer that would rule out a fair position for his wife. He conveyed his honest disappointment yet unyielding determination to T.R. Hogness, director of the institute: "If my own future were the only consideration, I would not hesitate to accept your fine offer. However, my decision is complicated by the fact that Mrs. Stadtman is also a scientist and if possible, we would like to get located in an area where she can get a suitable position also." In his reply, Hogness gave advice: "If your decision is to be based upon simultaneous academic staff appointments for both you and Mrs. Stadtman, it may mean that you are closing your opportunities for an academic career, since I believe that the policy of the University of Chicago in this regard is no different from that of most other universities."

Meanwhile, Thressa Stadtman received an offer from Anfinsen, who had recently moved to the National Heart Institute as a lab chief. Anfinsen also offered Earl a position in view of his broad

knowledge in the enzymatic study of metabolism. The couple decided to join NIH at an annual salary of \$5,400 each, or GS-11 level.

The Stadtmans were soon joined by other married couples in Bldg. 3: Marjorie and Evan Horning; Martha Vaughan and Jack Orloff; and Barbara Wright and Herman Kalckar. It is interesting to note that all of these women scientists worked in the same room of Anfinsen's laboratory. Former NIH director and heart institute scientist Donald Fredrickson recalled: "I [as a clinical associate] got into a room of Thressa Stadtman's. I was there with four women and I thought all the scientists at the NIH were women."

This clustering had not so much to do with administrative obstacles as social conventions that made male scientists reluctant about working with female partners or even their wives. The level of their reservation was greatly reduced in 1954 when DeWitt Stetten, Jr., was appointed associate director of the National Institute of Arthritis and Metabolic Diseases (precursor of NIDDK). He set a precedent for other NIH couples by working closely with his wife in the same section of the laboratory.

There were scientists such as Bruce Ames and Marshall Nirenberg, who met, courted and married their life partners on campus. Among other notable couples were the future leaders of NIH, Alan Rabson (deputy director of NCI) and Ruth Kirschstein (now acting director of NIH). Kirschstein's remarkable career, which included becoming the first woman to head any institute at NIH (she became director of the National Institute of General Medical Sciences in 1974), started when she was a resident physician at the Clinical Center. Later, she worked as a researcher in the Division of Biologics Standards. This would not have been possible had the antinetopism rules been practiced at NIH as in academia.

(The author is a DeWitt Stetten Jr. fellow of the NIH History Office and NHLBI.) ■

Women's History Month Program Set, Mar. 20

All are invited to attend the NIH 2002 Women's History Month Program on Wednesday, Mar. 20, from 11:30 a.m. to 1 p.m. in Natcher Auditorium, Bldg. 45. The theme is "The World of Women - Post 9/11." There will be a panel discussion highlighting women and their various organizations' responses to the events of Sept. 11. Panelists include Capt. Patricia Haynes, NIH Police; Cmdr. Angela Martinelli, Public Health Service; Tiffanye Costello, lead instructor, Arlington County fire department; Betty Hastings, medical technician, HRSA and Lt. Brenda Rabbitt, D.C. fire department. There will be an awards ceremony recognizing NIH'ers who made positive contributions in reaction to Sept. 11, followed by a reception in the Natcher atrium.



Earl R. Stadtman and Thressa C. Stadtman are shown in 1949 after receiving Ph.D. degrees from the University of California, Berkeley. Unable to overcome the barrier of antinetopism rules in academia, they elected to come to the National Heart Institute in 1950. They are both still researchers at NHLBI.

Protecting NIH's Architectural Legacy

NIH Buildings Eligible for Historic Register

Many of the original research buildings located on the NIH campus are eligible to be listed in the National Register of Historic Places as a result of the pioneering biomedical research that has been conducted on campus since 1938. The register is the nation's official list of buildings, structures, districts and sites that best represent United States history and architecture. The properties listed in the register are acknowledged by the federal government as worthy of preservation for their significance in American history and culture, and are so considered during the planning of construction and renovation projects.

The original research buildings, which form the NIH historic core district and officer's quarters historic district, were built in the 1930's and 1940's. They meet register criteria for significance in American history, architecture, and culture, and possess integrity of location, design, setting, workmanship, and other distinctive characteristics. These buildings include, listed by historic names: Bldg. 1 - Administration Building and Power Plant; Bldg. 2 - Industrial Hygiene Laboratory; Bldg. 3 - Public Health Methods Bldg.; Bldg. 6 - National Cancer Institute; Bldg. 4 - Institute for Experimental Biology; and Bldg. 5 - Microbiological Institute. Bldgs. 15B, C, D, E, F, G are known as the officers' quarters, Bldg. 15I is the NIH director's house and Bldg. 15H is the surgeon general's house.

The Memorial Laboratory Bldg. 7 is eligible for the register because it was one of the first bio-containment laboratories in the nation. All of the existing buildings that pre-date NIH on the Bethesda campus such as the Wilson Estate (Tree Tops), the Convent of the Sisters of the Visitation (the Cloisters) and the George Freeland Peter Estate (the Stone House) are also eligible for the national register. The Rocky Mountain Laboratory in Hamilton, Mont., is already listed on the National Register of Historic Places.

The crown jewel of NIH's architectural legacy, according to the Division of Engineering Services, is the National Library of Medicine, the world's largest medical library. The library collects materials in all areas of biomedicine and healthcare, as well as works on biomedical aspects of technology, the humanities, and the physical, life and social sciences.

Contrary to what one might think, a building that is listed or eligible for listing on the National Register of Historic Places can be altered or even demolished. When a federal agency must alter a historic structure to meet program needs, it is required to consult with the state historic preservation officer, who gets an opportunity to comment on the alteration. First the agency's federal preservation officer must make a determination of effect. If the

alteration, for example, is to demolish the interior of a historic building, the officer will make a determination of adverse effect on historic property. The federal and state preservation officers will execute a binding memorandum of agreement that usually stipulates how the agency will mitigate the loss of historic property. In many cases, photographic documentation is used for this purpose.

When NIH converted Bldg. 2 into an administrative office building, it was required to prepare an historic American building survey document for the National Park Service to be included in the National Archives.

If the federal preservation officer makes a determination of adverse effect, it will not necessarily delay the project. In most cases a project must be designed before any demolition can take place. The officer should be able to weigh in at the preliminary design stage; however, the determination of effect can also occur later.

For more information about the NIH historic preservation program, contact Ricardo Herring, 402-2048. ■

Dr. Denise Wiesch has moved to the Center for Scientific Review to be scientific review administrator for its epidemiology and disease control 2 study section. She comes from NIAID, where she was a program officer in the Division of Allergy, Immunology, and Transplantation. She began her career at NIH after college, working as a senior laboratory technician in the Neurogenetics Branch, NIMH. She also worked on a contract to the National Library of Medicine indexing scientific journal articles for Medline. Wiesch then enrolled in Johns Hopkins University, where she received an M.P.H. and a Ph.D. in genetic epidemiology. Her



research focused on the genetic basis of occupational allergy in workers at the Jackson Laboratory in Bar Harbor, Maine. She continued this research at the Center for the Genetics of Complex Diseases at the University of Maryland in Baltimore before joining NIAID.

African American Volunteers Needed

NIMH is seeking medically and psychiatrically healthy African American volunteers ages 18-50 years old to participate in a study about the regulation of the activity of the body's most rapidly acting and powerful "stress" system—the sympathetic nervous system. The study includes administration of test medications that affect the activity of the sympathetic nervous system. Compensation is provided. Participants should not be taking any medications currently. Call 594-1430. ■



Dr. Jeffrey Elias recently joined the Center for Scientific Review as new scientific review administrator of the behavioral and biobehavioral processes 5 scientific review group. This group examines applications for grants to study the clinical aspects of emotional, behavioral and cognitive disorders in adults. Elias comes to CSR from the University of Nevada in Reno. As director of research for its Sanford Center for Aging, he conducted independent research on health issues and functional aging and coordinated a diverse portfolio of basic and behavioral research. He previously was a professor of psychology at Texas Tech University in Lubbock.

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and his wife had taken their 6-year-old on a trip to Mount Vernon. During the narrated tour of the estate, the travelers were led to see “the quarters.” Amy wanted to know what the quarters were, so her father told her. The child’s reaction made an impact. “George Washington owned slaves?” she asked in a loud voice, amid a sudden deafening silence by the rest of the tourists. “Well, what’s so great about him then?” Years later, Wilkins said, her question spurred one of his own, which resulted in years of research leading to his current publication.

“I welcome the opportunity to speak to you today when you are celebrating pioneers,” he said, “because the only way that I have been able to understand my own life, my own needs as a citizen, as a husband and as a father was through celebrating those pioneers who were my ancestors.”

The nephew of the late civil rights activist and former NAACP executive director Roy Wilkins, who along with Marshall helped rear him after the death of his father, Roger—a former assistant attorney general in the Johnson administration—had read Dubois’s writings describing what he called a “double consciousness of the Negro.” Dubois had asserted that inside each black in the U.S., two personalities actually were always in conflict with each other—the American and the Negro.

Wilkins said he had also spent countless hours being inspired but also bewildered by Marshall, “a true American patriot” who deeply believed—despite any evidence to the contrary—that there was no wrong that could not be corrected by the proper application of the Constitution.

These three great black Americans spurred the premise for Wilkin’s book. The question that had nagged at him over the

course of his life and career seemed simple: “Can a black person be patriotic?” Wilkins set out to examine the lives of four acknowledged patriots, founding fathers Washington, Thomas Jefferson, James Madison and George Mason. Wilkins discovered that the impression left by most accounts of history was similar: The American Revolution was a “great white achievement accomplished solely by great white men.

“No wonder [Dr. Carter G.] Woodson [father of Black History Month] thought we had to study some black history,” Wilkins said, “because the people who wrote history in this country ground black people and their spirits under their heels in a way to make them feel as people who can have no pride, no dignity and therefore no human power to free themselves.”



NIH acting director Dr. Ruth Kirschstein and OEO Director Lawrence Self greet keynote speaker Wilkins.

As much as Woodson deserves to be honored for institutionalizing recognition of the contributions of African Americans, Wilkins said, “There should come a time when we don’t need black history month any more, because our history is not a separate history. Our history is part and parcel of



Thelma Gaither of NIAID and Joe Ager, who retired as EEO officer at NIDDK, were among more than 45 current and former NIH’ers recognized for their contributions to campus history.

American history. You cannot separate it. From the very start, there has never been an American war in which black people have not fought and died, going back to Queen Anne’s War in 1701—more than half a century before they thought of having a Revolution.”

Despite what may or may not be part of the history books, Wilkins pointed out that black people served as infantrymen, porters, spies, cooks, seamen and harbor and river pilots and many of them won their freedom by fighting in the Revolution. He also came to a conclusion about Washington, Jefferson,

Program planning committee chair Kay Johnson Graham of NIDCD and NINR, noted, “Just as there were pioneers such as Harriett Tubman and Sojourner Truth, we have Dr. Vivian Pinn, NIH associate director for research on women’s health, Dr. Griffin Rogers, Dr. Ida Owens and many, many others.”



PHOTOS: LEW BASS



Drs. Ernest Marquez (l) and Tony René, both of NIGMS, are among the hundreds of attendees at a pre-program reception in the Visitor Information Center.

Madison and Mason. "Somewhere deep in their souls," Wilkins said, "each of these men understood that slavery was wrong. Secondly, each of these men was aware of the fact that he could not have been the man he was without blacks. These men all led lives cushioned by slavery. They could not have had the leisure to study, to do politics, to read, to write, to meet, to create new institutions, a new army, a new government, without the freedom that their slaves made for them."

NIH's observance began with a message from noted abolitionist Frederick Douglass delivered by stage and screen actor Frederick Strother. "It is good, so good, that we assemble to lift up our voices in celebration and thanks on this Black History Month," Strother intoned in what the audience could only imagine was a Douglass-esque baritone. "Standing as we do upon the watchtower of human freedom, we cannot be deterred from any expression or movement—however humble—to improve and elevate the character and condition of any member of the human family. We have tilled [this nation's] fields, we have cleared its forests, we have built its roads and bridges. This is our home. We have to do with the past only as we can make it useful to the present and the future. To all inspiring motives and noble deeds that can be gained from the past, you are welcome. But, now is the time, the important time. Your fathers have lived and died and now you must do your work."



Frederick Strother portrays noted abolitionist Frederick Douglass.

NIH acting director Dr. Ruth Kirschstein paid tribute to forerunners in science. "Our theme for today, 'Celebrating Pioneers: Standing on the Shoulders from the Past,' reminds us that African American History Month is a time of both remembrance and reflection," she said. "Many of our great African American pioneers were scientists, physicians, nurses and other public health experts whose contributions improved the health of all Americans. I want to acknowledge our current scientists. We are very proud of your accomplishments as we continue to work in partnership to meet the challenges of infectious diseases, diabetes, cancer and other disorders."

Later, African Americans who have made significant contributions to NIH's history were recognized. "Our history as people of African descent in this nation is really an impressive one," said Dr. Vivian Pinn, NIH associate director for research on

women's health, who read the names and accomplishments of more than 45 of NIH's black pioneers, most of whom were seated in the audience as honorees. "Our rich history should serve as a legacy to guide and empower all of our people as they contribute to the successful diversity of our nation."

In his conclusion, Wilkins stressed the importance of honoring the past, but working in the present. This generation, he said, must repay the great debt owed to those who first paved the paths.

"I've been a fortunate man," he said. "But, as Jackie Robinson said in his autobiography, 'I never had it made.' By that he meant that as long as there were people who were like him, who were ensnared by poverty and racism and hatred, he didn't have it made."

Recalling the lives of those like Douglass and Harriet Tubman, who achieved their own freedom but risked it to go back and help others find liberation, Wilkins said he is often asked why—having already achieved tremendous strides in his various endeavors—he continues to do such "thankless" and often frustrating work as sit on the Washington, D.C. Board of Education.

He said he tells people, "As long as there is race-inflicted pain in this country, as long as we can't

Honored as a pioneer scientist at NIH, Dr. Ida Owens of NICHD chats with Dr. Roland Owens (no relation), a tenured researcher at NIDDK.



figure out how to educate poor black children in the richest nation on the face of the Earth, as long as there is only one doctor for every 4,000 people and the mayor is closing hospitals in Harlem, as long as all that is happening, there is something to do...I figure I'm going to die sometime and maybe I'll meet some of these ancestors—maybe some who never drew a free breath in their life. And they're going to look at me and ask, 'What did you do with your freedom?' I'm going to have to have an answer for them. It's the answer I leave with you: 'I tried to be as strong as you. I tried to hold up my end, just like you did. You were my hope. You were my strength. You were my future. I celebrate my pioneers along with you.'" ■



Program honorees Dr. Leamon Lee (l), NIH associate director for administration, and OD EEO Officer Hilda Dixon are greeted by Roland Corsey, president of the NIH chapter of Blacks in Government. For those who missed the 2002 Black History observance, a video-taped version is set to be broadcast at noon on Wednesday, Mar. 27 in Bldg. 31, Conf. Rm. 8. For more information, call 496-6302.

TEENAGE INVENTOR, CONTINUED FROM PAGE 1

year-old student at Central High School in Grand Junction, Colo. "Then I remembered a time when I was at the same restaurant and saw some people who were deaf who needed an interpreter to help them place their order. I thought I could try to

develop an electronic method that would make it easier for people to communicate."

Seven months later and—so what else is new for a busy high school senior?—one day before the Western Colorado Science Fair, Patterson completed a prototype glove that can translate the hand positions employed by people who use American Sign Language (ASL) to fingerspell words in English by converting them into large, easy-to-read letters displayed on a computer screen. To Patterson, a tightly closed fist with the thumb pressed flat and to the side, an outward-facing palm with the

thumb neatly tucked in, and five fingers curved in the shape of an incomplete circle can be translated as easily as A-B-C.

Patterson's invention, the "Sign Language Translator," was a Grand Award winner in the 2001 Intel International Science and Engineering Fair, where it was named best of category in engineering, and the first place winner in the individual category at the 2001 Siemens Westinghouse Science & Technology Competition. On Mar. 11, Patterson received top honors and a \$100,000 scholarship at Intel's Science Talent Search, a competition often referred to as "the junior Nobel prize."

Patterson's glove offers a new way in which individuals who sign might express themselves during brief, one-sided conversations with people who don't understand sign language. As part of its science education program, the National Institute on Deafness and Other Communication Disorders invited Patterson to Washington last month, where he spent the day demonstrating his invention; trading ideas with scientists, administrators and students participating in the Intramural Research Training Award program; and touring the intramural research facilities to learn about other areas of human communication research. He also met with leadership in extramural research, including the program administrator of NIDCD's Small Business Innovation Research and Small Business Technology Transfer programs, to discuss his future plans and to learn about funding.

"New assistive technologies hold tremendous promise in helping people with communication disorders interact more easily in everyday settings,"

said Dr. James Battey, director of NIDCD. "We at NIDCD are delighted that a talented and creative young person like Ryan is interested in contributing his skill to challenges of human communication. We hope to do all that we can to nurture the interests of young scientists."

Why Patterson was perhaps the best person to design a translating glove becomes obvious at first meeting. The young man has deep curiosity and enormous technical ability, and has been fascinated with electrical engineering since before he could walk. The stories he tells are mind-boggling, if not just a little bit scary: how at the age of 3 he carried around an electrical cord instead of a blanket; or how he asked Santa to bring him an extension cord for Christmas one year. Or the time when, at 6 years old, he helped his dad rewire the addition to their house; or the less favorable times in which he felt the surge of 110 volts of electricity whenever he accidentally stuck a screwdriver into an outlet.

"I lived," he said with a laugh—half in amazement, half in defense of his early attempts to tackle the formidable learning curve that awaited him.

By the third grade, when neither his teachers nor his parents could answer his questions—his father is a foreman at a metal fabricating plant; his mother is a kindergarten teacher's aide—he was introduced to John McConnell, a retired particle accelerator physicist from Los Alamos who had recently moved to the area. McConnell, whom Patterson respectfully refers to as "my mentor," worked with Patterson every Saturday from 9 a.m. to 5 p.m. for the next 7 years, teaching him how to build circuit boards, read schematics and design electronic circuitry. McConnell and his wife Audrey, who helped in the stitching of the prototype glove, have spent so much time with Patterson during his growing-up years, they consider themselves his "third set of grandparents."

"It's important for retirees to reach out to kids and teach them what we know," said McConnell, who directs a math and science center for K–12 students and teachers in Grand Junction. McConnell estimates that approximately 1,000 children take part in center activities each month. "We give them wings so they can fly on their own. Now, Ryan's doing things that I can't," he noted proudly. Patterson's past award-winning science fair projects have included an autonomous robot and Sleuthbot, a computer-controlled search robot.

Once Patterson settled upon the translating glove for his project, he began learning as much as he could about the deaf community in general, and sign language in particular. A visit to the NIDCD web site provided him with enough background information to determine that the invention might indeed be useful for deaf people as well as other individuals who have difficulty communicating such as people who have had strokes, throat cancer, speech-impair-



During his trip to NIDCD, Patterson shows glove to Dr. Judith Cooper, chief of the Scientific Programs Branch, Division of Extramural Research.

ment and possibly individuals with cerebral palsy who use ASL.

Patterson set a number of goals for his translating glove, the first being accuracy. "I know how annoying it is when I'm using speech recognition software and the computer doesn't recognize what I'm saying," he said. His other goals were cost-effectiveness, comfort, energy-efficiency and ruggedness.

The Sign Language Translator consists of two separate components: a leather-thin golf glove, which tells the computer the precise position of the hand, and the computer, which is programmed to associate each hand position with a corresponding letter that, in turn, flashes up on its screen. Ten

"If I can make an innovative device that could help people out—particularly people with disabilities—I'll feel as though I've made a difference."

flexible sensors sewn into the glove monitor the position of the fingers by measuring the electrical resistance that is created by the fingers as they bend. A small microcontroller on the back of the hand converts the change in the electrical current into the 1's and 0's that the computer can recognize and ships the information to the laptop via a short rubberized antenna jutting from the microcontroller. The computer then reads the numerical values and, in a fraction of a second, converts them into the letters of the alphabet, which appear on the screen.

With so much numerical precision involved, one might wonder if individual differences, such as a larger hand size or a slightly different position of the fingers, might throw the computer off. But Patterson took care of that. Before a glove wearer signs her first word, she trains the device to recognize her own hand positions by forming each letter of the alphabet and setting the new "customized" values with the tap of a button.

"I find it interesting that the sensors involve deflection, because that's how our inner ear works," remarked Battey, referring to the hair cells found in the inner ear. Sound vibrations cause hairlike bundles at the top of the hair cells to bend, kicking off a chain of events that generates an electrical signal, which travels to the brain. "There are actually a lot of similarities between how the glove works and how the inner ear works," he said.

Although portability was not one of Patterson's top priorities, it became an obvious concern—after all, who wants to carry a laptop around all the time?—so he also developed a scaled-down version of the device. He replaced the laptop with a small wireless receiver and display unit roughly the size of a TV remote control. Two small microcontrollers perform the translation.

Even with the accolades, Patterson has many improvements in mind for his bilingual glove. Already, he has incorporated speech dictation software, so that a computerized voice says the word aloud after it has been spelled. To increase translation speed, he is attempting to fit all of the computing hardware onto the glove itself. He also plans to replace the first microcontroller with a powerful math processor so that a full range of hand motions—not just stationary hand positions—can be translated. And he'd like to redesign the glove so that all of the machinery is hidden from view. Currently, he has obtained a provisional patent on the glove and plans to apply for a full patent later this spring.

"The sign-translating glove is an interesting and effective way to use a computer to communicate," said Lori Ingram, personnel assistant at NIDCD, who attended one of Patterson's many "hands-on" demonstrations. Ingram, who is deaf, said that she appreciates the glove's ability to capture finger-spelling, and looks forward to a day when it can truly capture ASL.

Patterson concedes that, despite its name, the glove can read only one letter at a time and is not able to translate true sign language, which includes a full range of signs—face, hands and arms—such as those employed in ASL. The latter, he says, would require a lot more hardware and computational ability. Portability also would most likely be compromised. For the time being, his goal is to construct his translating glove so that it works as well as, if not better than, writing a message with a pen and paper.

"Of all the projects I've done so far, this has been the most interesting because of the interface between electronics and people," said Patterson. "If I can make an innovative device that could help people out—particularly people with disabilities—I'll feel as though I've made a difference." ■

Dr. George Chacko has become the scientific review administrator of the Center for Scientific Review's new special review H study section, which examines applications in computational biology, such as those related to the Biomedical Information Science and Technology Initiative. Chacko trained as a veterinarian at the College of Veterinary Medicine in Bangalore, India. He received his Ph.D. in biochemistry and immunology from Ohio State University. Chacko underwent postdoctoral training at Washington University School of Medicine in St. Louis. He then moved to the Laboratory of Immune Cell Biology at the



National Cancer Institute. His scientific interests include intracellular signal transduction by immunoreceptors, analysis and visual representation of biological data, and receptor trafficking.

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Are you aware of the benefits of technology-based solutions in improving performance? Most people know about the impact that the World Wide Web has had for organizations in e-government, e-business and e-commerce. But the web can also be used for instruction. E-learning harnesses the power of the web to deliver and monitor student learning and development activities. HRDD can provide custom-built solutions that can be delivered directly to your employees' desktops. For more information, or for a project estimate, contact Kathy Hardin at 496-9439 or email hardink@od.nih.gov.

OMAR's Elliott Retires After 40 Years in Government

By Carla Garnett

For the last 18 or so years of his career, Jerry Elliott coordinated controversy. And, he readily admits, he utterly enjoyed every minute of what he calls "the golden years." On Feb. 1, however, after 40 years of federal service, Elliott retired from his post as program and management analysis officer at the NIH Office of Medical Applications of Research. He had served as coordinator of OMAR's consensus development conferences since 1984, overseeing more than 50 of the high-level biomedical and research confabs during that time.

"I could have retired many years ago," he noted. "I have been fortunate enough to find a niche, one that I really enjoyed. Coordinating the consensus development conferences has been so rewarding and has involved so many exceptional people. The thing that's so great about coordinating these conferences is that you get a topical, superficial knowledge of each topic. I've learned a great deal about a great many subjects."

A North Carolina native and an N.C. State University graduate, Elliott began his federal career as an army draftee during the Berlin Crisis. In 1961, he was assigned to Ft. Detrick as a biology lab technician.

"I worked on anthrax in those days," he recalled. "Seems like things have come full circle."

Following graduate work in microbiology back at N.C. State, Elliott returned to Ft. Detrick just before the biowarfare unit there closed down. He moved on to a tissue culture lab at NCI, where he spent the next several years as a microbiologist working for Drs. John and Elizabeth Weisburger, longtime researchers in chemical carcinogenesis.

By that time, Elliott was married with four kids and a number of other extracurricular interests. He had realized that to get promoted in the lab he would need not only to earn his Ph.D., but also to devote nearly 24 hours a day to research. Since neither prospect appealed to him, he applied for and was accepted into the Management Intern Program, receiving an M.B.A. along the way. He drew various rotations in legislation, budget and personnel, especially enjoying an assignment with lawyer and physician Dr. Joseph Perpich. By the early 1980s, Elliott had gone to work for NCI program planning officer Lou Carrese, whom Elliott calls a groundbreaker in biomedical science planning.

"Before Lou came, there wasn't any formal planning," he said. "People felt that the only way to do science was through serendipity. Then came the National Cancer Act, which doubled the money. We had to figure out how to spend it. Lou was a pioneer. He came here from industry. All the other institutes copied him."

During his career at NIH, Elliott recalls being in on the ground floor of several other issues that

would change the course of medical research.

"I remember when AIDS was first mentioned," he said. "I was working at NCI for [Dr.] Guy Newell, who was acting director at the time. They were

talking about gay men and the cases of Kaposi's sarcoma they were seeing. Those were the early days of the disease."

By far, though, Elliott's favorite work involved arranging consensus development conferences, which bring together for agreement a panel of the nation's non-federal experts on medically important yet controversial topics.



Jerry Elliott

Issues such as attention deficit-hyperactivity disorder (1998), cochlear implants (1995), electroconvulsive therapy (1985) and acupuncture (1997) never ceased to fascinate Elliott, who was at once an observer and—as the person who coordinated the meetings—an insider.

"The thing I remember most about Jerry is how good a schmoozer he is—and I mean that in a good way," said Bill Hall, HHS deputy press officer who worked with Elliott during the golden days of consensus development conferences. "He genuinely loves people and is one of the friendliest, most down to earth people I've ever known. In the 9 years I worked with Jerry at OMAR, the characteristic about him that struck me the most was how he would very quickly get to be 'best friends' with virtually every member of a consensus conference panel, many of whom were at the top of their respective fields of medicine. I did find it curious, though, that at one of our conferences I distinctly heard Jerry off to the side with one of the top orthopedic surgeons in the country saying, 'You know, I've got this problem with my knee.' And the surgeon's response was, 'Well, I think I can sneak you in a week from Thursday.'"

Former OMAR director Dr. John H. Ferguson remembers relying on Elliott's sixth sense for maintaining the integrity of the conferences. "Jerry always had great antennae for things that might subvert or distort the NIH consensus process," Ferguson noted. "There were always lots of people, groups, organizations, etc., that would try to use the process for their own ends—and Jerry could spot them a mile away. He was kind of the 'keeper of the flame of purity' of the consensus process."

In addition to the mini-education he received with each topic, Elliott said he took greatest pleasure in witnessing the health benefits that often followed a conference's recommendation.

"Sometimes you can see the direct result," he said, noting the CDC on antenatal corticosteroids (1994).

Chamber Music Concert, Mar. 24

The Rock Creek Chamber Players will perform at 3 p.m. on Sunday, Mar. 24 in the Clinical Center's 14th floor assembly hall. The free public concert, sponsored by the recreation therapy section, will include a piano sonatina by Sibelius; Bartok's second string quartet; Poulenc's sonata for clarinet and bassoon; and Schoenberg's *Verklaerte Nacht* for string sextet. For more information call (202) 337-8710.



"Before we held the conference, about 15 percent of expectant mothers used them (to prevent complications from premature births). That number is up to 85 or 90 percent now. Literally, thousands of babies were saved. That in itself is very rewarding."

"Jerry's retirement is a real loss to OMAR," concluded Dr. Barry Kramer, NIH associate director for disease prevention. "I refer to him as the Cal Ripken of OMAR. He has conducted more NIH Consensus Development Conferences than any human being, and this is a record not likely to be broken. His advice and industry will be really missed here."

In retirement, Elliott has so many activities planned that he should find it difficult to miss NIH too often. A Civil War history buff, he wants to teach history at local high schools "as long as I don't have to acknowledge that the South lost," he jokes. Also on his agenda are hiking the entire Appalachian Trail, resuming his thrice-weekly raquetball play, rebuilding his 25-foot Bayliner boat and sailing down the Intracoastal Waterway with his son, spending more time with his grandkids and indulging his love for live music by tending bar at a local pub. Still, Elliott—who revealed that one of his proudest accomplishments here was his induction into NIH's Blood Donor Hall of Fame in 1998—admitted that leaving a job he has loved for so long will not be easy.

"There's a certain kind of pride that you develop in working at NIH over the years," he said. "Good work is done here, and you encounter caring people, people who truly are making a difference." ■

Privacy Act Training Offered

The NIH Office of Management Assessment will conduct a training symposium to discuss the Privacy Act of 1974 and relevant privacy issues on Wednesday, May 8, from 9:30 to 11:30 a.m. in balcony A of the Natcher Auditorium, Bldg. 45. Issues covered will include collection of information, parts of a system notice, provisions of disclosure, relationship to FOIA, key players and responsibilities as well as civil and criminal remedies. All employees are welcome, and no advance registration is necessary. Individuals who need sign language interpretation and/or reasonable accommodation to participate can contact Karen Sikes, 402-6201, sikesk@od.nih.gov.

Volunteers Needed

An NIH study is seeking individuals currently taking an anti-depressant (Wellbutrin). Participants will be asked to donate 4 tablespoons of blood for routine screening and evaluation of platelet function. The visit will be less than an hour. Compensation is provided. Call Donna Jo McCloskey for more information and to schedule an appointment, 496-5150. ■

HRDD Class Offerings

The Human Resource Development Division 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 496-6211 or visit <http://LearningSource.od.nih.gov>.

Customer Service in a Changing World	3/21
Introduction to Project Management	3/21, 22
The Professional Office Manager II	3/26, 27
Advanced MS Access 2000	3/27
IMPAC II Peer Review Module	3/27
Positive Approaches to Difficult People	3/27
Decision Making Skills	4/2
Speaking on the Job-Part II: Presenting Yourself	4/2, 3, 4
NIH Senior Leadership Program	4/3

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>.

Introduction to Cascading Style Sheets	3/21
Data Warehouse Query: Budget & Finance	3/21
Computer Security Forensics	3/21
EHRP/PeopleSoft Hands-On Workshop for NIH HR Staff	3/21
LISTSERV Electronic Mailing Lists: Workshop for List Owners	3/22
Data Warehouse Orientation	3/25
Introduction to HTML	3/25
Introduction to Image Processing II	3/25, 27, 29
Genetics Computer Group Sequence Analysis	3/26-28
Using Email at NIH	3/26
PowerPoint Topics: Graphs, Links and More	3/26
BRMUG - Biomedical Researchers Macintosh User Group	3/26
Data Warehouse Query: Staff Training & Development	3/27
Overview of Microsoft's C# Language	3/27
KMIG - Knowledge Management Interest Group	3/27
Avoiding Pitfalls in Statistical Analysis	3/28
Seeking Information on the Web	3/28
Java for Programmers	4/1, 5
Introduction to Programming	4/2-5
Hubs, Switches, and Routers	4/2
MATLAB 6 - Matrix Laboratory	4/3-5
mAdb Basic Informatics	4/3
Account Sponsor Orientation and Workshop	4/3

Healthy Males, Females

NIMH is seeking healthy men and women ages 25-55 to participate in a protocol studying the causes of schizophrenia. You may be eligible if you have a college degree and no history of schizophrenia among first-degree relatives. Participation involves two outpatient visits. Compensation is provided. Call 435-8970. ■



Dr. Luci Roberts has joined the Center for Scientific Review as scientific review administrator for the behavioral and biobehavioral processes 1 study section. She comes from NICHD; for the past 4 years she was a fellow in its Laboratory of Comparative Ethology, where she studied the neuroendocrinology of social bonding and parental behavior in nonhuman primates. She earned her Ph.D. in zoology from the University of Maryland, studying the effects of perinatal exposure to steroids on parental behavior in prairie voles. She then accepted a postdoctoral position at the National Zoological Park in Washington, D.C., expanding her research in studies of the reproductive physiology and behavior of prairie and meadow voles.

NLM Offers Free Movie Wednesdays

In conjunction with its ongoing exhibit "The Once & Future Web: Worlds Woven by Telegraph and Internet," the National Library of Medicine is hosting a free public film series. "Wednesday at the Movies" offers a mix of popular films that explore the impact of the telegraph, computers and the Internet on our society and culture. The series, originally scheduled for fall 2001, was postponed due to security measures.

The films are shown Wednesday evenings from 6:30 to 9 from Apr. 3 to May 15 in Lister Hill Auditorium, Bldg. 38A. A guest speaker will introduce each movie and take questions at the end. All films will be shown with closed captions and a sign-language interpreter will be available for the introductions and discussions.

The schedule is as follows:

Apr. 3, *Western Union* (director Fritz Lang, 1941)
Speaker: Bernard Finn, curator, Division of Electric-

ity and Modern Physics, National Museum of American History, Smithsonian Institution.

Apr. 10, *Fail Safe* (director Sidney Lumet, 1964)
Speaker: Janet Abbate, University of Maryland; historian of computer networks and the Cold War; author of *Inventing the Internet*, MIT Press, 1999.

Apr. 17, *Edison the Man* (director Clarence Brown,

1940) Speaker: Robert Friedel, University of Maryland; historian of technology; author of *Edison's Electric Light* and *The Zipper: An Exploration in Novelty*.

Apr. 24, *The Matrix* (directors Andy and Larry Wachowski, 1999) Speaker: Lisa Lynch, Catholic University; visiting professor of media studies.

May 1, *Balto* (director Simon Wells, 1995)
Speaker: Chuck Howell, curator, Library of American Broadcasting, College Park.

May 8, *Enemy of the State* (director Tony Scott, 1998) Speaker: Marc Rotenberg, Georgetown University School of Law; executive director, Electronic Privacy Information Center.

May 15, *You've Got Mail* (director Nora Ephron, 1998) Speaker: Katie King, Women Studies Program, University of Maryland; author of *Theory in its Feminist Travels*.

This is a free public event. As schedules may change without notice, check updated information before the show at <http://www.nlm.nih.gov/onceandfutureweb/> or call to verify at 496-5963. ■



An image of the SAGE computer room in the 1964 doomsday film *Fail Safe*

Database Debuts at NIH Library, Mar. 21

The NIH Library now offers access to Essential Science Indicators (ESI), a database containing science performance statistics and science trends data compiled by the Institute for Scientific Information. ESI may be conveniently accessed from the NIH Library web site at <http://nihlibrary.nih.gov/Elecres/databases.htm>.

The web-based resource enables researchers to conduct ongoing, quantitative analyses of research performance and trends in science, covering a multidisciplinary selection of 8,500 journals from around the world. The analytical tool also gives researchers the ability to determine highly cited scientists, institutions (university, corporate, government research lab), nations and journals. Also included are editorial discussions that provide guidance on data analysis and interpretation enhanced by tables, charts and other data sets presented in ESI.

Key benefits to using ESI for NIH staff include the ability to analyze research performance of companies, institutions, nations and journals; rank top nations, journals, scientists, institutions and companies by field of research; and identify significant trends in the sciences and social sciences.

NIH librarian Brigit Sullivan will present the features of Essential Science Indicators on Thursday, Mar. 21 from 2 to 3:30 p.m. in the Clinical Center's Lipsett Amphitheater. Sullivan is leader of the library's electronic resources team and coordinates the library's acquisition of electronic resources on behalf of NIH staff, including more than 2,700 online full-text journals currently accessible at <http://nihlibrary.nih.gov>. Also, a representative from the Institute for Scientific Information's research services will be present to answer questions related to ESI data and the algorithms that support it.

For more information, call the NIH Library at 496-1080. ■

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features Dr. Dan R. Littman on Mar. 27, speaking on "Epigenetic Regulation in T Cell Development." He is Kimmel professor of molecular immunology, departments of pathology and microbiology, and coordinator, molecular pathogenesis program, Skirball Institute of Biomolecular Medicine, New York University Medical Center.

On Apr. 3, Nobel laureate Dr. Arvid Carlsson, professor emeritus of pharmacology, University of Göteborg, will give an NIH Director's Lecture on "A Paradigm Shift in Brain Research" (see story, p. 1).

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