

"Still
The Second
Best Thing
About Payday"

The NIH Record

Supine Sleeping Position Deemed Safer for Infants

For years, most parents in the United States have been putting their infants to bed stomach-down. In an about face on this age-old practice, however, infants today may find themselves sleeping on their backs, rather than the other way around.

Conventional wisdom held that the prone (stomach) position was safer for infants because it helped prevent them from choking on regurgitated milk or formula. According to the American Academy of Pediatrics (AAP), however, there is no evidence that aspiration occurs more frequently in infants lying on their backs than in infants lying on their stomachs or sides. On the other hand, several current studies from New Zealand, Australia, and England demonstrate a strong association between the prone position during sleep and the risk for an infant succumbing to sudden infant death syndrome (SIDS).

In light of increasing evidence linking the prone position with a greater risk of SIDS, the AAP recently issued a statement recommending that parents place their infants on their side or back when putting them down to

(See **SUPINE**, Page 4)

RNA Research Pioneer

Sharp To Present NIH Lecture

By Tom Reynolds

In the last 15 years, molecular biologists have probed deeper into the cellular mechanisms that regulate the expression of DNA's genetic code in protein, and have begun to learn about the roles of regulation in diseases like cancer and AIDS.

Dr. Phillip A. Sharp, head of the biology department at the Massachusetts Institute of Technology, pioneered the study of RNA's complex role in regulating gene expression, including the discovery of RNA splicing. Sharp will address current research questions in this field when he presents the NIH Lecture, "Splicing of Nuclear Precursors to Messenger RNAs," on Wednesday, May 6, at 3 p.m. in the Clinical Center's Masur Auditorium.

In 1977, Sharp published the first work describing the "cutting and pasting" cells do in preparing RNA to make protein. Inside the cell's nucleus, a DNA strand copies itself whole into RNA form. Enzymes then go to work removing nonsense bits of RNA, called introns, and splicing together the coding portions, called exons. In this way, unprocessed RNA is turned into messenger RNA, which then carries the genetic message into the cell's cytoplasm where protein is made.

Sharp's discovery, along with the work of

(See **SHARP**, Page 2)



Dr. James Vaupel of Odense University Medical School in Denmark explains his approach on forecasting life expectancy to (seated, from l) Dr. Linda Martin, National Research Council; Dr. Richard Suzman, director of NIA's new Office of the Demography of Aging; workshop chairman Dr. Samuel Preston, University of Pennsylvania; and Dr. Michael Stoto, Institute of Medicine, National Academy of Sciences. See story p. 9.

Davey Studies Blood Supply in Africa

By Sue Kendall

Imagine infants dying daily from rampant malaria. Imagine a hospital that has no penicillin or normal saline to treat those infants. Imagine trying to treat an anemic baby by giving it a unit of blood untested for HIV. Dr. Richard J. Davey doesn't have to imagine. Davey, of the Clinical Center's department of transfusion medicine (DTM), saw these distressing sights and others in Africa during a 1-year detail, ending in 1991, to the World Health Organization.

"I was shocked by the extent of infant mortality, the high incidence of HIV in adults, and the scarcity of basic medical supplies and

trained staff in some areas," he reflects. Simply infusing saline alone could prevent many blood transfusions, he points out.

Davey, a PHS commissioned officer, was detailed to the Geneva-based WHO through the NIH Foreign Work-Study Program. His assignment was with the Global Program on AIDS and the Global Blood Safety Initiative (GBSI). Comprising members of WHO, the League of Red Cross and Red Crescent Societies, and the International Society of Blood Transfusion, "the GBSI's goals are to improve blood transfusion services in

(See **DAVEY**, Page 6)

Congenital CMV Infection Seen As Prime Cause Of Hearing Loss in Children

By Anne Blank

Congenital infection with cytomegalovirus (CMV), one of seven known human herpesviruses, may be the leading cause of hearing loss in young children, according to a group of researchers who met recently at NIH; NICHD and NIAID cosponsored the 2-day workshop, and NIDCD was also represented.

By the time they reach late adulthood, a large number of people have been infected with CMV, which is present in the saliva, urine and other bodily fluids of people who have been exposed to the virus. In most healthy people, the virus causes no symptoms whatsoever. If symptoms do occur, they may be temporary and mild, including fever, fatigue and swollen lymph glands. In people with compromised immune systems, however, such as AIDS patients, cancer patients under-

going chemotherapy, and people who have taken immunosuppressant drugs in connection with organ transplants, CMV may be life-threatening. Pregnant women comprise another high-risk group because they can transmit the virus to their fetuses. When maternal infection—which in the mother may be silent—leads to congenital infection, serious health problems for the fetus may ensue.

"Congenital CMV disease is an enormous but unappreciated public health problem," said Dr. Charlotte Catz, chief of the NICHD's Pregnancy and Perinatology Branch, and a cochair of the workshop. "Fortunately, the medical community is beginning to pay greater attention to developing preventive

(See **CMV**, Page 4)

SHARP
(Continued from Page 1)

researchers at Cold Spring Harbor Laboratory in New York, showed that protein production is much more complex than scientists had previously believed. It had been assumed that the cells of higher organisms behaved like bacterial cells, making RNA copies of genes in uninterrupted strands.

A milestone in the study of gene expression came in 1983, when, after several years of struggle, Sharp and MIT colleagues succeeded in duplicating RNA splicing in the laboratory, making it much easier to study.

Currently, Sharp and other scientists are working toward pinpointing exactly what goes on during the splicing reaction in the cells of complex organisms. The process involves the formation of RNA-protein complexes known as "spliceosomes."

One question still to be answered, Sharp said, is whether RNA catalyzes the splicing reaction—serving, in effect, as its own enzyme—in contrast to the typical situation in which a protein plays this role.

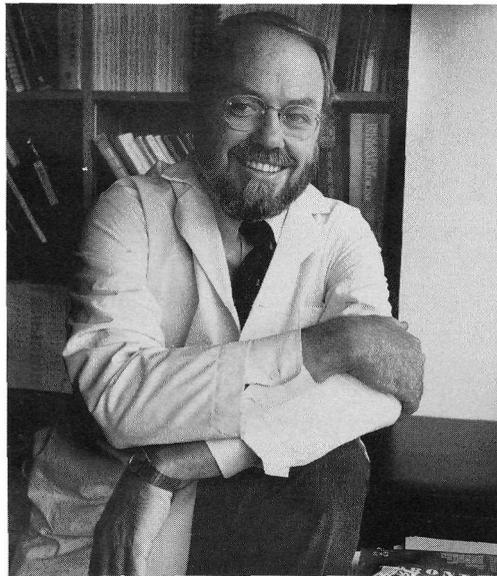
This "self-splicing" phenomenon was first observed in the protozoan *Tetrahymena* by Dr. Thomas Cech of the University of Colorado in Boulder. While scientists suspect it goes on in the spliceosomes of higher organisms as well, this has yet to be conclusively demonstrated. In the NIH lecture, Sharp will present new data relevant to splicing in mammalian cells, as well as summarizing current knowledge about proteins believed to be important in RNA splicing.

"We now have ways, by synthesizing RNA and putting modifications at one site, to actually begin to address questions about the chemistry of those processes," he said.

Research on RNA splicing has contributed to the understanding of AIDS, cancer, and other diseases. Sharp plans to discuss recent work on the Rev protein, which is produced by the human immunodeficiency virus in AIDS patients, and is believed to regulate splicing of viral RNA. Splicing may also influence how some cancer-causing genes are expressed, though Sharp said this research is still in its infancy. For example, he noted that the *src* oncogene is spliced differently in different tissue types.

As scientists learn more about RNA's complex functions within the cell, its importance in the evolution of the genetic code becomes increasingly apparent. Sharp pointed to recent work suggesting that RNA can catalyze chemical reactions involved in protein synthesis as well as the synthesis, modification, cutting, and splicing of RNA. The first genes were most likely made of RNA, with DNA evolving later, he said.

Sharp received a B.A. from Union College in Barbourville, Ky., his native state, and a Ph.D. in chemistry from the University of



Dr. Phillip A. Sharp

Illinois. He arrived at MIT in 1974, and directed the university's Center for Cancer Research from 1985 to 1991, when he became head of the biology department. Nominated as president of MIT in 1990, he chose not to accept the position because it would have meant giving up his research. He is a cofounder and chairman of the scientific board of Biogen, Inc., a biotechnology firm in Cambridge, Mass.

For his groundbreaking work in molecular biology, Sharp has been honored with a number of prestigious awards, including the General Motors Cancer Research Foundation's Alfred P. Sloan, Jr. Prize in 1986, and the Albert Lasker Basic Medical Research Award in 1988. He was elected to the Institute of Medicine of the National Academy of Sciences in 1991. □

STEP Forum on Extramural NIH Features Healy

The Staff Training in Extramural Programs (STEP) committee has announced that NIH director Dr. Bernadine Healy will lead a forum on "Current and Future Issues for the Extramural Program," on May 5, from 2 to 4 p.m. in Masur Auditorium, Bldg. 10.

Healy will discuss her priorities and plans for the NIH extramural programs and answer questions from the audience concerning these activities.

NIH's extramural programs support a wide variety of basic and clinical research in the nation's universities and medical schools, as well as a broad spectrum of training for individuals who wish to pursue research careers. Dr. John Diggs, NIH deputy director for extramural research, will moderate the forum.

The forum is open to all NIH personnel. No advance registration is required. Sign language interpretation will be provided. For more information call 496-1493. □

Spend Your Lunch Hour At PEF Auction, May 1

Weekends in Ocean City, Williamsburg, or the mountains of West Virginia, Orlando get-aways, a hot air balloon ride, an autographed copy of Marilyn Quayle's new book, craft items, dinners at local restaurants, aerobics classes, oil changes, tax returns, makeovers and massages. . .

All of the above and hundreds more items will be auctioned at the annual Patient Emergency Fund Auction on Friday, May 1 in the Clinical Center's Visitor Information Center. A silent auction, treasures & collectibles sale, and a bake sale will run from 11 a.m. until 2 p.m. A live auction will be held from 12:30 to 1 p.m. Lunch will also be sold during the event. Everyone is invited to attend; admission is free. □

Chamber Concert Planned, May 4

The NIH Chamber Players will present music for piano and strings at noon on Monday, May 4 in Masur Auditorium, Bldg. 10. Sponsored by FAES, the concert will include Beethoven's Trio in E flat major, Op. 1, No. 1 and the Trio in B flat major, Op. 97 (Archduke). For more information call 496-7976. □

The NIH Record

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New NIAID Malaria Laboratory Seeks to Combat Disease

By Mary Jane Walker

Chronicles reveal malaria's presence dating at least to ancient Rome, when the Italians realized a link existed between illness and the foul air emanating from the stagnant marshes and swamps. The term malaria or, as the Italians said, "mal'aria" means "bad air."

By World War II, malaria caused such problems for the U.S. war effort that the Public Health Service created the Malaria Control in War Areas Program, the forerunner to the Centers for Disease Control.

Today, malaria affects more people worldwide than any other infectious disease. Each year, more than 270 million people become infected with malaria and almost 2 million, mostly children, die from it.

Recognizing the importance of research on malaria, the Division of Intramural Research of NIAID has established the Laboratory of Malaria Research. The new laboratory conducts basic research, particularly on the disease-causing organisms and the mosquitoes that carry them, as well as drugs to treat and vaccines to prevent the disease.

Dr. Louis H. Miller has been appointed to head the new malaria laboratory. He previously led the malaria research effort when it was part of the Laboratory of Parasitic Diseases. "Forming the new laboratory reflects the institute's acknowledgment of the tremendous toll malaria is taking on populations worldwide," says Dr. Anthony S. Fauci, NIAID director.

Malaria thrives in tropical climates. Any one of four microscopic *Plasmodium* parasites, *vivax*, *malariae*, *ovale* and, the most serious, *falciparum* can cause the disease. Humans contract malaria through the bite of an infected female *Anopheles* mosquito. Very rarely, transfusions of infected blood or sharing intravenous needles can spread the disease.

Human infection begins when the mosquito, while feeding on blood, injects saliva containing the malaria parasites into the body. Upon entering the bloodstream, the parasites first infect the liver cells. Within 5 to 15 days, the parasites are released into the bloodstream. These parasites invade red blood cells, cause the cells to rupture and more parasites burst forth to attack yet other red blood cells.

This cycle continues, accompanied by chills and fever, until the parasites are controlled through drug therapy or, eventually, the body's own immune defenses. Life-threatening complications can occur, including kidney and liver failure, nervous system disorders and coma.

The drug chloroquine, along with effective mosquito control, curbed the spread of malaria in the 1950's. Now, drug-resistant parasites have developed, complicating treatment worldwide. "Alternative therapies are too

expensive for most people to afford," Miller says.

Prior to the use of chloroquine, 20 to 25 percent of people in the regions where malaria is most endemic died from infection with *Plasmodium falciparum*. Without new drugs or successful means to block drug resistance, Miller says, this high death rate could reappear. "We had more possibilities to control malaria in the 1950's than we do in the 1990's," he says.

Investigators in five sections of the new laboratory are working to develop the tools necessary to prevent and control this disease. In the genetics and pharmacology section, researchers are laying the groundwork for new drugs that have different, but equally potent, effects on the parasite and are looking for ways to block drug resistance altogether.

"Vaccines would have the most dramatic, rapid impact on the spread of malaria," says Miller. In the molecular vaccine section, investigators focus on vaccines that block the growth of the parasite inside the mosquito in order to prevent transmission. Using several species of malaria parasites, the scientists are identifying antigens, or parts of the parasites that elicit an immune response, as well as the chemical substances that enhance the response. They also are cloning the genes responsible for making the parasite antigens. "We know that effective malaria vaccines for humans can be developed, especially since vaccines have prevented severe infection and disease in every animal model of the disease," Miller continues.

Scientists in the cell biology and immunology section study how the malaria parasite invades the red cell. This information may help them find other approaches to treat or prevent malaria as well as to develop vaccines.

Some of the most intriguing research in the malaria laboratory involves studies of the mosquito carriers themselves. In the medical entomology section, researchers observe the evolution, habitat and behavior patterns of the mosquitoes as well as the relationships between the mosquitoes and the parasites. To complement their work on the NIH campus, the researchers operate a field station in Mali, West Africa. They hope to use their observations someday to introduce into the environment genetically altered mosquitoes that cannot transmit the malaria parasites.

Investigators in the molecular biology section study the mosquito-parasite relationship on a molecular level to provide information necessary for vaccine development and to identify potential new targets for antimalarial drugs.

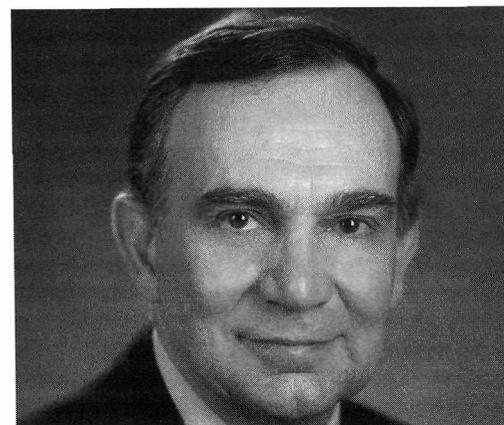
Research Festival Poster Show Applications Due, May 15

The 1992 NIH Research Festival will be held Monday, Sept. 21, and Tuesday, Sept. 22. The Alumni Symposium is titled "Frontiers in Immunology and Infectious Diseases." In addition, there will be four other symposia: "The Extracellular Matrix in Development and Pathology," "Structural Biology," "Transgenic Animals as Disease Models," and an opening symposium on neurosciences. The research festival committee is chaired this year by Dr. Edward Korn, NHLBI scientific director.

More than 30 workshops are being organized for the festival, along with poster sessions accompanying the corresponding workshops. The festival committee invites submission of poster topics by all NIH, ADAMHA, and FDA staff from the Bethesda campus.

The application form for poster sessions is being distributed desk-to-desk. Prospective poster authors have 2 more weeks to fax in their applications. The final deadline for the applications is Friday, May 15. Poster authors will be sent a receipt confirming their preliminary registration. If you have not received any confirmation within a week of submitting your application, or if you want further information about poster session registration, call Gregory Roa, NIH Visitor Information Center, 496-1776.

The Technical Sales Association (TSA) will provide refreshments for each poster session on Monday and Tuesday. There will be no picnic this year. Thursday, Sept. 24 and Friday, Sept. 25 have been reserved for the TSA Scientific Equipment Show in the Research Festival tents. □



Dr. Joseph F. Gallelli, chief of the Clinical Center pharmacy department, was invited to present a special lecture on "Pharmaceutical Manufacturing and Development in the Pharmacy Department at the NIH," at the 112th annual meeting of the Pharmaceutical Society of Japan in Fukuoka, Japan, recently. While there, he also lectured to the Fukuoka Society of Hospital Pharmacists on the subject of "Hospital Pharmacy in the United States and at NIH."

SUPINE POSITION ENDORSED FOR INFANTS **(Continued from Page 1)**

sleep. Presently, there is no formal recommendation for infant sleep position, but in this country the most prevalent practice appears to be placing infants in the prone position.

At a Mar. 30 meeting held by NICHD, experts from the U.S. and abroad, including members of the AAP task force on infant positioning and SIDS, were divided on the issue of whether a recommendation on sleep position should be made. Nonetheless, they agreed that the evidence in favor of a change in practice was compelling. In New Zealand, Australia and England, SIDS incidence has decreased by as much as 50 percent over the last 1 to 2 years after the launching of public health programs that included recommendations for the

supine (back) or side position over prone.

"Faced with the evidence from other countries, the practicing pediatrician or physician would be moved to suggest that for most babies without contraindication, the supine position seems to be the favored way to go at the present time," said Dr. Duane Alexander, NICHD director.

Although in this country a larger number of infants sleep on their stomachs than in the countries where these studies were done, the U.S. has a lower baseline rate of SIDS. This may be due to other environmental and behavioral factors such as type of bedding, house heating and cooling methods, breastfeeding and maternal smoking habits. Because of these potentially confounding variables, it is unknown whether a nationwide change in

infant sleeping position will change the incidence of SIDS in this country.

At the NICHD meeting, those against a change cited the need for more information about other variables that may enter into SIDS deaths. Some also expressed concern that certain babies, including those with respiratory distress, gastroesophageal reflux, or upper-airway problems, may be put at greater risk by being placed supine. The AAP emphasized, however, that for these infants the prone position may be better, and that the new recommendation applies only to healthy term infants.

NICHD intends to monitor the recommendation's impact and to conduct further research into causes and prevention of SIDS.—
Anne Blank □

CMV INFECTION MAY CAUSE HEARING LOSS IN CHILDREN

(Continued from Page 1)

interventions. In fact, a recent editorial in the *New England Journal of Medicine* stated that the stage is now set for the development of a safe and effective vaccine to prevent congenital CMV disease."

Of all congenital infections, CMV is the most common. Each year in the United States, almost 40,000 infants are born with congenital CMV infection. The virus can be transmitted from mother to fetus in utero, during birth, and after birth through breast milk. In symptomatic cases, symptoms may range from mild to profound, including hepatitis, fever, epilepsy, cerebral palsy and other forms of severe central nervous system damage. Approximately 85 percent of infants who are symptomatic at birth have some degree of mental retardation. Although it is not clear whether all infants who exhibit symptoms of infection at birth will have long-term neurologic or developmental problems, researchers believe that most of them will. In the most extreme cases, CMV infection may result in neonatal death.

The majority of infants with congenital CMV infection, however—about 92 percent—are asymptomatic at birth and appear completely normal. Unfortunately, this does not mean that the virus is doing no harm. Even in infants who appear to be completely healthy, CMV may be causing insidious damage in the form of mild to profound hearing loss, which is the most common adverse sequela in asymptomatic infants.

Once hearing loss occurs, it cannot be reversed or prevented from progressing. Nonetheless, experts agree that early identification of infants with hearing loss is critical to their future health and well-being. With early identification, appropriate intervention and education can take place to help hearing-impaired children develop their communication abilities.

"If a child has hearing loss and goes

through the first 12 or 18 months of life without anyone recognizing that, that's going to tremendously impair that child's ability to learn how to communicate," said Dr. Robert Pass, professor of pediatrics in microbiology and director of the division for infectious diseases at the University of Alabama, Birmingham.

The problem is that it is difficult, if not impossible, to identify hearing impairment at birth. For this reason, some experts believe that all infants should be screened for congenital CMV infection so that infected infants can be identified, tested and monitored for signs of hearing impairment as they grow older. Screening can be done quickly and inexpensively with tests that identify the presence of virus in the saliva using monoclonal antibody. "The opinion that we should screen all newborns really is based on the desire to identify children with hearing impairment as early as possible," Pass explained.

As with other incurable viral infections, prevention clearly is better than any medical intervention. In the case of congenital CMV infection, prevention starts with the mother. Because CMV can be transmitted through casual contact, including kissing young children, as well as sexual contact, the risk of acquiring CMV cannot be entirely eliminated. A woman's risk of becoming infected during pregnancy, however, can be greatly minimized by limiting the number of sexual contacts and avoiding new sexual partners. Even though the virus is so widespread that a significant number of adults have been exposed to it, studies indicate that a primary maternal infection and/or reactivation of latent infection during pregnancy greatly increases the risk of neonatal infection. If sexual activity with a new partner does occur, the same barrier contraceptives that are being promoted to prevent transmission of other STDs may help guard against CMV infection. As with other STDs, begin-

ning sexual activity at a young age and a high number of lifetime sexual partners are associated with a higher risk of CMV infection. "I think that measures that are taken to deal with STDs will aid in decreasing the congenital transmission of CMV," said Dr. Susan Chandler, assistant professor, department of genetics, University of Illinois at Chicago.

Primary CMV infection also is associated with the presence of other STDs, young age, and lower socioeconomic status. Maternal CMV infection is more common among lower-income women, who give birth to three times as many symptomatic infants as middle- and upper-income women. In one study of a predominantly Black, low-income population, mothers who delivered a CMV-infected baby were more likely to be young, single, primigravid (pregnant for the first time), and to have a history of one or more other STDs. "Even in low-income populations, an unequal burden is falling on single, teenage mothers," Pass noted. Whether the presence of other STDs increases the risk of acquiring CMV has not yet been determined.

Another risk factor for maternal acquisition of CMV is having a young child in day care. Numerous studies have indicated that day-care programs, especially those for young children under age 2, are a prime setting for CMV transmission. Among day-care employees working with children in this age group, annual infection rates range from 8 to 20 percent. The infection rate among parents—both mothers and fathers—with infected children younger than 2 years old, is about 50 percent annually, according to epidemiologic studies. The younger the child, the higher the rate of transmission, with children under age 1 being the most infectious. As children get older, they may stop excreting the virus and so become less contagious. □

Delilah Wrongly Accused?**NINDS Shy Lecture Sheds New Light on Autoimmune Disorders**

By Norman Oliver

Samson suffered from a rare neurological disease that sapped his strength, and Delilah's reputation was maligned for political purposes, said Oxford University professor of clinical neurology Dr. John Newsom-Davis, at the annual NINDS G. Milton Shy Lecture recently. Newsom-Davis presented an overview of the molecular biology of several muscle and nerve disorders during the annual lecture named in honor of the first NINDS clinical director.

"Prof. John Newsom-Davis has made monumental contributions to the understanding of neuromuscular diseases, one of Dr. Shy's particular interests," said Dr. Dale McFarlin, NINDS acting clinical director. Newsom-Davis was the first to describe the use of plasmapheresis, or blood plasma exchange, as a treatment for myasthenia gravis, the disorder that may have affected Samson. Plasmapheresis is performed by removing blood, separating the blood cells from the plasma, and reinfusing the cells and a plasma replacement.

Myasthenia gravis is perhaps the best understood of all the diseases in which the immune system that normally defends the body from infection turns inward and attacks the body itself. In the disorder, the immune system damages the junction where muscles receive signals from nerves.

"Myasthenia gravis is first described in the Old Testament," Newsom-Davis said while displaying a slide of Delilah nursing Samson. Samson also suffered from autoimmune hair loss, or alopecia, Newsom-Davis asserted "Delilah's cutting off of Samson's hair is just a political story invented by the Old Testament author for his own benefit. I have five patients with myasthenia gravis and autoimmune alopecia, and I am secretary of the Delilah Defense Society."

Newsom-Davis described work in his and other labs that indicates myasthenia gravis may be a syndrome of several diseases. In myasthenia gravis, the immune system attacks receptors on muscle cells that receive chemical messages from nerves. Depending on the patient, the antibodies in the blood attack different parts of a subunit of the acetylcholine receptor. This suggests that myasthenia gravis may have several triggering mechanisms. It also points the way to the development of drugs that block the immune system's production of the antibodies without the side effects of current therapies.

Many scientists consider myasthenia a model that may improve understanding of what causes the body's immune system to attack itself. Newsom-Davis discussed two other disorders, one long known to be an autoimmune condition, and one his lab has

newly determined to be an autoimmune disorder.

In Lambert-Eaton syndrome, a condition with symptoms similar to those of myasthenia gravis, the immune system attacks the nerve rather than the muscle. The chemical messengers that trigger a muscle contraction are stored in "vesicles" at the nerve tip or terminal. Normally, about 50 vesicles are released to stimulate a muscle. In Lambert-Eaton syndrome, there may be as few as 10. The disorder is frequently associated with cancer and, in particular, 60 percent of the cases are associated with small-cell lung cancer.

Newsom-Davis described experiments in his lab in which blood serum from patients with Lambert-Eaton syndrome was injected into mice. He has demonstrated a 40 percent reduction in calcium channels at the terminal. In addition, the normal, orderly pattern formed by these channels is disrupted. Since similar mice injected with blood serum from normal individuals maintain their normal pattern, Newsom-Davis concluded that the antibodies in Lambert-Eaton syndrome attack the channels.

"In cancer patients, the antibodies interfere with calcium influx into the cancer cells," he said. "They also interfere with calcium influx into normal nerve cells. There is strong evidence that the tumor is driving the antibody response. For example, when chemotherapy or radiation therapy puts the tumor in remission, the Lambert-Eaton syndrome goes away as well."

He noted that Lambert-Eaton syndrome can occur with or without cancer. Therefore, like myasthenia gravis, the same disease may have more than one triggering factor.

He presented evidence that another rare neuromuscular disease, neuromyotonia or Isaac's syndrome, may be an autoimmune disease. Patients treated with plasmapheresis improve. The symptoms of muscle stiffness are due to an excess excitability of the nerves. When mice are injected with blood plasma from patients, they are more resistant to muscle paralysis than normal mice. What the antibodies are attacking in this disorder is still unknown; however, Newsom-Davis suspects potassium channels are the targets. □

Hebert Memorial Service Set

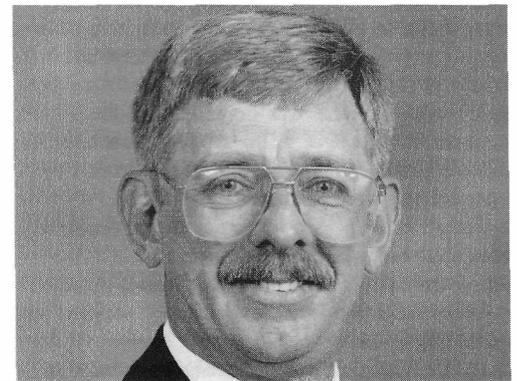
Friends and former coworkers of Dr. Clarence L. Hebert, who headed the Clinical Center's anesthesiology service for many years, are invited to attend a memorial service in his honor on Saturday, May 9 at 3 p.m. in the 14th floor chapel, Bldg. 10. Refreshments will follow the service at the Days Inn in Gaithersburg. □

Bedick Heads NIEHS Engineering

Thomas M. Bedick has been named chief of the NIEHS Facilities Engineering Branch. A captain in the PHS commissioned corps, he is responsible for maintenance, operation, and renovation of NIEHS' more than 25 buildings, including the 334,000-square-foot laboratory and office complex, Bldg. 101, and the NIEHS South Campus support center, which supplies utilities service for Bldg. 101.

In addition, Bedick will take a leadership role in the building and phasing in of new Bldg. 101 modules—an office and auditorium module and a major new laboratory module, which will consolidate NIEHS staff on one campus. Construction is expected to begin on the lab module this year.

Bedick comes to NIEHS from the Food and Drug Administration's National Center for Toxicological Research in Jefferson, Ark., where he was deputy director of its division of



Thomas Bedick

facilities engineering and maintenance. He has also worked for the Indian Health Service in Maryland and Oklahoma, and for the U.S. Army at Aberdeen Proving Grounds, Md. He has received a number of honors and awards from PHS, including two unit commendations, the outstanding service medal, two outstanding unit commendations, and the commendation medal.

Bedick received a bachelor of science degree in civil engineering and a master of science in sanitary engineering from Pennsylvania State University. He and his wife Patricia have a son and three daughters. □

Koop To Sign Books

Dr. C. Everett Koop, former United States surgeon general, will be at NIH on Tuesday, Apr. 28 from 3:30 to 5:30 p.m. He will be in the Visitor Information Center, Bldg. 10, to sign copies of his recent book, *Koop: The Memoirs of America's Family Doctor*. Koop's appearance is sponsored by the Clinical Center's department of rehabilitation medicine. □

DAVEY**(Continued from Page 1)**

developing countries through country-support projects, training and education, and research," says Davey.

"The country-support projects were the most interesting because of onsite involvement in Africa," he says. Africa's blood supply problem is twofold, he explains: there is not enough blood, and the blood that is available is often contaminated by a host of infectious diseases, notably HIV, malaria, and hepatitis.

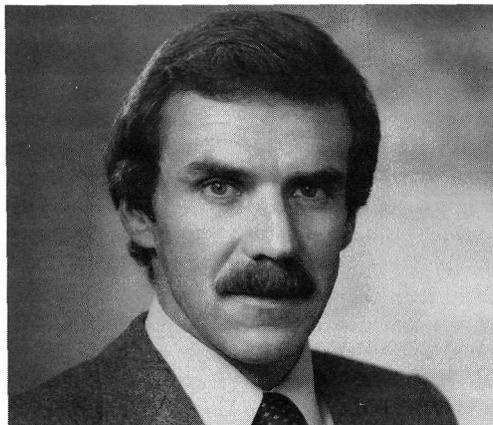
"I spent some time in a small hospital in western Kenya where the incidence of malaria is extremely high and HIV seropositivity runs about 10 percent. The hospital treated about 200 inpatients and 500 outpatients a day. There were no full-time staff physicians to treat the patients, with most care given by overworked junior medical officers. There was no saline anywhere, and other important drugs were often unavailable. There was no blood bank and no sense of voluntary blood donation, because people have other concerns and are often too sick to donate blood anyway. Blood is usually given by family members or paid donors. There was no screening for malaria or hepatitis. HIV screening was intermittent—when the ELISA (screening instrument) was working," he says.

Asked if such dire conditions ever discouraged him, he said "Working for an international organization, one learns quickly to focus on a very few, manageable projects in order not to be overwhelmed."

In Kenya, Davey and colleagues from the Centers for Disease Control focused on reducing unnecessary blood transfusions in children anemic from malaria. "The CDC team found that children with blood hemoglobin levels above 3.5 g/dL did not often benefit from a transfusion," Davey says. Although this level is low by Western standards, he says, the children would be more at risk by receiving blood than by having a low hemoglobin level. The blood thus spared could then go to a patient who desperately needed it.

Davey also spent several weeks in the tiny African country of Malawi, which has been devastated by the AIDS epidemic. In some urban areas the HIV infection rate exceeds 20 percent. "Malawi has very few physicians, no hematologists, only one pathologist, and no medical schools. The blood supply is at great risk," he comments. Working with the government, Davey and his WHO colleagues developed a 5-year plan to collect, screen, store, and distribute blood, and ran a "crash course" in screening techniques. With continued WHO support, Malawi should have a self-sufficient blood service by the end of 5 years, Davey predicts.

Not all facilities are as disadvantaged as the ones in Kenya and Malawi. Says Davey,



Dr. Richard Davey

"There is a great variation in the availability of resources in Africa. There are high quality services in some major cities." He points to a well-organized, well-run, volunteer-based blood transfusion system in Zimbabwe. "The reason it works is that they have some excellent leadership and the system has been established apart from direct government control, which has freed it from some of the financial and bureaucratic problems that beset other programs."

He explains that medical care is a low priority for some countries. "It costs at least \$25 to draw, process, store, and transfuse a unit of blood. This far exceeds the annual per-capita healthcare budget in some countries," he says.

In Harare, Zimbabwe, Davey participated in a WHO-sponsored 14-day workshop for health professionals from 6 African countries. "We reviewed fundamental aspects of blood donation, technical processing of blood, how to transfuse properly, and so on," he says. Efforts are ongoing to establish Harare as a formal WHO regional training center, similar to those WHO operates in Europe and Asia. Another important outcome from his trip was the development of WHO guidelines governing use of autologous (self-donated) blood targeted to the limitations of developing countries.

An aspect of the research part of Davey's work-study involved collaboration with his colleagues in the DTM. Working with Betsy Jett and Dr. Harvey Alter, he investigated ways to reduce costs of HIV tests, which can run \$3 to \$4 apiece for single-test cartridges. Furthering preliminary work of a WHO colleague, Dr. Jean Emmanuel, Davey investigated whether a single test cartridge could accurately test a pool of sera from 5 donors, thus reducing the cost per test to \$.60. If any pool tested positive, individual sera would be retested. This technique detected all the true-positive samples, and had no false-positive readings. "This method works well where HIV is not very prevalent. If the prevalence is high, too many pools would be positive to make the procedure cost-effective,"

he comments. Field testing will begin soon in Africa and Asia.

Healthcare conditions weren't the only surprise Davey had during his trip. "Malawi is a very conservative country," he says. "Women must wear ankle-length skirts—no trousers allowed—and men must have short hair. This applies to Westerners too. If a man shows up at the airport with longish hair, he gets it cut or he leaves!"

Davey cautions, "One problem with Western aid to these countries is that well-meaning people go in and say 'This is how it should be done,' without understanding that maybe that isn't the way it should be done in that culture." He stresses linking up with religious, educational, and community leaders to help bridge the cultural gaps and disseminate health information and care.

Davey's interest in healthcare in developing countries was spurred by past trips to Peru, Ecuador, Nepal, and India. A mountaineer who can claim Mt. McKinley as a conquest, Davey traveled in Nepal and South America as the physician for mountaineering expeditions and treated villagers along the way. "I saw firsthand the kinds of healthcare problems these people face," he recalls. "I thought it would be a useful experience to see what I could do to help."

Reflecting on his time in Africa, Davey praised the altruism and dedication of his WHO colleagues and other healthcare workers and described how just one person can make a difference. He cited one medical technologist who, "through a very extraordinary effort, managed to train technologists and establish HIV screening programs at almost all the healthcare facilities in Malawi. That country went from screening 20 percent of its blood to 90 percent within 2 or 3 years."

Citing the Malawi experience as his most satisfying, he says, "At least most blood is now being screened for HIV, and there's a plan on the books, with funding, to organize the country's blood transfusion service. If it works, there will be a positive and long-lasting improvement in the health of that nation." □

R&W Sponsors Farm Market

The Montgomery County Farmers Markets will open in four locations around the county starting the first week in May, including at NIH, sponsored by R&W. The NIH market will open on Tuesday, May 5 from 2 to 6 p.m. on parking lot 41B.

New highlights of the markets will be the acceptance of food stamps, and the availability of baked goods—breads, pastries, pies—from such companies as Uptown Bakery, Marvelous Markets and Loafin' Around. Each market will feature fresh fruits and vegetables in season, as well as specialty items such as honey and eggs, fresh cut flowers, potted plants and small trees. □

OMS Provides Worksite Blood Pressure Screening in May

NHLBI assumes the lead for sponsoring National High Blood Pressure Education Month in May 1992 for the 18th year. At NIH the Occupational Medical Service (OMS) has visited worksites on the campus for the past 12 years to provide blood pressure screening and will continue this tradition this May.

The only way to recognize hypertension is by measuring blood pressure. If you haven't had your blood pressure checked in the past year, the Occupational Medical Service invites you to visit one of the screening sites listed here or to take advantage of the blood pressure



Betty Mosley of the Clinical Center's housekeeping staff takes control of her blood pressure by having it monitored by OMS nurse Delores Gatt.

Vitastat machines located in Bldgs. 38A, Westwood, Executive Plaza North and by the 31 cafeteria, at your convenience.

NHLBI recommends the familiar themes of weight reduction and shaking the salt out of your diet as methods of lowering blood pressure. These goals, as many know, are difficult. The OMS nursing staff is available to help you by providing practical information. Ask what

actions you can take to identify and reduce your risk of hypertension. By lowering your blood pressure you also lower your risk of stroke, so the benefits are enormous.

1992 Blood Pressure Screening Schedule

Bldg. 1	Tuesday, May 5 Wilson Hall 9-11:30 a.m.
Bldg. 10	May 4-28 - Rm. 6C306 Mondays, 1:15-4:15 p.m. Thursdays, 8:15-11:15 a.m. Monday-Friday, 5-9 p.m.
Bldg. 10	Monday, May 11 Wednesdays, May 20 and 27 Special Events Rm. 1C174 8:30-11:30 a.m.
Bldg. 12B	Tuesday, May 26 Rm. 2N207 9:30 a.m.-noon
Bldg. 13	May 1-29 Health Unit, Rm. G904 8:30-11 a.m., 1:30-3:30 p.m. Closed Tuesdays at 2:30 p.m.
Bldg. 29	Tuesday, May 19 Rm. 115 8:30-11:30 a.m.
Bldg. 30	Monday, May 18 Rm. 132 8:30-11:30 a.m.
Bldg. 31	Tuesdays, May 12, 19, 26 Rm. B2B57 1-3 p.m.
Bldg. 31	Wednesday, May 13 Fitness Center 11 a.m.-1 p.m.
Bldg. 37	Tuesday, May 12, 8:30-10:30 a.m. Wednesday, May 20, 1:30-3:30 p.m. Small Conf. Rm. 6B23
Bldg. 38A	Wednesdays, May 6, 13, 20 Thursday, May 28 Screening Rm. B1N28G 2-3:30 p.m.
EPN	Thursdays, May 14, 21, 28 Rm. 103 8:30-10:45 a.m.
Fed. Bldg.	Thursdays, May 14, 21, 28 Rm. 10B08 1-3 p.m.
WW Bldg.	May 1-29, Except Thursdays Rm. 28 8:30-11 a.m., 1:30-3:30 p.m.
Bldg. 10	Wednesday, May 13 Special Session for CC Housekeeping Rm. B1D25, 3-4:30 p.m.

Anand To Head Virology Study Section

Dr. Rita Anand, formerly with the National Institute of Allergy and Infectious Diseases and a widely regarded expert in AIDS research, has moved to the Division of Research Grants as scientific review administrator of the virology study section.

The section is one of DRG's 83 chartered study sections that are responsible for initial peer review of most of the approximately 31,000 grant applications seeking funding from NIH each year.

Anand attended Panjab University in India, where she received the B.S. (honors) and M.Sc. degrees. In 1974, she received a Ph.D. in cell biology from the University of Rajasthan, India, through an NIH graduate research fellowship. From 1975 to 1978, she was a postdoctoral fellow in the department of biological sciences at Columbia University.

In 1978, she became a postdoctoral associate in the department of molecular genetics at Albert Einstein College of Medicine, where she conducted research on retroviruses. In 1981, she accepted an assistant professorship in the department of microbiology and immunology at Morehouse School of Medicine, Atlanta, where she developed an independent research program in murine retroviruses. While at Morehouse, her research work was funded by NIH.

In 1984, she was offered an opportunity as a visiting scientist to do research on the biology of HIV at the Public Health Service's Centers for Disease Control in Atlanta, where she expanded her research to neuroretrovirology of HIV. After moving to PHS, she continued her research on HIV in laboratories of the National Institute of Mental Health (1987-1989) and the Food and Drug Administration (1989-1990) before coming to NIH in 1990 as a scientific review officer of NIAID's AIDS review section.

Anand has published extensively in scientific journals in the research areas of neurologic AIDS and antiviral agents against HIV. She was interviewed in 1985 by PRN, Physicians Radio Network, for the published article "HIV-1 (BR) an isolate from an AIDS Dementia Patient," published in the *New England Journal of Medicine*, and again in 1987, by NPR, National Public Radio, for her work on putative neuropathic HIV-1 isolates, published by *Lancet*.

She currently serves as a reviewer for the journal, *Antiviral Chemistry and Chemotherapy*. She has been an invited participant in numerous workshops and seminars on AIDS. In 1981, she was presented the Research Recognition Award by the Belfer Institute for Advanced Biomedical Sciences at Albert Einstein College of Medicine. While at CDC, she received its Appreciation Award for teaching laboratory techniques in HIV research. □

Cancer Prevention Fellowship Program Takes Applications

The Division of Cancer Prevention and Control, NCI, is accepting applications for the Cancer Prevention Fellowship Program, whose purpose is to train individuals from a multiplicity of health science disciplines in the field of cancer prevention and control.

The program provides for: master of public health training (at accredited university programs), participation in the Cancer Prevention and Control academic summer course, working at NCI directly with individual preceptors on cancer prevention and control projects, and field assignments in cancer prevention and control at other institutions.

Eligibility requirements are: M.D., Ph.D., or other doctorate (foreign medical graduates must have current ECFMG certification and appropriate experience) and U.S. citizenship or permanent residency.

Funding permitting, as many as ten fellows

will be accepted for up to 3 years of training, beginning July 1, 1993. Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

Deadline for receipt of applications is Sept. 1, 1992. For more information, contact the program director Dr. Douglas Weed or Barbara Redding, 496-8640. □

Normal Volunteers Sought

The Clinical Neuroendocrinology Branch, NIMH, and the Developmental Endocrinology Branch, NICHD, seek healthy women between the ages of 25 and 50 for studies involving the relations of hormone changes, sleep and psychological functioning. Individuals will be admitted to the Clinical Center for 2½ days and 4 nights. Subjects will be paid. For more information leave a message at 496-4319. □

Clinical Center Expands Computer Operations for Patient Information

By Ellyn J. Pollack

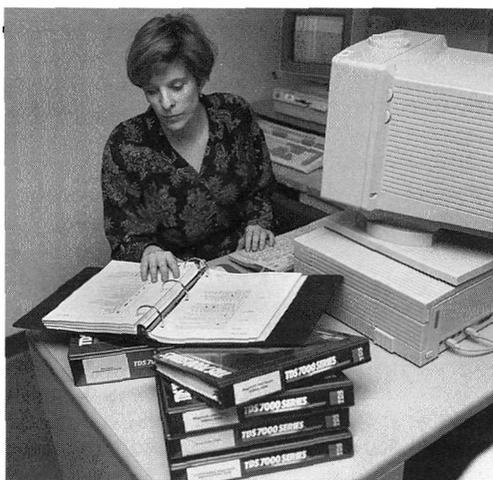
In response to the rapid growth of medical research at NIH, the Clinical Center's information systems department (ISD) recently converted the medical information system (MIS) to new software. TDS 7000, which is the most extensive change to the system since it was installed in 1976, will provide the groundwork for future MIS expansion.

Sixteen years ago, fewer than 6,000 patients were admitted to the hospital and 65,000 were seen in the outpatient clinics. Today, the CC averages 9,300 inpatient admissions and 152,000 outpatient visits every year.

"We expect to see 22,000 new patients a year at the Clinical Center," says Regina Nealon, computer analyst. "We needed to do some type of maintenance if we want to keep all of them online."

MIS is a large "real-time" computerized system that provides access to patient records to retrieve and add data. Medical orders are entered directly by physicians or nurses using video terminals and personal work stations that connect to a central computer. Patient information is displayed on video screens and printed for incorporation into the patient record.

The old system had significant limitations. Only 14,000 patient records could be kept online. As a result, only current patient data might be accessible through MIS. The ISD staff used two methods for file maintenance. If a patient record was inactive for 30 days, the record automatically purged, or dropped, from the system. If the database began to reach its capacity, the ISD staff used selective partial



Computer analyst Regina Nealon gives the new CC patient information computer system, TDS 7000, a trial run.

purging, which kept the patient on the system, but copied discontinued or completed orders and results to tape.

"Now that we have an expanded database," Nealon says, "we can retain data on MIS for a much longer time. We are asking the medical staff and department members what they want to see on MIS. Our intent is to keep essential data online for 2 to 3 years." According to management analyst Gerry Macks, the new system currently has 17,000 patients online, but the potential quantity is "virtually unlimited."

"The new software relieves the architectural limitations on how large the patient files can be," explains Dr. John Foy, deputy chief of ISD. "The new limitations on the size of the

files will be based on how much disk space we have. At some time, we will probably have to limit the size of the patient files so retrieval does not get too slow—whatever too slow is."

TDS 7000 made structural changes in the way the data are stored in the files, Foy explains. "These were infrastructural changes that, if we did them right, are nearly invisible to the 4,000 MIS users."

Prior to the conversion, ISD completed a 2-year testing process of the new system.

An average 5,300 orders are entered into MIS every day. With the new system, one patient may now have up to 100,000 orders, a 50-fold increase over the old system.

The physical expansion and conversion of the MIS database is just the first phase of conversion. The second phase will be much more gradual. The ISD staff will work with members of individual departments to develop the various capabilities of the new system to best benefit the users.

Future benefits will include an appointment system, a biographical file that contains more data, new screen and report-coding capabilities, and an advanced online copy technique to reduce scheduled downtime for file maintenance. □

Ehrlich Lecture Set, May 6

The Foundation for Advanced Education in the Sciences, Inc., at NIH is sponsoring the Fifth Paul Ehrlich Lecture on Wednesday, May 6 at 3:30 p.m. in Lipsett Amphitheater, Bldg. 10. Prof. Manfred Eigen will speak on "Viruses as Models of Early Evolution." For more information call 496-7975. □

NIAID's John Gallin Receives Public Health Service Award for Exceptional Achievement

Dr. John I. Gallin, director of NIAID's Division of Intramural Research, recently received the Public Health Service Award for Exceptional Achievement in Orphan Products Development.

The award recognizes his leadership role in conducting studies that led to a genetically engineered form of a drug that can extend the lives of patients with chronic granulomatous disease (CGD).

Gallin's work pioneered the way for Food and Drug Administration approval of a bio-engineered version of interferon gamma, a substance produced naturally in the body that helps enhance the immune system's ability to fight infection.

An estimated 1 in 1 million babies is born with CGD, a rare inherited disease. People with CGD have defects in certain immune system cells and need antibiotics or interferon gamma to help defend the body from life-threatening bacterial and fungal infections. Treatment with interferon gamma is twice as



Dr. John I. Gallin

effective as treatment with antibiotics in attacking infections in these patients.

CGD patients also develop excessive inflammatory reactions that cause conditions such as gingivitis (swollen, inflamed gums), enlarged

lymph glands and tumor-like masses called granulomas. Although not malignant, granulomas can cause serious problems by obstructing passage of food through the esophagus, stomach and intestines as well as by blocking urine flow from the kidneys and bladder.

Gallin's studies of CGD span more than 15 years. He has defined the clinical spectrum of this disease, developed new approaches to diagnosis and treatment, and identified the nature of the defects in the immune cells.

In the early 1980's, Gallin's studies first showed that antibiotics could help prevent serious infections in CGD patients. He pioneered the use of a CGD therapy that combines extensive removal of infected tissue with prolonged antibiotic therapy and transfusions of white blood cells. He was one of the first to demonstrate that low doses of corticosteroids are safe and effective in reducing obstructions caused by granulomas in the gastrointestinal or urinary tracts. □

Conference on Pill, Bleeding

Although hormonal methods of birth control such as the birth-control pill remain among the most effective forms of contraception, their potential to cause dysfunctional bleeding is a significant hindrance for some women. In fact, more than half of all women who stop using this kind of contraception cite abnormal bleeding as the reason for discontinuing use.

To clarify the underlying causes of contraceptive-related dysfunctional bleeding and research strategies aimed at developing effective interventions, NICHD and the World Health Organization are cosponsoring a conference for experts in the field of contraceptive development. Scheduled for May 4-6 at the Lister Hill Auditorium, Bldg. 38A, the conference is titled "Exogenous Hormones and Dysfunctional Uterine Bleeding." Topics for discussion include: endometrial growth and vascular development; molecular mechanisms involved in the initiation and cessation of bleeding; the effects of Norplant on blood vessels in the endometrium; and the current state of both basic and experimental clinical research on exogenous hormones and abnormal bleeding.

"Even though hormonal contraceptives are now available to women in lower doses than ever before, dysfunctional bleeding is still a very real problem for large numbers of women," said Dr. Nancy Alexander, conference cochair and special assistant for contraceptive research in NICHD's Contraceptive Development Branch. "In light of the recent development of Norplant, it is time to thoroughly investigate the problem of abnormal bleeding associated with progestogen-containing contraceptives, with the goal of ultimately developing more effective interventions, as well as new products which reduce side effects." □

Atlantic City Trips Planned

R&W has two trips scheduled to its most popular destination, Atlantic City, N.J. Bus trips to Resorts Casino will be held on Friday, May 29, and again on Friday, June 26. Buses leave from Bldg. 31C at 7 a.m. and return to NIH at approximately 9 p.m. Cost is \$25 per person and includes motorcoach transportation and a coin package from the Resorts Casino. (May's package is \$7.50 in coin, June's is \$5 in coin.) Sign up early—these trips fill quickly. For information, call 496-4600. □

NIA Tries To Narrow Differences of Opinion At Workshop on Forecasting Life Expectancy

By Vicki Cahan

How long will we live? At a 2-day meeting supported by the National Institute on Aging, an international group of scientists grappled with this question, attempting to narrow the differences of opinion among them about how people will age in the next few decades. For the most part, the panel of demographers, statisticians, clinicians, and biomedical and social scientists agrees that death rates for older people will continue to drop—with growing numbers of older people living longer—but they continue to debate how quickly these improvements will occur and how widespread they will be.

The NIA called for the session following several recent research reports that differ markedly in projected patterns of mortality, disease, and disability. "The scientific community's view about life expectancy for individuals and for the population has a profound importance for all of us. Decisions are being made now about our future, from Social Security and Medicare to housing and pension policy, and they need to be based on the best methodologies available," says Dr. Gene D. Cohen, acting NIA director. The "Workshop on Forecasting Survival, Health, and Disability" was held by the National Academy of Sciences' Institute of Medicine and the National Research Council with NIA funding. It was chaired by Dr. Samuel Preston of the Population Studies Center at the University of Pennsylvania.

The various assumptions about life expectancy translate into large differences in projections of the numbers of older people in the future. "Some researchers see age 85 as an upper limit for life expectancy, while others project 95 or 100 years," says Dr. Richard Suzman, director of NIA's new Office of the Demography of Aging. "Even a small increase in life expectancy can produce huge increases in the estimated numbers of very old people, for example," he points out. "The most commonly used projections, from the Bureau of the Census, say that in 50 years there will be about 12 million people age 85 and over. But other estimates for 50 years from now range from 23 million to 40 million people."

The work of several scientists, much of it controversial, was examined at the meeting. Dr. Ronald Lee, University of California, Berkeley, presented an approach, developed with partner Dr. Lawrence Carter, University of Oregon, based on past mortality rates. Lee's work suggests that, by 2065, the average life expectancy will increase to 86.1 years, compared to about 75 years today. Some participants in the meeting suggested that these and other forecasts should reflect greater uncertainties in the later years. Dr. James Fries,

Stanford Medical School, also projects some increase in life expectancy by extrapolating past trends. He adds, however, that unless there is a fundamental change in mortality patterns from the past, life expectancy probably will not exceed 85 years.

But improvements in health and in fighting diseases like cancer and coronary artery disease may mean significant increases in life span. Dr. James Vaupel, Odense University Medical School, Denmark, says there is no reason to believe that life expectancy is genetically limited to today's levels.

"My hunch is that some of these estimates are much too conservative," says Vaupel. "The work of NIH is going to pay off and there are going to be breakthroughs" that extend life expectancy up to 90 or 100 years. Duke University's Dr. Kenneth Manton cited an apparent 8.7 percent decline in mortality rates for people age 85 and over from 1988 through 1991 alone. Scientists might want to examine medical interventions or reduced risk factors that could have contributed to the improved rates, he suggests. Much more needs to be known about disease and disability and causes of death before some of these models could be used to make predictions for the entire population, panel members said.

Representatives of the Social Security Administration, Health Care Financing Administration, Bureau of the Census, Office of Management and Budget, and other public and private agencies with an interest in forecasting attended the meeting. Dr. Michael A. Stoto, deputy director of the IOM's Division of Health Promotion and Disease Prevention, said the IOM/NRC will report to the NIA later this year on results of the meeting. □



Dr. Ruth L. Kirschstein, NIGMS director, was recently elected a fellow of the American Academy of Arts and Sciences. She was honored for her contributions in the areas of educational and scientific administration.

WICB Honors Hynda Kleinman

Dr. Hynda Kleinman, chief of the cell biology section in NIDR's Laboratory of Developmental Biology, has received the Senior Award from Women in Cell Biology (WICB). She was recognized for "her scientific achievement and her strong commitment to the fostering of women in science."

WICB is a committee of the American Society for Cell Biology that encourages women to pursue careers in cell biology. The Senior Award is given to an established scientist who has demonstrated excellence in research and has furthered career opportunities for women in cell biology. The award was presented at the society's meeting in Boston.

Kleinman has received many honors, including the NIH Director's Award in 1984. Her efforts to have women included in scientific programs, on editorial boards, and in other scientific activities have been recognized



Dr. Hynda Kleinman (r) accepts the Senior Award from Dr. Susan Gerbi of Women in Cell Biology.

by the 1987 NIDR EEO Special Achievement Award, the 1988 EEO Award of the Year, and now by the award from WICB.

She is well-known for her work on the extracellular matrix, especially the use of matrix proteins in cell differentiation. Together with collaborators, she first demonstrated that the glycoprotein laminin aids neurite outgrowth and subsequently defined the action site using synthetic peptides. She also was involved in the development of an artificial basement membrane that promotes the differentiation of various epithelial and endothelial cells in vitro and tumor growth in vivo.

Kleinman obtained her Ph.D. in nutritional biochemistry and metabolism from the Massachusetts Institute of Technology in 1973. She has published more than 170 papers and serves on the *Cancer and Metastasis Reviews* editorial board, as well as on many review panels. She holds three patents and has three pending, and is an adjunct professor at Georgetown University School of Medicine. □

Asian/Pacific American Heritage Program To Be Held May 8

Everyone is invited to the 20th annual NIH Asian/Pacific American Heritage celebration on Friday, May 8. There will be a lunchtime program of food and demonstrations and an evening program of Asian music and dance. The NIH theme this year is "Respecting Cultural Diversity."

The lunchtime program will take place between 11:30 a.m. and 1:30 p.m. on the patio of Bldg. 31A with demonstrations of the Indian sari, bonsai, calligraphy, and sushi and noodle preparations. There will also be Indian music and dancing. Chinese, Indian, Japanese, Korean, Filipino and Thai food will be sold by some of the best Asian restaurants in the area. A percentage of the proceeds will be donated to the Children's Inn at NIH.

The evening program will be held in Masur Auditorium, Bldg. 10 from 7:30 to 9:30 p.m. A program of Asian music and dance

will feature performers from the Dance Troupe of the Embassy of Indonesia, Sutradhar Dance Academy (Indian), Washington Mai No Kai and Minyo Group (Japanese), and the Chinese Opera Club of Greater Washington. A reception in the NIH Visitor Information Center will immediately follow the program.

Everyone is invited to the reception to meet the artists and to feast on Asian pastries and snacks.

The program is sponsored by the NIH Asian/Pacific American cultural committee and the Asian/Pacific Islander American advisory committee, Office of Equal Opportunity. Sign language interpretation will be provided. For information about the program and accommodations for individuals with disabilities, contact Joan Brogan, Asian program manager, 496-2906.

Imaging Science Talks Continue in Lipsett Amphitheater

The Frontiers in Imaging Sciences lecture series continues with seminars on May 11 and June 1 in Lipsett Amphitheater, Bldg. 10.

On May 11 at 12:30 p.m., Dr. Laurence P. Clarke of the University of South Florida will address the "Clinical Review of Automatic Artificial Intelligence Techniques for Enhancement of Tumor Boundaries in Medical Imaging." He will discuss the use of artificial intelligence techniques for enhancing image contrast and improving tumor/edema boundary definition using MRI images. One of the clinical models involves brain gliomas imaged pre- and post-MR contrast material, where color-coded image segmentation is compared to the original MR images with and without contrast. These techniques also have potential application for analysis of digital mammographic images for tumor detection.

On June 1 at noon, Dr. Myron Moskowitz of the University of Cincinnati will give a lecture entitled "Excess Mortality in Breast Cancer Screening: Biology or Tautology?" In virtually every breast screening program reported to date, a small increase in breast cancer mortality has been found among women who were screened compared to those who were not, particularly in the early years of screening. Moskowitz notes that although the increases in mortality have not been "statistically significant"—meaning the studies did not have enough women in them or otherwise did not lend total support to the finding—they are worthy of serious investigation. He will discuss how the design of breast screening programs affects the outcomes and may limit their applicability in making recommendations for the general population. He will also explore the phenomenon of "false negative reassurance" that may influence women who

have had a negative mammogram or other screening procedure to disregard subsequent breast changes that warrant medical attention.

The seminars are sponsored by the National Center for Research Resources and NCI, in collaboration with the Clinical Center's diagnostic radiology department. For more information, call 496-2992. □

DCRT Computer Training Classes

Classes	Dates
PC-DOS Advanced Topics	5/4, 5
The Modern Concept of Chaos	5/5
Programming with Object-Oriented Data Structures	5/5
Batch Files with PC-DOS	5/6
Relational DBMS Architectures: Why Client/Server?	5/7
Memory Management on the PC	5/11
Developing Data Entry Applications with SAS/FSP	5/12
Intermediate PC-DOS	5/13, 15
Filemaker Pro Advanced Topics	5/13
Using the Internet	5/13, 14
DB2 Application Programming	5/18-22
Distributed Database Processing Using Client/Server Technology	5/18
Recurrent Problems in Data Analysis	5/18, 20, 22
Image Processing on the Macintosh	5/19
ENTER MAIL	5/19
Finding Sequence Homologies in GenBank	5/19
BITNET	5/21
GCG Sequence Analysis on the Convex	5/26-28
Convex Questions and Answers	5/26
Enter BBS	5/27
Software Engineering and CASE Concepts	5/29

Classes are offered by the Computer Center Training Unit, DCRT, without charge. Call 496-2339 for more information. □



TRAINING TIPS

The NIH Training Center of the Division of Personnel Management offers the following "hands-on" courses:

<i>Personal Computing Courses 496-6211</i>	<i>Starting Dates</i>
Welcome to Macintosh	5/18, 6/9
Advanced Macintosh Techniques	6/18
MacWrite	6/2
Intro to WordPerfect 2.0 (Mac)	5/4, 6/10
Advanced WordPerfect 2.0	5/14
Transition to WordPerfect 2.0	(upon request)
Intro to Microsoft Word (Mac)	6/3
Excel Level 1	6/4
Excel Level 2	6/17
Excel Level 3	5/21
Filemaker	5/7
4th Dimension	6/15
FoxBASE-Levels 1 & 2 (Mac)	(upon request)
Aldus Pagemaker	6/8
3Com PC Network-Level 1	6/11
3Com PC Network-Level 2	5/19
Intro. to Personal Computing for New Users	5/27
Introduction to DOS	5/19, 6/4
Introduction to Windows 3.0	5/11, 6/11
Introduction to WordPerfect 5.1	5/18, 6/10
WordPerfect 5.1—Advanced Topics	5/13, 6/16
Intermed. Harvard Graphics, Rel. 3.0	5/20
Intro. to Harvard Graphics, Rel. 2.3	5/14
Intro. to Paradox	6/1
Intermediate Paradox	6/2
Advanced Paradox	5/21
Intermediate dBASE III+	5/12
Intro. to Lotus 1-2-3, Rel. 2.2	6/15
Lotus 1-2-3, Rel. 2.2—Adv. Tops.	5/27
IMPACT System for Personnel Staff	6/10
IMPACT System for MSCs	5/18
IMPACT System for Administrative Staff	6/18
IMPACT System for Professional Staff	6/18
Introduction to CRISP	5/12, 6/9
Advanced CRISP	6/9

Theatre Group Performs Comedy

The NIH R&W Theatre Group will present Moliere's *The Imaginary Invalid* on May 15, 16, 22, 23, 29 and 30 at 8 p.m., and May 17 and 24 at 3 p.m. in Masur Auditorium, Bldg. 10.

The play is a comedy classic about a man who imagines he is seriously ill. It involves the antics of the classical hypochondriac and his relationships with his family and doctors, poking fun at physicians and patient alike.

Jim Robertson is directing a talented cast of actors. Ticket prices are \$7 for adults, \$5 for seniors, and \$3 for children 12 and under.

The NIH R&W Theatre Group is an ensemble of NIH employees and other community members who each year present a musical revue and a dramatic production for the benefit of the NIH Patient Emergency Fund. The group also presents on-the-road productions of its shows.

For information or tickets, call Brenda Merson, (301) 253-3511. □

NEI Colleagues Mourn Robert Hudson

Robert Hudson, grants management specialist in NEI's Extramural and Collaborative Program for more than 13 years, died on Feb. 11 at age 44 of non-Hodgkin's lymphoma. He was diagnosed with cancer in September 1991, and had retired in January of this year due to his illness.

Hudson joined NEI's Extramural Services Branch in 1978 as a grants management specialist for the Strabismus, Amblyopia, and Visual Processing Program. In that position he oversaw the program's fiscal and administrative management of research grants.

Colleagues regarded him as highly professional and a valued advisor to senior staff because of his extensive knowledge of the program. He also helped set up the computer applications for NEI's grants management reviews. In September 1990, he became the grants management specialist for NEI's Corneal Diseases and Cataract Programs, a position he held until his retirement.

Hudson was born in New York City in 1947, but his family relocated to Virginia when he was a young boy and later moved to Washington, D.C. He served 4 years in the U.S. Army and graduated from the Army's ASCOM Education Center in 1968. He began working at the Department of the Navy in 1969, where he trained as a management technician. He began his career in DHEW grants management in 1972, when he served as a liaison between the Grants and Contracts Management Division, Office of Human Development Services, DHEW, and Project Head Start, a program of the Administration for Children, Youth and Families.

Hudson developed a great interest in Afri-



Robert Hudson

can history and culture, which led to several trips to Senegal and Gambia, West Africa. Eventually, he established his own travel agency called African Roots. Recently, he expanded African Roots to include an import/export business that specialized in authentic African foods and articles of clothing that previously had not been available in the United States. Through his work with African Roots, he befriended an African student and sponsored him to come to the U.S. to continue his education.

Hudson was a member of the Kankouran West African Dance Company in Washington. On several occasions he performed with the dance company in area theaters. He is survived by his mother and an older brother.—Linda Huss



The representatives of the Coalition of Patient Advocates for Skin Disease Research met recently with the NIAMS to discuss current progress and activities in intramural and extramural dermatology research. Seated (from l) are Diane Williams, United Scleroderma Foundation; Vicki Kalabokes, National Alopecia Areata Foundation; Susan Snyder, Foundation for Ichthyosis and Related Skin Types; Cora Lee Stewart, Eczema Association for Science and Education. Standing (from l) are Dr. Alan Moshell, director, NIAMS Skin Diseases Branch; Debbie McIntyre, Scleroderma Research Foundation; Dr. Lawrence E. Shulman, NIAMS director; Bonnie Cady, National Alopecia Areata Foundation; Barbara Butler, National Psoriasis Foundation and the Lupus Foundation of America; Miriam Feder, DEBRA; Dr. Steven Hausman, NIAMS deputy director; LaDonna Williams, Eczema Association for Science and Education; Dr. Michael Locksbin, director, NIAMS Extramural Program; and Cathy Gidley, National Psoriasis Foundation.

*An NIH Wedding***Two Commuters Discover Romance on Campus**

By Carla Garnett

Romance is probably not the first word most people think of when the conversation turns to NIH. In fact, on a list of top ten words about NIH, romance may not make the cut. Unless you ask newlyweds Rosamond and Ed Burns. Thus far, NIH, and particularly employees here, have played a big role in the Burnses lives together.

Last May at Clinical Center maintenance section chief Neal Hunt's retirement party, Ros recognized a face she saw occasionally on her way to work by MARC commuter train. So when she caught the stranger surreptitiously glancing her way, she went over to him and introduced herself. Five months later, she and Ed were engaged and 4 months after that they were married. It must have been love at first sight.

"Well, sort of," Ed says, grinning at his wife.

"It's all his fault—," says Ros, deadpan.

"My fault?" Ed quickly interrupts, looking incredulous. In his version of the story, Ros is the pursuer; he, the pursued. Ros just smiles.

"See," Ed explains, "she had been scoping me out on the MARC train all these months. It really took me by surprise when she came over to me at the party. Then, she just reeled me in."

Ros swats him. He wasn't supposed to tell about the scoping part.

Both Burnses agree that never in a million years did they suspect they would find their life mates at NIH. Neither was even looking. Although both are employees of the Office of Research Services, they had not met before the party.

An NIH'er since 1984, Ros works in the safety operations section of the Occupational Safety and Health Branch as a senior occupational safety and health specialist. Before moving into that position, she spent 4 years in NIAID's Laboratory of Molecular Microbiology in Bldg. 5.

Ed, who joined NIH in 1987, is an electrician for the Division of Engineering Services Shops Branch, primarily responsible for emergency generators. Ed says he basically grew up on NIH's campus. His mother was the timekeeper for the construction company that built the Clinical Center and was the first receptionist after it was completed. "The sisters at the Cloister [then a convent for the Sisters of the Visitation] would babysit me," he recalls.

The Burnses NIH ties do not end there, though. Not only did they meet here, but their wedding party—best man, maid of honor and officiating minister—are also NIH employees. George Crockett, a DES employee, was the best man; Lisa Iwaszko, of the Divi-



NIH newlyweds Ed and Ros Burns (l) watch as the Rev. Frank Kelly (seated), chief of the Clinical Center's maintenance section and officiating clergy at the ceremony, signs their marriage certificate. Other NIH'ers George Crockett and Lisa Iwaszko (r) served as best man and maid of honor.

sion of Safety, served as maid of honor; and the Rev. Frank Kelly, new chief of CC maintenance, performed the ceremony held at the couple's home in the Blue Ridge Mountains of West Virginia.

Their 2-week honeymoon in Jamaica over, the couple recently returned to work and the

routine that played a big part in their first meeting. The MARC train and NIH helped bring them together, but Ros and Ed now carpool in to work. "It's cheaper and more fun for two to drive than to take the train," Ed says. □

NIDCD Hosts Satellite Conference on Environmental Pollutants, May 8

Environmental pollutants enter our bodies and cause or aggravate problems of the respiratory tract, the nose and sinuses, and the digestive tract. Many forms of pollution, including noise pollution, can adversely affect the body, particularly the ears, nose, and throat. The elderly and very young are at greatest risk.

To inform scientists, physicians, and the public about the health problems associated with pollution and to identify areas needing additional research, NIDCD will sponsor a 2-hour live interactive satellite teleconference broadcast from Lister Hill Auditorium, Bldg. 38A, from 1 to 3 p.m. on May 8.

Cosponsoring the teleconference is the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), a nonprofit organization of physicians who specialize in the treatment and surgery of disorders affecting the ears, nose, throat, and other head and neck regions. Dr. James B. Snow, Jr., NIDCD director, and Dr. Jerome C. Goldstein, AAO-HNS executive vice president, will open the teleconference entitled, "WARNING! The Impact of Pollution on the

Upper Alimentary and Respiratory Tracts."

At the auditorium, a panel of scientists will discuss the impact of pollution on public health. Local television host Paul Anthony will moderate the teleconference, which will include a live broadcast featuring scientists from NIEHS in North Carolina.

The broadcast from Lister Hill will be transmitted via satellite to various universities and medical centers in the U.S. and Canada. The TV program will be seen live from each of these sites where a physician or scientist will lead discussions for the local audience. The program is also being made available to more than 250 institutions subscribing to educational satellite; they will be able to query the panel via a toll-free 800 number.

The video teleconference is open to all NIH'ers. No advance registration is required, but doors shut at 12:30 p.m. Sign language interpretation will be available at Lister Hill. Real-time captioning will be provided for all sites. CME credit is also being offered. For more information call 496-7342 (voice) or 402-0252 (TDD). □