The Newsletter of the
NIH Alumni Association

Autumn 1991
Vol. 3, No. 3

NIHAA Update

A Tradition Continues

Fifth NIH Research Festival Fosters Reunions, Fresh Outlook

By Carla Garnett

Despite the first saturating rain all summer, NIH's 4-day, fifth annual Research Festival played to packed arenas—including Masur Auditorium, Lipsett Amphitheater, Wilson Hall, two tents and various meeting rooms—all over campus. Standing-room-only symposia and well-attended workshops combined to make the 1991 festival a fitting tribute to the 5-year tradition. Nearly 500 posters—a record—were submitted for presentation, necessitating for the first time a third poster session.

NEI director and acting NIH deputy director for intramural research Dr. Carl Kupfer opened this year's festival by reminiscing about the first Research Day, Sept. 25, 1986, when, he said, "A tradition began. Amid a festival-like atmosphere, NIH's intramural research programs presented a small fraction of the

*(See **Festival** p. 8)*

NHLBI director Dr. Claude Lenfant (l) presents the 1991 Distinguished Alumnus Award to Dr. Joseph L. Goldstein, a Nobel laureate who worked at NIH from 1968 to 1970.

Revitalization Seen

'Town Meeting' Airs Intramural Concerns

By Rich McManus

NIH director Dr. Bernadine Healy held a 2-hour "town meeting" Sept. 20 in Masur Auditorium at which she fielded questions from intramural NIH and ADAMHA scientists and announced her intention to revitalize the "jewel in the crown of NIH" as part of her overall strategic plan for the NIH. She also lent a ringing endorsement to the idea of a graduate university at NIH and envisioned a whole new "NIH North" campus as a possible answer to the problems of overcrowded labs, insufficient parking, and decrepit infrastructure.

*(See **Town Meeting** p. 18)*

In This Issue

Fiftieth Anniversary of NIH's Move Celebrated

On Saturday, Nov. 23, the NIHAA and the NIH Historical Office/DeWitt Stetten, Jr. Museum of Medical Research will sponsor a seminar and reception commemorating the 50th anniversary of the full occupation of the NIH campus in Bethesda in 1941. Complementing the fall event will be an exhibit entitled "Seventy Acres of Science," sponsored by the Stetten Museum and mounted in the NIH Clinical Center, Bldg. 10.

The seminar will be preceded by a reception from 2 until 3 p.m. at the Mary Woodard Lasker Center, Bldg. 60, at NIH. Speakers at the seminar, which will begin at 3 p.m., are alumni who participated in the move to the Bethesda cam-

*(See **Anniversary** p. 2)*

Anniversary (continued from p. 1)

pus: Dr. Leon Jacobs (parasitic diseases), Dr. Margaret Pittman (microbiology and biologics control), Dr. Harold Stewart (cancer pathology), Dr. Joseph Leiter (carcinogenesis and chemotherapy), and Dr. Lewis Sargent (chemistry).

A videotape, prepared by the National Library of Medicine, of President Franklin D. Roosevelt's dedication of the new campus in 1940 will also be shown. Rep. Constance A. Morella of Maryland's 8th District will present opening remarks. Dr. Carl Kupfer, NEI director and acting NIH deputy director for intramural research, will end the program with observations about "NIH Today and Tomorrow."

Copies of the exhibit brochure, which will provide a short history of the transition to Bethesda, will be distributed to those who attend. The winter 1992 *NIHAA Update* will publish excerpts from the seminar and recollections of other alumni across the country who were at NIH during this period.

With its move to the Bethesda campus from the old NIH campus at 25th and E Streets, N.W. in Washington, D.C., NIH crossed an important threshold. A new commitment to basic medical research was displacing the traditional focus on epidemic control and sanitary engineering. Civilian scientists were supplanting the military traditions of the Public Health Service with the work styles of academic science.

By the early 1930's, the old campus was filled to capacity. Acute space limitations curtailed experimental activities, and crowded animal holding areas posed disease dangers for both animals and staff. Surgeon General Hugh S. Cumming thus launched a search for an animal farm outside the District of Columbia.

In 1934, however, Luke I. Wilson offered his Bethesda estate to the Secretary of the Treasury, who had jurisdiction over the PHS. Aware of the NIH search for an animal farm, the secretary accepted the Wilson donation. Dr. Lewis R. Thompson, director of the PHS Division of Scientific Research, realized that the 45-acre tract provided an opportunity to rebuild the entire NIH. When monies from the 1935 Social Security Act also provided a means to expand the NIH staff, Thompson's plans were put into effect. In 1937, shortly after Luke Wilson died from cancer, his widow Helen donated an additional 25 acres, raising the total acreage, as the PHS described it, to "70 acres of science."

Construction and occupation of the first six buildings proceeded quickly. By Dec. 1, 1938, the NIH's administrative staff and library had moved into Bldg. 1, while the Divisions of Industrial Hygiene and Public Health Methods established themselves in Bldgs. 2 and 3. The following October, the National Cancer Institute began operating out of Bldg. 6, and two months later, fourteen officers' quarters were occupied. In July 1940 the Divisions of Biologics Control and Infectious Diseases began moving into Bldg. 5 and the Divisions of Chemistry, Pharmacology, and Zoology into Bldg. 4. By May 1941 all laboratory equipment for these research buildings was in place, and the buildings were completely utilized.

The term "reservation," which is used to refer to the Bethesda campus, has a long history. When Pierre L'Enfant drew up his plan for Washington, D.C., he designated that certain areas were "reserved" for the use of the federal government. The area at 25th and E was "Reservation #4," shortened to "the reservation" by NIH personnel. The term, like the campus, moved to Bethesda.

On Oct. 31, 1940, as the United States carefully monitored the war in Europe, President Roosevelt motored to Bethesda to dedicate the new campus. In his address, the president recalled that NIH had always been devoted to "furthering the health of all mankind." Its new mission, he declared, must be to "recruit. . . knowledge and science in the service of national strength."

For more information call Harriet Greenwald at (301) 530-0567.

The planning committee for the Nov. 23 meeting includes (seated, from l) Dr. Margaret Pittman, Dr. Harold L. Stewart; (standing, from l) Dr. Joseph Leiter, Harriet Greenwald, Dr. Leon Jacobs, Dr. Lewis J. Sargent, Dr. Victoria A. Harden, and Dr. James T. Duff.

NIHAA Update

The NIHAA Update is the newsletter of the NIH Alumni Association. The NIHAA office is at 9101 Old Georgetown Rd., Bethesda, MD 20814, (301) 530-0567.

Editor's Note

The NIHAA Update welcomes letters and news from readers. We wish not only to bring alumni news about NIH, but also to serve as a means for reporting information about alumni—their concerns, information on recent appointments, honors, books published and other developments of interest to their colleagues. If you have news about yourself or about other alumni, or comments on and suggestions for the NIHAA Update, please drop a note to the editor. We reserve the right to edit materials.

Credit

NIHAA Update is supported by grants from Glaxo Inc., Sandoz Research Institute and the Upjohn Company.

From Black List to White House

Elvin Kabat Wins National Medal of Science

By Rich McManus

Among the 20 winners of the National Medal of Science who gathered recently at the Rose Garden to receive their awards from President Bush, perhaps none relished the honor more than Dr. Elvin Kabat, a distinguished immunochemist who, for the past 16 years, has split his professional time between NIH and Columbia University, where he is emeritus professor of microbiology.

"I sort of felt vindicated," laughed Kabat, who is known, scientifically, for his pioneering basic research on the nature and function of the immune system.

A reason for the unusual pleasure he took in receiving a federal award, he said, stems from his having been blacklisted during the McCarthy era as a suspected communist sympathizer and his rejection, for a time, of all PHS grant money.

A few caveats are in order: First, prior to washing his hands of PHS funding, Kabat had seen his grant for studying allergic encephalomyelitis in a colony of about 40 monkeys cancelled by PHS. To protest that action, he rejected future funding for a while. He was also accused of undermining national security by publishing a paper on biological warfare after World War II. Second, although he had to sacrifice the monkey colony in order to obtain autopsy results, Kabat's research in other areas continued to flourish due to generous funding from the Office of Naval Research and the National Science Foundation.

"They supported me when PHS would not," he recalls. "I had the biggest grant in molecular biology for many years. For a while, I received 8.5 percent of all the federal money committed to molecular biology."

Ironically, another winner of this year's National Medal of Science, the late Dr. Salvadore Luria, was also unfunded by PHS during a time when his political leanings were suspect. A further irony: one of Kabat's three sons obtained his Ph.D. with Luria.

"Perhaps the friendship that has developed between Bush and Gorbachev explains this rebirth in terms of recognition," Kabat chuckles today.

If Kabat belongs on any list at all, it would probably be for hard work and stamina, not to mention scientific rigor and excellence.

"I'm a machine for work," he casually confesses.

Since 1975, he has hewn to a taxing schedule of teaching, research and writing, shuttling between New York City, where he has taught at Columbia since 1941, and NIH, where he has worked 2 days a week since a Fogarty scholarship year in 1974-75.

The Fogarty year was spent revising one of two "Bibles" Kabat has written. The first one was *Experimental Immunochemistry*, on which he collaborated with Manfred Mayer at Columbia. First published in 1948, it set forth the basic rules for measuring antibodies, antigens, and complement. Revised in 1958, it went through four large printings ending in 1968.

The second bible was *Structural Concepts in Immunology and Immunochemistry*, which was first published in 1968 and included the more sophisticated science and technology that had developed since his first book. It was the second edition of this opus that occupied Kabat during his Fogarty year; advice regarding the book came from NIH's Gilbert Ashwell, David Davies, William Raub, Henry Metzger, William Paul and Michael Potter.

During his Bethesda sojourns, Kabat resides on campus in Bldg. 20, across from the Clinical Center. Early on Mon-

*(See **Kabat** p. 4)*

***Kabat** (continued from p. 3)*

day and Tuesday mornings, he occupies an office on the first floor of Bldg. 8, where he is dwarfed by stacks of paper that will eventually compose the sixth edition of *Sequences of Proteins of Immunological Interest*.

"The fifth edition is more than 2,700 pages long," he notes, "and future volumes may be triple the size. It's a damn nuisance to carry even pieces of it from New York to Bethesda."

By about 9 a.m. he leaves for the National Center for Biotechnology Information in NLM's Bldg. 38A, where he works until early afternoon. NLM is the publisher of *Sequences*, a tome that is growing so fast that it must eventually be "published" on optical disk rather than paper.

"One is always behind," Kabat laments, searching through papers at his desk on a recent Monday.

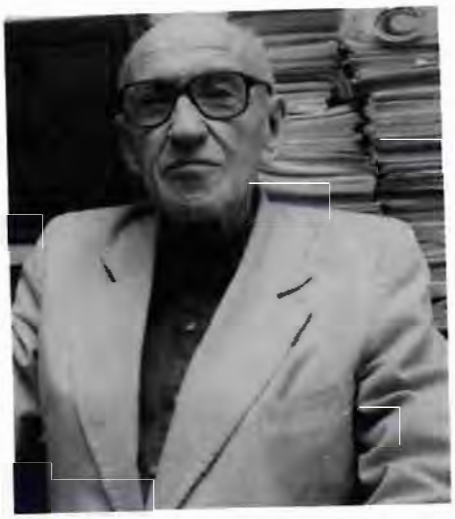
At Columbia, the 77-year-old scientist supervises the Ph.D. work of two graduate students and holds what he believes is the only Saturday morning seminar in American academia.

"We meet from 8 to 11 a.m.," he said. "It's sort of a journal club type of thing. Each member has to report on three articles. I call attention to interesting things I've heard about, or things that are in press that the students' wouldn't have seen."

On Sept. 24, Kabat left the United States for a 4-month sabbatical at the Pasteur Institute in Paris.

"I'm going to study some interesting crossreactive antibodies, and to keep in touch with people," he said. "I like to talk to people."

Kabat spent two sabbatical years in France, first in 1959, then in 1966. Preparing for his first visit, he studied intermediate French at Columbia so that he could deliver lectures. He had trouble, however, keeping the gender of French nouns in mind.



Dr. Elvin Kabat, who recently won the National Medal of Science, thinks he is probably "the most intensely studied human with respect to antibody formation to a variety of things."

"My principle was, if you used the masculine once and the feminine once, you were right once.

"I always speak extemporaneously—I never use notes," he continues. "However I once wrote some notes in French for my first lecture. The problem was, when the lights went down for my slide presentation, I couldn't see them. Afterwards I was told that I gave a very nice lecture, but that I referred to myself continually in the feminine."

Kabat was born in New York City and first was exposed to science at age 5 or 6.

"One of the boys in the house (apartment) got a chemical set," he recalls. "He invited me to see some experiments. I also had a cousin who was a physician. He was a role model for me."

Kabat had wanted to be a physician too, but the Depression put that choice out of reach.

"My father was trying to feed and house a family of four on $5 a week," he remembers. "I got a job in the laboratory of Michael Heidelberger at Columbia, paying $90 a month. I used part of my salary to help with the rent."

Kabat was Heidelberger's first graduate student and Ph.D. recipient, eventually becoming imbued with his mentor's brilliance and longevity.

"I have a good role model in Michael Heidelberger," he declares. "He was in the laboratory until a few weeks before his death at age 103."

Kabat asserts that he will work "until I drop." Asked whether he would pursue a research career again, he says, completely offhand, "Yeah, sure. I wouldn't think of doing anything else but what I did. I'm very satisfied with my career."

Years ago, Kabat was in the habit of making himself the normal volunteer for a wide variety of experiments, a practice that is now largely outlawed.

"I injected myself with a whole lot of polysaccharides," he recalls. "It's illegal now (as unauthorized human subject research). You couldn't do it at NIH today.

"If you want to be a good immunochemist, you should be a good antibody-former," he says with another laugh. "I have used gallons of my serum in experiments. I gave my graduate students (of whom there have been about 20 over the years, and many postdocs including some now at NIH) several gallons of it. I don't do that now, though."

Kabat has personally traced the persistence of two antibodies in his blood for the past 25 years.

"I can trace them back to samples going back to the 1950's," he says. "I'm probably the most intensively studied human with respect to antibody formation to a variety of things."

Though he has lately noticed a cancer protein in his blood and is taking chemotherapy for it, Kabat says he's healthy.

"I feel great. I like to work. I don't do much else. If I retire, what will I do until anybody wakes up?," he asks, referring to his habits as an early-riser.

Considering biomedical science from his perch as expert in the office of the NIH director, Kabat sees a "very unfortunate" climate beclouded by accusations

of wrongdoing.

"One doesn't know how to handle these things," he mused, then sharpened, "I think the universities have been lax in dealing with fraud and misconduct. Some of the early efforts were just whitewashes. There's a lot to be done about arriving at a due process approach."

He continued, "I'm worried about young people being discouraged from going into science by all this business of fraud—or alleged fraud. That's a trend that has to be reversed."

Kabat insists that senior scientists must be closer to the work they supervise.

"I look at all my students' notebooks every week to see what they've done the previous week," he said. "We also meet to discuss aspects of the work. That's one advantage of not running a very big laboratory."

At the peak of his investigations, Kabat had about 10 colleagues in his lab. Any more than that would be suboptimal, he suggests.

By and large, Kabat sees the scientific establishment flourishing, though "it could use more money. There's a lot of economic competition in terms of what people go into. Of course science salaries are much more competitive than they were in my day."

Kabat's National Medal of Science is but one of the honors he has accumulated during a life in biomedicine. A member of the National Academy of Sciences since 1966, he has won the Eli Lilly Award in bacteriology and immunology, the Karl Landsteiner Memorial Award, the City of Hope Annual Research Award, the R.E. Dyer lectureship, and the Dickson Prize in medicine from the University of Pittsburgh.

Two years ago, Kabat was made an honorary member of the Japanese Electrophoresis Society; the event marked both the 40th anniversary of the society and the 50th anniversary of a landmark paper Kabat published in the *Journal of Experimental Medicine*.

Perhaps more valuable than these awards is the fine reputation Kabat enjoys among those he has mentored.

"Working in Dr. Kabat's laboratory provided the most comprehensive and rigorous type of research training possible in the area of immunochemistry as well as a unique opportunity for interactions with a truly outstanding scientist," commented Dr. John O. Cisar, a research microbiologist in NIDR's Laboratory of Microbial Ecology. "Dr. Kabat was always interested in looking at the latest experimental data and his perspective and insight on specific problems was nothing short of remarkable."

"Although being a graduate student in Elvin Kabat's laboratory was an extremely arduous experience, the training his laboratory provided was truly invaluable," said Dr. Rose Mage, chief of the molecular immunogenetics section in NIAID's Laboratory of Immunology. "Elvin Kabat and his wife Sally maintain close contact with many of the 'graduates' of his laboratory and continue to be a positive factor in encouraging and fostering their careers. To this day, papers from my laboratory are written with the thought in the back of my mind that they must meet the exacting standards he expected from me when I was his student."

"I've got many friends, considering how tough I am on scientists," relates Kabat. "My associates used to joke that if you've been 'Kabatized' and survive, you can succeed anywhere."

Science, if not language, is clearly the richer for such a verb.

A Life in Science

Anyone interested in an account of Elvin Kabat's life in science may consult two autobiographical essays he wrote for the *Annual Review of Immunology*.

"My articles aren't like what you normally find in that publication," he observed.

The first, entitled "Getting Started 50 Years Ago—Experiences, Perspectives and Problems of the First 21 Years," appeared in 1983. The sequel, published in 1988, was titled simply "Before and After."

From the latter essay:

"One grew up in the 1910s and 1920s keenly aware of the role of infectious disease. I lost a brother who died of pneumonia at a few weeks of age in 1918; a cousin died of polio in the 1918 epidemic; my father was very sick in the influenza pandemic of 1917; a friend in our apartment house died of diphtheria, and many families lost a child or young relative. Epidemics of whooping cough, chicken pox, scarlet fever, measles, and diphtheria were frequent. When the Schick test and immunization with diphtheria toxin-antitoxin were first introduced in New York City Schools in 1924, I was Schiek negative, an early indication of my potentiality as an antibody former.

"My parents were very devoted to me and to my sister Harriet, born May 8, 1920. I had everything I wanted for the first 12 years of my life. My mother tended to be somewhat overproteetive. At the age of 10 or 11 I went to a school on 117th Street, and had to cross Lenox and St. Nicholas Avenues on the way. She wanted to accompany me, but I absolutely refused. She then followed me at some discrete distance. When I turned around and saw her, I laid down in the middle of the road and motioned to her to go back before I would stand up."

Life in the Andes and Chronic Mountain Sickness

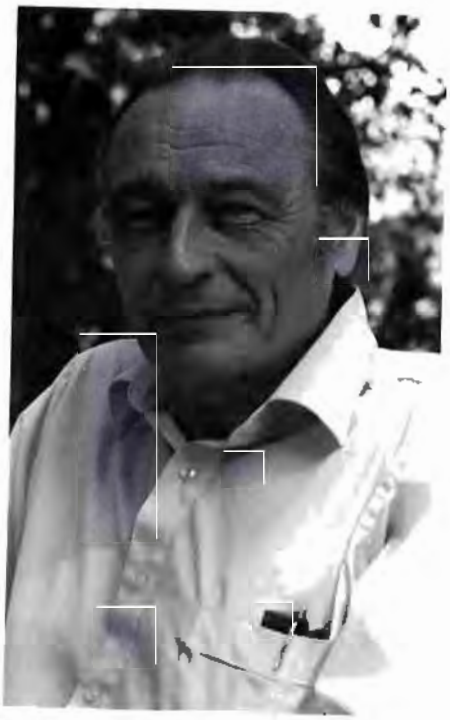
By Dr. Carlos Monge

(Editor's note: Dr. Carlos Monge, a member of the NIHAA Board of Contributing Editors, has sent the following short essay. Dr. Harvey Klein, chief of the department of transfusion medicine, Clinical Center, has provided a brief introduction. He worked with Monge in the summer of 1980 when a group of NIH and other scientists went to the Peruvian Andes to study people with chronic mountain sickness.)

Dr. Klein writes: "The disease is indeed named for his father who published the first description. Monge has spent much of his scientific life trying to unravel the physiology of adaptation and excessive polycythemia at high altitude. He has said often that North Americans think of geography as north-south and east-west, while Peruvians think 'up and down' as well. High altitude excessive polycythemia has a substantial economic and health impact in Peru — often the government does not support high altitude natives who move to sea level, despite the obvious health problems they will suffer if they continue to live on the high plateau. NIH had two collaborative studies with Monge during 1979-80. The principal investigators were Dr. Robert Winslow, NHLBI (now at Letterman in San Francisco) and Carlos Monge. There was a substantial cast of characters from the U.S. and from Peru. I was fortunate to be a minor player on one of these expeditions to the Andes. The results of these studies added some basic physiologic information to the concepts of blood viscosity, cardiac output, phlebotomy, and excessive polycythemia. The studies were cut short both by Winslow's departure from NHLBI and from the unstable political climate in the mountains of Peru. This essay from Dr. Monge brings us up to date on his work."

Chronic mountain sickness with excessive polycythemia or Monge's disease was first described in 1925 by my father, who considered this clinical entity as a loss of adaptation to high altitude. Natives of the high Andes or long-term residents can be affected by this condition in which the red cell mass rises to such a degree that headache, malaise, and vascular occlusive disease become serious medical problems. Since this first description, there has been continuous research on acclimatization, adaptation and loss of adaptation to the hypoxic Andean atmosphere in man and animals carried out by many investigators from Peru and from other countries. Our group at the Cayetano Heredia University in Lima has approached this problem using the fields of evolutionary biology, comparative physiology and epidemiology in an effort to integrate fundamental biological knowledge into the problems of public health of the Andean populations. I will give a few examples of results obtained in the course of this integrative effort.

At the celebration of the American Physiological Society Centennial, I presented experimental results demonstrating that the air cell of eggs from Andean birds nesting in the high mountains had partial pressures of O_2 and CO_2 similar to the alveolar air of humans living at similar altitudes. Since bird embryos are oxygenated by diffusion through the eggshell, this finding suggests that in the course of evolution, diffusion preceded pulmonary ventilation in setting the O_2 and CO_2 concentration values of the corresponding respiratory organs both at sea level and at high altitude. The ventilatory function of birds and mammals is considered a critical high-altitude adaptive parameter. Its failure as age increases is considered responsible for the excessive



Dr. Carlos Monge is professor of physiology, Universidad Peruana Cayetano Heredia, Lima, Peru.

polycythemia of chronic mountain sickness. These observations suggest the need to integrate diffusion into the pathology of chronic mountain sickness.

We have recently discovered that groups of chickens from the Andean plateau close to Lake Titicaca have hemoglobins with high affinity for oxygen and that this characteristic is transmitted to their descendants at sea level. This hemoglobin property is typical of high-altitude native animals like the South American camelids, the bar-headed goose of the Himalayas and other mammals and birds. Since chickens were introduced in South America during the Spanish conquest, our observation indicates that a high-affinity hemoglobin can be selected in an extremely short evolutionary time. This forces us to reinterpret our ideas about the evolutionary animal adaptation to the high Andes, including human adaptation.

In contrast to animals genetically adapted to high altitude, humans native to the Andes do not have high hemoglobin-oxygen affinity. They have a sea-level physiological design, and therefore, they are not truly adapted. Our epidemiological studies have shown that their hemoglobin concentration increases with age. These and other observations have led us to conclude that excessive polycythemia, which results in chronic mountain sickness, is indicative of the limited capacity of humans to tolerate high altitude as age advances and that chronic mountain sickness is not a disease of the individual but of the population.

Currently we are making an effort to persuade the health authorities of Peru to revise the working contracts of our high-altitude miners taking into consideration the health tribute they have to pay for contributing to more than 50 percent of nur national budget.

We are happy to see that much of the basic knowledge accumulated through the years can now be applied to solve problems of public health of the Andean high-altitude natives. As often happens in biology, without mutation (new knowledge) there is no evolution and without natural selection (applied science) there is no evolutionary advance.

A peaceful year in Bethesda as a Fogarty Scholar offered me an opportunity to organize my mind in relation to high altitude physiology and medicine and for this opportunity I am most grateful to NIH.

If you did not receive issues of NIHAA *Update* and would like a copy, please notify the editor at 9101 Old Georgetown Rd., Bethesda, MD 20814.

Dr. Monge (r, foreground) explains an experiment to a volunteer from the native population of Cerro de Pasco, Peru, while medical technologist Sandra Rosen (l) and Dr. Harvey Klein, then the assistant chief of the CC Blood Bank, supervise. The photographs on this page were taken in 1980 when NIH scientists went to the Peruvian Andes to work with Dr. Monge.

Dr. Monge checks blood pressure of a woman who came in for treatment.

Dr. Monge conducts a pulmonary function test.

Festival (continued from p. 1)

outstanding research projects at a 1-day intellectual feast of symposia, posters and workshops."

"We established NIH Research Day in 1986 in hopes of increasing contact and collaboration among scientists," explained Dr. Abner L. Notkins, director of NIDR's intramural research program and founder of Research Day. "The event has far exceeded our original expectations."

Five years later, a lot has changed—most changes demanded and determined by growth. Several institutes, centers and divisions did not exist back then.

In May 1986, NIADDK had just split, producing NIDDK and the National Institute of Arthritis and Musculoskeletal and Skin Diseases, a 6-month-old infant institute. The Division of Research Resources and the Division of Research Services had 4 years before they would be united, gaining center status. The National Institute on Deafness and Other Communication Disorders was 2 years away, a mere sparkle in NINCDS's eye.

In 1986, more than 3,000 attended the Research Day poster session that was held in the Visitor Information Center in the Clinical Center. "The response by the intramural community to the first Research Day was overwhelming," Kupfer said of the fledgling event. "An estimated 5,000 people participated in the events with two symposia, 20 workshops and 95 posters."

This year the festival included four symposia, 33 workshops and an added poster session. For the second year in a row, two tents were needed to accommodate the largest number of presenters ever.

"The sheer size of the operation has made it difficult for investigators to know each other or the scope of the work of the intramural programs," said Kupfer, comparing the single bacteriological laboratory in Staten Island, N.Y., that was NIH in 1887 to the 63-building, 503-acre Bethesda campus that is 1991's NIH. "In fact, many investigators in the same institute, indeed within the same building, have never met."

The annual Research Festival (the event achieved "festival" status last year with the addition of a 2-day "in-tent" technical equipment display sponsored by the Technical Sales Association) has become many things in its short life. For many NIH'ers and former NIH'ers, it is reunion time.

In another custom begun last year, the festival began with the NIH Alumni Symposium, a salute to selected former NIH researchers.

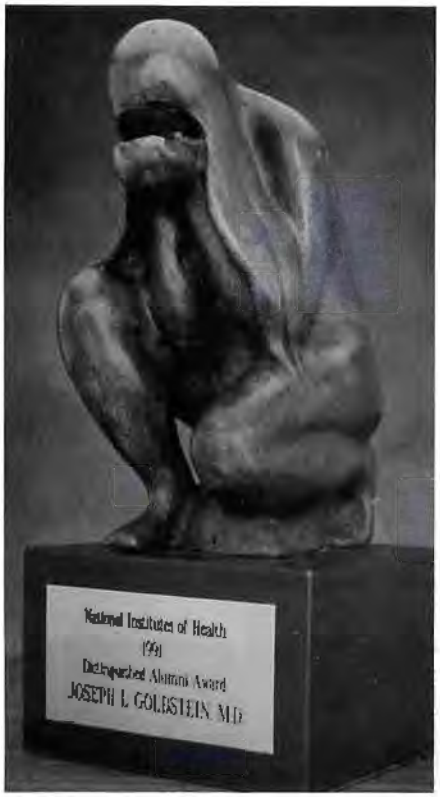
According to Kupfer, "NIH's individual intramural programs have trained approximately 50,000 doctoral scientists who have since joined the staffs of virtually all the world's medical research centers."

As Dr. Steven Paul, director of NIMH's intramural research program and chair of the 1991 festival organizing committee, observed, "The Alumni Day program was an impressive display of work from some of our most distinguished alumni, exemplifying how important and instrumental NIH has been in training the premier scientists in the country."

This year's alumni symposium, "Cholesterol: A Mystery Unraveled," and its accompanying Distinguished Alumnus Award, honored 1985 Nobel laureate Dr. Joseph L. Goldstein of the University of Texas Southwestern Medical School. In 1968, Goldstein came to NHLBI's Laboratory of Biochemical Genetics headed by Nobel laureate Dr. Marshall Nirenberg, who received the prize in physiology or medicine that year.

"Like most physicians in this stage in their career, I had very little previous research experience and my concept of what constitutes biological research was nebulous at best," Goldstein said, accepting the award from NHLBI director Dr. Claude Lenfant. "Although I was scientifically wet behind the ears, I still had an appetite for research that was ready for stimulation." Goldstein said two crucial events shaped his 2-year stint at NIH: One was Nirenberg's willingness to act as preceptor to a young physician/novice researcher in the Laboratory of Biochemical Genetics. "That opportunity," he recalled, "opened my eyes to the excitement of science and there I acquired scientific skills, learned the importance of originality and quality and style, experienced the thrill of discovery and first appreciated the power of the molecular approach to human disease."

The second breakthrough in Goldstein's NIH experience involved his



The NIH Distinguished Alumni Award is a replica of the statue "Healing Waters" by Azriel Awret, which is located near the escalator on the first floor of the Bldg. 10 clinic. It will be awarded each year to distinguished alumni of NIH.

clinical work here, in the course of treating a pediatric patient of Dr. Donald Fredrickson (then National Heart Institute director and chief of the Molecular Diseases Branch). The 6-year-old girl had been diagnosed with what is now known as homozygous familial hypercholesterolemia (FHC), a genetic lipid disorder that makes heart attacks in childhood common among its young patients.

During this time, Goldstein began to work with an arthritis institute clinical associate, Dr. Michael Brown, to search for the genetic defect in FHC. In 1985, Goldstein and Brown, an original NIH collaboration, shared the Nobel Prize in Physiology or Medicine for their research on reduction of blood cholesterol, work Goldstein said was financially supported mainly by NHLBI.

"Believe it or not," Goldstein said, "after 23 years, we're still working together and we're having just as much fun in research now as we did in the early days. When I look back in my scientific development at NIH, it's the jewel in the crown of all the institutions that shaped my research career."

Featuring medical doctors from UCLA to Harvard to Washington University who had once done postdoctoral training in basic science at NIH, the alumni symposium filled the 500-seat Masur Auditorium.

"I am extremely pleased to be here," said Dr. Alfred Gilman of the University of Texas Health Science Center, a 7-year NIGMS grantee who trained at NIH from 1969 to 1971 and gave the first lecture of the symposium. "I'm particularly glad to have the opportunity to acknowledge my great debt to the heart institute, to the [NIGMS] pharmacology research associate program and particularly to Dr. Nirenberg in whose lab I worked."

Notkins emphasized that besides the enjoyment of gathering with former associates, the addition of alumni events has added an important new dimension to the festival. "It links those of us who are here now with colleagues who were at NIH in the past," he said. "It provides a sense of history and continuity."

NIH'ers also see the festival as a sort of "premiere night" for science. Paul explained, "The research festival embodies the scientific vigor of NIH. The whole purpose is to have some very famous scientists interacting with our younger scientists and to establish many mutually beneficial collaborations."

The Division of Computer Research and Technology took full advantage of the forum presented by the festival. "The research festival gave us a wonderful opportunity to alert the NIH community to the new hardware, software and networking technologies that can contribute so much to the research enterprise," said DCRT director Dr. David Rodbard, whose division presented more than 20 posters.

"The poster session is a very important part of NIH Research Day," agreed Dr. Alan Schechter, chief of NIDDK's Laboratory of Chemical Biology and chair of Research Day '89. "It's where the most exciting collaborative science begins and where crucial one-on-one contacts are made."

One notable improvement in the way the festival was organized this year, Paul said, was the emphasis placed on encouraging and showcasing NIH's women scientists. "We tried to get a broader representation across campus," he said. "There are not that many senior women scientists at NIH. We tried to include more women in the sessions this year."

Dr. Monique Dubois-Dalcq, chief of NINDS's Laboratory of Viral and Molecular Pathogenesis and member of the festival organizing committee, applauded

(continued on p. 10)

Participants in NHLBI Alumni Day symposium are (front row, from l), Dr. Philip Leder, Harvard Medical School; Dr. Alfred Gilman, University of Texas Health Science Center; Dr. Ronald Kaback, UCLA; and Dr. Joseph Goldstein, University of Texas Southwestern Medical School; (back row, from l) Dr. Claude Lenfant, NHLBI director; Dr. William Catterall, University of Washington Medical School; Dr. Philip Majerus, Washington University School of Medicine; and Dr. Edward Korn, director of intramural research, NHLBI.

(continued from p. 9)

the decision to encourage NIH's women scientists to participate and suggests that yearly reminders of the decision be handed down to posterity's festival planners.

"I think we're going to have to repeatedly reinforce it every year," she said, noting that the new planning strategy was the brainchild of a group of 20-25 senior women scientists at NIH, who had observed past festivals and found too few women researchers represented in symposia and workshops. The group then wrote a letter to the next year's festival organizing committee, asking that an effort be made to increase participation by women scientists of renown. The 1991 festival signaled NIH's response to the letter.

Dubois-Dalcq said the idea was a necessary first attempt at solving the problem and that it was met with an enthusiastic response by the committee. Although there are plenty of women who hold postdoctoral and staff fellow positions at NIH, she continued, there are much fewer in the section chief category and only a handful who are laboratory chiefs.

"I see the yearly NIH festival as an opportunity to increase the visibility of women who are independent investigators and often leading scientists in a particular field," Dubois-Dalcq said. "This year's organizing committee made an effort to have such women scientists—independent of their tenure status—organize or speak in workshops, which turned out to be very successful. There is still room for NIH to improve in this area, but this year's festival shows that we are indeed trying."

This year's annual Research Festival represented NIH's increasing efforts to include more women in its research community and to highlight scientific work by women.

Dr. Ofelia Olivero, who has presented a poster every year since she came to NCI's Division of Cancer Etiology from Argentina in 1987, said the poster session has a unique function for NIH newcomers and veterans alike. "What it does is improve interaction among scientists," she said. "It is very hard to know what everyone is doing in a place this large."

Dr. Grace Ault, a staff fellow since June in NINDS's Laboratory of Experimental Neuropathy, concurred. "The poster sessions are the most helpful part of the festival. I've been able to meet a lot of people and really just explore."

Likewise, Bob Bare of the Laboratory of Comparative Carcinogenesis at NCI's Frederick Cancer Research and Development Center and a 24-year NIH veteran, was enjoying his first research festival. "You really get an idea of what projects other people are working on," he said, adding that, but for such an annual activity, some NIH'ers in Frederick and other remote NIH facilities could be completely isolated from the rest of the agency.

Another change that has been considered by festival planning officials is having the event every other year instead of annually. "Certainly there's a lot of repetition," acknowledged Paul, "but I like the idea of doing it every year."

Schechter agreed, "There's enough good science here to have something every year. It is a great deal of work, but the final product is worth every effort."

Paul said NIH'ers who have suggestions or comments about the festival should send them to him; he will see that the remarks get into the hands of next year's committee. Regardless of the numerous evaluations and post-mortems to which the 1991 festival will doubtlessly be subjected, the tradition will thrive if its foundation is any indication.

Dr. Griffin Rodgers of NIDDK's Laboratory of Chemical Biology explains his poster on betathalassemia carriers at the first poster session of NIH's annual Research Festival.

"Despite the changes and expansions," Kupfer said, "the goals remain the same: to provide abundant opportunities for NIH scientists to interact with each other to discuss science with investigators they otherwise might not meet and to establish new collaborations.

"There is perhaps no other research institution or university in the world—indeed there are few national or international scientific meetings—that can present the breadth and depth of science we enjoy at the NIH Research Festival."

"It's a spiritual kind of thing," Paul concluded. "Besides being very stimulating scientifically, it's a fun way of celebrating science."

In 1992, Research Festival is scheduled for Sept. 21 and 22. The National Institute of Allergy and Infectious Diseases will honor its distinguished alumni. The National Heart, Lung, and Blood Institute will coordinate the workshops, poster sessions, and symposia for Research Festival '92.

News From and About NIHAA Members

Dr. Mark Bolander, senior staff fellow in the Laboratory of Developmental Biology, NIDR, and former chief of the Orthopedic Research Unit, NIAMS, is now a consultant in the department of orthopedic surgery at the Mayo Clinic. His wife Judy used to be a staff nurse in the Alcohol Rehabilitation Unit in the Clinical Center. He reports that they are now surrounded by corn fields, instead of concrete and asphalt, but they miss their friends in Bethesda. Judy is improving her golf game before the snow arrives and he is applying for research grants involved in fracture healing, clinical practice and surgery.

Dr. George P. Canellos, who was with NCI from 1963 to 1965 and then from 1967 to 1975, and is now chief of clinical oncology at the Dana-Farber Cancer Institute in Boston and W. A. Rosenberg professor of medicine, Harvard Medical School, was elected an honorary fellow in the Royal College of Physicians of Great Britain.

Dr. Paul J. Davis, who was a clinical associate and senior staff associate at the Gerontology Research Center, NICHD (now NIA), has left Buffalo, where he was chief of the medical service at the VA Medical Center and professor and vice-chairman, department of medicine, State University of New York at Buffalo School of Medicine and Biomedical Sciences. He has been named chief of medicine at Albany Medical College of Union University, Albany, N.Y.

Dr. Gideon Goldstein, a visiting scientist in the Laboratory of Immunology, NIAID, 1967-1968, is currently executive vice president and CEO of the Immunobiology Research Institute. Recently he was the co-recipient of the 1991 Discoverers Award, presented annually by the Pharmaceutical Manufacturers Association. He was cited for "developing the monoclonal antibody OKT3 ... which is widely used in organ transplant recipients for the treatment of acute rejection of kidney transplants." This research greatly improved the success rate of kidney transplants.

Dr. Joseph S. Handler, who was a section chief in the Laboratory of Kidney and Electrolyte Metabolism, NHLBI, from 1960 to 1989, writes that he is now professor of medicine and director of nephrology at Johns Hopkins University School of Medicine.

Dr. Chester J. Herman, a former NCI section chief in quantitative cytology from 1970 to 1979, is currently professor of pathology at Emory University School of Medicine, associate director of the Winship Cancer Center and director of anatomic pathology at Grady Memorial Hospital in Atlanta, Ga.

Dr. Walter E. Heston, from 1940 to 1975 at NCI as chief of the Laboratory of Biology, writes that he was initially "employed as a NCI research fellow stationed at the Jackson Memorial Laboratory, Bar Harbor, Maine, from July 1, 1938, to June 1, 1940." He is now retired and living in Fort Myers, Fla.

James G. Hill retired on June 3, 1991, as chief, Office of Science Policy and Analysis, NICHD. He is currently the Director, Program Development, Science Directorate, American Psychological Association in Washington, D.C. He writes: "I would enjoy hearing from former colleagues on (202) 955-7653, especially in regard to moving forward the role of behavior scientists in health research, a topic of increasing importance in the light of the proposed reorganization which would bring the research from NIMH, NIDA, and NIAAA into the NIH family."

Dr. Ze Huang, who was a visiting fellow in the Developmental Endocrinology Branch, NICHD, has left NIH for the department of physiology in the School of Medicine at the University of Maryland and writes: "I spent a very precious time at NIH. I miss NIH all the time and I want to keep in touch."

Dr. Edwin M. Jacobs, who from 1976 to 1984 was the associate and acting chief of the Clinical Investigations Branch, DCT, NCI, since 1985 has been clinical professor of medicine at the University of California, San Francisco, and associate executive officer of the Northern California Oncology Group.

(continued on p. 12)

(continued from p. 11)

Dr. Georgeanna (Seegar) Jones, who had a fellowship at NIH in 1938-39, is professor of obstetrics-gynecology at Eastern Virginia Medical School. With her husband Dr. Howard Jones of the Jones Institute for Reproductive Medicine in Norfolk, Va., she was quoted in the *Time* magazine of Sept. 30, 1991, in a cover story on "Curing Infertility." Her work with her husband produced the first in vitro fertilization baby in the United States.

Dr. Laurence J. Marton, a clinical associate at NCI's Baltimore Cancer Research Center from 1971 to 1973, when he shifted his training to clinical pathology, has recently been named dean of the University of Wisconsin Medical School. He will assume his duties next spring. He currently chairs, at the University of California, San Francisco, the department of laboratory medicine. A clinical pathologist, Marton conducts research within UCSF's Brain Tumor Research Center on biochemical mechanisms for brain cancer drug therapies.

Charles Miller II, who was in the Division of Financial Management, OD, from 1960 to 1967, and retired 2½ years ago as executive officer of the National Academy of Sciences Institute of Medicine, was profiled in the October 1991 issue of *Washingtonian* magazine. He has a second career as a volunteer working at a variety of activities ranging from nursing home ombudsman to teaching English to Indochinese refugees.

Dr. Paul Parkman, who was on campus from 1963 until his retirement in 1990 as director of the Food and Drug Administration's Center for Biologics Evaluation and Research, was honored in Canton, N.Y., on Sept. 28 as part of St. Lawrence University's 1991 Homecoming Weekend. He is a graduate of the school and he received the Sol Feinstone Alumni Award in recognition of his medical work, especially as the co-developer with Harry Meyer Jr., of the rubella vaecine.

Dr. Philip Y. Paterson, a scientist in the Laboratory of Immunology, NIAID, based at the NYU School of Medicine from 1957 to 1960, became chairman and professor emeritus of microbiology and neurobiology, Northwestern University, in September 1990 and moved to Eagle River, WI. He writes that he "is in transition, not retirement, writing fiction (short stories: a novel for middle graders in progress) and running, cross-country skiing, snowshoeing, back packing, canoeing, violin playing and reading yards of books that have waited decades for attention."

Barbara A. Rolling, a clinical nurse expert at the Clinical Center from 1968 to 1980, recently received the PHS Outstanding Service Medal for her "noteworthy and high quality contributions toward improving care for the elderly through important projects initiated to advance training and education in geriatric medi-

In an historic moment, three former NIH directors meet at the Sept. 22 NHLBI reception. They are (from l) Dr. Robert Q. Marston, Dr. James A. Shannon and Dr. Robert S. Stone.

cine and dentistry." Rolling is the project coordinator for the Grants for Faculty Training Projects in Geriatric Medicine and Dentistry program, which is funded by the Bureau of Health Professions, Health Resources and Services Administration.

Dr. Frank R. Sharp, who was an NIMH research associate from 1973 to 1976, is now professor of neurology at the University of California, San Francisco, and chief of neurology at the San Francisco VA Medical Center. He writes that he "has recently shown that the induction of the c-fos protooncogene can be used to map activated neurons in the brain and that induction of the heat shock genes can be used to map injured neurons in the brain."

Dr. Maxine Singer, from 1956 to 1988 affiliated with both NIAMD and NCI, where she now is scientist emeritus, is president of the Carnegie Institution of Washington. She presented the NIA's fifth annual Florence Mahoney Lecture on Aging entitled "Jumping Genes and Their Potential for Genetic Damage" on Sept. 25.

Dr. Milton W. Skolaut, at the Clinical Center from 1952 to 1969, where he was director of the pharmacy and central supply, retired from the PHS in 1969 and became director of the department of pharmacy at Duke University Hospital in Durham, N.C. He retired from this position in 1987. Since then he and his wife Rheta have travelled extensively in Canada and the United States in a 37-foot motor home. In addition, he and his wife do short assignments for Project Hope and have been to many parts of the world. The next trip will take them to the Soviet Union in the area around the Aral Sea.

Dr. William S. Sly, who was a clinical associate at NIH from 1959 to 1963 working in the laboratories of Drs. Marshall Nirenberg and Earl Stadtman, is now Alice A. Doisy professor and chairman of the Edward A. Doisy department of biochemistry and molecular biology at St. Louis University School of Medicine. He recently received one of two $40,000 Senior Laureate Awards from the Passano Foundation. Sly was "honored for his discovery of the pathway by which lysosomal enzymes are targeted to their specific location within lysosomes. He found cellular receptors that bind a sugar molecule on the surface of these enzymes and direct the enzymes to lysosomes. This work has broad relevance to the study of intracellular transport and human enzyme storage diseases."

Dr. Solomon H. Snyder, who worked with his "mentor" Dr. Julius Axelrod in the Laboratory of Clinical Science, NIMH, from 1963 to 1965, and who is now director of the department of neuroscience, Johns Hopkins School of Medicine, has won the largest monetary prize in American science—the $331,000 second annual Bower Award in science. The award, which is the result of a $7.5 million bequest by Henry Bower, a Philadelphia chemical manufacturer, is administered by the Franklin Institute. He was cited for his work on how drugs affect the brain and their relationship to understanding addiction. He was instrumental in the discovery of enkephalins and opiate receptors in the brain.

Dr. Leo Stolbach, who was a clinical associate and a senior investigator at NCI in endocrinology from 1960 to 1963, writes: "As of 11/1/91 I will be assuming the position of chief of medical oncology at St. Vincent Hospital in Worcester, MA. It is a large teaching hospital affiliated with University of Massachusetts School of Medicine. I am looking forward to the opportunity of combining clinical care, clinical research, teaching and application of behavioral medicine techniques to patients with cancer."

Elaine Hamilton Vreenegoor, retired from DRS' Medical Arts and Photography Branch, where she worked from 1959 to 1989, writes that she is now serving as president of the board of directors, Maryland Federation of Art. Its goals are to encourage the promotion, exhibition and the appreciation of the visual arts, all media, in the state of Maryland and surrounding metropolitan area.

Dr. John H. Weisburger, who was at NCI in the Etiology Division, 1949-1972, and who is now a senior member emeritus at the American Health Foundation in Valhalla, NY, writes that he is organizing a teaching seminar on mechanisms in nutrition and cancer to be held in Venice, Italy, on Oct. 12-14, 1992.

(continued on p. 14)

(continued from p. 13)

Dr. Dawn Butler Willis, a chemist in the Kidney and Electrolyte Metabolism Laboratory, 1957-58, writes, "This early experience in research inspired me to earn a Ph.D. degree in microbiology from the University of Tennessee in 1968. I then spent 20 years as a faculty member in the department of virology and molecular biology of St. Jude Children's Research Hospital in Memphis, pausing to take a sabbatical in 1981 as an American Cancer Society-Eleanor Roosevelt International Cancer research fellow in Strasbourg, France. In 1988, after the move of its national headquarters from New York City to Atlanta, I joined the American Cancer Society as a scientific program director."

Dr. Bernhard Witkop completed 40 years at NIH in 1990 and received a gold pin and a certificate from NIDDK. In 1991 he arranged the Fourth Paul Ehrlich Lecture by Isabella Karle on "Imaging in Theory and Praxis: From Paul Ehrlich Receptors to Modern Roentgen Analysis."

Dr. James B. Wyngaarden, former NIH director and now foreign secretary at the National Academy of Sciences, received the 1991 George M. Kobler Medal from the Association of American Physicians at its annual meeting in Seattle in May. In the presentation speech he was lauded for "a remarkable array of achievements in all phases of academic and public life — in research, in education, in science policy, in writing and editing, and in major administrative leadership locally at Duke, nationally at NIH, and now internationally."

Dr. K. Lemone Yielding, a senior investigator for NIAMD, 1955-64, is now vice president for research and dean of the graduate school at the University of Texas Medical Branch in Galveston.

Dr. James A. Shannon (l) talks with Dr. and Mrs. Joe R. Held at the Sept. 22 reception. Held is president of the NIH Alumni Association.

President's Page

What is Happening with The Alumni Association?

Glaxo Inc., the Sandoz Research Institute and the Upjohn Co. have responded to our request for financial assistance to make possible the continuation of *NIHAA Update*. We are deeply grateful to these three pharmaceutical firms for their generosity and we want to thank Drs. Charles Sanders, Robert Levy, and Theodore Cooper who helped make this possible. We are completely dependent on the dues paid by our members, and donations such as these. Our organization receives no funds from the NIH.

If you have not yet responded to the dues renewal notices that were recently sent out, please do so because dues are an important part of our income. We are now looking at ways to expand our membership, and to build a bigger financial base to support an increasing variety of activities. We would welcome any suggestions you might have about ways that you feel the NIHAA can be of better service to its members, the NIH, and the biomedical community in general.

The NIHAA had a good turnout at the reception that initiated the NIH Alumni Day and Research Festival '91 activities. It was an opportunity to see many friends from the past. We were fortunate in having three former NIH directors with us: Drs. James Shannon, Robert Marston, and Robert Stone. We want to thank the National Heart, Lung, and Blood Institute, which was the lead institute for this year's festivities, for the outstanding scientific and social events that it planned. NHLBI alumnus and Nobel laureate Dr. Joseph L. Goldstein of the University of Texas was the winner of this year's NIH Distinguished Alumnus Award. Special thanks go to Dr. Claude Lenfant, director of NHLBI, and his staff, especially to Dr. Edward Korn and Gerri Wolfle, who

worked efficiently to organize many of the activities. We are looking forward to participating in next year's Alumni Day and Research Festival.

On Nov. 23, we will be celebrating the 50th anniversary of NIH's move to Bethesda. On Jan. 28, 1992, we shall be having an annual meeting, when additional members will be elected to the board of directors. In case of inclement weather, Feb. 4, 1992, will be an alternate date. Cal Baldwin is chairing our nominations committee. Anyone having suggestion for candidates can send them to the NIHAA office.

We recently changed our bylaws because of current conflict-of-interest rules involving government employees. Our thanks go to Drs. Edwin D. Becker, Philip S. Chen, Sheldon G. Cohen, Kenneth A. Collins, Michael Fordis, Irwin J. Kopin, Abner L. Notkins, Lois A. Salzman, Alan N. Schechter, and Federico Welsch, who had been serving as board members until the change in our bylaws precluded the participation of current NIH employees. Their service was valuable during the association's formative period. Our new bylaws now permit the organization of an associate members council, which will be made up entirely of current NIH employees. I hope these former board members will be among the associate members on this new council so the NIHAA can continue to receive their input.

NIHAA Update continues to be our principal means of communication to our membership. In preparing this publication Harriet Greenwald, the editor, depends on the advice of the newsletter editorial advisory committee. We thank Bobbi P. Bennett, Dr. Sheldon G. Cohen, Dr. Peter G. Condliffe, and Storm Whaley, who have just completed terms of service and welcome Dr. Jerome G. Green, Colleen Henrichsen, Dr. John L. Parascandola, Dr. Philip Schambra, Elizabeth H. Singer, and Dr. Richard G. Wyatt to the committee.

Attention

NIHAA wants to hear from its members. Please type or print your note for a future issue and mail it to *Update*.

Name

Home address

Home phone

News, include dates/position at NIH and photo if possible.

Suggestions for newsletter

Suggestions for NIHAA

Science Research Updates

GENE-ENGINEERED BACTERIAL TOXIN KILLS AIDS-INFECTED CELLS IN LABORATORY TESTS

A bacterial toxin genetically engineered to attack HIV-infected cells successfully killed target cells in culture, leaving healthy cells unharmed, suggesting that similarly altered toxins could have therapeutic potential for AIDS.

The human immunodeficiency virus (HIV), which causes AIDS, attacks certain cells critical to proper functioning of the immune system. The cells studied in this research were T cells, which are the primary target of HIV, and monocytes, which serve as reservoirs of infection and allow the virus to spread throughout the body. Infection by HIV activates the cells, triggering them to produce a molecule on their surface called the interleukin-2 (IL-2) receptor. (Interleukins are substances secreted by immune cells to help regulate immune responses.) The receptor is not found on unactivated cells.

In order to take advantage of this difference between HIV-infected and uninfected cells, the investigators exposed the cells to diphtheria toxin altered so that it attacks only cells bearing the IL-2 receptor. The resulting toxin selectively destroyed HIV-infected T cells and monocytes in culture while sparing those that did not have the receptor.

Drs. Robert Finberg of the Dana-Farber Cancer Institute in Boston, Sharon Wahl of NIDR, and Jean Nichols of Seragen Inc. in Hopkinton, Mass., led this research effort. The investigators believe the IL-2 toxin may have potential as a treatment for individuals infected with HIV. Similarly engineered toxins have shown promising antitumor effects in cases of leukemia and lymphoma in which other treatments had lost effectiveness. While it would not be a cure for AIDS, treatment could decrease the number of infected cells, thereby reducing viral replication and the total amount of virus in the body.

GENE FOR FRAGILE X SYNDROME PINPOINTED BY SCIENTISTS

Scientists supported by NCHGR and NICHD have ended a long search for the gene that is responsible for fragile X syndrome, the most common inherited form of mental retardation. The discovery is a major step towards explaining what scientists have called the "bizarre" genetics of fragile X.

One of the key mysteries of fragile X inheritance is why its pattern of occurrence in carriers of the mutation is not consistent with that of other X-linked genetic disorders. Twenty percent of male carriers of the mutation, for example, do not develop the disorder, but they can transmit it through their daughters (some of whom may also be affected) to their grandchildren.

The identification of the gene—designated FMR-1—will provide scientists with a means to answer questions that remain about fragile X syndrome inheritance, such as whether genetic imprinting—a process in which gene expression is influenced by the sex of the parent from whom the genes are inherited—may play a role in fragile X syndrome. FMR-1 is adjacent to a region that is altered in people with fragile X syndrome in a manner consistent with gene imprinting.

Studying the gene may also shed light on the abnormality that gives the syndrome its name: a thread-like, and therefore fragile, stretch in the X chromosome. A fragment of this X chromosome has been found to vary in length among people affected with the disease. A striking feature of FMR-1 is that the protein it encodes contains a stretch in which the same amino acid is repeated 30 times, a possible clue to these puzzling features.

FMR-1 is expressed in the brain, but the function of its protein is as yet unknown. Knowledge of the gene and its protein will not only help scientists understand the disease, but should also provide an important diagnostic tool and eventually lead to ways to treat the syndrome. Grantees Dr. Stephen T. Warren at Emory University in Atlanta and Dr. Thomas Caskey at the Howard Hughes Medical Institute, Baylor College of Medicine, Houston, reported these findings with colleagues at these centers and scientists in Rotterdam and Leiden, The Netherlands.

BRAIN RESEARCHERS PREVENT ALZHEIMER'S-LIKE LESIONS IN ANIMALS

Researchers have used a new live animal model of Alzheimer's disease to show that excessive accumulation of the brain protein beta amyloid is a cause, not a consequence, of the nerve degeneration seen in the disease and that another protein can protect against the beta amyloid-caused degeneration.

Abnormal accumulations of beta amyloid in the brain are a hallmark of Alzheimer's disease (AD), but scientists have been unable to determine whether amyloid deposits result from nerve degeneration, or cause loss of function. NIA- and NINDS-supported scientists Dr. Bruce Yankner, Children's Hospital, Boston, and Dr. Neil Kowall, Massachusetts General Hospital, and colleagues, injected beta amyloid into the brains of live rats. The protein caused nerve cell death similar to that seen in patients with AD.

In an attempt to thwart the destructive

effects of beta amyloid on brain cells, Yankner's team injected substance P directly into the brain, and in another study, into the abdomen, before injecting beta amyloid into the brain. Substance P is one of a family of neuropeptides called tachykinins, natural brain proteins similar in structure to a portion of beta amyloid. Substance P, which is significantly depleted in the cerebral cortex of patients with AD, successfully inhibited nerve cell death in the rats when injected either into the brain or systemically within 24 hours after injection of beta amyloid.

The development of an animal model that can mimic the degenerative changes characteristic of AD is an invaluable tool for learning more about this disease and for developing and testing potential treatments, such as substance P, that may one day prevent or reverse the functional loss caused by AD in human patients.

TREATING SYSTOLIC HYPERTENSION IN OLDER PEOPLE CAN PREVENT STROKES

A 5-year multicenter clinical trial has demonstrated that drug treatment for isolated systolic hypertension (ISH), a common condition in older people, can help prevent strokes.

Isolated systolic hypertension means that systolic pressure, which represents blood pressure during heart contraction and is the upper number in the blood pressure ratio, is over 160, while diastolic blood pressure, which represents pressure when the heart is filling with blood, is normal (less than 90). While previous studies had demonstrated the value of treatment for diastolic hypertension in reducing the risk of stroke and heart disease, none had examined whether treatment for ISH could have similar benefits.

The Systolic Hypertension in the Elderly Program (SHEP), funded by NIA and NHLBI, was designed to test whether drug treatment to lower elevated systolic blood pressure can reduce the number of strokes, heart attacks, and deaths from cardiovascular disease in people age 60 and older. Half of 4,736 persons enrolled in the study received treatment for their hypertension, while half received a placebo.

The patients received the lowest doses of antihypertensive drugs necessary to achieve a target systolic pressure, beginning with the diuretic chlorthalidone, and progressing in a stepped care program to a beta adrenergic blocking drug if necessary, always using the lowest effective dose. This regimen reduced the incidence of total stroke by 36 percent, and reduced the incidence of coronary heart disease by 27 percent. According to the researchers, the treatment regimen is uncomplicated, inexpensive and causes very few side effects.

More than 3 million Americans over age 60 have elevated systolic hypertension. SHEP participants who were treated had an 11 percent lower rate of hospital and nursing home admissions than those who were not treated. Nationwide, treating ISH in older people could potentially prevent up to 73,000 hospital and nursing home admissions a year.

This material was compiled by Charlotte Armstrong, Office of Communications, OD.

NHLBI director Dr. Claude Lenfant (l) and then-NIA director Dr. T. Franklin Williams fielded questions at a press conference at NIH announcing the SHEP findings.

Town Meeting *(continued from p. 1)*

Healy spent the first half-hour of the well-received program placing the intramural side of NIH, which accounts for about 10-15 percent of NIH's nearly $9 billion budget, in social, political and economic context.

In brief, she said biomedical science in America is "an endangered enterprise" attracting fewer students and fewer dollars as its workforce ages and becomes less robust. Those youngsters who do elect careers in biomedical science tend to have so many debts that clinical medicine, not basic research, attracts them most. Lastly, America's edge in technology is being ceded to foreign nations, and with it is going a decided economic advantage.

"NIH must become a national priority," she said, "and the intramural program must be the flagship of biomedical research in the United States. It can and must be better. It can and must be happier."

Facing a panel that included Healy and most of her top staff, Dr. Enrico Cabib of NIDDK opened the questioning with a lament that was repeated by others: Why are there so many administrative hurdles placed in front of intramural scientists these days? And further, why is the nature of those obstacles so belittling to scientists?

"We are treated like naughty children who are suspected of telling lies," he complained. "I have been here for 24 years and everything still looks nice on the surface, the roses still bloom. But NIH is showing signs of rot at the core. My question is, What are you planning to do?"

The packed hall erupted in loud and sustained applause.

"We share your frustration," said Healy, who explained that rules are part of the price we pay for working in the federal government. "Procurement regulations are imposed on us externally," she said. "You can't shoot the messenger—these people (administrators) have to obey the law. I'd have to be blind, deaf and dumb not to know that procurement is a big problem on this campus. And I know that your frustration titer is high."

Healy makes a point at the session, during which she endorsed a graduate university at NIH and a possible new NIH campus in exurban Maryland.

Healy said that big agencies with big budgets draw big attention from Congress. "Once you break the billion-dollar barrier, there is extraordinary scrutiny of every penny you spend," she said. DELPRO (NIH's automated procurement system) needs to be more efficient, Healy acknowledged, adding that she will relentlessly "see what we can do to come up with solutions. Some problems can be changed only by changes in the law. I don't want to see 2,000 scientists being led away from here in handcuffs."

Before entertaining the second question, Healy quipped, "Let's get the complaints on the table, although don't applaud every one."

She warned against NIH'ers projecting themselves as privileged people caught up in personal hassles and red tape. "The public is not impressed by relieving federal employees of their personal difficulties. The real stakes are the health of all Americans."

Healy asked Jack Mahoney, NIH associate director for administration, to follow up her answer to Cabib. "There is no challenge to the integrity of our scientists intended in these regulations," he assured, adding that NIH's Division of Procurement—the locus of many procurement hardships—is currently undergoing review and improvement.

Dr. Joost Oppenheim of NCI, who spent 20 years on campus before taking a job at the Frederick Cancer Research and Development Center, brought up two issues: crowded conditions in laboratories force scientists "to sacrifice comfort for the opportunity to work here," and satellite outposts (he labeled Frederick, Md., "Siberia") of NIH preclude the close interaction of potential colleagues to a point that is "really very damaging."

"That brings up a strategic question," answered Healy. "Should the intramural program grow or stay the same? In my view, a no-growth scenario is a declining-quality scenario. It would result in doing yesterday's, instead of today's, science.

"It would be tragic if we closed down the intramural program," she said, "because it is the jewel in the crown of NIH."

She picked three areas where intramural NIH is poised to take off: structural biology, the human genome project, and gene therapy.

How to accommodate a booming intramural program? "The site plan of the campus is being revisited," she reported. "We haven't done that in about 20 years. Norm Mansfield (NIH associate director for research services) is looking into the plan, and is overseeing renovation of the Clinical Center and construction of the COB (Consolidated Office Bldg., planned for some 3,000 workers currently in rental space, to be built at the south end of campus near NLM by the late 1990's). We really don't have any room left on the campus to grow. So we

are moving toward the point of considering—just considering mind you, not planning—a substantial campus to be known as 'NIH North' and this (the Bethesda campus) would be 'NIH South.' The north campus would not necessarily be a clone of NIH, but would be a supercritical mass of facilities. If we plan it well, everyone will want to be there."

NCI scientist James Mulshine posed the next question: "Is PHS too large to deal with the specific (hiring) needs of NIH?" New recruits face a hostile hiring system, he said, one that restricts their opportunities to earn bonus money.

Healy answered, "I've read briefing books on NIH from here to the front door and I confess I flunk when it comes to understanding the complicated personnel system at NIH. You've got Civil Service, Commissioned Corps, SES, and now SBRS. It's a mind-bender." She referred the question to NIH personnel chief Stephen Benowitz, but offered, "An ideal NIH bill would simplify personnel regulations here."

Dr. Stephen Epstein of NHLBI said that, in his 30 years at NIH, there has been an "overwhelming" increase in administrative burdens. Furthermore, many administrators lack the gumption to push the bounds of their authority when it comes to meeting scientists' needs, he said. "We need an aggressive interpretation of the rules—one such as a good lawyer would give you—that would result in helping scientists, not in making administrators' lives easier."

Healy again offered sympathy, explaining that NIH has but one lawyer to deal with such questions. Using a medical analogy, she said that NIH's attorney "has to be the cardiologist, neurosurgeon, and diagnostic radiologist, all rolled into one. A top priority is expanding our legal expertise," she said. "NIH is now in the big-time, and we need a more solid corporate/legal base. We have to provide better legal information to our family members."

NIMH's Dr. Jacqueline Crawley decried both the careworn and unappealing surroundings facing potential recruits in many laboratories and the lag time in hiring foreign postdoctoral scientists at NIH.

Healy agreed. "The infrastructure here seems to be at the bottom of the food chain. We need to work hard to improve it." She also mentioned the possibility of a loan-forgiveness program such as the one in place for AIDS researchers at NIAID as an incentive for postdocs to come to NIH.

Crawley's observations drew two more comments: Dr. Philip S. Chen, Jr., NIH associate director for intramural affairs, said there are ways to speed the paperwork associated with hiring foreign postdocs, of whom there are many more than U.S. postdocs at NIH, and Dr. Charles McCarthy, director of NIH's Office for Protection from Research Risks, acknowledged both that surroundings are, in many cases, poor, and that regulations governing research are "unnecessarily complex and need simplification."

Discussion moderator Dr. Carl Kupfer, who in addition to heading NEI is also acting NIH deputy director for intramural research, read a handwritten query: "Why does NIH permit the need for AAALAC (American Association for the Accreditation of Laboratory Animal Care) accreditation to result in delays of up to 1-2 years in other renovation projects?"

"You can't overestimate the need for AAALAC accreditation," said Healy. "It was a shock to me when I first came here to learn that NIH's intramural program is not AAALAC-accredited. That's like not having adequate fire protection."

Norm Mansfield said that, by the end of October, NIH will be ready for AAALAC's inspection, but that not all work orders were halted by that job's precedence. "We have handled 100,000 trouble and preventive maintenance calls, 6,000 work orders have been processed

(continued on p. 20)

Joining Healy on the panel were (from l) Dr. Charles McCarthy, director of the Office for Protection from Research Risks; HHS lawyer Gloria Frank; CC acting director Dr. Saul Rosen; Dr. Philip S. Chen, Jr., NIH associate director for intramural affairs; Dr. Jay Moskowitz, NIH associate director for science policy and legislation; and Jack Mahoney, NIH associate director for administration. Not visible are Norman Mansfield, NIH associate director for research services, Dr. John W. Diggs, NIH deputy director for extramural research, and NIH's attorney Robert Lanman.

(continued from p. 19)

and completed, and 450-500 big contracts have been let for major renovation to buildings.

"In the last year, NIH has gotten more money for facilities than ever in its history," he reported. "The problem is, things have been let go for 20 years—jobs that should have been done.

"It is not widely recognized that the utility systems to labs are past their prime. We face the potential of catastrophic failure in some of these systems. NIH needs a couple of billion dollars to fix up this campus. Satellite facilities are needed because we're running out of room. There's not much space left for new construction."

Margaret Jensvold of NIMH accused NIH of "destroying lives and careers" by fighting sexual discrimination and harassment lawsuits brought against it "to the hilt" in the courts while simultaneously appearing to endorse publicly advances in women's health and research. "NIH's behavior in court makes those sweet words hypocritical and divisive," she said.

Healy emphasized, "All of us on this panel find such harassment and discrimination repugnant." The director knew of five such cases in recent history—three were settled, she said, and the other two are being adjudicated. Confirming those figures was Diane Armstrong, director of NIH's Division of Equal Opportunity. "Dr. Healy published policy guidelines on sexual harassment and sex discrimination shortly after her arrival at NIH," Armstrong said. "There is no place for discrimination at NIH."

NIMH's Jack Simpson, who identified himself as one of the few people to come from private industry into government, asked the panel why NIH training funds could not be used by an employee specifically for obtaining an advanced degree in a work-related field; Benowitz replied that it is up to an ICD's discretion to pay for such work—there is no legal bar on obtaining a government-funded degree.

One question that everyone knew would arise was finally popped by NIDDK's Dr. Simeon Taylor, who posed it in perhaps its least challenging form: "The parking problem bothers all of us at NIH. It's not a minor problem, though it does sound trivial. I'm almost embarrassed to bring it up, but it could have a major impact on the quality of life here. A solution would be of major symbolic value, and could encourage us a lot."

Said Healy, "My good friend Carl Kupfer warned me that if I wanted to come out of this meeting alive, I'd better do something about parking." Within the coming months, 650 more spaces will be added to campus parking, she said. Parking is the Montgomery County executive's biggest NIH-related priority, she added; the county's "good neighbor" rule specifies one space for every two employees here as a way of minimizing local auto traffic.

"Only about 5 percent of NIH'ers use Metro," she said, urging that those for whom it is convenient use public transportation. Healy also said it is now legal for NIH to subsidize in some way the admittedly high cost of Metro fares.

Dr. David Fitzgerald of NCI prefaced his question with an endorsement of town meetings: "They should be held every year during the week before Research Festival." He then asked why travel arrangements by federal scientists, particularly to foreign countries, take so much time and effort.

"Foreign travel is never going to be made easy," forecasted Healy. "There is extraordinary scrutiny—it's one of those lightning rods. Look what happened in Florence (Italy, site of last summer's international AIDS conference)—it became a major congressional explosion."

Healy said travel rules within NIH could be streamlined and suggested that scientists try to get the sponsoring institution to pay for travel and lodging. Lastly she advised Fitzgerald, "You're not alone (in being scrutinized). Look what happened to poor Mr. Sununu."

Audience members were invited to address Healy and her OD staff from microphones located in the aisles. More than a dozen intramural scientists asked questions.

A question arose about making tenure-track positions in the intramural program more open and competitive. Answered Kupfer, "We could do a much better job of stressing the advantages of the intramural program (to attract top candidates). The Office of Education is putting a prospectus in order to attract the very best people. We have a good case to make."

NEI director Dr. Carl Kupfer, who is also acting NIH deputy director for intramural research, moderated the discussion and posed questions submitted to him from the audience.

Dr. Barry Richmond of NIMH recounted "the agony of dealing with procurement people. If you want to make a big purchase, you almost have to don battle garb. There must be a way to make complex procurements smoother."

Having dealt with a version of this question earlier, Healy said she perceives a "cultural phenomenon at NIH—the administrators are seen as adversaries of the scientists. I can tell you that is not the mindset of Bldg. 1. Give (the administrators) a grain of sympathy. You say we're not service-oriented. I say it is a high priority for us and is becoming a higher priority. Jack Mahoney is making it an emphasis."

At this point, Healy reassured the scientists that top OD staff have spent much of the past month working on Office of Government Ethics regulations affecting, among other things, NIH'ers' ability to earn outside income. HHS ethics lawyer Gloria Frank stated, "There will be changes from the current policy. Right now is a time of intense scrutiny."

Dr. Robert Adelstein of NHLBI closed the session with a call for future town meetings, then inquired about the desirability of establishing formal postgraduate education at NIH "as a way of attracting investigators and increasing our own scientific knowledge."

"That is a readily accomplishable vision for NIH," answered Healy. "We could have a magnificent graduate university. It would enliven the intellectual atmosphere and make a marvelous contribution to this country. I feel it's almost an abrogation of our social responsibility not to have it. The time is right to think about it and do it.

"This is a very lofty note on which to close this first of what I hope will be very many town meetings," she said.

Healy Disburses First Shannon Awards

NIH director Dr. Bernadine Healy has announced the names of the first recipients of NIH's "James A. Shannon Director's Awards," which will provide nearly $30 million in new biomedical research support.

"This program is very important to me because it will help maintain research momentum and raise investigator morale," she said. "These awards were made for applications that fell within the required 'margin of excellence' but just missed funding. The proposals deemed especially innovative and creative were given preference. The Shannon awards will assure that hundreds of excellent scientists will receive NIH support who otherwise would not."

The Shannon Awards were named to honor the physician who directed NIH during the period 1955-1968, when NIH emerged as a world leader in biomedical research.

When Healy became NIH director in April 1991, her first major new funding initiative was the Shannon awards.

The first recipients are 310 scientists at 146 research institutions throughout the United States. The recipients did not specifically apply for these awards, but were nominated by NIH program staff people, with the concurrence of the institute directors, from among applicants whose priority scores for new and competing NIH grants were just above the cutoff figures.

Many of the recipients are young scientists for whom this is their first NIH research support. It is expected that these promising biomedical investigators will use these funds to narrow their research focus into areas suitable for exploration in future NIH grant applications.

For other recipients, the Shannon awards will provide "bridge" support to sustain a proven productive laboratory that is maintaining its expertise between NIH grants. Still other scientists—most of whom have already worked under NIH research grants—will be using their Shannon awards to branch into exciting new biomedical areas where they can probe promising hypotheses.

Most of the awards (289 out of 310) are for $100,000 to cover research and indirect costs over a 2-year period. Nineteen awards are for $50,000 for research and indirect costs for 12 months, while two smaller awards will provide partial support for about 2 years.

Women's Health Research Comes of Age

About 120 scientists, clinicians, ethicists, lawyers and women's health advocates brainstormed to set a research agenda for women's health for the next decade at a workshop Sept. 4-6 in Hunt Valley, Md., north of Baltimore. "Our goal," said Dr. Ruth Kirschstein, in her opening remarks, "is to address the biomedical research needs of America's women."

Kirschstein, director of NIGMS, has served since September 1990 as acting NIH associate director for research on women's health. The Office of Research on Women's Health (ORWH), which she headed, organized the workshop called "Opportunities for Research on Women's Health." The office also held a 2-day public meeting in June to solicit input on the research agenda from organizations involved in women's health issues. More than 90 statements were submitted at this meeting.

Workshop participants expressed enthusiasm that NIH had held such a meeting within the first year after the creation of the ORWH. Rep. Pat Schroeder (D-Colo.) commented that she was gratified at the progress that already has been made. Many advocacy group representatives also praised NIH for its commitment to—and actions on behalf of—women's health research.

In the keynote address, Dr. Bernadine Healy, NIH director, acknowledged "an awakening in women's health." Referring to past criticisms of NIH for not including women in some important clinical studies, she said, "We have owned up to these faults and made important corrections very quickly." She urged everybody to put these lapses "into perspective and move forward."

Healy asked for a "unified" agenda for women's health research. "Setting the priorities will be the most difficult, as well as the most important, aspect," she said, "because it will help us allocate resources and guide and encourage researchers."

A 10-member task force on opportunities for research on women's health will submit its recommendations to NIH by mid-December 1991. It must evaluate and prioritize a 2-inch thick set of draft recommendations from ten panels of experts who met during the workshop.

Because women's health issues are complex and need to be addressed on many levels, the meeting took a two-part approach. On the first day, the panels explored women's health in terms of life span: from birth to adolescence, young adulthood, the perimenopausal years, and the mature years. On day two the perspective shifted to crosscutting science: reproductive biology, early developmental biology, aging processes, cardiovascular diseases, malignancy, and immune function and infectious diseases.

A special panel met to examine issues related to the inclusion of women in research, which range from legal and ethical considerations to recruitment into and retention in clinical studies.

Discussions throughout the 3 days focused on many gender differences and women's health needs:

- While females have an advantage of longevity over males, many women live those extra years in states ranging from poor health to frailty to severe disability.
- Gaps in knowledge exist about physiological differences between males and females. These differences affect overall disease and gender-specific diseases across all age groups.
- Little is known about the benefits and risks of estrogen replacement therapy, yet this information could be of vital importance to the health of women after menopause.
- Women bear a disproportionate burden of impact from sexually transmitted diseases and urinary tract infections. This is especially true of women between ages 15 and 40.
- At least 80 percent of sexually active women use or have used oral contraceptives. Yet the potentially great impact of their long-term use has never been carefully assessed.
- The rate of smoking in women soon will be higher than the rate in men. This threatens to raise lung cancer rates in women to epidemic proportions.
- Little is known about the impact of diseases on minority women. For example, black women have higher rates of obesity than white women. Yet national surveys show black women do not eat more fat, only more cholesterol, than white women.
- Addictions and depression take a tremendous toll on women from all segments of American society.

"As we move into the nineties women seem to be going both backward and forward in terms of health status," said Dr. Maureen Henderson, associate head of the Fred Hutchinson Cancer Research Center in Seattle. One reason, she suggested, is that women born in the 1940's, 50's, 60's and 70's have very different sociomedical backgrounds from one another and are unlikely to have the same future health profiles. "We need to understand cohort experiences," she concluded.

Henderson showed a slide of 18 growth factors and hormones that influence the growth and metabolism of breast cells. Yet, she said, only two—estrogens and progestins—have been studied in research on breast cancer, heart disease, and osteoporosis. "We must encourage risky and innovative research on less easy-to-measure hormones and their influence on women's specific diseases and health in general," she urged.

Many discussions during the workshop focused on the need to look at a woman's overall physical and mental health throughout her lifespan. "NIH needs to stress behavioral aspects of health and disease to a greater extent," said Healy during her keynote address. "I predict that in 3 or 4 years, it will be commonplace at NIH for scientists and science administrators to think of behavioral research within the spectrum of biomedical research."

The workshop was chaired by Dr. Mary Lake Polan of Stanford University's department of obstetrics and gynecology and Dr. William Hazzard of Bowman Gray School of Medicine.

"The women of America deserve this research agenda," Kirschstein told workshop attendees. The agenda will be carried out under the direction of Dr. Vivian W. Pinn, whom Healy has named as her choice for permanent head of ORWH.

Pinn To Direct ORWH

Dr. Vivian W. Pinn has been selected as the first director of NIH's Office of Research on Women's Health (ORWH).

She comes to NIH from Howard University College of Medicine where, since 1982, she has been professor and chairman of the department of pathology. She is the third woman and the first African American woman to chair an academic pathology department in the United States. She is also a recent past president of the National Medical Association.

Pinn is internationally recognized for her research in renal pathology. Her medical interests include increasing opportunities for minorities in medical education, and improving access of minorities and women to health services. Recently, she led a project to increase screening for breast cancer and cervical cancer among minority and disadvantaged women, and to increase provider sensitivity and education concerning such screenings.

The ORWH was established in September 1990 to strengthen and enhance NIH's efforts to improve the prevention, diagnosis, and treatment of illnesses in women, and to enhance research related to diseases and conditions that affect women. The office helps establish NIH goals and policies for women's health issues and assures that all appropriate clinical trials include the participation of women. Dr. Ruth L. Kirschstein, who is also the director of the National Institute of General Medical Sciences, had been the NIH acting associate director for research on women's health.

Dr. Vivian Pinn has been appointed to head the new Office of Research on Women's Health.

Pinn earned her M.D. degree in 1967 at the University of Virginia School of Medicine, where she was the only African American and the only woman in her class. She completed a residency in pathology at Massachusetts General Hospital. Her bachelor of arts degree is from Wellesley College, and she was the valedictorian of her graduating class at Dunbar High School in Lynchburg, Va. She has received many distinguished awards in her field, is an active member of several professional organizations, and has authored or coauthored numerous medical journal articles.

New Rehabilitation Medicine Center Created

NIH's family has officially expanded: The agency's newest entity, the National Center for Medical Rehabilitation Research (NCMRR), established within the National Institute of Child Health and Human Development, was announced July 9.

The product of congressional legislation signed into law last November by President Bush, NCMRR will conduct and support research to develop techniques and devices for medical rehabilitation to improve the quality of life and increase the independence of the 35 million Americans with disabilities.

One of the center's priorities will be to support research leading to improved technologies and techniques to reactivate muscle, nerves and bodily functioos impaired by injury, disease, disorder or birth defect, and to improve prosthetic devices.

NCMRR also has responsibility for supporting research training programs and for disseminating health information. It will eventually include an intramural component conducting both basic sciences research and clinical studies.

DHHS secretary Dr. Louis Sullivan, who announced creation of NCMRR, said, "The new center will conduct and support the work of engineers and scientists seeking to restore, replace and enhance the function of children and adults with physical disabilities."

The center is the fourth national center to join the 13 institutes, three divisions, Clinical Center, Fogarty International Center, and National Library of Medicine that constitute NIH.

A Closer Look at the NIH Office of Education

By Dr. Michael Fordis

The NIH, like so many other academic and research institutions, has seen a decline in the number of talented young physicians and scientists eager to enter its research training programs. In addition, fewer young people are choosing science as a career and the quality of science education in grades K to 12 is inadequate to meet the challenges of the future. Paradoxically, this diminished interest in biomedical research careers is occurring at a time of unparalleled scientific opportunity.

In response to this situation, NIH established the Office of Education a little over a year ago. In brief, its goals are to address the education, training, and recruitment of postdoctoral fellows and students. Educational programs at NIH are, therefore, not viewed in isolation but rather in the context of a continuum of educational experiences that are offered for those interested in biomedical science. These experiences are made available from the time they are young students until they are in need of specialized, postdoctoral training.

Early efforts of the office focused on the recruitment of postdoctoral fellows. Applications for the Clinical Associates Program, formerly known as the Medical Staff Fellowship Program, increased 2½ fold, and by July 1991, 95 percent of the clinical associate positions were filled. In addition, foreign physicians are now being attracted to NIH for clinical and basic research training through the NIH-International Medical Scholars Program. The number of Accrediting Council on Graduate Medical Education (ACGME) accredited programs at NIH doubled this year to a total of twelve with the addition of programs in critical care medicine, endocrinology and metabolism, hematology, infectious disease, medical oncology, and rheumatology. Opportunities for both M.D. and Ph.D. scientists are now clearly outlined in the *NIH Postdoctoral Research Fellowship Opportunities Catalog*, which includes descriptions of the training programs available at NIH and descriptions of the research focus of each of the intramural laboratories. The second edition will feature expanded laboratory descriptions as well as citations for each of the tenured scientists.

The Office of Education also has responsibility for overseeing several programs that for many years have been serving to attract to NIH future physicians early in their training. The Summer Research Fellowship Program enables medical students to spend the summer between their first and second year engaged in biomedical research at NIH. Third and fourth year students are able to participate in the Clinical Electives Program, which offers nineteen different clinical educational experiences. Under development is the NIH Medical Elective Program for Clinical Residents, which will provide residents with firsthand knowledge of the advantages of subspecialty training at NIH.

Medical students were only a small part of the research force at NIH this past summer. A total of almost 700 high school, college, medical/dental, graduate students, and teachers participated in the summer research program. An important element of the program was a weekly seminar organized by the Office of Education and presented by an intramural scientist. Eleven speakers, including Dr. Anthony Fauci, Dr. Michael Gottesman, and Dr. Judith Rapoport, described recent advances at the frontiers of biomedical research. The Office of Education also organized an end-of-the-summer poster session featuring presentations by 122 students from 22 states and U.S. territories. This summer also saw the arrival of the second group of high school student and teacher interns. In collaboration with

Dr. Anthony Fauci, director of NIAID, answers questions from students following his presentation on AIDS at the Office of Education's Summer Seminar Series.

the Howard Hughes Medical Institute and the Montgomery County Public Schools, this program provides a full year of research experience in an intramural laboratory and formal instruction by Office of Education staff in developing a scientific presentation. Each of the students in the program is from an underrepresented minority group; this program is designed to nurture their initial interest in the biomedical sciences. Additional efforts in the area of precollege science education are being launched by the Office of Education's newly established NIH Science Education Academy. Already operational is a NIH Speakers Bureau and the NIH Biomedical Research Preparatory School, a Saturday program developed with the Office of Minority Programs to train promising high school students in molecular biology so that they may be better prepared to apply for summer research positions at NIH. Soon to be in operation are NIH EDNET, an electronic bulletin board connecting NIH scientists with school teachers, a course to prepare NIH scientists for visits to the classroom, and a new summer research program for teachers and students preparing to become science teachers.

The Office of Education is committed to helping the intramural program to focus on a number of institutional problems that keep the intramural program at NIH from achieving its full potential. In addition, we have been able to mobilize NIH scientists to become mentors to students who need to be encouraged in their pursuit of a scientific career. These efforts speak to a renewed interest in educational matters at NIH, an attitude that can only help us to remain at the forefront of biomedical research training.

Dr. Fordis is director of the NIH Office of Education.

CALENDAR

NOVEMBER

The NIH Lecture will be Tuesday, Nov. 19, 1991, at 3 p.m. in Masur Auditorium, Bldg. 10. The speaker will be Dr. Irving L. Weissman, Howard Hughes Medical Institute investigator and professor of pathology and developmental biology at Stanford University School of Medicine. His topic is "Hematopoietic Stem Cells: Biological and Clinical Potentials."

The Kinyoun Lecture, sponsored by NIAID, will be Thursday, Nov. 21, 1991, at 4 p.m. in Lipsett Amphitheater, Bldg. 10. The speaker is Dr. Zanvil A. Cohn. His topic is "Cell-Mediated Immunity—From Bench to Bedside."

On Tuesday, Nov. 26, 1991, from 8 a.m. to 4:30 p.m. in Masur Auditorium, Bldg. 10, there will be a 20th Anniversary Symposium on the National Cancer Act entitled "Past Accomplishments/Future Goals."

On Wednesday, Nov. 27, 1991, the first Gorgas Memorial/Leon Jacobs Lecture will be presented by Dr. Leon Jacobs in Wilson Hall from 3 to 5 p.m. His topic will be "A History of NIH Parasitology: People and Perspectives."

NOVEMBER-DECEMBER

As part of a holiday fundraising effort for the Children's Inn at NIH, White Flint Mall and radio station WLTT-97.4 will be holding a promotion from Nov. 22 to Dec. 22, 1991, at the mall. If you would like to assist in this fundraising effort or would like additional information, contact Pam Keller at the Children's Inn, (301) 496-5672 or Randy Schools at the NIH R&W, (301) 496-6061.

For more information about various lectures and events at NIH, call (301) 496-1766. For information about NIHAA call (301) 530-0567.

Stealing the show at the first anniversary of the Children's Inn at NIH in July was Hydeia Broadbent (second from r), who sang a song she made up for guests including (from l) NIH director Dr. Bernadine Healy, congressional spouses Janet Waxman (foreground) and D. Chris Downey, and Albert D. Angel, president of the Merck Company Foundation.

New Labs for Seven Institutes

Bldg. 49 Enters Final Construction Phase, Completion Seen in 1992

By Rich McManus

The new Child Health and Neurosciences Building (Bldg. 49), due to be dedicated next fall under the name of its chief congressional sponsor, the late Rep. Silvio O. Conte, has entered its fourth and final construction phase right on schedule.

The eight-story laboratory and animal facility on the west side of the NIH campus will house research programs from NICHD, NIMH, NINDS, NIAAA, NEI, NIDR, and NIA.

"Progress has just been tremendous on this thing," said project officer Stephen R. Hagan of the Division of Engineering Services.

Ground was broken for the building in October 1988, when Conte visited the campus for what he called the proudest moment of his political career. Phase I—creation of the site foundation and utilities—began shortly thereafter, followed by phase II, the concrete superstructure, and phase III, mechanical systems and exterior.

The contract for phase IV, the fitting out of laboratory and office space, was recently awarded. This last phase will end in just over a year, said Hagan.

"Bldg. 49 is really two separate buildings," he said as he led a walking tour of the facility, now swarming with specialists working on their own discrete parts of the project. "The north side of the first five floors is for the animal facility and the south side contains laboratories and offices." The remaining three upper levels will be limited to labs and offices.

The design will provide state-of-the-art facilities for research in child health and the neurosciences. One guiding principle in the design has been to achieve AAALAC (American Association for the Accreditation of Laboratory Animal Care) approval, and to segregate animal research and other activities, Hagan explained.

There are two separate loading docks at the rear of the building for animals and laboratory materials. Inside, four elevators serve the animal side—two for large animals, mainly primates, and the other two for such small animals as rats, mice and other rodents.

To enhance the psychological well-being of the animals, small windows have been built in many holding rooms. Anterooms are provided outside these rooms for maintenance and for minor procedures and record-keeping. Directly across the hallway are procedure rooms for animal experiments.

On the laboratory side, an 8-foot-wide utility corridor, which backs onto a freight elevator, divides the labs, providing a delivery route, access to lab support rooms and giving easy access to ventilation shafts and other utilities to maintenance workers.

Visitors to Bldg. 49 will enter at a security desk, past which is a large, open staircase rising four floors through a glassed-in atrium. This central staircase, plus glassed-in fire stairs on each side of the building, provide "interaction spaces," where the "human primates" can enjoy some "psychological well-being" of their own.

The front of the building, which faces south, features conference rooms with solarium-type floor-to-ceiling windows on each of its five upper floors; these will be conference rooms for each of the insti-

The north side of what will be known as the Conte Bldg. is actually the rear of the building. The small windows on the first five floors admit the outside world to animal holding areas and were built for the animals' benefit.

The south side of Bldg. 49 will be the entrance to the facility, scheduled for completion in fall 1992.

tutes doing research in the building. Office space for the ICDs will occupy a 10-foot deep area of the building's front portion.

In front of the building are large concrete air shafts resembling silos. These house air intake equipment for the ventilation of 49 and are built off the ground to avoid contamination from car and delivery truck fumes.

To meet the parking demands of the estimated 500 or so workers who will occupy 49 and others in that area of the campus, a new multi-level parking garage is slated to be built just west of Bldg. 34. March 1993 is the target date for completion of the garage.

Another change planned in that corner of campus is construction of Bldg. 29B, an FDA facility to rise adjacent to Bldg. 29, said Hagan. Convent Dr. will be straightened out in the vicinity of Bldg. 36 to make room for the FDA addition, he noted.

NIH Notes for July—September 1991

HONORS AND AWARDS

Dr. Gilbert Ashwell, NIDDK investigator in the Laboratory of Biochemistry and Metabolism, was honored on Sept. 12 and 13 with a symposium on "The Chemistry and Biology of Carbohydrate-Protein Interactions" ... **Dr. Claudia Baquet,** associate director of NCI's Cancer Control Science Program, received from the Indian Health Service the Director's Special Award for "outstanding efforts in cancer prevention activities for American Indians and Alaskan Natives" ... **Dr. Peter Bennett,** chief of NIDDK's Phoenix Epidemiology and Clinical Research Branch, was given the Indian Health Service Director's Special Award for "outstanding efforts in the understanding and treatment of diabetes in American Indian and Alaskan Natives" ... **Gwendolyn Brooks,** NIAID equal employment opportunity officer, recently received an "Outstanding Service Award" from the National Council of Negro Women, Prince George's County, Md., chapter, during its 10th anniversary celebration. The council recognized Brooks for her voluntary support and outreach to young women in the community ... **Dr. Bruce Chabner,** director of NCI's Division of Cancer Treatment, was promoted to the rank of rear admiral in the PHS Commissioned Corps ... **Dr. Louis S. Diamond,** chief of the parasite growth and differentiation section in the Laboratory of Parasitic Diseases, NIAID, was honored by having a conference in India dedicated to him for his contributions to the study of *Entamoeba Histolytica*, which have been of far-reaching significance, and for his "profound impact on amebiasis research in India" ... **Dr. Giovanni Di Chiro,** chief of the neuroimaging section of NINDS, was honored by the executive committee of the American Society of Neuroradiology when it dedicated its annual President's Lecture to him. The lecture was given by **Dr. Louis Sokoloff,** a world renowned neurochemist and physiologist with NIMH ... **Dr. Alfred Del Vecchio** has been awarded a 3-year American Cancer Society postdoctoral fellowship to continue work at NCI's Laboratory of Tumor Virus Biology. He will be working in research on human papillomaviruses to study genetic differences in the viruses that may cause infected cells to become cancerous ...

Dr. Susan Ellenberg, chief of the Biostatistics Research Branch in NIAID's Division of AIDS, has been elected to fellowship in the American Statistical Association "for exemplary and creative leadership in the development of sound statistical approaches to AIDS clinical trials, for important contributions to the planning and monitoring of multicenter clinical trials, and for service to the profession" ... **Dr. Leland Hartwell,** NIGMS grantee and professor of genetics at the University of Washington, received the 1991 V.D. Mattia Award from the Roche Institute of Molecular Biology for his contributions toward understanding the regulation of the eukaryotic cell cycle ... **Paul Jarosinski,** Clinical Center pharmacy specialist and coordinator of oncology, was recently named " Pharmacist of the Year" at the annual meeting of the United States Commissioned Officers in Atlanta. This award recognizes exceptional performance that exemplifies the most outstanding qualities of a pharmacist in USPHS ... **Dr. Robert Katz,** director of NIDDK's Metabolic Diseases Research Program, spoke on "NIDDK and Its Support of Rare Diseases" at the 10th anniversary conference of the United Leukodystrophy Foundation. He also chaired a scientific roundtable discussion to explore the possibilites for NIH-sponsored immunology research in the leukodystrophies ... **Dr. Harry Mahar** recently accepted an award on behalf of the Occupational Safety and Health Branch, Division of Safety, from the Maryland governor's committee on employment of people with disabilities at its annual conference and awards luncheon. The award was presented to the branch for its outstanding role in encouraging the employment of people with disabilities ... **Dr. Sidney McNairy,** director of the Research Centers in Minority Institutions Program, National Center for Research Resources, was the recipient of the 1991 Morehouse School of Medicine Award ... **Linda Nee,** a social science analyst at the NINDS Clinical Neuroscience Branch, has been honored for her outstanding contributions and achievements in medicine through research on Alzheimer's disease. She received a 75th Anniversary Commemorative Medal at the 10th annual Geneva Sayre Lecture delivered recently at Russell Sage College in Troy, N.Y. She is a graduate of Russell Sage College ... **Karen O'Steen,** director of NIH's Executive Secretariat, was honored by the Indian Health Service with the Director's Special Award, for "expert advice and counsel to the IHS as it reviewed the Executive Secretariat to improve the

*(See **NIH Notes** p. 28)*

NIH Notes (continued from p. 27)
agency's responsiveness to external authorities"... **Dr. Richard Rothman,** formerly of NIDDK's Laboratory of Medicinal Chemistry, was selected for the 1991 Joseph Cochin Young Investigator Award by the committee on problems of drug dependence for his contributions to opioid pharmacology research. He recently joined the Addiction Research Center of the National Institute on Drug Abuse ...

Dr. Earl Stadtman (r) receives applause when it was announced that he was the corecipient of the 1991 Welch Award in Chemistry.

Dr. Earl Reece Stadtman, chief of NHLBI's Laboratory of Biochemistry, has been named one of two winners of the 1991 Welch Foundation Award in Chemistry. He will share the $250,000 prize with Dr. Edwin G. Krebs of the University of Washington at Seattle. Both men were cited for outstanding contributions in the field of enzyme chemistry.

APPOINTMENTS AND PERSONNEL CHANGES

Linda Beach is the new coordinator of the Fogarty International Center's volunteer services office. She works with visiting scientists who come to FIC from all over the world, helping them adjust to metropolitan D.C. She also supervises and trains volunteers to help at the office ... **Dr. Jaswant Singh Bhorjee,** associate professor of cell and molecular biology, Meharry Medical College, has been appointed scientific review administrator of the pathology A study section in DRG's Referral and Review Branch. The section is one of 82 within the division. It consists of 20 members from the scientific community who conduct the initial scientific merit review of applications relating to studies in pathology, pathobiology, and the biochemistry of disease ... **Dr. Wendy Baldwin,** chief of the Demographic and Behavioral Sciences Branch, NICHD, has been named deputy director of NICHD. In this job, she shares with the NICHD director the responsibility for overall planning, direction, and evaluation of NICHD activities, and she will also oversee the direction of the institute's extramural research and scientific review programs ... **Dr. Geoffrey P. Cheung,** former assistant director for operations and program procedures in NIAID's Division of Extramural Activities and acting chief of the NIAID Research Manpower Development Staff office, has joined NIGMS as a program administrator in the Minority Biomedical Research Support program ... **Dr. Gene D. Cohen** has been appointed acting director of the National Institute on Aging. In addition to serving as deputy director of the institute since 1988, he is executive secretary for both the DHHS council on Alzheimer's disease and the congressionally appointed advisory panel on Alzheimer's disease. Before joining NIA he had served as first chief of the Center on Aging of the National Institute of Mental Health ... **Dr. John C. Dalton** has been named the first director of the Division of Extramural Activities, NIDCD. He is responsible for planning amd executing extramural activities and for overseeing grants management, peer review activities and national advisory council functions. He comes to NIDCD from a similar position at NINDS ... **Kimberly B. Hooven** was recently appointed chief administrative officer for DCRT. Before assuming her new position, she was the senior budget analyst at NIDDK, where she served the intramural division. She was recently an intern for the DHHS Women's Management Training Initiative ... **Robert N. Gray,** formerly deputy director and vice president of the Washington Board of Trade, has been selected as the executive director of the Children's Inn at NIH ... **Dr. Ernest W. Johnson,** director of the Diabetes, Endocrinology and Metabolic Diseases Division, NIDDK, left to become the director of grants and contracts at Penn State University College of Medicine in Hershey. He was also appointed professor of cellular and molecular physiology in the college of medicine at Penn State ... **Dr. Barnett S. Kramer,** senior investigator with the Navy Medical Oncology Branch and a professor at the Uniformed Services University of the Health Sciences, has been appointed associate director of the Early Detection and Community Oncology Program in the Division of Cancer Prevention and Control. He will oversee the early detection studies, the community oncology and rehabilitation programs, the cancer prevention fellowship, and an intramural program in biomarkers and prevention research ... **Dr. John J. McGowan,** associate director of the Basic Research and Development Program of NIAID's Division of Acquired Immunodeficiency Syndrome, has been appointed director of NIAID's Division of Extramural Activities ... **Dr. Donald I. McRee,** a health scientist administrator at NIEHS, has been named chief of the Scientific Review Branch in NIEHS's Division of Extramural Research and Training. This branch is responsible for reviewing the scientific and technical merit of all research and development contract proposals and grant applications including those for program projects, research centers, special research grants, training grants, and applications received in response to requests for applications. He joined NIEHS in 1969 ... **Dr. Lawrence J. Prograis, Jr.,** was recently appointed deputy director of NIAID's Division of Allergy, Immunology, and Transplantation, where he continues to serve as chief of the division's Asthma and Allergy Branch ... **Dr. Matilda White Riley, NIA** associate director for the Behavioral and Social Research Program, has been named senior social scientist at NIA. She joins a small number of other senior researchers who have received the congressionally established senior scientist position, and is the first social scientist at NIH to receive this appointment. A sociologist and pioneer in innovative approaches to the study of aging and society, she plans to focus her research on social structures and structural changes as they affect quality of life, health and functioning among older people ... **Dr. Robert Strausberg** has been named to head NCHGR's Technology Development Program. He has had experience both in academia and in the biotechnology industry. He comes to NIH from Genex, a biotechnology firm in Gaithersburg. He was senior director of research responsible for DNA sequencing, DNA synthesis, cDNA and genomic cloning, and the expression of foreign genes in yeast and E. coli ... **Dr. Percy Thomas** has been named the new director of the Extramural Associates Program at NIH. He came to NIH in May 1990 to do an organizational study for the Division of Financial Management ... **Dr. Judith L. Vaitukaitis** has been appointed deputy director for extramural research resources, NCRR. She has served as director of the General Clinical Re-

search Centers Program, NCRR, since 1986 and as acting deputy director for extramural research resources since February 1990 ... **Dr. T. Franklin Williams,** director of the National Institute on Aging since 1983, has resigned his position to return to appointments at the University of Rochester School of Medicine and Dentistry and the Monroe Community Hospital. By returning to academic life he hopes "to accelerate the integration of new knowledge about aging into the medical school curriculum and into the practice of medicine."

RETIREMENTS

Dr. Artrice Bader, a program administrator in the Cellular and Molecular Basis of Disease (CMBD) Program, NIGMS, has retired after 32 years at NIH. She began her NIH career in 1957 as a biologist in NHI. In 1961, she transferred to NCI. She took time out to return to graduate school and in 1966 became the first Ph.D. recipient from Georgetown University's biology department. She returned to NCI in 1966 and in 1978 transferred to the CMBD program where she administrated a portfolio of grants in cell organization, motility and division. During retirement, she plans to enjoy her family while working as a consultant in science management and review ... **Dr. Jeanne Brand** of NLM's Extramural Programs Division recently retired from government service. She came to NLM in 1967 and was chief of the EP's Publications and Translation Division before being named chief of EP's International Programs Branch in 1970. In her position at NLM she administered the only peer-reviewed extramural publications support program at NIH. She has also been very interested in the history of medicine and she most recently received the NIH Director's Award for her outstanding leadership in promoting scholarship in the history of medicine through the NLM Grant Program ... **Eleanor M. Casey** recently retired from the Committee Management Office, OD. She came to NIH in 1978 and spent her entire career in the CMO. One of her responsibilities was to prepare *NIH Advisory Committees*, a popular listing of all NIH chartered committees with their memberships, for biannual publication. One member described the book as the "Who's Who" of the scientific community ... **Dr. Charles R. Smart,** chief of NCI's Early Detection Branch from its beginings in 1986, has retired and returned to Salt Lake City. He has devoted his professional life to dealing with cancer both as a surgeon and as an expert in the field of cancer registration and screening. In his retirement, he will continue his efforts to control cancer.

DEATHS

The Rev. Kenneth A. Bastin, 36, chief of the Clinical Center's department of spiritual ministry for the past 2 years, died in a traffic accident in Washington, D.C., on Aug. 1. In addition to his pastoral duties at NIH, where he held regular worship services in the chapel on the hospital's 14th floor and visited patients, he was a member of the CC ethics committee and supervised students in the department's clinical pastoral education program ... **Dr. David P. Byar,** 53, who was chief of the Biometry Branch, Division of Cancer Prevention and Control, NCI, died on Aug. 8. His primary interest was the design of cancer prevention and screening studies and assessment of epidemiologic evidence. He joined the institute in 1966 ... **Harold Carter,** a technician at NIH, died on Sept. 7. He was employed at the Clinical Center as a darkroom technician in the department of radiology. He had worked at NIH for 29 years in many capacities and in 1976 had joined the radiology department ... **Dr. Michele Filling-Katz,** 36, a genetics researcher in the Laboratory of Clinical Studies, NIAAA, was slain in Burtonsville on Aug. 11. She was murdered at home with her husband Dr. Norman Katz, chief of pediatric ophthalmology at Walter Reed Army Medical Center. Dr. Katz's son has been arrested and charged in the shooting death of the couple ... **Dr. Roger W. Gilliatt,** 69, chief of the electromyography section at NINDS, died of cancer Aug. 19 at his home in Washington. He was an authority on peripheral nerve problems and peripheral neuropathy. He retired in 1987 as the chair of clinical neurology at the University of London's neurology institute and came to work at NIH ... **Dr. Morris M. Graff,** 81, died on July 28. He came to work at NIH in 1956 in the study section on endocrinology at NCI. He retired in 1985 and travelled extensively and pursued artistic endeavors such as photography and sculpture ... **Dr. Clarence Louis Hébert,** 79, retired chief of the Clinical Center anesthesiology department, died of cancer Sept. 5 at his home in Venice, Fla. He was anesthesiology chief at NIH from 1953 until he retired in 1975. He was a medical officer in the PHS for 25 years. He moved to Venice last year from Bethesda ... **Jetta R. Houghten,** 67, a pianist and piano teacher who also had worked as a grants management specialist at NIH, died of cancer July 30 at her home in Bethesda. She worked at NIH from 1975 to 1983 ... **Thomas C. Leffingwell,** 69, a retired administrative and budget officer of the Fogarty International Center, NIH, died of septicemia July 16 at Suburban Hospital. He joined the staff at NIH in the mid-1950's. He retired in 1983 ... **Dr. Robert Meyer Leonard,** 68, retired administrator at NIH, died of cancer and Parkinson's disease Sept. 23 at his home in Silver Spring. He retired in 1985 after 21 years with the Division of Research Grants' Scientific Review Branch. He formerly was dean of the department of pharmacy at George Washington University ... **Dr. Robert C. Moore,** 49, a pharmacist with NCI's Pharmaceutical Resources Branch, Developmental Therapeutics Program, died July 31 of a heart attack. He had joined NCI early this year from the Health Care Financing Administration where he helped implement the Medicare Catastrophic Coverage Act passed in 1988 ... **John M. Proctor,** 54, executive director of the National Institute on Drug Abuse from 1972 until retiring in 1987, died June 30 of a heart attack. From 1963 to 1968 he was a personnel management specialist at NHLBI. He was an administrative officer for NIMH at St. Elizabeths Hospital in Washington from 1968 to 1972. In the early 1970's, he played a key role in the reorganization of NIDA. He was responsible for the planning, coordination and conduct of management affairs, including financial matters, contracts, personnel and general support administration ... **Dr. Efraim Racker,** 78, a leading researcher on energy storage in living cells and its implications for cancer, died Sept. 9 of a stroke at University Hospital in Syracuse. He had been a member of a cancer advisory board to NCI and chairman of the biochemistry study section at NIH ... **Frances S. Seal,** 87, the widow of Dr. John R. Seal, deputy director of NIAID, died Sept. 17, at Bethesda Naval Hospital after a long illness ... **Christine Marie Smith,** 23, a systems analyst with NIH, died on Aug. 23 in an automobile accident in Manassas, Va. ... **Dr. Randall G. Sprague,** 84, a senior consultant in medicine at the Mayo Clinic and an authority in metabolic and endocrine disease, died Dec. 28, 1990. From 1947 to 1951, he was a member of the metabolism and endocrinology study section at NIH.

NIH Retrospectives

N.I.H. record

FEDERAL SECURITY AGENCY — PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH

Autumn 1951

Dr. Pearce Bailey, formerly chief of the Veterans Administration's section on neurology, has been named first director of the National Institute of Neurological Diseases and Blindness ... October saw 121 communities in the United States with water fluoridation programs in effect—up 71 from last October's figure. The Division of Dental Public Health, PHS, reported that an additional 138 communities have approved a fluoridation program ... A vitamin of the B family has been isolated in pure form by NIAMD scientists.

the Record

Autumn 1961

A study issued by the Personnel Management Branch, OAM, reflected the following statistics about NIH: from 1951-61 the number of full-time employees at NIH has increased from 2,361 to 8,783. The breakdown is NCI, 1,168; NIMH, 818; NIAID, 59; NHI, 576; NIAMD, 545; NINDB, 510; and NIDR, 181. The Divisions' employee totals were reported as: DRS, 1,037; DRG, 467; DBS, 222; and DGMS, 112. The 1,211 members of the scientific and professional staff hold 1,276 doctorate degrees in more than 25 disciplines. Medicine is represented by 566, the biosciences by 351, the physical sciences by 77, and psychology by 60. A variety of other branches of knowledge including, among others, dentistry, veterinary medicine, mathematics, and public health, are represented by 157 doctorate degrees; and 65 Doctors of Medicine are also holders of doctorate degrees ... An assemblage of special guests, including Boisfuillet Jones, Special Assistant to the DHEW Secretary for Health and Medical Affairs, and PHS Surgeon General Luther L. Terry, joined with NIH staff and other personnel for the official opening of the new 11-story NIH office structure, designated as Building 31.

the NIH Record

Autumn 1971

Prince and Princess Hitachi of Japan visited NIH. Hitachi, the second son of the Emperor of Japan, is a special investigator at the Japanese Foundation for Cancer Research in Tokyo ... New parking regulations have been in force since April 1, but employees and visitors continue to park illegally at the rate of 40 to 60 tickets issued per day ... Forty prominent biomedical scientists with expertise in laboratory and clinical research will participate in the initial discussion phase of the National Cancer Plan.

The NIH Record

Autumn 1981

The National Institute of Environmental Health Sciences announced a reorganization to include more toxicological testing through the National Toxicology Program. Toxicological research activities of the Food and Drug Administration and the Centers for Disease Control's National Institute of Occupational Safety and Health will be consolidated at NIEHS.

Marjorie Melton, a parasitologist who was in the Laboratory of Parasitic Diseases, NIAID, identified the two women in our last mystery photo as Ann Jowett and Irene Kahler. Above is another photo about which National Library of Medicine prints and photographs curator Lucinda Keister needs information. It is a photo of the flagpole in front of Bldg. 1 which is being painted. It was taken between 1940 and 1947. Does anyone remember the date and the name of the employee? Please send information to Update.

Two NIH Grantees Claim 1991 Lasker Awards

Two NIH grantees are 1991 recipients of the Albert Lasker Medical Research Award, the prize widely thought of as a precursor to the Nobel Prize. Dr. Yuet Wai Kan of the University of California, San Francisco, and Dr. Edward B. Lewis of the California Institute of Technology, both geneticists, were honored for their clinical and basic research, respectively.

First presented in 1946, the Lasker Awards recognize individuals who have made significant contributions in basic and clinical research in the diseases that are the main causes of death and disability. In the 45-year history of the awards, 49 Lasker honorees have later received the Nobel Prize. Lasker Award winners receive, in addition to a citation and an inscribed statuette, a $15,000 honorarium.

Clinical research award recipient Kan, whose early training was supported by a fellowship from the then National Institute of Arthritis and Metabolic Diseases in 1970, has received grant money from NIDDK since August 1973. From 1974 to 1978, he served on NIH's sickle cell disease advisory committee and in 1975, he received an NIH Research Career Development Award.

Dr. Yuet Wai Kan

Over a 21-year period, NIH has supported Kan's work in abnormal hemoglobin synthesis, mechanism and detection research as well as his basic research in hematology and oncology. Kan developed the first and best methods for detecting abnormal hemoglobin for

Dr. Edward B. Lewis

Cooley's anemia and sickle cell anemia in the fetus and then in the umbilical cord.

The Louis K. Diamond professor of hematology at UCSF since 1983, Kan delivered the NIH Lecture in 1986 and was selected to receive an NIDDK MERIT (Method to Extend Research In Time) Award in 1987. He served on the advisory committee for the NIH hematology study section from 1980 to 1984 and on the NIH blood diseases and resources advisory committee from 1985 to 1989. Kan, whose work has implications for gene therapy for life-threatening diseases, has also received research support from NHLBI and NCI.

Lewis, who shares the 1991 Lasker basic research award with Dr. Christiane Nusslein-Volhard of Germany, is an NIGMS grantee. His work is involved in mapping a series of rearrangements (which he called the "bithorax complex") in genes that control segmentation of the fruit fly (Drosophila) embryo. Gene complexes involved in genetic control, called homeobox genes, in fruit flies can provide understanding of human health problems because the human genome is also known to contain similar gene clusters. This work should shed light on gene clusters that seem to operate in a coordinated manner in specific times and places during development.

The Thomas Hunt Morgan professor of biology, emeritus, at CalTech, Lewis was elected to the National Academy of Sciences in 1968. He also received research support from NICHD.

The 24-member 1991 Lasker Awards jury of distinguished scientists and physicians included two NIH researchers—Dr. Thomas Waldmann, chief of NCI's Metabolism Branch, and Dr. James Watson, director of the National Center for Human Genome Research.

Kennedy Center Promotion Available to NIHAA

The NIH Alumni Association has been invited to join with the NIH R&W for a special program at the Kennedy Center. You will be given a glimpse of the work-a-day world of ballet with "The Corps de Ballet" program. You will get to enjoy pre-performance discussions with company artistic directors, choreographers, designers, and dancers. Our evenings are Jan. 29, 1992, from 6 to 7 p.m. with Pacific Northwest Ballet and with American Ballet Theatre on Apr. 4, 1992, from 6 to 7 p.m. Tickets for these programs are just $5. Please call R&W at (301) 496-6061 for reservations or write to: Recreation and Welfare Association, National Institutes of Health, 9000 Wisconsin Ave., Bldg. 31, Rm. B1W30, Bethesda, MD 20892.