More Aggressive Stance Urged

Public Education Advised To Counter Animal Rights Argument

By Carla Garnett

The biomedical research community may have conceded far too much to its critics up to now on the issue of using animals in research. That is one of the conclusions drawn at "The Impact of Animal Rights and Other Policy Debates on Intramural Scientists," an ADAMHA/NIH colloquium held recently in Masur Auditorium.

An open forum that featured ADAMHA administrator Dr. Frederick Goodwin, the all-hands meeting explored one of the most urgent topics facing medical researchers today—the use of animals in biomedical and behavioral research.

Goodwin began by differentiating the traditional animal welfare movement from the animal rights movement. The former holds that responsible human stewardship of animals involves humane care, prompting support of such projects as shelters for strays and pet care education, while generally acknowledging the importance of biomedical research.

Animal rights activists view animals and humans as morally equivalent, and oppose any use of animals—including biomedical research—on the grounds that "speciesism" is no different than racism, he said.

Budget Growth To Abate

AIDS Crisis Will Deepen In 1990s, Experts Say

By Rich McManus

The AIDS epidemic in the United States, already threatening to overburden health care resources in major urban centers on both coasts, will probably not be matched by federal funds needed to combat it, said speakers at NIH's observance of World AIDS Day, Dec. 1.

While Dr. June Osborn, chairman of the National Commission on AIDS, drew a portrait of a health care infrastructure on the verge of collapse, NIAID director Dr. Anthony S. Fauci offered the sobering news that federal AIDS research funds, which increased dramatically throughout the 1980s, will not continue their exponential rise.

A third speaker at the observance, Cleve Jones, who founded the Names Project in San Francisco to commemorate with quilts the lives of AIDS victims, accused the federal government of apathy in the face of the epidemic then exited dramatically to join a White House protest at which he expected to be arrested.

The observance, held in a packed Masur Auditorium, took place against a backdrop of Names Project quilts that framed the podium and loomed on walls in the Clinical Center lobby. Each one bore the name of a man or woman who has died of AIDS.

Jones, who related that he is "personally interested in the progress of AIDS research at NIH" because he has the disease, spoke in front of a quilt unblazoned with the name of his "best friend in the world." Noting that the idea for the quilt originated among gay white men in San Francisco, he said the artwork has infiltrated deep into the heart of the country. A poor black woman from Kentucky who had cared for a son stricken with AIDS journeyed alone across the U.S. in a bus to add her son's name to the quilt, he said.

"People are very, very good at building walls," he observed, "but this virus is crossing all boundaries. You don't see those walls when you walk through this quilt."

More than 2 million people have visited the quilt, which has expanded to more than 11,000 panels, Jones reported.

Osborn drew ironic parallels between the recent California earthquake, which drew both intense media attention and immediate government promises of relief, and the AIDS crisis in San Francisco and Los Angeles, about which comparatively little has been said or done.

"We keep hearing that the 'big one,' hasn't hit yet," she commented, "but AIDS is a far

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Bridging Science and Administration

GA Program: A Career Catapult for NIH Administrators

By Rich McManus

Second of two articles

If the name of NIH were to reflect accurately the origins of the personnel who enrich it, it would probably have to change to NIH—International Institutes of Health.

Such would certainly be the case if you consider Elke Jordan and Hortencia Hornbeak. Both scientists hailed originally from distant shores and both employed that peculiarly Yankee trait of ingenuity to craft key administrative careers. Both also took advantage of the Grants Associates (GA) Program to adapt their personal interests to their professional livelihoods.

Lasting 1 year and packing what one graduate calls a 10-year overview of NIH into 1 year, the GA program is open year-round to qualified applicants. Enrollees, five of whom are accepted each year, are provided with mentors and do assignments in a variety of management areas that can last from a few weeks to a few months. They also take a Seminar Series of classes. At the end of their year of training, GAs can usually take their pick of management jobs at NIH.

When Dr. Elke Jordan arrived on the NIH campus in the fall of 1972, she had already undergone several transformations. Born and reared in Germany, she and her family had emigrated first to England and then to the United States by the time she reached college age. Fascinated with science "from the first minute I was exposed to it," Jordan entered

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bigger disaster than the earthquake. The big one in health care is sure to hit in the 1990s. And there are no steel rods keeping the concrete from shifting under our feet with AIDS."

A "national torpor" has seized the country with regard to AIDS, she claimed; much of the public has been led to assume it is exempt from the disease. AIDS will strain the health care system in the U.S. to its limits, she forecasted, and has necessitated a complete reappraisal of health care delivery in this country.

"We must begin to take our situation seriously as a nation and forego the wishful thinking that it's not so bad," she said, calling for an alteration in the national mood.

Many new cases of AIDS are turning up in America's heartland, she reported. "Soon, 80 percent of new cases will be diagnosed away from urban epicenters. Sex and drugs are everywhere—there are no regional exceptions to be had. The terms rural and bucolic no longer go together automatically."

Fauci confirmed, with evidence from studies in Baltimore and New York, that abuse of intravenous drugs is implicated in a heightening "epidemic of infection" that will lag 8-10 years behind an eventual "epidemic of disease." Not that the current situation is not dire enough; more than 110,000 cases of AIDS have been diagnosed in the U.S. to date and more than half of those patients have died.

"The real challenge of the 1990s," Fauci said, is "the need for the American public to reevaluate the role of biomedical research."

AIDS research has been claiming a disproportionately large percentage of available research dollars, but will not continue to do so in the 90s, he said.

NIH funds for AIDS research grew exponentially from $3.3 million in 1982 to $752 million in 1990, "which is an appropriate rate of growth," he said. "But in the 90s, this will not continue. Competing forces are quite justified in not allowing this to occur. We are dealing with a finite pie."

Both heart disease and cancer, which claim far more lives than AIDS, have strong and legitimate claims on federal research dollars, Fauci explained. "The pie of biomedical research needs to be bigger."

The 1990s will be the "decade of early intervention," he said. "I think it will show us the benefits of early testing and counseling. But I don't see any true cure emerging, not even in the 1990s."

The search for an AIDS vaccine is "very complex, both for the science and the trial design," he said. Six general types of vaccine are currently undergoing phase I testing, he reported, and "all involve interesting findings. All appear safe and elicit immunological responses. But will they be protective? We don't know right now."

Identifying himself strongly as a basic biomedical researcher who is constrained to do the best with what Congress makes available to him, Fauci acknowledged that AIDS in the '90s will be every bit the formidable problem that Osborn described.

"As scientists and caregivers, we can only do what we can do," he said. "The challenges are enormous. But our duty as citizens is to show understanding and compassion to HIV-infected individuals."

FAES Spring Semester To Start

The FAES Graduate School at NIH announces the schedule of courses for the Spring semester. The evening classes sponsored by the Foundation for Advanced Education in the Sciences will be given on the NIH campus.

Tuition is $50 per credit hour, and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with the supervisors and administrative officers as soon as possible.

Courses are offered in biochemistry, biology, biotechnology, chemistry, computer science, mathematics, medicine, pharmacology, immunology, microbiology, psychology, psychiatry, statistics, languages, administration and courses of general interest.

It is often possible to transfer credits earned to other institutions for degree work, and many courses are approved for AMA category I credit.

Classes will begin Jan. 29, and registration will be held Jan. 17-23. Spring schedules are available in the graduate school office in Bldg. 60, suite 230, the foundation bookstore, Bldg. 10, Rm. B1L101 and the business office in Bldg. 10, Rm. B1C18. To have one sent, call 496-7977.

Savants Needed for Study

Savants are usually autistic people with isolated areas of extraordinary abilities. These abilities may include prodigious skills in the arts or music, calendar and arithmetic calculations, and reading. A popular example of a savant can be seen in the character played by Dustin Hoffman in the movie Rain Man. Brain imaging scans (MRI, PET) and neuropsychological testing will be performed to help explain brain function. If interested contact Drs. Glenn Mannheim, 496-6080, or Judith Runsey, 496-9070.
Research Council Recommends New Vitamin Levels

By Patricia Blessing

A new set of dietary guidelines for essential vitamins and minerals in the diet has been issued by the National Research Council (NRC) under a contract supported by the National Institute of Diabetes and Digestive and Kidney Diseases. The updated recommended dietary allowances (RDAs) add two nutrients, vitamin K and selenium, and revise the recommendations for several vitamins and minerals since the last edition of the RDAs was issued nearly a decade ago.

The RDAs have been issued periodically since the early 1940s to help provide nutritional guidance for healthy persons. According to NIDDK director Dr. Phillip Gorden, this 10th edition was originally planned to be published in 1985. However, after review of the draft recommendations, he said the edition was postponed because of differing scientific opinions among the members of the committee on dietary allowances, which worked on the RDAs from 1980 to 1985, and independent reviewers. In 1987, a five-member subcommittee of the Food and Nutrition Board was selected to revise and update the earlier draft report, under the sponsorship of NIDDK. The subcommittee was chaired by Dr. Richard J. Havel, director of the Cardiovascular Research Institute at the University of California, San Francisco.

The new edition sets RDAs for protein, 11 vitamins and 7 minerals. Each RDA has a built-in safety factor so that the levels actually exceed the requirements of most individuals. The panel said that the RDA guidelines should be viewed as averages taken over time (a span of 5 to 10 days) and are not guidelines for daily intake. The panel emphasized that "it is unnecessary to design a single day's diet that contains all the RDAs for all the nutrients." Rather, a diet composed of a variety of foods from different food groups will most likely meet the RDAs, according to the panel.

Historically, the RDAs were designed as a guide for determining United States dietary needs of military troops. Today, the use of the RDAs has expanded, and they are now used for a variety of purposes, including establishing standards for food assistance programs, designing nutrition education programs and developing new products in industry. In addition, the RDAs serve as the scientific basis for the Food and Drug Administration to derive the U.S. recommended daily allowances (USRDA)—the food label guide that lists the nutritional content on food products. Rather than list the numerous categories of RDAs (18 categories, grouped by age and sex), the USRDAs are formulated by using the highest nutrient requirement of the RDAs for all age groups, male and female. Although the RDAs have been updated three times since 1968, the USRDAs have not been changed.

Recommendations in the new edition of the RDAs for some nutrients remain unchanged or require only slight revision. In addition, some nutrients levels simply may change because the new RDAs are now based on actual median heights and weights for the U.S. population rather than on arbitrary ideal measurements used in past editions. Several nutrient changes reflect new scientific information or new interpretations of data by the committee; a summary of the most significant changes is listed below.

Vitamin K Based on recently published work, the RDA for this vitamin is established for the first time. It is essential for normal blood clotting; green leafy vegetables are the best source.

Vitamin C The RDA for vitamin C for adult males and females remains at 60 mg/day. However, the committee recommended that cigarette smokers consume at least 100 mg/day of vitamin C because smoking lowers the amount of this vitamin in the blood.

Good sources of vitamin C are vegetables and fruits.

Vitamin B6 The lowered RDA for vitamin B6 reflects changes in the method used to calculate the RDA for protein on which vitamin B6 allowance is based. The richest sources of vitamin B6 are chicken, fish, kidney, liver, pork and eggs.

Folate Allowances for folate are much lower than are those in the previous edition because of new methods that provide more accurate analysis of the various forms of this nutrient available in the typical U.S. diet. The committee found that diets containing about half the previous RDA were able to maintain the body's requirement and stores of folate. Folate can be found in a variety of foods—liver, yeast, leafy vegetables, legumes and some fruits.

Vitamin B12 Based on recent studies on B12 metabolism and function, the committee recommended that the RDA for this vitamin be lowered about one-third to one-half from what was previously recommended. Vitamin B12 is found in animal products.

Calcium Research suggests that peak bone mass is probably not reached before age 25. Accordingly, the recommendation for 1,200 mg/day of calcium for adolescents has been extended through age 24 as compared to 18 years in the previous edition. For adults, the RDA for calcium (800 mg) remains the same. Dairy products account for most of the U.S. intake of calcium; other sources are certain vegetables, soft bones of fish and some calcium-enriched grain products.

Magnesium The RDA remains the same for adults, but it is lower than those in previous editions for children ages 1 to 15 and women during pregnancy and lactation. Magnesium is found in whole seeds such as nuts, legumes and unenriched grains.

Iron The committee examined data on the body's ability to store iron in relation to dietary intake and recommended that the RDA for iron be lowered for adolescent girls and premenopausal women (a decrease of 3 mg). The allowances for adult men and postmenopausal women remain the same. Pregnant women are advised to increase their daily iron intake by an additional 15 mg. Dietary sources of iron include meats, fish, eggs, certain kinds of beans and iron-enriched cereals and whole grain products.

Zinc The RDA for adult men (15 mg) remains the same, but because women have lower body weights, the RDA for adult females has been reduced to 12 mg/day. Dietary sources of zinc are animal products, especially meats and shellfish, such as oysters; plant sources of zinc include cereals.

Selenium Established for the first time in this edition, the new RDA for this trace element is based on human studies of selenium deficiency discovered in China. The RDA for adult men is 70 ug and 55 ug for women. Seafood, kidney and liver are good sources of selenium.

Lecture Series Talks Taxes

The Fogarty International Center's International Services and Communications Branch is hosting a series of free tax lectures for foreign scientists. The nine lectures begin Jan. 12; a series schedule can be obtained from intramural administrative offices. For more information, call 496-7337.
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development of alternatives to animals models, the activists' demands have become more strident," he said.

"Why have they targeted biomedical research, which is probably the most noble use of animals?" he asked. "Some have speculated that maybe it's because medical research is the most noble reason. Perhaps they figure if they can knock off the most noble first, then the other uses (food, clothing, farming and sport) may fall easier.

"Secondly, we're a more vulnerable target. We are regarded basically as a police, well-regulated institution," continued Goodwin, who related part of a conversation he'd once had with an animal rights activist.

"Why don't you all go to the race track and picket what they do to the animals there?" he asked.

"Because at the race track we would get our teeth kicked in," replied the protester.

Goodwin said that animal rights activists have infiltrated and radicalized many traditional animal welfare organizations. Such takeovers, he said, have led to "a steady shift of resources away from shelters and education programs to the 'stop research' agenda."

The animal rights movement enjoyed its largest growth in the 1970s post-Vietnam, post-Watergate era, taking seed during a period when the country's mistrust of establishment was prominent, according to Goodwin.

Other factors that have advanced the efforts of PETA and similar groups include the public's recent attention to environmental concerns, which tends to evoke a fear of technology, as well as American society's increasing scientific illiteracy, Goodwin continued.

"Animal rights is essentially a movement of young people," he said. "They don't remember polio and other research areas where the use of animal models was crucial. Health education now emphasizes primarily prevention—if you eat right, you have a good diet and practice safe sex, you won't get sick. But you can't prevent Alzheimer's, and what about treating people who already have AIDS?"

Yet another factor is the considerable decline in hands-on experience with animal research among students at all levels, including medical schools.

Goodwin listed five false allegations about the use of animals in research that activists use in their attack on biomedical animal research:

1. It is inherently cruel; is wasteful and duplicative; diverts funds from treatment; is unnecessary if disease is prevented by a healthy lifestyle and alternatives are employed; and finally, puts pets at risk.

"Using these allegations, animal rights groups have been quite successful in camouflaging their real agenda—to stop all uses of animals for human needs," Goodwin said.

While scientists and other research advocates must expose the fundamental philosophy, they must also be able to counter the "secondary arguments" with facts, he said.

With respect to allegations of waste or duplication, for example, he noted that 'science involves overlapping studies. Replication is essential to scientific progress.'

He also pointed out that laws prohibiting the use of pound animals for research have increased the number of animal deaths. Of the 15 million unclaimed animals killed by pounds each year, he said, "less than 1/1000 of the total is needed for research. If pound animals are not available, additional animals must be specially bred for research purposes."

About 40 cents of every $100 the federal government spends for health care is used for research with animals. Mental disorder and alcohol and drug abuse research involving animal models account for 2 cents of every $100.

Goodwin cited the polio vaccine and antihypertensives as examples of research strides made through the use of animal models. Ironically, the PET scan, which is heavily advocated by activists as an alternative to using animals in testing, took 8 years of animal testing to develop.

"The 'alternatives' argument is our most slippery slope," Goodwin noted. "It is one of the hardest arguments we have to counter. But the test is—would you take a drug that had only been tested on a computer or in a tissue culture?"

NIH acting director Dr. William Raub, who addressed policy questions following Goodwin's overview, advised researchers attending the meeting to become more actively involved in the public education effort now being launched by the Public Health Service. He noted that HHS secretary Dr. Louis Sullivan and assistant secretary for health Dr. James Mason regularly extol in their speeches the medical successes accomplished by using animals in biomedical research.

"There is a need for aggressive education of the public," Raub reiterated, also mentioning the improved security policy at NIH that protects laboratories from activists looking to destroy research projects that use animals.

"They (animal rights activists) have $50 million committed to their efforts," Goodwin concluded. "The biomedical research community has only about $1 million to counter it. We are not apologizing. We are not reluctant. That is clearly not the position of the department. Our public education effort will be increased. While we cannot do activities that may be seen as lobbying, we are educate."
Space Is the Place

NIH, NASA Agree to Joint Study, Establish Working Group

By Anne Barber

Back in June 1988, NIH and the National Aeronautics and Space Administration (NASA) signed a memorandum of understanding, agreeing to foster the development of an interagency cooperative program that will enhance the biomedical research capabilities of both agencies.

To accomplish this, an interagency working group between NASA and NIH was established to explore areas of mutual interest and formulate complementary programs in biomedical research. Biomedical research in this agreement was defined to consist of ground-based and space-flight research related to the biomedical changes in living organisms that are known to occur or could potentially occur during or after a space flight.

Initially, such programs will be developed in the following areas:

- Cardiovascular deconditioning, including space adaptation syndrome (space motion sickness), cardiac arrhythmias, and post-flight orthostatic intolerance (fainting and dizziness);
- Musculoskeletal degeneration, including the influence of microgravity and immobilization on bone demineralization and muscle atrophy;
- Vestibular adaptation, including space motion sickness and disorientation;
- Pulmonary adaptation, including the effects of gravity on respiratory control mechanisms; and
- The effects of the space environment on the aging process involved in each of the major body systems and as a model for the study of aging processes.

Programs in other disciplines may be developed at a later time.

A joint workshop was held recently on the effects of the space environment on the aging process. The NIA sponsored the workshop and established the following goals: identify current state of knowledge, identify gaps in that knowledge, develop research strategies to meet the needs, and identify how to meet the needs (see detailed story on the workshop in an upcoming issue of the Record).

"Right now, we are concentrating on the major subjects named above," says Edward Lynch, executive secretary for NIH's space medicine working group. "But, we might include other areas later such as the effects of radiation in space and what effects space has on the body's immune system.

"We have an open-ended agreement with NASA that will evolve over the next few years with many of the institutes becoming involved," he says.

The NIH members of the NIH/NASA interagency working group include Dr. Jay Moskowitz, director, Office of Science Policy and Legislation, cochairman; Dr. Claude Lenfant, director, NHLBI; Dr. Lawrence Shulman, director, NIMS; and Dr. Murray Goldstein, director, NINDS.

And NIH's space medicine working group, chaired by Moskowitz, includes Dr. Suzanne Hurd, director, Division of Lung Diseases, NHLBI; Dr. Donald A. B. Lindeberg, director, NHL; Dr. Ralph Naunton, acting director for extramural programs, NIDCD; Dr. Barbara Packard, director, Office of Program Planning and Evaluation, NHLBI; Shulman; and Richard Sprout, associate director for biomedical research and clinical medicine, NIA: Dr. Judith Vaitukaitis, chief, General Clinical Research Centers Program Branch, DRR; Dr. Frank Williams, NIA director; and Lynch, executive secretary.

According to Lynch, experience gained from previous space flights of relatively short duration indicates that the body appears to undergo profound physiological changes as a result of the microgravity environment and other conditions that exist in space. The NIH Space Biomedical Research Program is intended to increase understanding of these adaptive changes and to assess the potential health risks that may be associated with them.

A major objective of the program is to provide a scientific basis for the development and testing of interventions and countermeasures designed to safeguard and maintain the health and well-being of space travelers.

The committee feels it is equally important that the knowledge gained through studying the unique biological effects of factors encountered in space will contribute to the understanding of conventional health problems.

NIH Daycare Survey Has Begun

A productive work environment includes more than quality office and clinical space; it also includes providing quality daycare.

Last July, Norman Mansfield, NIH associate director for research services, requested that the Division of Space Management investigate the current daycare needs at NIH. A committee was organized and representatives from the Office of the General Counsel, Division of Personnel Management, Division of Equal Opportunity and representatives of the NIH women's advisory committee were invited to participate. More recently additional members were invited from nursing, procurement and the Westwood administrative staff.

The committee's role is to identify current daycare needs, evaluate those needs and provide recommendations to Bldg. 1 administration.

The committee decided that a survey was the best method of gaining up-to-date information. Research for the survey involved input from General Services Administration technical experts, examples of previous surveys by other federal agencies, the Montgomery County health department and also information from presentations by both NIH childcare facilities—Parents of Preschoolers Inc. and Child Kind Inc.

The survey was recently distributed at the Westwood Bldg. The remainder of Bethesda-based NIH employees will receive copies on Jan. 2. Completed surveys are to be returned by Jan. 19, 1990. A portion of the survey can be used to write comments and to volunteer to help implement the resulting programs. A survey of this magnitude can only be effective if it is completed by a large number of employees. The survey will give statistical information that will be used to ensure a correct comparison of daycare demand to NIH's ability to supply.

Paul Horton, director of the Division of Space Management, will conduct a presentation about daycare and the committee's activities on Dec. 15, noon to 1 p.m., Conf. Rm. 6, Bldg. 31.

The purpose of the committee and the resulting survey is to keep NIH in step with today's federal workforce. That goal can only be achieved if basic assumptions about the families, finances and quality of care can be redefined. With this vital information and the cooperation of all employees, NIH can continue a tradition of quality daycare and set a high standard for comprehensive federal daycare. —Donald Bordine

Dr. Gyorgy Csako (l) recently accepted a staff position at Vanderbilt University's department of clinical chemistry. Before he left the clinical chemistry service at NIH, colleagues honored him at a luncheon. Csako, a native of Hungary, was at NIH for 10 years.
Baltimore's Goucher College as a biology major, keen on becoming a physician. "All through college that was my aim," she recounts. "I was really intrigued with genetics."

She went to Harvard Medical School for a year but found it not as intellectually satisfying as the study of genes, which she describes as like "figuring out puzzles."

At Harvard she recognized that "dealing with patients was absolutely not my bag of tea." Conferences with her professors prompted a decision to enroll in graduate school at Johns Hopkins.

"Molecular biology was born during the time I was a grad student," she recalls.

After obtaining her Ph.D. at Hopkins, Jordan began a 10-year career of independent laboratory investigation. For 3 years prior to her arrival at NIH, she was at the University of California, Berkeley.

"I was studying a bacteriophage called lambda," she recalls, "and the mechanism by which it integrates into the chromosome of the bacteria it infects through a process called recombination. Everybody I worked for had grants from NIH, but I knew very little about the extramural programs of NIH."

Her acquaintance with the institutes began when she read an advertisement for the GA program in Science magazine.

"I felt I needed to make a change," she remembers of that time. "I felt I'd done my thing in the lab. It just hit me that GA sounded like a program that was tailor made for me."

Seven other scientists joined Jordan to become the GA class of 1973. All hailed from off campus save one—Ron Geller, currently director of NHLBI's Division of Extramural Affairs.

When the class graduated, the future for big government science looked bleak.

"It was the Nixon era," Jordan recalls, "and there were freezes and cutbacks and few jobs."

She took a job with NCI's Virus Cancer Program, with which she had done an assignment during her GA year.

"It was not the typical GA job because it had nothing to do with grants and was not an extramural program."

Jordan remained in the post for 3 years before another GA contact paid off—the Genetics Program at NIGMS wanted her.

"I wouldn't have gotten the job were it not for my GA experience," she said.

Dr. Fred Bergmann, a former GA board member who directed the Genetics Program, hired her.

Jordan rose to become deputy director of the Genetics Program Branch, then spent 6 years as associate director for program activities at NIGMS.

During that time she sponsored GAs who did assignments for her and was mentor to Dr. Wayne Wray, now deputy director of NIDR's Extramural Program.

In 1984-85, Jordan was chairman of the GA Board, which oversees and guides the program for the Office of Extramural Affairs. During her tenure, she greatly expanded the duties of the board and of the chairman. Three new training programs emerged under her leadership. All included the goal of giving NIH a well-rounded corps of health scientist administrators and all are still in place.

"Each program includes the Seminar Series and rotating assignments. It gives people who participate an opportunity to get to know the key people at NIH," she says.

Jordan, who is today deputy director of the National Center for Human Genome Research, never bALKs to return to the lab.

"I don't have the patience to go back to that sort of thing."

Instead she is managing NCHGR, which is "like a mini-institute. Unlike NIGMS, our center has a very specific goal. It is also a very visible program, with a lot of media interest. We expect scientists to collaborate extensively with each other and to share information more freely than is usually the case."

Jordan sees her role as keeping the center's "eye on the goal."

Her GA experience, she says, was "clearly very important to me. I would never have thought of coming to NIH if I hadn't seen that ad. GA gave me a chance to see how administrative work goes; I had not done much of it before. I decided that administration and management was, to me, just being natural. You take things one step at a time, just like the rest of life. You use a lot of common sense and patience, and watch for opportunities."

Watching for opportunities might have been the motto for Dr. Hortencia Hornbeck's entire life, so few has she let pass by. A glance at her resume suggests more than the familiar "raised by the bootstraps" metaphor. Her rise was more like the mercurial in a tropical thermometer—steadily upward.

Born in Colon, Panama, she began taking advantage of scholarships while in high school.

"I was more interested in philosophy than science as a kid," Hornbeck recalls. "But my music teacher advised me to go into science or starve."

Her clarinet teacher "told it like it was," she said, and challenged her to aspire to high goals.

While in high school, Hornbeck saw an advertisement in the newspaper for a scholarship program that would allow her to spend her last year of high school in the United States. Her music teacher urged her to apply.

Hornbeck won the American Field Service scholarship, which allowed her to spend her senior year in a high school in Williamsville, N.Y.

"I had three shocks when I came to the U.S.," she recalls, laughing. "Language shock, culture shock and temperature shock."

"But I got the idea then to return to the U.S. for my education," she said. "I was enchanted."

"I decided that administration and management was, to me, just being natural. You take things one step at a time, just like the rest of life."

While in the U.S., Hornbeck did everything her American family did, including visiting college campuses when the family's daughter reached college age.

Returning to Panama, she earned an A.A. degree in medical technology at Canal Zone College in Balboa, again on the strength of a scholarship.

"I had no master plan," she said. "I just approached college year by year. I commuted 40 miles each way from Colon to Balboa and lost a lot of weight."

Money was tight in the Hornbeck family as

Polcari Praised as GA Administrator

During interviews with GAs for this story, the name A. Robert Polcari sprang up repeatedly, usually following a string of laudatory adjectives.

The object of this admiration has a title—director for extramural staff training of OD's Office of Extramural Programs. He is also director of the Office of Health Scientist Administrator Development Programs, which makes him overseer of the Grants Associates Program.

"Polcari is a very savvy guy," says Dr. Zaven Khachatryan, associate director for neuroscience and neuropsychology of aging at NIA and a GA grad (class of 1978). "He has a lot of drive. A lot of people who have come
Dr. Hortencia Hornbeak

four sisters competed for resources.

"My guiding principle was that I should do more than expected in order to excel," Hornbeak says.

A third scholarship enabled her to enter Skidmore College in Saratoga Springs, N.Y., for her final 2 years of college.

Winning that scholarship "involved a language test and an SAT test," Hornbeak remembers. "I passed both, but then there was an interview. I was fully convinced that I wouldn't get it so I went into it relaxed and had fun."

The 4-year scholarship permitted her to obtain not only a B.A. in biology and chemistry, but also 2 years of graduate study at Georgetown University, where she received her Ph.D. in microbiology in 1972.

After completing her dissertation at Georgetown, Hornbeak did 2½ years of postdoctoral research at NIH in the laboratory of Dr. Bernard Moss, now chief of NIAID's Laboratory of Viral Diseases. Then began her academic career at the University of South Alabama in Mobile, where she was assistant professor of microbiology/immunology in the college of medicine.

"It was a new, budding medical school," she recalls. "I was one of the first faculty members there other than the chairman of my department."

Hornbeak spent 5 years in Alabama, teaching and doing research on herpes simplex virus and antifoulates for drug therapy against cancer.

"I had a lot of administrative responsibilities in that job as an assistant professor," she remembers, "and discovered that I had a lot of strengths in that area."

This awareness, combined with a desire to get a broader view of biomedical science and an interest in returning to NIH, brought her back to the campus in 1979.

"I came as a technical information specialist in NCI and spent 2 years in the International Cancer Research Data Bank Program. Then I realized, coming from an academic environment, that health science administration was a whole new challenge with a whole new set of rules. I realized that the way to learn it quickly and in one big scoop was the GA program."

Hornbeak joined the GA class of 1983 and quickly set about planning useful assignments.

"I selected my assignments rather carefully," she recalls. "To have a successful year, one really has to plan. You have to find out where there's action and when is the best time to do a particular assignment."

The year gave Hornbeak three gifts—knowledge, confidence and contacts.

"I learned to be malleable, to work quickly and to ask the right questions," she said. "My confidence built with each success."

After her GA year, Hornbeak spent 3 years as a project officer in the Office of Tropical Medicine and International Research, NIAID. "It was a very rewarding experience," she remembers.

There, her perspective on health research expanded to include the international arena.

Hornbeak maintains that the overall knowledge gained through the GA year has been invaluable to her subsequent NIH career.

"It has allowed me to thrive in my present job," she said.

Now acting deputy chief of NIAID's Program Project Review Branch, Hornbeak learned, during her GA year, the details of cooperative agreements—then a relatively new award mechanism at NIH. She now applies her expertise in this and other areas to helping speed advances in AIDS research through expedited review of grant applications and assisting in preparation of requests for applications and proposals.

Dr. Luz Froehlich, Hornbeak's current boss and main adviser during her GA year, hired her when she learned that Hornbeak wanted to work in what was then emerging as NIH's hottest field—AIDS.

Today, Hornbeak considers bench science "a phase that I went through. It is very difficult to switch to administration," she admits. "In the lab, it's 'I did this' and 'I did that.' But there's no longer an 'I' in administration."

To Hornbeak, one of the best lessons of her GA year was that the program prizes a quality that she too values—initiative.

"Dr. Froehlich has allowed me to take initiative," she says, enthusiastically. "You can't develop without it."

Those with the gumption to apply for the GA program may contact the Office of Health Scientist Administrator Development Programs, 496-1736. □

NIEHS director Dr. David P. Rall has received the international Ramazzini Award of the Collegium Ramazzini from the Town of Carpi, Italy. The Collegium Ramazzini is a professional scientific organization whose goal is advancing the study of occupational and environmental health around the world. Rall was honored for his career contributions to occupational and environmental medicine.
A sensitive new test that can detect small numbers of the spiral-shaped bacterium that causes Lyme disease has been developed by NIAID scientists. According to their report, which appears in the December issue of the *Journal of Infectious Disease*, the test “should greatly facilitate accurate diagnosis of the disease as well as provide a tool for studying the biology of the bacterium and how it causes disease.”

Drs. Patricia A. Rosa and Tom G. Swahn of NIAID’s Rocky Mountain Laboratories in Hamilton, Mont., conceived the test.

Based on a technique known as polymerase chain reaction (PCR), the new test can now be used in a limited way to diagnose Lyme disease. Widespread diagnostic use, Rosa says, will have to await one further achievement. Scientists must first determine whether there is one human tissue that always harbors the bacterium when a person is infected, and to which they can target this test. Otherwise, a negative test result could be misleading.

A major roadblock to effective treatment of Lyme disease has been the lack of reliable tests to diagnose the disease during early infection. Prompt treatment with antibiotics usually resolves the infection and prevents the onset of chronic arthritis, neurologic or cardiac symptoms. Lacking sensitive and specific diagnostic tests, physicians have relied heavily on patient history and clinical symptoms to diagnose the illness. But only 60 to 70 percent of people with Lyme disease develop the telltale skin rash, erythema migrans, only about half recall being bitten by a tick, and the later-stage chronic symptoms are nonspecific.

Lyme disease is now the most commonly reported arthropod-borne disease in the United States, according to the Centers for Disease Control. It is usually transmitted to humans through the bite of an infected tick. Since 1982, when reporting began, 13,825 cases have been recorded; 1988 cases totaled 4,572.

The scientists modeled their new test on the recently invented technique known as polymerase chain reaction. Briefly, PCR uses two short pieces of DNA, called primers, to define and bind the ends of a larger target segment of DNA being looked for in a sample specimen. If the primers ferret out their target, an enzyme, called a polymerase, copies it. Repeated cycles of this search-and-copy process can generate millions to billions of copies of the target DNA within a few hours. It is termed a “chain reaction” because each DNA copy produced becomes a target in the subsequent reaction. PCR is particularly useful for infectious agents that are difficult to detect, because it makes their presence overwhelmingly obvious and thereby identifiable.

In this case, the target is DNA from the Lyme disease agent, a coiled bacterium, or spirochete, known scientifically as *Borrelia burgdorferi*. With PCR, as little as five or fewer *B. burgdorferi* spirochetes can be detected within a sample. Sensitivity is key to improved diagnostic tests for Lyme disease because tissues from infected humans and animals appear to contain very few spirochetes.

PCR’s extreme sensitivity confers a marked advantage over currently used blood tests for Lyme disease. Blood tests detect antibodies (infection-fighting proteins) to *B. burgdorferi*. But these antibodies may not be detectable for up to 6 months after transmission of *B. burgdorferi* from an infected tick. Moreover, antibodies to other bacteria sometimes cross-react with these tests, mimicking a positive result. Because they are poorly standardized, current blood tests yield varying results from one diagnostic laboratory to the next, adding another factor of unreliability.

In addition to being highly sensitive, the new PCR test proved to be highly specific. It reacted with *B. burgdorferi* isolated from a broad geographic area including France and Germany as well as several states, and a range of hosts including ticks, rodents and humans.

Rosa says PCR can be used immediately to survey a given geographic region for infected ticks. Because a tick is small and self-contained, the whole tick rather than just DNA from a particular tissue can be used as starting material for the PCR amplification process, thereby simplifying the procedure.

PCR should also greatly facilitate answers to basic research questions. It should aid scientists’ efforts to understand how the bacterium establishes persistent infection and show in what tissues it appears during asymptomatic and symptomatic phases of the disease. It can also help clarify in what ways the disease can be transmitted.

To develop their PCR test, the scientists used DNA from the prototype *B. burgdorferi* isolate found in the early 1980s by two other NIAID scientists. This isolate was discovered in 1982 by Dr. Willy Burgdorfer and subsequently isolated by Dr. Alan Barbour from *Ixodes dammini* ticks found on Shelter Island, N.Y. This tiny species of tick, unrelated to the dog tick, is the primary vector for the spirochete in the eastern and midwestern U.S. Rosa and Swahn chose as a DNA target a piece of DNA from this isolate of *B. burgdorferi* that they had reason to believe would not vary from isolate to isolate.

They then tested DNA primers for this target against 18 samples of *B. burgdorferi* as well as against many other species of *Borrelia* important in causing human disease or known to infect ticks and rodents. In particular, they wanted to exclude the possibility that their primers could react with *B. hermsii*, the most closely related species in the genus. *B. hermsii*, which causes relapsing fever, often cross-reacts with *B. burgdorferi* in serologic tests because genetically they are about 50 percent alike.

The PCR test reacted with 17 of 18 isolates of *B. burgdorferi* tested but with no other *Borrelia* species tested, including *B. hermsii*.

The one isolate the PCR test didn’t react with came from Germany. But by slightly redesigning the primers, the scientists now find that they react with this one as well.

PCR was pioneered by researchers at Cetus Corp. in California. In 1985, they reported the development of a rapid prenatal PCR test for sickle-cell anemia. Since then, the technique has been embraced by widely divergent fields of science including anthropology, archaeology and forensics as well as infectious diseases.
Inn Opening Delayed by Fallen Trees

The opening of the Children's Inn at NIH, originally anticipated in March 1990, will be delayed 4-6 weeks by damage that occurred when two trees crashed into one of its four segments during a windstorm Nov. 21.

“We estimate damage in the range of $100,000-$150,000,” said Gerald Lawson of NIH's Design and Construction Branch, DES. He said that interpartitions, roof trusses, roof sheathing, cedar shakes and exterior window trim were ruined in the accident.

The first of the two trees that fell gave way at about 11 a.m. on Nov. 21 in the aftermath of a windstorm that hit the area the night before with fierce gusts. It came to rest against a second tree; groundskeepers were inspecting it when the two fell together atop the inn.

“The tree people were about 30 feet up in a cherry picker, looking at how best to remove the first tree,” said Lawson. “They heard the trunk snapping and warned workmen, who were attaching cedar shakes to the roof, to get off quickly.”

No sooner did the roofers leave when the two large tulip poplars came crashing down on the area they had just vacated. One of the workmen scraped his knee in the rush to exit.

The next day, workers sawed the two trees—one with a 30-inch diameter base, the other 20 inches—into segments and hauled them away for firewood.

Vernon N. Taylor of the Grounds Maintenance and Landscaping Branch said one tree was so rotten that “you could see daylight if you looked through the length of it.”

Groundskeepers said the wood would be sectioned and stacked near Bldg. 22.

“It’s available to anyone who wants to cart it off,” said a tree cutter. “It goes pretty fast.”

Replacement trusses for the damaged roof of the inn arrived at NIH on Nov. 30, by which time repairs were already in progress, Lawson said.

“Next week, we will do a complete review of all trees on the site” to evaluate their stability, he added. The inspection was a joint effort by NIH, the developer and the contractor.

“The most important thing is that no one got hurt,” said Andrew Tarler, administrative coordinator for the inn. “We’re all just relieved that it happened before the inn was occupied.”

Insurance covered the repair costs, he said, but added that the inn continues to require financial support. NIH employees who make contributions of $25 or more will be given a Children's Inn T-shirt. Call the R&W, 496-6661, for more information.—Rich McManus

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NIGMS Employees Honored

Ten employees of the National Institute of General Medical Sciences were honored at a recent award ceremony. NIH Awards of Merit were given to Dolores Lowery of the Minority Access to Research Careers Program and Lynn Pukkar of the personnel office.

The institute's first Employee of the Month award went to Lorraine Schultheisz of the Cellular and Molecular Basis of Disease Program. Recipients of length of service awards were: Yin Ling Chien and Janice Ramsden (10 years); Deborah Free, Peter Johnson, and Dolores Lowery (20 years); Artrice Bader and Charles Miller (30 years); and Calvin Waddell (40 years).
Dr. David Johnson Retires from NIDDK

He's a lesson in hard work and humility. He came to NIH in 1952, master's degree in hand, and started his career as a laboratory technician. Soon he was enrolled in a Ph.D. program at Georgetown University. Taking classes at night and on weekends, working full-time during the day, and finding time to be with his wife and two children was rough, he recalls. But it paid off. He went from lab tech to Ph.D. chemist to section chief to lab chief.

Yet today, as Dr. David F. Johnson, retired chief of NIDDK's Laboratory of Analytical Chemistry, sifts through papers and possessions accumulated over 37 years, he talks about how others contributed to his success instead of recounting his accomplishments.

"I owe a great deal to the man who hired me," says Johnson of Dr. Erich Heftmann, former chief of the section on steroids in the National Institute of Arthritis and Metabolic Diseases (later reorganized into NIDDK and NIAMS).

"Erich really shaped my career. He encouraged me and inspired me to go on to get my Ph.D. He advised me—and really made it sink in—that if I wanted to progress and succeed at NIH, then it's absolutely necessary to have a doctorate. I think that maybe without that encouragement, I may have drifted, I don't know.

"Then there was the support and encouragement of Ed Rall and Jesse (Dr. Jesse Roth, NIDDK scientific director). They showed a great deal of confidence in me and gave me a tremendous amount of support."

Johnson's success, however, was not a product of other people's confidence. It was all his own doing.

"He's a good scientist who doesn't mind getting his hands dirty and making things work," said Dr. Joseph (Ed) Rall, NIH deputy director for intramural research and former scientific director for NIDDK. "He was instrumental in managing the design of Bldg. 8, he has taught a course in chemistry every year for 20 years for the Foundation for Advanced Education in the Sciences; he's just a good scientist and a remarkably good administrator. He's good at whatever he puts his hands to."

In his early years at NIH, Johnson put his hands to steroid biochemistry research. He and Heftmann pioneered techniques in steroid chromatography, a technique for separating out and analyzing steroids of physiological significance from steroid mixtures. They developed one of the first automated systems for this kind of analysis. The noisy, unwieldy "Steroid Analyzer" prototype they put together with the instrument shop turned out to be a precursor to the liquid chromatography techniques used today.

Dr. David F. Johnson

This adventure with the NIH instrument shop apparently whetted Johnson's appetite for studying the techniques of biological research. In the late 1970s, he turned his attention to instrumentation and the research techniques of mass spectroscopy and nuclear magnetic resonance.

Besides his legacy of published papers and fruitful collaborations, Johnson will be long remembered for sharing a most coveted talent of his. That talent was in demonstrating how to run a productive research lab.

"I could talk about him forever as far as how he has been a good mentor and supervisor," said Dr. Stanley Simons, chief of the steroid hormones section in Johnson's lab. In the 14 years that he's had Johnson for a supervisor, Simons said he's learned the importance of creating an atmosphere in the lab that is conducive to scientific discovery.

"Dr. Johnson has been able to keep out all of the extraneous and annoying and disruptive influences. He has the ability to prepare the fallow ground so that science can blossom," said Simons. "Through his own example and interactions with people, he made the lab a place where people enjoy working. He did this by trying to create harmony. There was no doubletalk, no intrigue. You knew exactly where you stood and that just made life so much easier. That kind of leadership is effective because so much more can be accomplished.

"He will be sorely missed," said Simons, "and it's just going to be a different place here without him." —Kathy Kranzfelder

Toastmasters To Honor Broder

Dr. Samuel Broder, director of NCI, will receive this year's Communication Achievement Award from the NIH Toastmasters Club on Friday, Dec. 15 at noon in Wilson Hall, Bldg. 1.

Broder is being honored for demonstrating excellence in communication. Following presentation of the award, Roger Langley will talk about humor in public speaking. Refreshments will follow; all are invited.

The NIH Toastmasters, an R&W-sponsored club that fosters mastery of communication skills, is entering its 21st year on campus. It meets every Friday at noon in Bldg. 10, Rm. 2C310. Guests are always welcome.

Women Needed for Study

Normal volunteers are needed for an NIH study. Requirements are: female, ages 18-39, not on any medications (including birth control pills), no chronic illness or history of infertility. Volunteers will have blood drawn, physical examination and optional Pap smear. Payment will be in accordance with NIH guidelines. For further information, call 496-4244.

Paid Volunteers Needed

Volunteers are needed to give one 10 cc tube of blood for which they will be paid $20. The blood will be tested for evidence of exposure to monkey B virus. Only normal volunteers who have never worked with monkeys or monkey tissues need apply. Call 496-1836 to schedule an appointment for blood-drawing.

MARYLAND ACADEMY OF SCIENCES announces
Nominations are currently being accepted for
THE OUTSTANDING YOUNG SCIENTIST and
THE OUTSTANDING YOUNG ENGINEER OF MARYLAND AWARDS

These awards recognize extraordinary contributions made by young scientists and engineers who live or work in Maryland. EACH RECIPIENT WILL RECEIVE THE ALLAN G. DAVIS MEDAL AND A CASH AWARD OF $2,500.

TRIING TIPS

The NIH Training Center of the Division of Personnel Management offers the following:

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Personal Computer training is available through User Resources Center (URC) self study courses. There is no cost to NIH employees for these hands-on sessions. The URC hours are:
- Monday: 8:30 a.m. - 7 p.m.
- Tuesday: 8:30 a.m. - 7 p.m.
- Wednesday: 8:30 a.m. - 4:30 p.m.
- Thursday: 9 a.m. - 1 p.m.

Training Center, DCRT, and other training information is available on WYLBUR. Logon to WYLBUR and type ENTER TRAINING.

Weight Watchers at NIH

The NIH Fitness Center is sponsoring another session of Weight Watchers, scheduled to begin in January. Classes will be held on Fridays from noon to 1 p.m. in Bldg. 31C, Rm. B4BS25 (near the Fitness Center). Cost for the 8-week session is $100. Class size is limited to 24, and registrations will be taken on a first-come, first-served basis on Fridays, Jan. 5, noon until 1 p.m. Session runs Jan. 12 through Mar. 2, 1990. For further information call 496-TRIM.

Autism Treatment Opportunities

People with autism, ages 6 to 40, are sought for a 12-week, outpatient study evaluating the effectiveness of clomipramine on obsessive compulsive symptoms, social relatedness, mood swings, temper tantrums and other symptoms commonly present in autism. This drug is already available publicly in Europe. Anyone with coexisting severe to profound mental retardation or neurological or medical problems cannot be included. If interested contact Drs. Glenn Mannheim or C. T. Gordon, 496-6080, or leave a message at 496-3175.

Former NCI Secretary Ann Hartwell Dies

Ann Hartwell, a former executive secretary of the federal government and a longtime resident of the District of Columbia, died Friday, Oct. 20, of pulmonary fibrosis.

Hartwell worked for the federal government for many years. Her first position was in the National Cancer Institute, where she was secretary to the first director, Dr. Carl Voegtlin. It was there that she met her husband, Dr. Jonathan Hartwell, a chemist who headed NCI's natural products division.

Hartwell went on to join the Office of Interamerican Affairs headed by Nelson A. Rockefeller. Later she transferred to the Department of State when Rockefeller was appointed assistant secretary. Subsequently, she worked as an executive secretary in the offices of assistant and undersecretaries of state, positions filled by Ambassadors H. Freeman Matthews and Robert D. Murphy.

After she retired from federal service, Hartwell held part-time secretarial positions at the Johns Hopkins School of Advanced Studies for the late Secretary of State Christian A. Herter, Sr., Ambassadors Theodore C. Achilles, Wiley T. Buchanan, Jr., and H. Freeman Matthews. She also worked for a time at the National Science Board office of the National Science Foundation.

For 20 years, Hartwell was an active member of ARCS Foundation, Inc., a national volunteer group. ARCS is dedicated to helping provide scholarships for young students in the scientific and technological fields.

Hartwell was a member of Annunciation Catholic Church and the Spring Valley/Wesley Heights Citizens Association. She had also been an active member of the League of Republican Women of D.C.

Hartwell was born in West Point, Iowa. She is survived by her husband; a sister, Gertrude Carney, of San Diego; three nephews, John, Robert, and Patrick Carney, and six grandnieces.
Security Now a Division

Campus Crime Down in 1989, Officers Promoted

By Rich McManus

Crime on the NIH campus fell almost 17 percent during fiscal year 1989, reported O.W. Sweat, director of the new Division of Security Operations at NIH. The good news came during a ceremony attended by top NIH officials and employees during which four officers were promoted to sergeant and eight rose to corporal.

"I'm very pleased to make this announcement," said Sweat, who, as new division director, will report to Norman Mansfield, NIH associate director for research services. Until recently, the Security Branch had been a part of the Division of Safety.

"A 5 percent reduction in crime is enough to elate most police departments," he continued, "so this accomplishment is highly commendable."

He added that the arrest rate has gone up 47 percent to 71 individuals, 21 of whom were booked on Apr. 24, 1989, during an unusually disruptive animal rights demonstration at Bldg. 1.

Theft of government property is down 35 percent, Sweat reported, "due in part to the police and the intense efforts of the Crime Prevention Branch."

Three years ago, security instituted a program to anchor and cable valuable office equipment so that it could not easily be removed. More than 1,600 items, including balances, typewriters, computers and printers, were secured in FY 1989, which represents an increase from the year before.

The NIH Police fielded 100,458 calls for service last year, Sweat noted.

The force underwent more than 8,300 hours of formal training during the period. New recruits spend 2 1/2 weeks in sessions at NIH then go to "rookie school" at the Federal Law Enforcement Training Center in Glynco, Ga., for 8 weeks. Every officer on the force must complete 40 hours of intensive in-service training each year.

"The NIH Police is a professional organization," Sweat said. "It would be an understatement to say that I'm extremely proud of them."

Guest speaker Dr. William Raub, acting NIH director, said, "The NIH community honors itself today in honoring the officers being promoted. We often take you for granted when things are going well. Security on this campus has never been more of a challenge, but we are in good hands. All of us are in your debt."

Raub related a humorous story about the day his wife, a radiologic technologist, came to Bldg. 10 for a job interview. Arriving at the police post outside the Clinical Center garage, she inquired about where to park, explaining that she was here for a job interview. The officer on duty gave her the information, then hollered out, "I hope you get the job, ma'am. We need more pretty ladies around here."

When Mrs. Raub told her husband what had happened that night at the dinner table, he asked rather sheepishly if she had taken offense. "No, I think you should have him promoted," Mrs. Raub reportedly said.

Promoted to sergeant at the ceremony were: Sylvester R. Brown, George Evans, Mark E. Knowles and Glenn P. LeJeune.

Earning their corporal badges were: Bruce A. Blum, Chauncy M. Brown, Norman C. Dadd, John R. Driscoll, Jelio D. Harrison, Preston Jackson, Michael A. Lake and Harold L. Miller.

Sweat's last bit of data from the 1989 crime report involved the number of parking tickets issued at NIH during the period—12,343.

"I know that figure is exact," he said, "because that's the exact number of phone complaints I've received."

A reception for the officers, their families and guests followed the ceremony at police headquarters in Bldg. 31C.

Holiday Blood Donors Needed

The gift of a unit of blood would be greatly appreciated at holiday time by the NIH blood bank. Since many employees have use-or-lose leave and take it during this period, many regular blood donors are not available to give. However patients at the Clinical Center do not get use-or-lose leave and their need for blood remains, regardless of the holidays. All individuals who have ever considered giving the gift of blood are encouraged to donate at this time. To schedule a donation, call 496-1048.

The 10th anniversary of Operating Room Nurses Day was celebrated recently with an educational exhibit in the Clinical Center lobby. Surgical equipment, techniques and instrumentation were displayed by the NIH operating room nurses. Patients, family members, visitors and NIH staff were encouraged to ask questions as surgical nurses gave a hands-on demonstration of surgical equipment. The operating room staff enjoyed the opportunity to share this information.

NIH's Dr. Thomas Cameron, 63, recently became the third person to enter the Hall of Fame at NIH's department of transfusion medicine for donating his 100th pint of blood. He gave his first NIH donation in October 1963 and reached the century mark 26 years later.