

Still The Second Best Thing About Payday

## Spiegel Named Director of NIDDK

Dr. Allen M. Spiegel was named new director of the National Institute of Diabetes and Digestive and Kidney Diseases on Nov. 15, succeeding Dr. Phillip Gorden (see story, p. 9).

"I am very pleased that Allen Spiegel, one of the nation's most distinguished medical scientists, will be assuming leadership of NIDDK," said NIH director Dr. Harold Varmus, who made the appointment. "NIDDK is responsible for addressing some



Dr. Allen M. Spiegel

of the most important chronic and seemingly intractable diseases facing us today. With advanced understanding of the genetic underpinning of disease at the cellular

level, Allen and the institute are well positioned to dramatically affect the prevention and treatment of many diseases."

Spiegel, who has been scientific director at NIDDK for the past 9 years, is an internationally recognized endocrinologist whose research on signal transduction has helped define the genetic basis of several endocrine diseases. His research established that inherited disease can be caused by defects in G proteins, which serve as intermediaries between hormone receptors and effectors. Spiegel and colleagues at NIH have identified mutations in G proteins that result in defective cell-signalling and cause inherited disorders such as pseudo-

SEE SPIEGEL, PAGE 2

## HIGHLIGHTS

**1** Double Your Donation at Blood Bank

**New Director for NIDDK**

**3** Dangers of Chewing Tobacco

**5** Grantees Win Lasker Prizes

**9** Gorden Goes Back To Laboratory

**12** Quilt Showing Marks AIDS Day

U.S. Department of Health and Human Services National Institutes of Health

November 30, 1999  
Vol. LI, No. 24

## New Procedure Doubles Usefulness Of Blood Donation

By Rich McManus

When you lie down to give your pint of blood at the Clinical Center Blood Bank, it's almost taboo to think that not all of what you're giving is essential. Fact is,

however, that the department of transfusion medicine (DTM) needs mainly the packed red cells; the plasma is, in many cases, discarded or frozen for eventual reuse. To address this skewed economy, the Blood Bank now offers a "double red cell" procedure that allows a donor—in slightly more time than regular blood donation—to give twice the volume of packed red cells than in a normal donation, and get back his or her plasma and platelets, along with enough saline solution to restore the volume of red cells lost,



The finished product of the 35-minute procedure—two happy, healthy units of packed red cells.

SEE DOUBLE, PAGE 6

## NIH Group Selected to Decode Mouse Genome

Twenty-five NIH employees working in Gaithersburg have received a strong endorsement by a review committee of top scientists in the burgeoning field of genomics. The employees—scientists and staff at the NIH Intramural Sequencing Center (NISC)—were recently notified that NISC was designated a member of NIH's new Mouse Genome Sequencing Network. The network of 10 sequencing centers across the United States will decipher the genetic makeup (or genome) of the mouse, one of the most frequently used mammals in medical and behavioral research.



Dr. Jeff Touchman (r), director of sequencing at NISC, explains work to visitors during NHGRI Consumer Day on Nov. 12.

In 3 years, the network will

SEE MOUSE GENOME, PAGE 4



Dr. Marcia Steinberg has joined the Center for Scientific Review as chief of the cell development and function integrated review group and as scientific review administrator of the cell development and function 4 study section. As IRG chief, she will supervise seven study sections in the general areas of cell development and function, as well as one study section in international cooperative projects. She joined the National Science Foundation in 1989 and spent 10 years as a program director in molecular biochemistry before coming to CSR. While at NSF, she took leave for a year and split her time between the National Cancer Institute as a visiting scientist, and the House of Representatives as a congressional fellow. Steinberg's research interests encompass cell biology and biochemistry.

SPIEGEL, CONTINUED FROM PAGE 1

hypoparathyroidism type Ia and McCune-Albright syndrome. He and his colleagues have also identified and studied mutations in G protein-coupled receptors that lead to either hormone resistance in diseases such as nephrogenic diabetes insipidus or endocrine hyperfunction in diseases such as familial male precocious puberty. His current studies on a G protein-coupled calcium-sensing receptor may enable researchers to target treatment for hyperparathyroidism and other disorders involving this receptor.

Spiegel has also participated in a collaborative effort with colleagues in NIDDK and the National Human Genome Research Institute to clone the tumor suppressor gene which, when mutated, causes the inherited disease multiple endocrine neoplasia type 1 (MEN 1), as well as a number of sporadic endocrine and other tumors. The collaborative group is now studying the structure and function of the MEN 1 gene and its encoded protein, menin.

"Throughout my career, I have tried to forge strong links between fundamental science and clinical medicine. Now, I am enthusiastic about being able to do this on a larger scale," Spiegel said.

As NIDDK scientific director, Spiegel guided 21 laboratories and branches that study diabetes, metabolic diseases, sickle cell anemia and other red blood cell disorders, endocrinology, hepatitis B and C, genetics, biochemistry, molecular, cellular, developmental and structural biology. He has recently established a new branch to study pathogenesis of type 1 diabetes and to test new treatments to allow kidney and pancreatic islet transplantation in patients without use of global immunosuppressive agents.

He says NIDDK must continue its strong support for basic science because it offers "the best promise for discovering new knowledge relevant to human disease." At the same time, he adds, "We must vigorously support efforts to apply this new knowledge so that it reaches patients afflicted with the many serious disorders NIDDK studies, and measurably improves their and their families' lives."

After graduating *cum laude* from Harvard Medical School in 1971, Spiegel completed an internship and residency in internal medicine at Massachusetts General Hospital. He came to NIDDK's Endocrinology Research Training Program in 1973 under the mentorship of the late Dr. Gerald Aurbach and became a senior investigator in the Metabolic Diseases Branch and chief of the section of molecular pathophysiology 8 years later. In 1988, he was promoted to branch chief. Spiegel has received numerous awards, most recently the 1998 Edwin B. Astwood Lecture Award from the Endocrine Society and the 1996 Komrower Memorial Lecture Award from the Society for the Study of Inborn Errors of Metabolism. ■

## Renovation Limits Food Service In Bldg. 10 Cafeteria Kitchen

In a project scheduled to continue through Friday, Jan. 21, 2000, the Guest Services Inc. Bldg. 10, B1-level cafeteria kitchen has been shut down in order to renovate the kitchen ceiling.

The cafeteria dining area will remain open and offer a limited variety of breakfast items such as coffee and tea, boxed cereals, fresh fruits, doughnuts, pastries and muffins. Grab-and-go items such as sandwiches and salads, chips and bottled beverages will be offered during lunch hours. However, there will be no hot food services offered in this facility. Those wishing to purchase hot entrees for breakfast and/or lunch may visit the 2nd floor (ACRF) cafeteria and make their selections from an expanded menu that will be offered. To accommodate the overflow of patrons from the ACRF cafeteria, GSI will also offer sandwiches and salads at the Cafe Verde located on the first floor above the Visitor Information Center.

Note the following temporary changes in the hours of operation for the B1-level and ACRF cafeterias:

### ACRF Cafeteria - 2nd Floor

Monday through Friday - 5:30 a.m. to 10 p.m.

Saturday/Sunday and holiday hours will remain the same.

### B1-level Cafeteria

Monday through Friday - 7 a.m. to 2 p.m.

The B1-level cafeteria is scheduled to resume full operations starting Monday, Jan. 24, 2000.

If you have any questions or concerns, contact Pamela Jenkins, 402-0878. ■

## NIH RECORD

Published biweekly at Bethesda, Md., by the Editorial Operations Branch, Division of Public Information, for the information of employees of the National Institutes of Health, Department of Health and Human Services. The content is reprintable without permission. Pictures may be available on request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through Sept. 30, 2000.

NIH Record Office  
Bldg. 31, Rm. 2B03

Phone 496-2125  
Fax 402-1485

Web address  
<http://www.nih.gov/news/NIH-Record/archives.htm>

Editor  
Richard McManus  
rm26q@nih.gov

Assistant Editor  
Carla Garnett  
cg9s@nih.gov

The NIH Record reserves the right to make corrections, changes, or deletions in submitted copy in conformity with the policies of the paper and HHS.

♻️ The Record is recyclable as office white paper.



## Chewing Tobacco Use Linked to Dental Caries

If you think a “chaw” of tobacco won’t hurt you, chew on this: Chewing tobacco users are more likely to develop dental caries, particularly on the root surfaces of their teeth, than those who don’t use tobacco, say scientists at NIDCR and the Centers for Disease Control and Prevention.

“The results of this study give tobacco chewers yet one more reason to quit,” said lead author Dr. Scott Tomar of the National Center for Chronic Disease Prevention and Health Promotion, CDC. “We already know that chewing tobacco use is a risk factor for gingival (gum) recession and oral cancer. The damage that it can do to teeth is another item we can add to the list of health consequences.”

The CDC-NIH study of dental caries and chewing tobacco use in the United States is the first large-scale, detailed analysis of the relationship between dental decay and the leafy form of tobacco. The study results appeared in the November issue of the *Journal of the American Dental Association*.

The researchers analyzed dental caries and tobacco use data from more than 14,000 adults age 18 and over. The data were collected by the National Center for Health Statistics between 1988-1994 as part of the Third National Health and Nutrition Examination Survey.

The researchers distinguished between the two types of spit tobacco, also called smokeless tobacco, and other types of tobacco such as cigarettes, pipes and cigars. Spit tobacco comes in two forms, chew and snuff. Chewing tobacco is a bulky, leafy form of tobacco that is packaged as loose leaf, plugs, or twists, and snuff is a finely ground or shredded tobacco.

The survey data revealed that 6 percent of men age 18 and older use some form of spit tobacco, a figure that is consistent with other recent studies on tobacco use. (The researchers limited their data analysis to men since the vast majority of spit tobacco users are men.) Of the men who use spit tobacco, 59 percent use the chewing tobacco form. Almost half of those who use chewing tobacco also use one or more other types of tobacco.

The study showed that men who use chewing tobacco exclusively were four times more likely than those who had never used tobacco to have one or more decayed or filled root surface. Men who currently use only chewing tobacco also were more likely than former tobacco users or those who currently used only snuff to have root caries. On average, the men who used chewing tobacco exclusively had 3.84 decayed or filled root surfaces (out of 112 possible surfaces), more than any other tobacco-use group and those who had never used tobacco.

The researchers also found a dose-dependent

relationship between chewing tobacco use and the likelihood of having root caries. The more packages of chew a man used each week, the more likely he was to have a decayed or filled root surface. Additionally, the more years a man had used chewing tobacco, the more likely he was to have a decayed or filled root surface.

The researchers speculate that the high sugar content in chewing tobacco is one reason the product is associated with an increased risk of dental caries on tooth roots and crowns. Additionally, the way chewing tobacco is used might also help promote tooth decay, the scientists say. A typical user holds a wad of chew in his cheek for 30 minutes at a time and uses the product in this manner throughout the day, exposing the teeth to the tobacco for several hours. Moreover, both chew and snuff can contribute to gingival recession and therefore make tooth roots more vulnerable to decay.

“This study shouldn’t give chewers the idea they can switch to snuff,” said study author Dr. Deborah Winn of NIDCR. “Spit tobacco users should be aware that both chew and snuff are addictive and can cause oral disease.” According to Winn, earlier studies have linked spit tobacco in various forms to gingival recession, oral lesions and oral cancer.—  
Mary Daum ■



Dr. Arnold J. Levine, president of Rockefeller University, gave the 15th Hans Falk Memorial Lecture on Nov. 9 at NIEHS; his topic was “The Origins of Cancer in Humans.” Levine also gave a seminar the following day on “The Regulation of the p53 Gene and Protein.”

Hans L. Falk, to whom the first NIEHS named lecture series is dedicated, was an internationally known environmental health scientist and one of the first members of the NIEHS scientific staff.

## Bldg. 10 Crestar Bank To Close Temporarily

Starting Monday, Nov. 29, the Crestar Bank located on the B1-level of Bldg. 10 will be temporarily shut down for approximately 1 week in order to perform asbestos abatement in the ceiling and install fire protection sprinklers. During this renovation, there will be no banking services offered except for ATM transactions. The Crestar Bank is scheduled to resume full operation starting Monday, Dec. 6. If you have any questions or concerns, contact Pamela Jenkins, 402-0878. ■



Dr. Anne Thomas recently joined the staff of the National Institute of Nursing Research as clinical director of the Division of Intramural Activities and chief, Health Promotion Laboratory. Among her activities, she will be designing and implementing the new Health Promotion Laboratory. She comes to NINR from the faculty of Indiana State University School of Nursing at Terre Haute. Prior to that, she simultaneously served on the faculties of the University of Southern Indiana School of Nursing, and the University of Indianapolis School of Nursing. She is an adult and geriatric nurse practitioner, and received her Ph.D. from Texas Women’s University in 1994. In conjunction with the Midwest Center for Rural Health, Thomas was responsible for designing, implementing, evaluating and coordinating clinical research activities for the center’s rural health clinics.

**MOUSE GENOME, CONTINUED FROM PAGE 1**

carefully map, or determine the physical organization of the mouse's 21 chromosomes, and then sequence, or identify the order of the estimated 3 billion chemical bases, the mouse genome.

"Knowing the genetic make-up of the mouse and being able to compare it to the DNA of humans and other animal species will greatly expedite many avenues of research including assessing predisposition to disease, predicting responses to environmental agents and drugs, and designing new medicines," said NIH director Dr. Harold Varmus.

The value of the mouse genome to a wide spectrum of biomedical scientists is illustrated by the funding of the Mouse Genome Sequencing Network by NIH.

"Every institute at NIH, with support of the NIH Office of the Director, has made a contribution to the first year of funding for the Mouse Genome Sequencing Network, demonstrating the importance of this work to research progress in virtually every area of biomedical research from hereditary hearing impairments to Alzheimer's," said Dr. James F.

Bathey, NIDCD director and cochair of the trans-NIH mouse genomics and genetics resources coordinating group.

NISC, which was established in 1997 by NIH to provide its intramural scientists access to large-scale DNA sequencing at a relatively low cost, was one of numerous research institutions that applied for the Mouse Genome Sequencing Network grants. All applications for the network underwent the rigorous evaluation that characterizes the NIH grants awards system. A key consideration in the selection of these grants was the applicant's ability to sequence DNA accurately and efficiently.

That NISC competed successfully to receive one of the grants is a tribute to the facility's scientists and staff, said Dr. Jeffrey Trent, director of the intramural research program of NHGRI, which oversees NISC. "NISC's excellent work already has earned the praise of NIH scientists who depend on the facility for their research. NISC receiving the grant is certainly 'icing on the cake.'"

Dr. Eric Green, director of NISC, added, "Our involvement in the Mouse Genome Sequencing Network is particularly exciting since it will allow an intramural group to be full-fledged participants in an important component of the ongoing Human Genome Project."

The Human Genome Project's efforts to decode the genetic script of humans will produce a working draft in spring 2000 and a complete document in 2003. Data from the sequencing of both the human and mouse genomes are accessible to the public via NIH's GenBank Web site.—Cathy Yarbrough ■

**Mice Missing Enzyme Suffer Dwarfism, Thin Bones, Arthritis**

The saying about "not missing something until it's gone" is especially true when referring to a body component, no matter how obscure its function may appear on the surface. An international team of scientists has demonstrated in a mouse model that the absence of an enzyme often linked to disease has devastating effects on skeletal development and is inevitably fatal. A detailed look at the abnormalities provides valuable clues about the role of this enzyme in normal skeletal development, and raises a cautionary flag regarding the use of certain enzyme inhibitors for treating arthritis.

Dr. Kenn Holmbeck from the National Institute of Dental and Craniofacial Research and Dr. Paolo Bianco from Italy led a research effort to produce mice missing an enzyme called MT1-MMP (membrane-type 1 matrix metalloproteinase). The deficient animals appeared essentially normal at birth, but their bones, including those that make up the skull, failed to develop properly. The end result was thin bones, dwarfism and severe arthritis. The study appeared in the October issue of *Cell*.

The range of effects astounded even the investigators familiar with related enzymes. "We were profoundly surprised by the extent of effects resulting from the absence of MT1-MMP," said Holmbeck. "In other knockout models where closely related enzymes were eliminated, the effects were minimal. The development of arthritis was an especially interesting finding because this disorder has been linked to excess MMP activity in the joints. Broad-spectrum therapies aimed at inhibiting MMPs in arthritic joints should take into account that eliminating MT1-MMP activity could actually exacerbate the problem."

MT1-MMP is one of about 20 MMPs that have been identified in mammals. The existence of so many MMPs is one reason scientists have thought there may be some redundancy of function, so that the absence of any one enzyme would be compensated for by other family members.

To single out the role of a particular MMP, Holmbeck, Bianco and colleagues turned to the "knock-out" mouse. Using a technique known as targeted gene disruption, the investigators created mice that had the MT1-MMP gene obliterated so that it could not code for a functioning enzyme.

The wide range of effects observed in the knockout mice was found to be due to the inability of the mutant mice to cleave collagen, one of the most abundant building materials in cartilage and bone.

Although the link between MT1-MMP and arthritis remains to be determined, the study provides strong evidence that the enzyme is necessary for maintaining healthy joints.—Wayne Little ■



Mohammad Ojodu, a production technician at NISC, works at the computer.

## Grantees Win 'America's Nobels,' Lasker Awards

By Shannon E. Garnett

Three NIH-supported researchers recently won the 1999 Albert Lasker Award for Basic Medical Research, the nation's most distinguished honor for outstanding contributions to medical research.

Dr. Clay M. Armstrong, a professor in the department of physiology at the University of Pennsylvania School of Medicine, Dr. Bertil Hille, a professor of physiology and biophysics at the University of Washington, and Dr. Roderick MacKinnon, a professor in the laboratory of molecular neurobiology and biophysics at the Rockefeller University, were recognized for their pioneering research on the functional and structural architecture of ion channel proteins. These proteins govern the electrical potential of membranes throughout the body, thereby generating nerve impulses and controlling muscle contraction, cardiac rhythm and hormone secretion.

In addition, Dr. Seymour S. Kety, who became the first scientific director of NIMH in 1951, received the Lasker Award for Special Achievement in Medical Science for his lifetime of contributions to neuroscience, including the discovery of methods for measuring cerebral blood flow that led to current brain imaging techniques and his visionary leadership in mental health that ushered psychiatry into the molecular era.

Kety, who currently serves as a senior psychobiologist at McLean Hospital in Belmont, Mass., and professor emeritus of neuroscience in the department of psychiatry at Harvard Medical School, was also recognized for bringing valuable scientific perspective to the etiology of schizophrenia.

Through a series of landmark studies of adopted individuals with schizophrenia, Kety established the importance of genetics in causing the disease.

For more than 30 years Armstrong and Hille have sought to understand electrical signals in the nervous system. Electrical signals enable the brain to receive information from nerves throughout the body and allow muscles to contract.

Their work, and that of MacKinnon, is significant because ion channels are the basic components of the body's electrical system. "Ion channels are little holes in the membranes of all cells," says Armstrong. "The channels open and close to either permit or block certain ions from crossing the membrane. Sodium, potassium and chloride channels are among the most important molecules in

the electrical signaling system."

Armstrong was recognized for his work in cell membrane excitability, and for elucidating ion channel gating kinetics. He demonstrated that ion channels have gates that control the movement of ions into or out of a cell in response to small changes in voltage across the membrane. His current research focuses on the idea that proteins in solution are key to understanding ion channel gates at a more basic level.



Dr. Roderick MacKinnon

Hille's research proved that channels are independent physical entities in the membrane, each site generating electrical signals that make it possible for cells to talk to one another. In addition, he demonstrated that the channels are sized to accept one kind of ion or another. Their pores have the capacity to act as a molecular sieve. He established that the pores contain water molecules, which also contribute to the ion selectivity.

Currently Hille, who wrote *Ionic Channels in Excitable Membranes*—a classic text that is considered the scholarly bible of ion channels—is studying the role of ion channels in a variety of cell systems, particularly G-protein signaling and the control of neurotransmitters such as adrenaline, acetylcholine, serotonin and dopamine.

MacKinnon was honored for his elucidation of the structure and function of potassium channels. His work provided the first molecular description of an ion selective channel.

"The high-resolution structure of the potassium channel determined by MacKinnon and his colleagues provides a clear basis for understanding one of the important problems of biology—how ions are selected for transport across membranes. The opportunity now exists for a detailed mechanistic understanding of the way such channels are controlled in normal and aberrant cells," said NIGMS director Dr. Marvin Cassman.

"The work of Armstrong, Hille and MacKinnon is a wonderful extension of work begun 50 years ago by A. Hodgkin, A. Huxley and B. Katz in England. Studies of ion channels have benefited since that time from the work of superb scientists in this country and abroad," said NINDS director Dr. Gerald Fischbach.

The Lasker Awards, often called "America's Nobels," were presented last month at a luncheon in New York City. ■



Dr. Seymour S. Kety

### Healthy Volunteers Needed

The Uniformed Services University of the Health Sciences, along with NIMH, is looking for healthy, highly trained males and females between ages 20-40 with the ability to perform at least 5 pull-ups to participate in a research study relating to stress, tyrosine and physical and cognitive performance. If interested, contact René Beck or Gina Coll at the Human Performance Laboratory, (301) 295-1371 or (301) 295-9646.

DOUBLE, CONTINUED FROM PAGE 1

usually in the range of 360-400 milliliters.

The donor then rises from the recliner having parted with twice as precious a gift as regular donation, and commences typically to utter apropos one-liners: "I feel twice as good. I feel like I've accomplished twice as much." Or, "Does this mean I get a coupon for a return visit to the donor snackbar in a month? After all, I donated two units of red cells but I got only one set of cookies!"

According to Dr. Susan Leitman, chief of the DTM blood services section, one wag rose up from the 35-minute procedure asking, "Can I get an 8-hour parking permit (for donor parking) instead of a 4-hour permit?"

Well, nobody promised the procedure would sharpen wit, but Dr. Charles Bolan, the first person to donate double red cells at DTM—and the source of the comments above—maintains that he felt a lot better later in the day than he would have following a regular donation. He adds, "I feel like my blood is less viscous today, so I'm more alert mentally."

That benefit alone might prompt many to sign on for the procedure, which is already win-win for both donor and recipient. "Everybody benefits," says Leitman. "Donors end up making one trip to NIH instead of two. The donor recruiters make one phone call instead of two. The donation itself is twice as useful. The \$50 to \$60 we spend doing viral safety testing on the blood sample is only done once. And we only have to do one blood group/type test. We get two units out of one donation, which we keep together in storage since most patients who need the cells get two units anyway.

"Patients benefit by being exposed to a lower number of donors," she continued. "It's a big advantage to the patient, the Blood Bank, and the donor."

DTM is currently targeting the blood groups it needs most (type O), and those donors for whom it's the biggest hassle to come to NIH regularly. The department recently combed its records for group O donors who visit three or fewer times a year, and mailed out some 700 invitations to participate in the new procedure (though all inquiries are welcome,

insists Leitman). One of those who responded affirmatively was Hannibal Guerrero, who, on Oct. 28 became the fourth person to donate double red cells at NIH.

"I just do it because it makes me feel good,"



Dr. Susan Leitman, chief of the blood services section at the department of transfusion medicine, keeps a watchful eye on the dials of the apheresis machine during Bolan's donation.

PHOTOS: ERNIE BRANSON

said the Bethesda resident, who was first drawn to blood donation at NIH a year ago by a recruitment sign posted on Old Georgetown Rd. Because he works in northern Virginia, it's not easy to visit the Blood Bank regularly. "I feel like it's my community service," he said with a broad smile.

The NIH Blood Bank, whose goal is solely to service the needs of CC patients, currently uses some 5,000 units of packed red cells annually, and around 30,000 units of platelets. Because the long-dormant heart surgery program at the CC is gearing up to begin again, Leitman foresees a doubling of the need for red cell collection.

"Within several years, I would predict that at least 50 percent of blood donations here will use automated cell separation," she forecast. "It allows a blood center to tailor what it collects to the needs of the patients it serves. It also minimizes wasting and outdated because you are collecting most efficiently what you need. It really makes optimal use of your pool of willing donors."

Automated cell separation, or apheresis, is a procedure that uses the same size needle, and the same location (the antecubital vein in the arm's elbow joint) as traditional blood donation. But instead of the blood going into a collection bag, it travels in plastic tubing to a machine that spins the blood centrifugally in a bowl. As the blood components separate by weight in the spinning bowl, siphons remove needed components. In double red cell donation, only the packed red cells are kept; the plasma and platelets come back to the donor, along with some salt water. So instead of being down 500 ml of volume, as in a typical donation, the apheresis donor gets all volume back: saline solution in equal measure as red cells lost, plus all the plasma except a

Dr. Charles D. Bolan, a fellow assigned by the Army for 2 years to the department of transfusion medicine, becomes the first person to donate double red cells at NIH. The machine that allows the procedure—a Haemonetics MCS+—is in the foreground. "It's fun to see the plasma and red cells in transit," said Bolan. "It's very interesting."



tiny spritz. "Red cells are happier with a little bit of plasma mixed in," notes Leitman. Donors need not fear exposure to another person's plasma; the donor remains connected to his/her blood throughout the entire procedure.

"It's very, very safe to collect two units of packed red cells, while returning the rest to the donor," she assures, though there are some restrictions. Male donors must be at least 5'5" and weigh 150; women must be 5'1" and weigh 130. Also, the wait between double red cell donations is twice the wait between whole blood donations—112 days vs. 56 days.

"Coming to NIH to donate blood every 4 months has got to be more convenient than coming every 2 months," notes Leitman.

Both whole blood and double red cell donors can expect to feel a bit of fatigue following donation, but Leitman says a large published study indicates no increase in adverse effects for the latter category.

"Because citrate is used in double red cell donation (as a preservative), donors may feel some tingling around their lips and fingers for about 15 minutes," she said. "Some donors report they can feel some effect in their stomach. But we can slow down the rate (at which citrate is added) if it becomes uncomfortable."

NIH is experiencing a constantly increasing need for red cells to support a burgeoning kidney transplant center in the CC, as well as programs in stem cell and pancreatic cell transplantation, Leitman explained.

"In particular for group O red cells, we're right on the border of meeting our needs," she said. "We have gotten dangerously low in our supply of red cells for some surgeries. The double red cell collection allows rapid replenishment of low inventory. It's great for building back up a depleted reserve."

The double collection is especially good in two other areas, said Leitman: donors with extremely rare blood types can provide far more good for more patients with a single donation; and those who want to store their own blood for elective surgery (autologous donation) get both the safety of their own blood for transfusion, and suffer only one needlestick for the two units that are typically stored for future use.

Leitman says the advantages of apheresis are so evident that NIH may move toward the procedure as a means to collect almost every blood product it needs: platelets and plasma as well as red cells. And not only do DTM staff enjoy using the new technology, but also patients get "lots of attention from our staff," she said. "We give them T-shirts and buttons, and they feel like superstars."

If you are interested in double red cell donation, contact the Blood Bank at 496-1048. ■

## FAES Announces Spring Courses

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.

Courses are offered in biochemistry, biology, biotechnology (daytime courses), chemistry, computer sciences, imaging sciences, immunology, languages, medicine, microbiology, pharmacology, psychiatry, statistics, toxicology, 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 category 1 credit toward the AMA physician's recognition award.

Classes will begin Jan. 24; mail registration ends Dec. 30 and walk-in registration will be held Jan. 5-11. Tuition is \$100 per credit hour, and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with supervisors and administrative officers as soon as possible. Both the vendor's copy of the training form and the FAES registration form must be submitted at the time of registration. Note that FAES cannot access training forms entered in the NIHTS system; a signed hard copy (vendors' copy of SF182 form) is needed in order to process registrations for classes.

Schedules will be available in the graduate school office in Bldg. 60, Suite 230, the foundation bookstore in Bldg. 10, Rm. B1L101, and the business office in Bldg. 10, Rm. B1C18. To have a schedule sent, call 496-7976 or visit the FAES Web site at <http://www.faes.org>. ■



NICHD health science administrator Dr. Koji Yoshinaga has received the 1999 Distinguished Service Award from the Society for the Study of Reproduction. The award acknowledges his contributions to the reproductive biology community through work as an investigator, administrator and "facilitator of scientific exchange." Yoshinaga was the first researcher

to investigate the effects of nicotine on pregnancy. He has also made significant progress in studies of ovulation control and implanting processes in rodents. Through his administrative actions in the Reproductive Sciences Branch of NICHD's Center for Population Research, he has been an effective champion of extramural research funding and RFAs in critical research areas.



Dr. Alice Horowitz, a health educator in NIDCR's Health Policy, Analysis and Development Branch, recently received the Distinguished Service Award from the American Association of Public Health Dentistry. She was honored for her "excellent and distinguished service" to public health dentistry. The award is the highest honor the organization can bestow. Horowitz has served as a teacher, consultant and mentor in the field of public health dentistry, and has lectured and conducted continuing education courses in the U.S., China, Japan, Thailand and Korea.

### BLT Presents 15th Holiday Show, Dec. 16

For some joyful holiday spirit, plan to attend the 15th annual NIH Holiday Show presented by the Bethesda Little Theatre. The performance will be held on Thursday, Dec. 16 at noon in Masur Auditorium, Bldg. 10. Come and enjoy a variety of tunes in celebration of the season.

Along with the appearances of Ben Fulton as master of ceremonies, Nelva Reckert's novelty numbers and Gloria Newcomb's international flair, this year's show will also feature Michael Terence at the piano. The Bethesda Little Theatre is an R&W organization whose proceeds benefit NIH charities. The Holiday Show is BLT's gift to the NIH community in thanks for their support throughout the year. For more information, visit our web site at <http://www.recgov.org/r&w/blt/>.

### ORWH Concludes 1999 Seminar Series

The final program for the 1999 ORWH Women's Health Seminar Series, Women's Health Research for the 21st Century, will be held at 1 p.m. on Thursday, Dec. 2 in the Natcher Conference Center. The 2-hour seminar will focus on "Mood Disorders and Women: Clinical and Treatment Issues."

The program will open with an overview by Dr. Mary Blehar of the National Institute of Mental Health. Other presenters and topics include Dr. Katharine Wisner, Case Western Reserve University, "Depression"; Dr. Lee Cohen, Massachusetts General Hospital, "Bipolar Disorder"; and Dr. Barbara Parry, University of California, San Diego, explaining "Premenstrual and Perimenopausal Mood Disorders." A question-and-answer period will follow.

The series is sponsored by the Office of Research on Women's Health. The 2000 seminar series will mark the 10th anniversary of the Office of Research on Women's Health and a decade of progress in women's health research. Topics will include AIDS, diabetes, stress, and heart and brain attacks. For more information, call 402-1770. ■

*Bill Leonard, a producer in NLM's Audiovisual Program Development Branch, has been selected for membership in the "Silver Circle" by the Washington, D.C., chapter of the National Academy of Television Arts and Sciences. The Silver Circle was established in 1987 to honor media professionals for their outstanding contributions to the D.C. television industry over a career spanning 25 years or more. Leonard worked for NBC for 27 years before coming to the library in 1980. Among the august company in the 1999 class of the Silver Circle are Ted Koppel, Jim Lehrer and Judy Woodruff.*



### Female Volunteers Needed

The Behavioral Endocrinology Branch, NIMH, is seeking female volunteers ages 40-50 to participate in a 6-month study of the effects of aging and reproductive hormones on measures of cerebral activity, blood flow and stress hormone production. Volunteers must have regular menstrual cycles with no changes in mood in relationship to menses, be free of medical illnesses and not taking any hormones or medication on a regular basis. Payment will be in accordance with the duration of each visit and the type of protocol. For more information, call Linda Simpson-St. Clair, 496-9576. ■

### CIT Computer Classes

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

Hubs, Switches and Routers	12/1
Tango Users Group	12/1
Electronic Forms Users Group	12/1
Fundamentals of Unix	12/1-3
Parachute for Windows 95/98	12/2
IT Security for Unix System Administrators	12/3
DWQuery: Budget and Finance	12/3
Using the SAS System for Elementary Statistical Analysis	12/6-7
SAS Programming Fundamentals I	12/6-7
Basic Security for Unix Workstations	12/7
Creating Animated Web Presentations with PowerPoint 2000	12/8
Introduction to HTML	12/8
SAS Programming Fundamentals II	12/8-9
Programming in S-PLUS	12/9-10
Introduction to Networks	12/10
FileMaker Pro on the Web - Real World Examples	12/13
Using Email Effectively	12/13
Advanced Presentations with PowerPoint 2000	12/13
DWQuery: Personnel Costs (Human Resources) Mini	12/13
NIH Data Warehouse Budget Tracking	12/13
DWQuery: Property Management	12/14
Network Sniffer Workshop	12/14-16
Introduction to the Mac Operating System	12/14
Introduction to Visual Basic	12/14-17

### Lecture on Prostate Cancer, Botanical Medicine, Dec. 2

The Cancer Complementary and Alternative Medicine Research Interest Group is sponsoring a lecture on "Botanical Medicines and Prostate Cancer," Thursday, Dec. 2 from 11 a.m. to 12:30 p.m. in Lipsett Amphitheater, Bldg. 10. Speaker will be Dr. Sophie Chen, research associate professor at the Cancer Research Institute, New York Medical College. She cofounded International Medical Research, Inc. in 1993 to develop natural products and recently founded NovaSpes, Inc., to engage in cancer research on botanical extracts. She holds 12 patents and has published 25 articles and two books, many concerned with herbal compounds for treating cancers, cancer pain and viruses. Chen has developed an herbal mixture called PC-SPES that is directly cytotoxic to some cancer cell lines and has antitumor activity in xenograph models of human prostate cancer. PC-SPES has also undergone early phase clinical trials in prostate cancer at Memorial Sloan-Kettering Cancer Center and New York Medical College.

The presentation will be filmed and available on MBone and videocast.nih.gov.

## NIDDK Director Gorden Steps Down, Returns to Laboratory

By Joan Chamberlain

After 13 years as NIDDK director, Dr. Phillip Gorden is looking forward to trading his suit jacket for a lab coat. A director whose down-to-earth wisdom and humane leadership steered the institute through a period of rapid change, he is moving back to the Clinical Center to revisit the scientific questions that first intrigued him years ago. As chief of the section on clinical and cellular biology in the NIDDK Diabetes Branch, he is resuming his research in disorders of the insulin receptor, insulin secretion and severe insulin resistance. "These rare disorders have a great deal to teach us about the more common forms of diabetes," he says.

On a recent fall weekend, family, friends and colleagues gathered to honor this "man for all seasons," as fellow researcher and former NIDDK scientific director Dr. Jesse Roth described Gorden. A scientific symposium, "The Human Face of Science," paid tribute to Gorden's research contributions, which shed light on topics that span the field of endocrinology: the mechanisms of insulin action, receptor-mediated endocytosis, the pathophysiology and epidemiology of type 2 diabetes, insulin resistance and obesity, islet cell defects in type 2 diabetes, prevention and treatment of diabetes and its complications, hormonal resistance states and multiple endocrine neoplasia.

Gorden has combined his commitment to basic research with a dedication to applying state-of-the-art knowledge to ease human suffering. Under his leadership, NIDDK preserved the integrity of basic research during a time of fiscal constraint while broadening support for clinical trials in the wide range of disease areas covered by the NIDDK research mission. The first of those major trials, the Diabetes Complications and Control Trial, clearly showed the importance of strict glucose control in delaying the complications of diabetes and marked a turning point in treatment of the disease.

Gorden attributes much of his success to the support of his family and his upbringing in Baldwyn, Miss. He learned the value of hard work and sacrifice from his father Morris, who emigrated as a child from the Ukraine in 1921. A country doctor neighbor, paid with a cord of wood when cash was short, inspired Gorden to become a physician. A generation later, Gorden's own love of medicine and learning inspired his sons Jed and Lee to become doctors.

After receiving his M.D. from Vanderbilt University and completing his internship and residency at Yale University in 1964, Gorden began his biomedical research career at Yale as a Public Health Service clinical fellow and research fellow in metabolism. From 1976 to 1978, he was visiting professor at the University of Geneva School of Medicine. Before becoming NIDDK director, he served as chief of the

section on clinical and cellular biology in the NIDDK Diabetes Branch, chief of the Diabetes Branch, and clinical director in the institute's Division of Intramural Research.

"This hasn't been an 'I' career—it's been a 'we' career," Gorden says of his partnership with his wife Vivian.

At their Bethesda home, the Gordens hosted many Friday night dinners fondly recalled by colleagues as a forum that nurtured enduring friendships and the lively exchange of scientific ideas.

Those who know him speak often of Gorden's compassion and humanity. "It was remarkable to be there on clinical rounds with Phil, who would go to the bedside with the kind of insight into what patients needed and what we were supposed to be doing that was rarely seen at NIH," recalled Dr. C. Ronald Kahn, head of Harvard's Joslin Diabetes Center, who knew Gorden when the two were young investigators in the Clinical Center.

"Phil is endowed with exceptional humane qualities: generosity, open and broadmindedness, a never-failing capacity to listen and to help, and a distance from the sensationalism and superficiality that at times invade medicine and science," added Dr. Pierre Freychet, scientist emeritus at France's University of Nice, who met Gorden in 1969 while working in the Diabetes Branch.

"Medicine without science would be largely useless, yet science has got to be driven by humanity or it won't be translatable," says Gorden. "Both have to work together, and that's really a challenge for science, for NIH and for society. Healing is a much bigger thing than prescribing some very modern technology to bring to bear on a particular disorder."

Gorden's career is distinguished by outstanding achievements in training research scientists and strengthening mechanisms for research training and career development. He mentored many young investigators who sought to emulate his astute clinician's skill and practical approach to problem solving. Dr. Simeon Taylor, now chief of the Diabetes Branch, was one of them: "Phil has been an outstanding role model for physician scientists and a supportive mentor to his colleagues. His main goal was always to cure sick people and to ease suffering when cure wasn't possible. For Phil, the commitment to medical research comes from being a compassionate physician helping his patient." ■



Attending the symposium "The Human Face of Science," held in his honor are (from l) Dr. Phillip Gorden with wife Vivian, son Jed, father Morris and son Lee.

## Healthy Mothers Needed

The Pediatrics and Developmental Neuropsychiatry Branch, NIMH, seeks right-handed mothers age 20-40 with nonadopted, first-born children age 5-12 to participate in an fMRI study on the visual processing of faces. Volunteers should have no history of medical or psychiatric disorders, and should not be taking prescription medication (including birth control pills). The first-born children of volunteers should have no history of psychiatric illness or chronic medical problems. Volunteers must have normal vision or wear contacts. Participation requires a 2-hour screening interview, a followup visit, and a 3-hour visit for fMRI scan. Participants will be reimbursed. For more information, call Lisa Kalik or Neil Santiago at 496-8381.

## NEI Grants Officer Grimes Says Farewell

Carolyn E. Grimes, NEI grants management officer, retired Oct. 1 after a 31-year career in the federal government, 27 of those years with NEI.

She began her career as a secretary in the License Renewal Branch of the Federal Communications Commission. In 1972, she joined NEI as secretary to the program planning officer in NEI's Office of the Director. In 1975, she accepted a position in the Division of Extramural Research where she was secretary to the chief of the Scientific Programs Branch. It was here that her natural aptitude for grants management was immediately recognized and she was promoted to the position of grants management specialist and ultimately to grants management officer.

Grimes was the focal point for fiscal and administrative management of the NEI grants program. Through the years, she developed strong working relationships with business personnel from a variety of academic and vision research institutions. She was also well known to the NEI-funded researchers who attend the annual meetings of the Association for Research in Vision and Ophthalmology. Well regarded within the broader NIH extramural community, Grimes was frequently asked to partici-



Carolyn E. Grimes

More than 750 NIH employees gathered information on planning for retirement at the NIH Retirement Fair sponsored recently by the quality of work life committee. The all-day event featured over 18 exhibitors including Legg Mason, National Association of Retired Federal Employees, and the Retired and Senior Volunteer Program of Montgomery County. Above, representatives from the Savings Bond marketing office show examples of their product information. Below, Fran Valentine of the Social Security Administration offers planning tips. Other presenters included the NIH Federal Credit Union, the Federal Retirement Thrift Investment Board, and OPM's Retirement and Insurance Service. The prevailing message seemed to be: "It's never too early to think about retirement and planning for your future!"



pate in policy planning committees and management oversight groups at NIH. Dr. Jack McLaughlin, NEI deputy director and director of the Division of Extramural Research, says, "Carolyn made a tremendous contribution to vision research. She helped advance the research of numerous extramural investigators by her prompt, efficient response to their requests for information and help."

During her career at NEI, Grimes received many awards and citations for her initiative, innovation and organization, including a Special Act Award in 1996 for developing a procedures manual for handling disbursements from the NEI scientific review and evaluation grant. She also showed strong dedication to mentoring and training activities and helped shape the careers of several generations of grants management and management intern trainees at NIH.

Now she says it's time to bid farewell to her colleagues, friends and the workplace she has known so well. The National Advisory Eye Council meeting in October 1999 would have been her 82nd. "We developed a very close working relationship over the years, and I will miss her greatly," says McLaughlin.

The NEI staff embraced Grimes as a colleague, the resident institutional memory and a friend. Although she will enjoy her well-deserved retirement, she will be missed greatly in the NEI and NIH extramural community.—Linda Huss ■

## STEP Holds Session on Predicting The Future of Medicine

The staff training in extramural programs (STEP) committee will present a Science for All session entitled, "Science Fiction to Science Fact: Predicting the Future of Medicine" on Thursday, Dec. 9 from 8:30 a.m. to noon in Bldg. 1, Wilson Hall.

Thirty years ago, scanning techniques and lasers were the stuff of science fiction. Come learn how "fictional" ideas of the past are shaping current medicine and what is predicted for the future. The featured speakers will be: Athena Andreadis, Harvard Medical School neuroscientist and author; Dawn R. Applegate, Advanced Tissue Sciences, who will discuss body repair and tissue engineering; Ann Carmichael, Indiana University infectious disease historian.

The session is free and open to all. Seating is on a space-available basis. One ESA credit is available for the session and attendance at STEP activities earns credit toward NIH grants management certification. Inform the STEP office about any need for sign language interpretation or reasonable accommodation by Dec. 3. For more information call 435-2769. ■

## New NIH Travel Management Center Contract Announced

A new performance-based contract for the NIH Travel Management Center has been awarded to WorldTravelService (WTS). The TMC transition began Nov. 15; full implementation and performance standards will be effective Jan. 18.

WTS will bring several enhancements that promise to improve service:

- ◆ experience serving government travelers
- ◆ technologically advanced reservation and accounting systems
- ◆ reservations can be made via email and fax
- ◆ lowest fare guarantees
- ◆ comprehensive meeting planning (for a fee)
- ◆ upgraded telephone and fax system
- ◆ Web site dedicated to NIH travelers
- ◆ 24-hour emergency customer support
- ◆ electronic booking (in the future)

A new requirement for this contract entails non-refundable service fees that will be charged for each transaction that results in an airline/train ticket being issued. A fee-for-service fact sheet and other useful information can be found on the Web at <http://www.nih.gov/od/ors/dss/special/index.htm>, or call 402-8180 to request copies. WTS will be located in Bldg. 10, Rm. 1C200, with hours from 8 a.m. to 5:30 p.m. In addition, WTS has agreed to staff the Executive Plaza South location, Rm. 150A from 8 a.m. to 7 p.m., until it moves into a permanent location off-site to be announced. Opening of the new off-site location will be Jan. 18. WTS can be reached at 496-8900 (staff travel) and 496-6676 (patient travel).

Throughout the next few months, posters, brochures and manuals about the new contract will be disseminated throughout NIH. Information sessions will also be scheduled. Questions or comments should be directed to the project officer, Tim Tosten, 402-8180 or [tt17b@nih.gov](mailto:tt17b@nih.gov). ■



*Former NIDR deputy director and associate director for extramural programs Dr. Clair L. Gardner, 83, died at his home in Grants Pass, Oregon, on Oct. 12. He served as acting director of NIDR from 1975 to 1976*

*and retired in 1981 after 26 years in the Public Health Service. He is survived by his wife Sara, four children, and five grandchildren.*

## NEI Mourns Donna Phillips

A once familiar face at NIH has passed away after 30 years with the federal government, and 29 years with the National Eye Institute.

Donna Phillips retired from NEI on May 21, 1999, due to illness. If you've been at NIH for any length of time, you were sure to hear as she passed, "Hi honey, how's everything?" At a Jan. 20, 1999, retirement party, Phillips talked about NEI with affection, "...it was mostly about the



*Donna Phillips*

people, I truly loved seeing all my friends at the NEI as well as NIH.

I'm sad to be leaving, but because I'm not feeling so well, it's time for me to retire." She battled cancer for the past 2 years,

and passed away on Sunday, Oct. 10.

Phillips began working at NEI on Nov. 30, 1969, in the administrative office, arriving as one of the institute's first employees. Prior to joining NEI, she worked as a clerical assistant part-time at the PHS Bureau of State Services, Environmental Health Sciences.

When the NEI staff talks about Phillips, one thing was certain: "All we had to do was look at Donna's face on a Monday morning during football season to know if the Washington Redskins won or lost...her face told the story." She was an avid Washington Redskins fan.

After her passing, NEI received a very loving note from Phillips's mother: "The Family of Donna Jean Phillips wishes to express our sincere gratitude to each and every NEI employee who donated leave, provided emotional support or extended a caring word to Donna during her illness. This meant more to her than you will ever know. The caring and sharing approach to such a serious problem by so many people provided blessed relief to Donna and our entire family. Donna is now in good hands with no earthly worries. God bless each one of her NIH friends."—Linda Huss

## Memorial Set for David Rall

There will be a memorial symposium for recently deceased Dr. David P. Rall in the Natcher Bldg. auditorium on Friday, Dec. 3 at 3 p.m. Dr. Bernard Weinstein will deliver an address entitled "Molecular Mechanisms of Environmental Carcinogenesis; Recent Advances and Future Challenges." There will also be tributes by many of Rall's friends. ■

## Paid Volunteers Needed

Are you 18 to 35 years old? In good health? You may qualify to participate in a study of commonly prescribed medications. The study involves multiple visits over a 3-month period. Men and women may earn up to \$880 and get free medical tests. Call the Uniformed Services University at (301) 319-8204.

### Mandoleers Give Concert, Dec. 12

The Takoma Mandoleers will present their sixth annual Holiday Concert on Sunday, Dec. 12 at 2 p.m. This free concert, open to the public, is sponsored by the Clinical Center rehabilitation medicine department and will be held in the 14th floor assembly hall, Bldg. 10. The Takoma Mandoleers, founded in 1923, is the oldest mandolin orchestra in the United States. The musical selections will include songs of the early 20th century such as classical, popular music, marches and ragtime. For more information call Bob Hammond, 435-5655, or evenings, (301) 990-6718.

### Quilt Showing Marks AIDS Day

The National Cancer Institute's Office of Diversity and Employment Programs is sponsoring the display of three sections of the AIDS Memorial Quilt in commemoration of World AIDS Day on Wednesday, Dec. 1.

The quilt is the largest ongoing community arts project in the world. Each of the more than 42,960 colorful panels in the quilt commemorates the life of a person lost to AIDS.

Panels are 3 feet by 6 feet in size. As the epidemic claims more lives, the quilt continues to grow.

Quilt sections will be on display through Dec. 8 in the following three locations:

- outside the NCI director's office on the 11th floor of Bldg. 31;
- in the lobby of Bldg. 31;
- in the lobby of the Executive Plaza Bldg.

NCI is encouraging employees to bring young people to view the quilt and discuss its significance. The theme for the 12th annual World AIDS Day is "Children and Young People: Listen, Learn, Live." More information on World AIDS Day is available at <http://www.avert.org/worldaid.htm>. ■



Members of NIH Toastmasters Club No. 3421 (Friday Noon Club, which meets in Bldg. 36, Rm. 1B11) dined at the Anchor Inn in Wheaton recently to celebrate the 30th anniversary of the club. Charter member Padman Sarma (holding plaque) was toasted (and roasted!) for his 30 years of continuous service. For information about joining the club, contact Mark Anderson at 496-7793.

### Long, Short Sleepers Needed

To complete a sleep study, NIMH needs male and female volunteers ages 20-35 who routinely sleep 9 hours or more nightly, or who sleep 6 or fewer hours nightly. Volunteers must have no sleep disturbances or insomnia, plus no history of mental illness. Volunteers must be in good general health and not taking any medications or birth control pills. The study requires living on the research unit for 4 consecutive days. Compensation is available. For more information call 496-5831 or 496-6981. ■



A memorandum of understanding was signed recently to create a collaboration to analyze the percent of global disease associated with the environment and to share expertise for resolution of international issues in environmental health. Poonam Khetrpal Singh (l) from India is executive director of the World Health Organization's sustainable development and healthy environments group. Cosigner is NIEHS director Dr. Kenneth Olden.

### Annual Sing-Along Scheduled, Dec. 12

The third annual *Messiah* sing-along will take place on Sunday, Dec. 12 at 3 p.m. in Masur Auditorium, Bldg. 10. Presented by the NIH Community Orchestra and the Bethesda Little Theatre, this popular event will feature the orchestra along with a chorus and soloists. Come prepared to sing your part or just listen and enjoy the music. Scores will be available for borrowing. The suggested donation of \$10 will benefit NIH charities. For more information, visit <http://www.gprep.org/~music/nih> or call (301) 897-8184. ■

### Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held (usually) on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—moves up to 3:15 when Dr. Patrick O. Brown visits on Dec. 8; he is associate professor, department of biochemistry, and HHMI associate investigator at Stanford University School of Medicine. His talk, an NIH Director's Lecture, is on "The Living Genome."

On Dec. 15, Dr. Stephen C. Harrison will discuss "Viruses as Molecular Machines." He is Higgins professor of biochemistry and director, Center for Structural Biology, Harvard Medical School, and HHMI investigator at Harvard.

The series then goes on winter holiday until resuming Jan. 12.

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