

"Still  
The Second  
Best Thing  
About Payday"

# The NIH Record

## From Birdseed to Vaccines

### **OTT Helps Invent a Healthier World**

By Rich McManus



*Dr. Maria Freire*

Build a better mousetrap, the saying goes, and the world will beat a path to your door. But at NIH's Office of Technology Transfer—the world's largest not-for-profit biomedical patent-seeking organization (so fit it more than pulls its own weight: royalties the 50-person office helped NIH earn exceeded total NIH technology transfer expenses, including salaries, by \$5 million last year)—that mousetrap had better benefit the public health or OTT won't touch it.

The office is headed by a quietly ambitious Ph.D. in biophysics who once felt she was a failure because the routine of benchwork wasn't satisfying her love for science. Nowadays, however, Dr. Maria Freire is getting satisfaction, despite the amused assertion that, because of her demanding job, she doesn't have a life, and the fact that she keeps a Price Club-sized stash of Tylenol at hand and powers her way through a 2-hour tutorial on invention disclosure, patents and licensing by pressing a cold Diet Pepsi to her forehead.

"I Survived Maria Freire's First Year at OTT," reads a sign on a colleague's door. The artwork shows a two-headed Janus—one face comic, the

other unamused. It is unsaid during the interview, but feelings might not be the top priority when creating a "lean, mean, strong portfolio of technologies." Freire winces at being reminded of a phrase that has stuck with her since Dr. Harold Varmus hired her a year ago from the University of Maryland Graduate School at Baltimore to lead an aggressive, public-health directed but market-savvy tech transfer program: She once said of her job of winnowing commercially valuable wheat from chaff, "It's hard to tell someone that their child is ugly."

It is typical of Freire to be refreshingly blunt, but still somehow charming. There's  
(See FREIRE, Page 6)

## Midsummer Implementation Seen

### **Security To Be Boosted at NIH Facilities**

When walking around NIH's Bethesda campus, one might have a hard time believing there's a need to enhance security here. However, the days when NIH was a small research facility located in the countryside are long gone.

During the past 20 years, NIH and the surrounding community have seen tremendous growth in population and boundaries. There are benefits from that growth, but also minuses. NIH has to face such realities as the effects of traffic and crime.

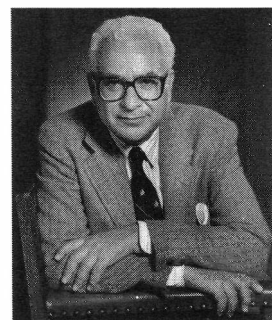
Ten years ago, crime on the Bethesda campus was relatively rare and consisted of mostly minor offenses. Crime has since increased 310 percent, with approximately 70 criminal arrests a year, most involving nonemployees.

However, NIH remains a relatively safe and secure place to work. Most crimes occurring here are related to theft of property, with crimes against persons such as assault and robbery being extremely rare. To protect the safety of all NIH employees and visitors, the Division of Public Safety in the Office of Research Services administers a broad security program for NIH.

The attention placed on security at all federal facilities has been heightened, however, since the Apr. 19, 1995, bombing of the Murrah Federal Bldg. in Oklahoma City. In fact, the day after that bombing, the President directed the Department of Justice to conduct a study to assess the vulnerability of federal office buildings. As a result, Justice published a report entitled "Vulnerability Assessment of Federal Facilities" on June 28, 1995. This study proposed minimum security standards for  
(See SECURITY INITIATIVES, Page 4)

## **Nobelist Gell-Mann To Lecture, June 6**

Renowned physicist and Nobel Prize winner Dr. Murray Gell-Mann will present the NIH Director's Cultural Lecture, Thursday, June 6 at noon in Masur Auditorium, Bldg. 10. He will discuss "From Simplicity to Complexity," a search for connections between basic laws of physics and the complexity and diversity of the natural world.



*Dr. Murray Gell-Mann*

The guest speaker is professor and cochairman of the Science Board, Santa Fe Institute, New Mexico, and Robert Andrews Millikan professor emeritus of theoretical physics, California Institute of Technology.

Gell-Mann received the Nobel Prize in physics in 1969 for his work on the theory of elementary particles. His  
(See GELL-MANN, Page 2)

## No Exit for Bugs

### **Bldg. 41A Renovated For Maximum Safety**

By Rich McManus

For the past 2 years, a new laboratory facility has been going up almost unnoticed on campus—that's because it is being built within an existing building—Bldg. 41A, a structure on the south side of the reservation that was completed in the mid-1970's to house cancer virus research under extreme safety precautions.

The renovated laboratory, called the NIH Maximum Containment Laboratory (MCL), is one of only three facilities in the country (the others are at CDC and Ft. Detrick) where biosafety level 4 research can be conducted; BL4 is the highest level of containment for biomedical research.

The reason for such precaution is the bug that will be studied there first—multidrug resistant tuberculosis (MDR-TB), which can be transmitted through the air via coughs and sneezes. Back in  
(See BLDG. 41A RENOVATION, Page 8)

## GELL-MANN

(Continued from Page 1)

"eightfold way" theory brought order to the chaos created by the discovery of some 100 particles in the atom's nucleus. He was also instrumental in helping to construct the theory known as "quantum chromodynamics," which seems to account for all the nuclear particles and their strong interactions. Meanwhile, his current research focuses on complex adaptive systems, which brings together such disciplines as natural history, archeology, historical linguistics, depth psychology, and creative thinking.

Gell-Mann has received numerous additional awards and honors, including the Ernest O. Lawrence Memorial Award of the Atomic Energy Commission, the Franklin Medal of the Franklin Institute, the Research Corporation Award, and the John J. Carty medal of the National Academy of Sciences. He is also a recipient of honorary degrees from a number of institutions including the University of Chicago, the University of Turin, Italy, and Cambridge and Oxford Universities, England.

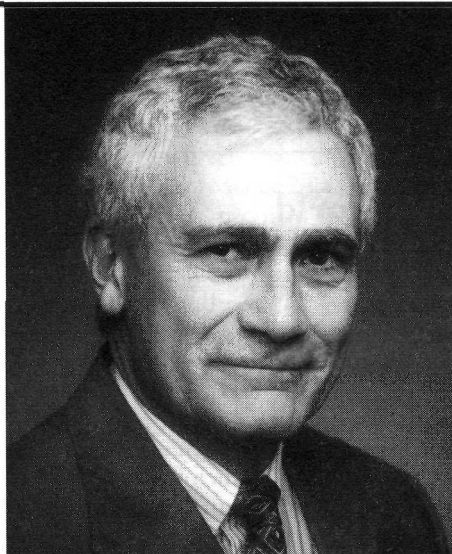
Currently a member of the President's committee of advisors on science and technology, Gell-Mann has been affiliated with Caltech since 1955.

All NIH employees are invited to attend the lecture. For more information, contact Hilda Madine, 4-5595. □

## DCRT Boosts Advanced Laboratory Workstation Support

DCRT's Advanced Laboratory Workstation (ALW) system gives researchers "plug and play" capability for Unix workstations made by Sun Microsystems, Hewlett-Packard, and Silicon Graphics, Inc. (SGI). The system also gives users access to a large managed disk storage system linked to the Internet as well as automatic backup of data, security maintenance and monitoring, distribution and maintenance of scientific software, delivery of electronic mail and news, and World Wide Web access.

DCRT recently improved ALW support for two popular Unix workstations: the SGI workstation and the Sun SPARCstation. Support for the SGI, often used for molecular modeling, has been upgraded by replacing the Network File System with the faster, more secure and more powerful Andrew File System already used in other ALW system platforms. In addition, SGI users of ALW will find its software distribution services an easy way to get automatic updates of molecular modeling applica-



*William L. Risso has been named acting director of the Division of Computer Research and Technology following the recent retirement of Dr. David Rodbard. After joining NIH in 1968 as a PHS Commissioned Corps officer, Risso worked on computerized axial tomography and positron emission tomography scanners, postsurgical monitoring systems, and early computer networks. As DCRT's deputy director for the past 5 years, he has joined the NIH administrative community in seeking new ways to apply computing to NIH business processes. He holds a master of engineering degree from Dartmouth College's Thayer School of Engineering.*

tions maintained by the DCRT Center for Molecular Modeling.

For Sun SPARCstation users, moving from the SunOS to the Solaris operating system is a major upgrade, giving improved performance and security. ALW users with scientific software needing Solaris upgrading can get help assessing their needs from DCRT.

Through a DCRT loaner program, researchers considering an investment in a Unix workstation can evaluate the ALW system free of charge for 1 month. To learn more, call 4-DCRT or email [4dcrt@nih.gov](mailto:4dcrt@nih.gov). See also the ALW system home page at <http://www.alw.nih.gov>. □

## Healthy Males Needed

If you are a white male, ages 50-69, healthy, have no history of cancer, and are not taking steroids or antibiotics, you are eligible to participate in an NCI study on male serum hormone levels and prostate cancer. Volunteers will be paid \$130. Call Susan Greenhut, (301) 309-3667, for details. □

## Intersections Get Stop Signs

The NIH Police Branch will be overseeing the installation of stop signs at two locations on campus; their placement is a result of traffic surveys conducted by the branch for pedestrian safety and speed reduction. The intersections affected are Center Drive at Convent Drive and Lincoln Drive at Service Road West.

Both intersections carry a large volume of vehicular and pedestrian traffic. Several accidents have occurred at Center and Convent Drive, mainly due to the drivers' speed and/or not yielding to pedestrians.

Each of these intersections currently has two stop signs in place; the modification will result in a four-way stop intersection (at Center and Convent Drs.) and a three-way stop intersection.

The signs will be installed Saturday, May 25. Advisory signs will be installed to alert drivers to the new signs. □

## OSIA Has Play Tickets

Join the Order Sons of Italy in America, NIH chapter, for the last play of the season at Montgomery Playhouse in Gaithersburg. The play, *The Musical Comedy Murders of 1940*, is half mystery, half comedy and all fun. The show is at 8 p.m. Friday, June 21 and the cost is \$10 per person (two for the price of one if you have a coupon in the Entertainment 1996 Book). To attend, send a check in the appropriate amount (together with the Entertainment 1996 coupon if you have one) to A. Robert Polcari, P.O. Box 2323, Rockville, MD 20847-2323. The deadline for reserving tickets and for payment is June 7. □

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NIH Record Office  
Bldg. 31, Rm. 2B03  
Phone 6-2125  
Fax 2-1485

Editor  
Richard McManus  
[rm26q@nih.gov](mailto:rm26q@nih.gov)

Assistant Editor  
Carla Garnett  
[cg9s@nih.gov](mailto:cg9s@nih.gov)

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## Conservative Approach Urged for Temporomandibular Disorders

An independent panel convened by ANIH has recommended a conservative and reversible approach to treatment for the vast majority of patients with temporomandibular disorders (TMD).

"The absence of reliable scientific data has led to confusion among dentists and physicians regarding when and how to treat TMD," said panel chair Dr. Judith E.N. Albino, president emerita and professor of psychiatry at the University of Colorado Health Science Center in Denver. "The good news, however, is that for most people initial TMD pain is not a signal that a serious problem is developing. Only a small percentage will develop significant, long-term symptoms," she said.

Temporomandibular disorders comprise a group of painful conditions that affect the jaw joint (temporomandibular joint) and the muscles that control chewing. The panel estimated that more than 10 million Americans have symptoms associated with TMD, which is most often seen in women ages 20 to 40.

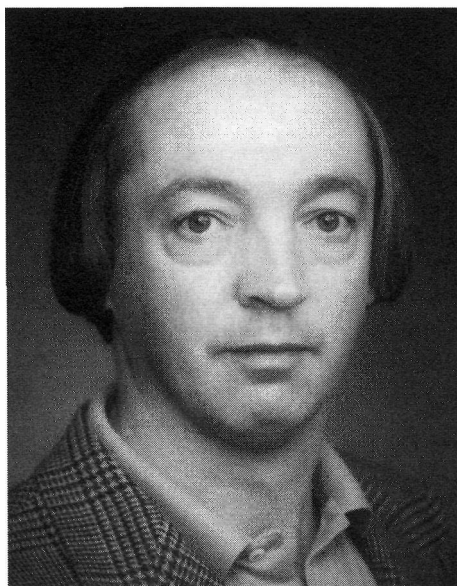
TMD treatment falls into two main categories: conservative/reversible and irreversible. Conservative treatments do not invade the tissues of the face, jaw, or joint. These treatments are as simple as possible and are used most often because most patients do not have severe, degenerative TMD. They include self care practices such as eating soft foods, applying heat or ice packs, and avoiding extreme jaw movements like wide yawning, singing, and gum chewing. Learning special techniques for relaxing and reducing stress may also help patients deal with pain that often comes with TMD problems. Other conservative therapies may include education, pain control medication, and physical therapy. Reversible treatments do not cause permanent changes in the structure or position of the jaw or teeth.

Irreversible treatments for TMD, which include surgical procedures, result in permanent alterations to the jaw joint or teeth. The panel emphasized that surgical treatments are only indicated in a small percentage of patients. When such treatment is necessary, however, it is essential the patient fully understand the reason for the treatment, the risks involved, and other types of treatment that may be available. For patients who have already undergone surgery, additional operations should be considered only with great caution, as the probab-

ity of success decreases with each additional intervention.

The panel noted that universally accepted, scientifically based guidelines for diagnosing and managing TMD are not available and that consequently practitioners sometimes have attempted to respond to their patients' needs with a variety of unproven diagnostic and therapeutic approaches. Concerns about the safety and effectiveness of these approaches, as well as potential for harm, led the panel to recommend studies to assess the accuracy, reliability, and cost effectiveness of currently used diagnostic tools.

Copies of the full panel statement can be obtained by calling 1-888-644-2667 or by visiting the NIH Consensus Program web site at <http://www.nih.gov> and selecting Health Information. □



*Dr. Robert A. Craigie, chief of the molecular virology section in NIDDK's Laboratory of Molecular Biology, is the winner of Maryland's 1996 Outstanding Young Scientist Award for his leadership and significant contributions in retroviral research. He was chosen from a number of scientists age 39 and under who live or work in Maryland. He was cited for his outstanding contributions to the understanding of retroviral DNA integration, a critical step in the replication cycle of HIV and other retroviruses and for his contribution to the determination of the structure of the catalytic domain of HIV integrase. The award is sponsored annually by the Maryland Academy of Sciences. Craigie received \$2,500, a framed certificate and the Allan C. Davis Medal of the academy.*

## NIGMS Brings Together Minority Program Directors

The NIGMS Minority Opportunities in Research (MORE) Division sponsored a 3-day conference recently that brought together directors of its research and training programs at minority institutions. The goals of the meeting were to facilitate connections, promote dialogue, and provide technical assistance to MORE grantees.

Dr. Ruth L. Kirschstein, NIH deputy director, welcomed the nearly 400 participants and reiterated NIH's continuing commitment to minority programs. She said NIH will continue to support programs that provide "opportunities for those who have not had such opportunities before," but acknowledged that the overall climate in which such programs operate throughout the country is changing.

The meeting's keynote address was delivered by Dr. Matthew Weinberg, president of the Weinberg Group, a consulting firm that assists lawyers and companies involved in technically oriented litigation and regulatory issues. His speech, "Too Many Ph.D.s?" focused on alternative careers for Ph.D.s trained in the sciences. He said that "the need for science expertise has never been greater," and noted that Ph.D.s can work in a wide variety of fields, including policy making, regulatory approval, finance, law, consumer activities, corporations, consulting, and associations.

A special panel discussion addressed the recruitment of minority students to NIH-supported predoctoral research training programs. Panelists stressed the value of summer research experiences, especially when students do research outside their home institutions. Among the benefits of these experiences are linkages to universities where students might later pursue graduate degrees; the opportunity for mentoring by faculty at these universities; and exposure to research at larger, more research-intensive institutions.

In addition to the many demonstrations and workshops, participants were given the opportunity to meet individually with NIH staff to address the specific needs of their programs and institutions.

Dr. Clifton Poodry, director of the MORE division, said, "The feedback we received from participants told us that the objectives of the meeting were largely met." He said NIGMS staff members "found the one-on-one interactions with the program directors most informative and helpful." —Susan Athey □

## SECURITY INITIATIVES TO BE IMPLEMENTED SOMETIME THIS SUMMER (Continued from Page 1)

federal buildings and recommended that all federal facilities be upgraded to meet those standards.

The study's objective was to protect the safety of federal employees and citizens who work in or visit federal offices daily. As part of it, a committee developed 52 security standards dealing with such items as perimeter parking, lighting, physical barriers and closed circuit television monitoring. Additional standards were recommended for security at entrances and exits, employee and visitor identification, and the operation of day care centers.

Five levels were identified ranging from Level 1, minimum security (typically, leased facility with 10 or fewer employees such as a small post office) to Level 5, maximum security (a building such as the Pentagon or CIA headquarters with a large employee population and critical national security mission). A greater number of standards and more sophisticated security measures apply to Level 5 buildings and their occupants; the number of security standards lessen as the levels decrease.

While the Justice report prompted immediate facility assessments throughout the government, NIH's Division of Public Safety was already winding down a year-long vulnerability assessment of all on- and off-campus buildings. According to Jim Sweat, DPS director, "the DPS study and the Justice report were combined into one document, with the intent of upgrading NIH security to a level more comparable to other government and academic institutions." This NIH security assessment report was finalized and issued by DPS last August, 6 weeks after the Justice study was released.

Recognizing that enhancements to security at NIH would require the participation and support of the entire NIH community, ORS turned to its advisory committee for review of the DPS report. Since 1985, the committee has provided a forum for discussion of ORS services and policies.

In July 1995, the committee discussed security issues and members volunteered to serve on a subcommittee to review the forthcoming DPS report and recommend strategies for enhancing security at NIH. The subcommittee, and subsequently the ORS advisory committee as a whole, endorsed several recommendations that could be implemented quickly. Three of

those recommendations are:

- ★ Require all employees and contractors to obtain and wear identification (ID) cards in all NIH facilities on and off-campus;

- ★ Require all ID cards, card keys, metal keys, and parking permits to be surrendered when leaving NIH; and

- ★ Recommend that movable, theft-prone equipment such as computers and balances be secured by cabling or other devices. (Although not required, this initiative is highly recommended.

Cabling has been shown to be a strong deterrent to equipment theft in NIH facilities. DPS now allows administrative offices to retain keys to the cabling, which facilitates relocation of the equipment.)

DPS's NIH security assessment also contains a number of longer-range security initiatives that would bring individual buildings into compliance with the Justice-recommended standards

*Subcommittee members wrestled with a number of issues including assuring personal safety without changing the intellectual and professional ambiance of the NIH campus.*

for their security level. These can't be implemented without significant planning and evaluation and, in some cases, substantial funding. To accomplish this, the ORS advisory committee concurred with DPS's recommendation to establish building security advisory committees that will look at their building's specific security needs and make recommendations.

In arriving at these recommendations, the committee recognized a changing environment in which most universities and hospitals now require substantially more security than they did 20 years ago, specifically building access limitations and visible picture IDs for all employees. Comparing notes, members found that many colleagues would welcome increased security and felt that picture IDs would impose minimal burdens on NIH staff while significantly increasing

security awareness in NIH facilities. In considering the more specific Justice security standards, subcommittee members wrestled with a number of issues including assuring personal safety without changing the intellectual and professional ambiance of the NIH campus, and weighing the feasibility/reasonability of upgrades that would be required to meet Justice standards in an area that might be considered relatively low risk for terrorist activity (as contrasted with crime, assault, etc.).

"Part of the uncertainty in this area," says Sweat, "comes from the fact that, prior to April 1995, the Murrah Bldg. in Oklahoma City had been considered a low security risk building. Since that so-called low-risk building was bombed, it is virtually impossible to put a risk category on the NIH."

Other concerns were expressed about cost. Would it be prohibitively expensive to meet the standards described by Justice? Would these costs decrease research funding? Of foremost concern was ensuring that NIH find a way to address the requirements of each NIH facility for employee security as well as scientific collaboration, information exchange, and appropriate public access to NIH intramural and extramural programs.

The DPS and the committee felt the answers to these questions must be developed with input from the building occupants themselves as participants on security advisory committees. Many of these committees will actually be set up for clusters of similar buildings, based on type of use (lab, office, clinical, animal), size, location, or other appropriate category. This will help create more uniform security measures among similar types of buildings. It will also help address the balance that must be maintained among the security of the occupants of an individual building; the risk/cost benefit of any security enhancements; and the need for NIH staff to move freely between buildings and receive colleagues, patients, and other visitors.

DPS will work with the ICD executive officers to establish the security advisory committees that will have ICD representatives from the occupants of each building in the cluster. Members will be authorized to represent their ICD and vote on recommendations for security enhancement in their cluster. It is



expected that the work of these committees will be ongoing, and will constitute a major part of NIH security improvements.

These proposed recommendations were presented to the NIH scientific directors, executive officers, and the ICD directors and received unanimous approval from all groups. DPS is now in the process of developing an implementation plan.

ORS expects the NIH security standards policy to be in place by midsummer. Soon after that, DPS will begin setting up the building security advisory committees, concentrating on high-risk (level 4) buildings first. According to Steve Ficca, NIH associate director for research services, "This can be a success if we all join together as partners to make it one. Each of us must do our share to make NIH less vulnerable to the many unforeseen elements that may seek to disrupt or destroy the wonderful research work that is done here. We can begin this partnership mission by wearing our ID cards, securing our equipment, turning in our keys, and by reminding others to do the same." □

## Savings Plan Open Season

The Thrift Savings Plan is having another open season, now through July 31. FERS employees who were hired before Jan. 1, 1996, as well as CSRS employees have an opportunity to change their current election, or make an initial election.

Eligible FERS and CSRS employees may elect to contribute to the G fund (government securities), C fund (stocks), and/or F fund (bonds). FERS employees may contribute up to 10 percent of their salary each pay period and will receive matching agency contributions on the first 5 percent. CSRS employees may contribute up to 5 percent of salary, but do not receive any matching contributions. FERS employees who do not contribute receive an automatic 1 percent agency contribution each pay period. They may choose to distribute this contribution among the three funds.

The features of the plan and directions on how to make a plan election or to change your current withholding are described in the Thrift Savings Plan open season leaflet, which will be distributed to eligible employees by their ICD personnel office. More detailed information is available in your ICD personnel office. □

## Kids Benefit by Feeling Connected, Capable

Children's chances to succeed in life are not solely determined by the traditional IQ score, but by their ability to feel connected, capable, and able to contribute to others, according to Linda Jessup, executive director of the Parent Encouragement Program, who recently led a parenting seminar sponsored by the NICHD equal employment opportunity advisory committee.

"As parents, we can't afford to look at our children narrowly, just in terms of academic success," said Jessup, whose organization provides training and support to parents and families. She calls these three abilities the IC, for 'I can' quotient. First, children need to feel that they are able to connect with other people and develop meaningful relationships. Second, they need to feel capable of handling tasks and new challenges. And third, children must feel that what they do somehow makes a contribution, whether to the family, to another person, or even to the family pet.

"A lot of misbehavior is related to people not doing these things very well," Jessup said. "Misbehavior doesn't just come out of the air."

It is the parents' responsibility to help their children develop these abilities, she said. For example, an adult daughter who, as a child, was frequently asked by her mother for her opinion now says that this simple action made her feel needed, Jessup recounted.

After dividing into small groups, seminar participants then identified other ways parents can help or hinder their children's development in these areas. To make children feel connected, suggestions were to: spend time together, talk about family history and stories; establish family traditions, talk about your childhood, and tell them about their birth (show pictures or videos). Things that may prevent children from feeling connected include excessive television viewing or playing of computer and video games, and rushing from one activity to another without taking the time to talk.

"The best insurance against peer pressure is having family relationships and systems that leave a child feeling secure in him or herself," Jessup said.

To encourage children's sense of being capable, parents should let them help with chores and give them choices—whether in activities, clothing, or chores. "When children feel that they are capable, they tend to feel competent,

self-disciplined, self-motivated, and self-reliant," Jessup explained.

Kids' sense of capability can be undermined, however, by criticizing, pampering, and insisting on perfectionism.

Finally, parents can help foster children's sense of contribution by showing appreciation, showing them ways in which they can contribute, and listening. On the other hand, giving children tasks that are too difficult for them and being negative about what they try to do can be harmful. "If children don't feel like they can contribute, they feel they don't matter," Jessup said.

To help children develop their IC quotient to its fullest, Jessup advises parents to help their children be courageous. This can be done by encouraging children to try new things, assuring them that it's okay to fail sometimes, telling them you have confidence in them, and presenting yourself as a role model.—

Anne Blank □

## Chamber Concert, May 30

The NIH Chamber Players will perform a concert of string quartets on Thursday, May 30 at noon in Masur Auditorium, Bldg. 10. String quartets of Mozart and Schubert will be on the program. Performers will be Morton Raff, Grace Boeringer, Jere Stern and Suzanne Epstein. Admission is free and all are welcome. For more information, call 897-5463.

## Study Section Workshop Set

The Division of Research Grants is sponsoring a study section workshop entitled, "The Radiation Chemistry of DNA." The program will be held on Wednesday, June 5, from 8:30 a.m. to 3 p.m. at the Embassy Suites Hotel, 4300 Military Rd., Chevy Chase, Md. The workshop will be chaired by Dr. Michael Sevilla, Oakland University.

Speakers include Dr. Simon Pimblott, Notre Dame University; Dr. Roman Osman, Mt. Sinai School of Medicine; Dr. William Bernhard, University of Rochester; Dr. Steven Swarts, Bowman Gray School of Medicine; Dr. John Ward, University of California, San Diego; and Dr. Paul Doetsch, Emory University.

The workshop is open to all interested parties. For more information contact Dr. Paul Strudler, 5-1716. □

## FREIRE

(Continued from Page 1)

a velvet glove around that iron hand. But the hand has been responsible for significant advances in the past year. Though she won't take much credit for it—in the patent world, every good thing you see today was preceded by years of unnoticed toil—OTT is a big business, a major player in establishing the world biotechnology industry.

Some figures tell the story: OTT took in almost \$20 million in royalty income last year; intramural NIH is averaging about 250 invention disclosures (the precursors of actual patent applications) per year, and “many times that number,” says Freire, when you factor in disclosures made by NIH extramural grantees; around 60 percent of invention disclosures result in patent applications; the number of patents actually issued was only 30 for HHS in 1985, and rose to 95 in FY 1995; the number of executed licenses—which means someone is using your patented idea—is “on a solid, steady trend upward,” said Freire, adding, “159 were executed in 1995, versus around 40 in 1989”; the Department of Commerce has reported that, mainly because of NIH, HHS accounted for 75 percent of all federal royalty income in FY 1994, a total of \$18.7 million—all other agencies combined earned only \$6 million.

Interestingly, about 75 percent of all NIH royalty earnings are the result of just seven inventions. A total of eight NIH intramural investigators have attained the \$100,000 royalty maximum (recently bumped up to \$150,000) earnable by a federal inventor per year.

To understand the meaning of the preceding numbers, it helps to think of the patenting process as a funnel. At the broad end is a big pool of invention disclosures, which is the first step on the road to a patent. When an NIH scientist says, “Eureka—an invention!”, the first stop should be with his or her ICD technology development coordinator (TDC). The TDC, typically a scientist, or lawyer, or M.B.A., consults with an ICD team of specialists and takes the idea—categorized at this point as any one or combination of vaccines, diagnostics, therapeutics, devices or research tools—to OTT. In FY 1995, some 271 invention disclosures were made by NIH scientists.

Through a process of marketing and patentability review, OTT then decides whether to shepherd the disclosure to the next step—the next narrower part of the

funnel—which is a patent application. This decision isn't based so much on the worth of the science as on future commercial prospects or public health benefits of the invention. Is it worth taking this idea any further? Also, is there a clear public health benefit? Freire said OTT “might see a wonderful surgical procedure that can be patented, but we won't apply for a patent since it will place barriers to its use and won't broadly benefit the public health.”

During her first year in office, she focused heavily on establishing policy guidelines about patenting and licensing. “It takes \$20,000 to \$30,000 to prosecute a patent application in the U.S.,” said Freire, so OTT doesn't take the process lightly.

In each case, patent attorneys sit down with the scientist—the key player in the entire drama—and write an application. “The application should make as broad a claim as possible for the commercial applicability of the invention,” counseled Freire. Such claims are the most important and enforceable part of a patent. The first one written is the broadest, then they get more and more specific in succeeding paragraphs. “This gives room for the licensing people to look at as many markets as possible,” Freire said.

“The trick is to get a patent that isn't so narrow and limited that there's no use for it, no way to exploit the idea.” Evi-

dently, patents are well prepared at NIH, for Freire divulges, *sotto voce*, “We have some of the best patent coverage in the world.”

In FY 1995, NIH submitted 147 patent applications.

Here's where the liquid in the funnel gets a little muddy. The time between patent application and patent issue can be quite long—so it doesn't make sense to compare patents-applied-for and patents-issued in the same year. “For something like software or engineering, I've seen a patent issue in 8 months,” she related. On the other hand, she knows of an application that languished for 12 years before a patent issued.

Typically, it takes a minimum of 3 years for the patent office to rule on whether biomedical products or materials are patentable. It is during this lull, when there is no news, that tension between scientists and their tech transfer colleagues can build.

“They want to know why we haven't called them in 2 years, and the answer may well be that we haven't heard anything from the patent office,” Freire noted.

In FY 1995, 95 patents were issued to NIH investigators—of course some of those patents were applied for many years earlier.

Once a scientist gets a patent, he or she has a piece of turf, a “backyard,” to use

## Of Birdseed, Bufferin and Brave New Worlds

One of the most unlikely licenses ever executed at NIH is the result of an invention made before Dr. Maria Freire's time by an NCI investigator, Dr. Peter Blumberg, doing research on receptors. In the course of pursuing cancer research, the scientist realized that birds, unlike mammals such as squirrels, lack a receptor for tasting chili peppers. It turns out that birdseed coated with the chemical compound that gives chili peppers their heat can be consumed without harm by birds, but repels squirrels, which

are notorious poachers of feed meant for birds. In other words, here was a birdseed with a built-in weapon against its chief enemy.

Freire keeps a bag of the seed on a desk in her office as a reminder to be creative—to think of markets and utility beyond the obvious. Failure to seek patent rights for promising inventions is a major sin in technology transfer, she warns. One has only to consider the case of Johns Hopkins, which never patented saccharin or Dramamine, which were invented there, or the University of Maryland at Baltimore, under whose auspices Bufferin was discovered but not protected

by patent. Both institutions are poorer but wiser today.

Freire, a former bench scientist, says directing OTT has given her back her love of science, which had languished—with repetitive experiments—at the bench, and permits her an extensive overview of cutting-edge biomedical research.

More than merely optimistic, Freire predicts, “The day is coming when a background in biomedical sciences will be important in virtually every area of economic life—from the fabrics we wear, to how computer circuits are designed and built, to manufacturing. It's going to be amazing.”

Freire's analogy. So valuable is that piece of "intellectual property" that whole companies are sometimes started over the staking out of a single patented invention.

But a patented invention by itself is a barren holding unless someone wants to use it, and the way to use it is by obtaining a license—"a gate to the backyard"—which is the right to use that invention. This can be either exclusive or nonexclusive, and is the royal road to royalties and use by a grateful public.

*"The trick is to get a patent that isn't so narrow and limited that there's no use for it, no way to exploit the idea."*

Licenses are the narrow end of the funnel, where all the years of effort are distilled down to pure usefulness. OTT completed 159 licenses in FY 1995.

Now, if you're an optimist like Freire, attach the narrow end of another funnel to the bottom of that first one, and—voila!—you have an hourglass. And the broadening-out at the bottom is where royalties, over time, collect. In FY 1995, NIH earned \$19.4 million in royalty income, placing it among the top four U.S. academic centers as royalty revenue generators. In the past decade, NIH intramural inventions have earned almost \$100 million in royalties. Again, recall that this doesn't count NIH-funded extramural research that also results in the progression: disclosure, application, patent, license, royalties.

The big winners within HHS include a hepatitis A vaccine, the AIDS diagnostic test kit, the AIDS therapeutics ddI and ddC and fludarabine for children's leukemia, a flow-through centrifuge device, and such varied research tools as cDNA clones, cell lines, plasmid DNA, proteins/peptides, chemical compounds, and various monoclonal antibodies.

Given such potential for success, do NIH patent rights ever suffer infringement? Does the overall economy affect biotech investment? Freire has ready replies: Yes, NIH goes after the cheaters, aggressively. And no, even a soft economy has its biotech bulls. She paraphrases Gertrude Stein: "Good technology is good technology is good technology. I've never seen a bad market

for biotechnology, though some periods are better than others."

While OTT has sole authority for patenting and licensing at NIH, the ICDs have authority for approving cooperative research and development agreements, or CRADAs, which are a way for federal scientists and private industry to collaborate on research projects, with mutual benefit. CRADAs have attracted some \$31.3 million in new R&D resources for HHS from private industry in the past 10 years. NIH currently averages around 30-40 CRADAs per year.

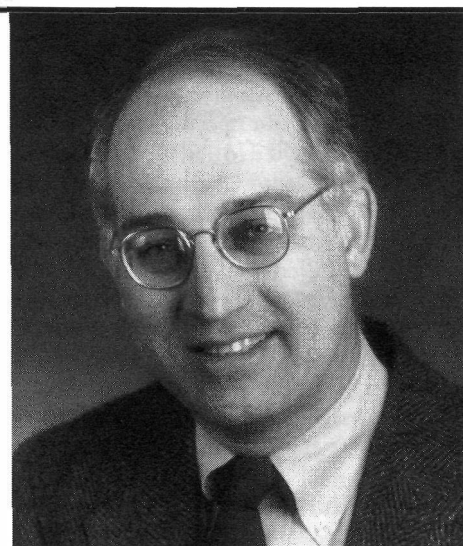
Recent passage of the National Technology Transfer and Advancement Act of 1995—also known as the "Morella bill"—has created an even more favorable environment for tech transfer. Among its provisions are that ICDs may hire FTE-exempt employees for CRADA collaborations; the royalty cap was extended to \$150,000/year per inventor; NIH can reassign patent rights to the inventor if it chooses not to seek a patent or otherwise commercialize a given invention; and royalty revenue can now be applied to mission-related research in the laboratory.

Despite gaining a new and firmer handle on an enterprise that is relatively recent in federal annals, Freire concedes that many NIH investigators may have a poor impression of OTT. "A lot of people have had very bad experiences with the process," she relates, "but some have been very happy. There's no question there's been a steep learning curve, and we're trying to address the issues. We need to see more invention disclosures, but we also have to be selective at the same time."

"There needs to be a better education process so we can teach researchers what to expect," she states. "There has been poor communication and followup. We also have to reduce expectations. [Tech transfer] is not the solution to funding problems. You're not going to become rich and have a Porsche in your driveway—unless you already own one."

Freire wants the onus of improved tech transfer—and lowered barriers to same—to fall on OTT. "The scientists should be busy doing what they do best, which is science. We must be more user friendly. Both of us must become more realistic, more sophisticated."

One can almost imagine her asking, "And if you could have that done within the next, say, hour?" □



*Dr. John R. La Montagne, director of NIAID's Division of Microbiology and Infectious Diseases, recently received the 1995 Presidential Meritorious Executive Rank Award from HHS Secretary Donna Shalala. The award recognizes the highest achieving career executives throughout the federal government. La Montagne was cited for his visionary leadership and guidance in the division's research efforts involving childhood vaccinations, emerging diseases, tuberculosis, Lyme disease and chronic fatigue syndrome.*

## Alternatives to Radioactivity

The NIH committee on alternatives to radioactivity has organized a workshop to be held on May 31 called, "Alternatives to Radioactive Methods in Biomedical Research." It will be held in Masur Auditorium, Bldg. 10. No preregistration is required.

The workshop begins at 9 a.m. and ends at 5 p.m. Speakers include Eric Green, NCHGR; Juan S. Bonifacio, NICHD; Randall Kincaid, Veritas; Brian Holaway, Boehringer Mannheim; David Hanzel, Molecular Dynamics; Katherine MacLean Peterson, Kirkegaard and Perry; Dennis Gilbert, Perkin-Elmer; Kenshi Hayashi, Kyushu University, Japan; Robert Crouch, NICHD; Mike Hammerman, Amersham; Keld Sorensen, Pierce; Larry Lantz, NIAID; Greg Beckler, Promega; Ted Davis, New England Biolabs; Allan Tereba, Promega; M.E. Jolley, Cutting Edge Technologies; Bill Biddison, NINDS; Stefan Löfas, Pharmacia.

There will also be refreshments and a technical exhibit of reagents and equipment for nonradioactive detection methods in the Visitor Information Center. For more information, call Bonifacio, 6-6368. □

## BLDG. 41A RENOVATION

(Continued from Page 1)

1991, Congress and NIH realized that TB was getting out of hand in certain urban areas in the United States, particularly those most ravaged by the AIDS epidemic. Plans began back then to create a facility where infectious agents could be handled safely, with the hope of new treatments emerging from the work. Later this summer, the MCL will open for intramural and extramural work, most likely in rabbits first, of *Mycobacterium tuberculosis*, the TB bacterium that infects more than 30 million people worldwide each year, according to the World Health Organization.

Around 2,000 people in the U.S. die from TB each year; globally, about 3 million people succumb to the disease. TB had been a leading cause of death in the U.S. at the turn of the century, then, owing largely to antibiotic therapy, its incidence waned. However, in the period 1985-1992, U.S. TB cases increased 20 percent. This alarming increase is seen as the result of the emergence of strains of TB that resist standard antibiotic therapy.

The MCL, built for about the same cost as the original Bldg. 41 (about \$3.7 million, most of which came from the U.S.-French AIDS Fund), is literally "a building within a building," said Dr. Deborah Wilson, chief of the Division of Safety's Occupational Safety and Health Branch. "The lab was renovated within the existing building, from the block wall on up." An airtight, gastight laboratory, the MCL will exhaust air—through a series of two high-efficiency particulate air (HEPA) filters—that is actually cleaner than the air going in, she said. HEPA filters, pioneered in the nuclear power industry, have a long and reliable history of cleansing exhaust air, she added.

Perhaps the most remarkable feature of work in the MCL is that researchers on the lab's "hot" side will wear blue plastic positive-pressure "space" suits. These "Smurf suits," as Wilson calls them, are connected by spiral hoses to an air supply for both breathing and cooling down the body. The positive pressure within the suits will prevent any dangerous aerosols from coming into contact with investigators.

The "hot" side of the lab can accommodate up to eight researchers, but a minimum of two are required at all times; a kind of "buddy system" has been instituted, as is common in many

potentially hazardous environments, from children's swimming pools to coal mines. Workers entering the hot lab must first remove all clothing and don a disposable cotton-like "bunny suit" that zips up the front, said Wilson. Then they enter an inner changing room where the space suits are hanging on hooks, drying from last use (an alcohol spray is used as a drying agent after workers emerge from the suits). A long table, such as ones used by parachutists to examine their equipment, is available for inspecting the suit for any leaks or holes. Workers then climb into the protective suits and connect to compressed breathing air, Wilson explained. A control tube on the suit's belt modulates the volume of air entering the suit.

An airlock controls entrance to and exit from the hot side; submarine-style steel doors, equipped with inflating rubber gaskets, admit the scientists to an antechamber—whose two doors can never be open at the same time—containing a decontamination shower. Once their work is done—4 hours is usually the maximum in an environment Wilson characterizes as "very tiring, and very restrictive,"—investigators take a 3-6 minute "decon" shower before emerging from the antechamber. Nozzles in the shower soak the suit from head to toe.

Other safety features include autoclaves, for steam-sterilizing equipment such as animal cages; decontamination of equipment with vapor-phase hydrogen peroxide, and formaldehyde gas; a microbicide-filled "dunk tank," for passing equipment safely between the clean side and the "hot" lab; welded stainless steel airducts for air handling; a "monolithic" sealed floor impervious to chemicals; and floor drains that empty liquid waste into heat decontamination tanks followed by cooling and neutralization processing before waste hits the local sewage system.

Not only will two members of Wilson's staff—a microbiologist and an assistant—be on hand at all times in the laboratory, but also the whole building will shut down for a month each year for safety inspections and preventive maintenance.

Since lab workers won't be able to take their notebooks out of the hot side, a fax machine and computer are installed to transmit data from the lab. Suited workers also wear special industrial headsets that reduce noise generated by air entering the protective suits, and enable workers to communicate more

clearly while in the lab.

Wilson emphasizes that NIH "is not bringing strange or exotic agents to Bethesda such as Lhasa fever or Ebola virus. We're not going out looking for exotic viruses on which to work. This lab is specifically for MDR-TB work, which may involve generation of mycobacterial aerosols."

Use of the MCL will be governed by a program review committee established by the NIH deputy director for intramural research. The NIH institutional biosafety committee, staffed by scientists and members of the public, will subject protocols to both scientific and safety review.

On May 16, NIH's Office of Community Liaison presented plans for MCL use to the community. In addition to Wilson, several NIH authorities briefed the gathering on science and safety issues, assuring the public that all work conducted at the MCL is within NIH's mission and carried out with utmost care.

Bldg. 41A has had a distinguished past, hosting both BL3 and BL4 work, Wilson noted. Study subjects have included Shiga toxin, early recombinant DNA work, mousepox virus, dengue fever, and HIV, the AIDS virus.

"NIAID's Dr. Malcolm Martin did his initial work creating transgenic mice bearing the complete HIV genome in this building," noted Wilson. "That was level 4 work—the animals were kept in glove boxes." With this renovation, the humans—not just their hands—are now in "gloves," and the entire facility is rated BL4.

The MCL will be open to public tours prior to being recommissioned; look for notices in the near future. □

## Study Recruits ACOAs

NIAAA is seeking adult children of alcoholics for an outpatient study. Each participant must be age 18 or older and have at least one biological parent with alcoholism. Eligible volunteers will be paid. For information call Linda Doty or Irene Culver, 6-1993. □

## Chamber Music Concert Set

The Rock Creek Chamber Players will perform on Sunday, June 2, at 3 p.m. in the 14th floor assembly hall, Bldg. 10. Featured will be C.P.E. Bach's Fantasia in C Major for solo piano; Roussel's trio for flute, viola and cello; and the Mendelssohn octet for strings. For more information about the free concert, call (202) 337-8710. □



## Nobelist Anfinsen Remembered

By Sharon Ricks

Dr. Manning Smith was on a road trip in 1972 when a radio announcement about his friend Chris Anfinsen caught him by surprise. Anfinsen, whom Smith remembers as being "the most charming and least motivated" student in the class of 1937 at Swarthmore College, had won the Nobel Prize. "I was so stunned," Smith exclaimed, "the next thing I knew, I was backing out of a ditch."

Smith was one of eight speakers and more than 100 of Christian Boehmer Anfinsen's friends and colleagues at an NIH memorial service sponsored by NIDDK on Apr. 22 in Wilson Hall.

"He was the big man on campus, a gorgeous guy," a woman friend from Swarthmore added. Behind his happy front, however, was a brilliant analytical mind, said another colleague. In 1950, Anfinsen joined NIH as chief of the Laboratory of Cellular Physiology at the National Heart Institute, now NHLBI. There he did his first work on the idea that the primary amino acid sequence contains the information necessary for the correct folding of a protein. According to Alan Schechter, NIDDK's chief of the Laboratory of Chemical Biology,

Anfinsen's hypothesis has become part of the fundamental paradigm of molecular biology.

"You had to be pretty smart to realize Chris was smarter than you," explained Dr. J. Edward Rall, NIDDK scientist emeritus and former NIH deputy director for intramural research. "He was so laid back." In 1962, Rall recruited Anfinsen as chief of NIDDK's Laboratory of Chemical Biology. There, Anfinsen brought to completion his work on protein folding and pioneered studies on structure-function relationships in proteins and the chemical synthesis of biologically active proteins.

"It didn't matter what boat we were sailing on with Chris," said Rall. "He was a consummate captain." Anfinsen's work landed him a Nobel Prize in 1972 together with colleagues from Rockefeller University who also studied ribonuclease.

"He helped change the world for the better," said Schechter, who commented on Anfinsen's impeccable standards of professional behavior and his work with many international organizations.



Christian Anfinsen

Others remembered Anfinsen's earlier years as a teacher at Harvard Medical School. "He was more than a mentor and colleague," said Dr. Daniel Steinberg, a former student. "He was a personal friend of 47 years." Steinberg said Anfinsen encouraged him to stay at Harvard, take a few more courses and get a Ph.D. "He made it sound so easy."

Dr. Harold Varmus, NIH director, also praised Anfinsen's ability to convert "innocent physicians to a love of laboratory life." He remarked, "Chris was endowed with all the qualities we hope for in a colleague—brilliance, humanity, modesty, and humor. It is a matter of great and continuing pride that Chris worked here for so many years and a matter of great importance that he inspired so many trainees to work imaginatively in a diversity of scientific disciplines. We and the rest of the world are in perpetual debt to Chris and to those he taught."

Anfinsen retired from NIH in 1981 to work as a biophysical chemistry professor at Johns Hopkins. He died May 14, 1995, of an apparent heart attack at 79. "The International Conference on Protein Folding and Design," held recently, was dedicated to his memory. □

## NIDDK Launches Health Campaign for Black Women

By Leslie Curtis

Nearly 50 percent of African American women over the age of 20 in the United States are overweight. To help curtail this rising trend, NIDDK's Weight-Control Information Network (WIN) launched "Sisters Together: Move More, Eat Better," a 3-year health awareness campaign. The pilot communications program is designed to encourage Black women, ages 18 to 35, from the Boston communities of Dorchester, Mattapan, and Roxbury, to control their weight by increasing physical activity and eating healthy foods.

"The program's target audience is based on findings from the third National Health and Nutrition Examination Survey, which found that among all racial and ethnic groups in the United States, African American women have the highest prevalence of overweight," said Elizabeth H. Singer, information officer for NIDDK and program director of WIN. The NIDDK Boston Obesity/Nutrition Research Center, which includes representatives from New

England Medical Center, Harvard School of Public Health, and Tufts University School of Nutrition Science and Policy, directs the Boston-based campaign under a subcontract of NIDDK's WIN.

"Constant input about this program from women in the community will help Sisters Together become a catalyst for healthful change," said Dr. Rima Rudd, lecturer at Harvard School of Public Health and Sisters Together advisor.

Since the September kickoff, which consisted of a Wellness Fair and 2-mile walk at the Reggie Lewis Track and Athletic Center in Boston, activities include a walking program, monthly community events such as cooking demonstrations at the Reggie Lewis Center, and a talk and book signing by Danella Carter, author of a new soul food cookbook, *Down Home Wholesome*, and a cooking show.

With WIN's help, individuals and community organizations are forming walking groups. Walking group leaders from the three Boston communities were recruited and trained this winter.

To provide the women information about how to prepare and cook healthier foods, the campaign sponsors "What's

Cooking in the Neighborhood," a 15-minute segment of the Boston live cable show *Today's Living*. The segments, hosted by nutritionist and Boston advisory group member Donna DeCaille, feature healthy cooking demonstrations by chefs from Dorchester, Mattapan, and Roxbury restaurants. The segments have highlighted soul food, Haitian cuisine, and other island dishes.

To promote the campaign's "eat better" message, all program participants receive a copy of the 1996 Sisters Together wall calendar.

Community involvement with the Sisters Together campaign is increasing. Local beauty salons, YMCAs, grocery stores, and community health centers are interested in promoting the campaign by distributing Sisters Together educational and promotional materials to their clientele. "The response from the community is outstanding," said Dr. William Dietz, director of clinical and pediatric nutrition at New England Medical Center and coordinator of Sisters Together. "A sense of ownership of Sisters Together by people in the local community is crucial to the success of the campaign." □

## DCRT's Del Priore Retires After 30 Years

Computer expert James Del Priore, whose pioneering work enabled computer networking at NIH to grow from a few dozen workstations in 1984 to more than 12,000 today, has retired from DCRT and the PHS Commissioned Corps after 30 years of service.

As chief of DCRT's communications technology section, he directed a team of engineers and computer specialists who develop and implement state-of-the-art communications technology for biomedical computing.

"You could call Jim the father of networking at NIH," said Dr. David Rodbard, former DCRT director. "He's a charter member of DCRT. Many of us remember him in the 'hybrid' computer center on the 11th floor of the Clinical Center, interconnecting analog and digital computers that solved many a research problem. Jim was there when the PC emerged and played an important part in the personal workstation office. Later, he was at the forefront of networks and electronic mail, inventing 'DOware' and introducing many of us to the 3Com network operating system."

"Jim lives in the future of computing technology, and he's always been there to prod us toward that future," said William Risso, DCRT acting director. In his 30 years at DCRT, Del Priore taught the first analog computing course at NIH; designed and implemented a voice recognition system for a handicapped computer programmer; designed the DCRT mail hub, which became the standard across NIH; designed, together with the NIH Training Center, training courses for users of local area networks; established a DCRT network fax hub to allow direct electronic mail to fax machines anywhere in the world; and created the NIH Public Network (PUBnet). Recently, he implemented a Campus Network Distribution System (CandyLAN), which takes advantage of "right-to-buy" site licensing agreements and provides NIH computer users with instant access to all commercially licensed software, allowing users to install software directly from CandyLAN the same day it is ordered.

"One of Jim's hobbies is magic, and sometimes he uses that ability in his job to pull off a nearly impossible project," commented David Songco, DCRT assistant director. "As the author of DOware, he wrote the program that took the mystery out of user-friendly software, so people could take advantage of



James Del Priore

computer technology without being computer experts."

Del Priore grew up near Annapolis, receiving a B.A. in mathematics from Washington College, where he graduated with the highest ranking in the department.

His first contact with computers, a 2-week course in FORTRAN, sparked a lifelong interest in computers.

"When Dr. Pratt [DCRT's first director] hired me, I was working as a professional clown," Del Priore says. In all the years at DCRT he never relinquished his interest in magic, clowning, acting, and other performing arts. Always willing to share his talents, he taught juggling in off-hours to coworkers and was often invited to entertain young patients in the Clinical Center with magic tricks. Among colleagues, his tie collection is legendary. On a bet in 1986, he wore a different tie every day for a year and entertained DCRT holiday partygoers with slides showing the approximately 260 ties in his collection.

Del Priore received many honors over the years, including the PHS Citation Honor Award (1986), Commendation Medal, HHS Employee of the Month (1991), NIH Director's Award, PHS Meritorious Service Medal, and PHS ADP Achievement Award (1995). □

## Health Carrier Service Days

The following Federal Employees Health Benefits Program carriers will be on the NIH campus to assist their enrollees who have claims or enrollment problems, or questions for the plan representative:

Kaiser Permanente—Thursday, May 23, from 10 a.m. to noon in Bldg. 31, Conf. Rm. 9, and from 1 to 3 p.m. in Bldg. 38, Conf. Rm. B.

M.D. IPA—Tuesday, June 4, from 10:30 a.m. to 2 p.m. in Bldg. 31, Conf. Rm. 7.

Blue Cross—Wednesday, June 5, from 10 a.m. to 2 p.m. in Bldg. 31, Conf. Rm. 9.

You do not need to sign up for these service days. Assistance is on a first-come, first-served basis.

## The NIH Life Sciences Education Connection

The Montgomery County Public Schools (MCPS) Student and Teacher Intern Program, under the direction of the Office of Science Education, graduated 13 students and 10 teachers in early May at a dinner/reception held to honor the participants and their mentors. The students presented their research findings during the evening.

According to Gloria Seelman, coordinator of the innovative program that links MCPS with scientists and researchers at NIH, the graduating class was composed of "dynamic people who exceeded the challenge of this demanding curriculum. This is an excellent program, where direct mentoring from a research scientist allows students an opportunity to explore the work they may choose for their careers."

Each year, NIH works with area high schools to select juniors and seniors, with preference to women and minorities, to participate in hands-on experimentation. Students and teachers complete intense coursework over 2 weeks, followed by 6-week internships in the summer. In the fall, students spend half-time at their school and the remainder at an NIH laboratory, while teachers return to the classroom to share their newfound knowledge.

The program has been wholly supported by the Howard Hughes Medical Institute in Chevy Chase since its inception in 1990. "The generous endowments have enabled NIH to fully fund student and teacher interns in selected labs throughout the year," said Seelman.

The 1996-1997 program, which begins this month, welcomes 25 new students and teachers to this worthwhile experience. For more information and to become a mentor, call Seelman, 6-0608.—Michele R. Bupp □

## Study Needs Men, Women

The behavioral endocrinology section, NIMH, is seeking men and women over 45 who are medication-free and experiencing such symptoms as: feeling sad or "flat," sustained lack of enjoyment and motivation, loss of energy, and decreased sexual interest. Eligible subjects will be recruited for a treatment study that augments age-related decline in the hormone dehydroepiandrosterone. For more information call Jean Murphy, 6-9675. □

## OHRM Training Tips

The Division of Workforce Development, OHRM, offers the following courses:

### Courses and Programs Starting Dates Management and Supervisory

Effective Presentation Skills	6/4-5
Women in Management	6/5-6
Working With Personal Differences I	6/6-7
Report Writing	6/10-11
Interpersonal Relationships in the Workplace	6/11-12
Recognition Secrets: Innovations for Rewarding Today's Workers	6/13
Positive Stress Management	6/18
Performance Appraisal Workshop	6/19
Time Management	6/19-20
The Winning Leader	6/19-21
Working with Personal Differences, Tech	6/20-21
Effective Supervision: A New Role Perspective	6/25-28
Interacting with Difficult People	6/27
Federal Budget Process	6/25

### Scientific and Medical

Scientific & Medical Editing	6/17
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### Personnel Management

KSA Methodology	6/24
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### Special Courses

NIH Retirement Seminar	6/3
Planning Early for Retirement	6/11

### Administrative Systems

TAIMS for System Administrators	6/5
Introduction to NIH Property Management	6/10
Basic Time and Attendance Using TAIMS	6/24
Determining Price Reasonableness in the Award of Simplified Acquisitions	6/27

### Administrative Skills Development

Secretarial Survival	6/6
Effective Writing I	6/12
Managing Difficulties in the Workplace	6/18
Leadership and Management Skills	6/24
Creating and Maintaining Filing Systems	6/27

### Personal Computing

Intro to Windows 3.1	6/4
Excel 5.0 for Windows	6/25
Lotus for Windows	6/11
Pagemaker 5.0 (Win/Mac)	6/10
Introduction to WordPerfect 3.1 (Mac)	6/18
Introduction to MS Word 6.0 (Mac)	6/25
Eudora Mail for Macs	6/13

More courses are available by completing the "Training By Request" form. For information, call DWD, 6-6211, visit the Training Web page <http://www-urc.od.nih.gov/dwd/dwdhome.html>, or consult the DWD catalog. □

## Preschool Holds Book Fair

The NIH Preschool will hold a book fair on June 12 and 13 in the Visitor Information Center, Bldg. 10 from 9 a.m. to 3 p.m. There will be books for all ages, from the beloved classics to current popular titles. There will be selections from the Clifford, Magic School Bus and Goosebumps series, as well as nonfiction, educational and sports-related books. For more information, call 6-5144. □

## Epilepsy Researcher J. Kiffin Penry Dies

Dr. J. Kiffin Penry, former chief of the NINCDS Epilepsy Branch and director of the Neurological Disorders Division, died from complications of diabetes at his home in North Carolina on Mar. 31. At the time of his death, he was professor emeritus of neurology at Bowman Gray School of Medicine. He was 66 years old.

An internationally recognized expert in epilepsy research, Penry played an enormous role in the dramatic progress made in the treatment of epilepsy through his scientific work and authorship of standard texts on the use of antiepileptic drugs.

Penry, who joined NINCDS in 1966, is credited with starting the NINDS Antiepileptic Drug Development Program, a partnership involving academic centers, pharmaceutical companies and the federal government in search of new antiepileptic drugs. He was also influential in the growth of the international epilepsy research community. As chief of NINCDS's first Epilepsy Branch, which he helped develop, Penry pioneered early use of antiepileptic drug level monitoring, simultaneous closed circuit TV and EEG monitoring, funding of comprehensive care centers for epilepsy treatment, and early development of major antiepileptic drugs such as carbamazepine and valproate.

In 1979, he returned to his alma mater, Bowman Gray, as associate dean for neuroscience development. There,

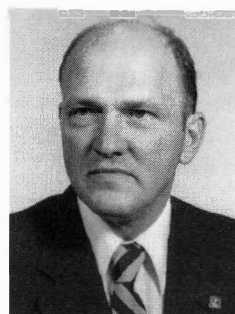
he established an internationally recognized epilepsy clinic for patients with difficult-to-treat seizures and a minifellowship training program for neurologists from across the country.

In recent years, Penry was active in efforts to test and bring to market a neurocybernetic prosthesis—a wristwatch-sized device implanted under the skin near the clavicle—for the treatment of epilepsy.

Penry graduated from Wake Forest College, *magna cum laude*, in 1951, and from Bowman Gray School of Medicine in 1955. He interned at Pennsylvania Hospital in Philadelphia, and

completed his neurology residency at North Carolina Baptist Hospital and Boston City Hospital. He served as a neurologist in the Air Force with the rank of major from 1960 to 1966 and was awarded the Air Force commendation medal. From 1966 to 1979 he served as a commissioned officer with the rank of captain in the Public Health Service. He wrote hundreds of scientific journal articles and numerous books on epilepsy and seizure disorders.

In 1993, Penry was awarded the American Epilepsy Society/Milken Family Medical Foundation Epilepsy Research Award and the Epilepsy Foundation of America's (EFA) 25-year Anniversary Award. EFA has established a J. Kiffin Penry Memorial Fund for Epilepsy Research in his memory.—Shannon E. Garnett



Dr. J. Kiffin Penry

## NIDR Hosts Scientific Frontiers Symposium in June

NIDR will host another of its popular Scientific Frontiers in Clinical Dentistry symposiums, June 13-14, in the Natcher Conference Center. Cosponsored by NIDR, the American Association for Dental Research, the American Association of Dental Schools, the American College of Dentists, and the American Dental Association, "Scientific Frontiers" is designed to bring clinicians and researchers together in a discovery of the most current and significant developments in fundamental and applied research today. NIDR director Dr. Harold Slavkin will give a presentation on "Dentistry in the 21st Century." To register, call Dina Battle, (800) 720-3921. Registration fee is \$100; \$50 for students. □

## DCT Offers Free Training Classes on Campus

Configuring Windows and Windows 95 for PARACHUTE Network Access	5/23	Comfortable Computing: Workstation Ergonomics	6/4
Densitometric Analysis of I-D Gels Using NIH Image	5/23	Electronic Forms Users Group	6/4
An Overview of FDDI	5/28	PC <=> Mainframe Communication w/Kermit	6/5
BRMUG	5/28, 6/25	Backing Up Personal Computer Data	6/7
Introduction to StatView for the Macintosh	5/28-29	C Language Fundamentals	6/10-14
Getting Started with C	6/3-6	WIG - World Wide Web Interest Group	6/9
		Database Technology Seminar	6/21

## Research Festival '96 Has Web Site

NIH net surfers need to bookmark a great new Web site! The URL is <http://mantis.dcrf.nih.gov/festival/>, the home page for NIH Research Festival '96. Dr. Henning Birkedal-Hansen, scientific director for NIDR, chairs this year's organizing committee. Registration has begun for poster sessions and workshops to be presented during the week of Sept. 16-20. The deadline for registration is 5 p.m., Friday, June 7.

"The festival brings together the diversity of research being conducted on the NIH campus," said Tom Flavin, chair of committee that coordinates the annual event. "Researchers look forward to the workshops and posters as a unique way to find out firsthand about related developments in other intramural laboratories."

Once again, the Natcher Conference Center will host most of the scientific programs on Monday, Sept. 16 and Tuesday, Sept. 17. These include two major symposia, over 20 workshops and four poster sessions. The posters are coordinated closely with the workshops, which are organized around the various NIH interest groups.

Researchers from all ICDs are invited to submit an application to present posters and/or workshop lectures at the festival. However, poster space is limited to approximately 300 presentations. As a suggested guideline for applicants, principal investigators are encouraged to reduce the number of entries from the same laboratory wherever possible, either by coordinating or combining similar or repetitive presentations.

Researchers may submit applications one of three ways: via the World Wide Web, fax, or email. The new, preferred method is to apply via the Web. At the Festival URL mentioned above, visitors will find a link to an electronic application form. Using a current browser supported by DCRT (for example, Netscape or Mosaic 2.+), applicants can simply fill in the blanks on the form and forward it with the click of a button. Authors may want to create their 120-word abstract on a word processor and then copy and paste it to the form. These abstracts will later become available for browsing.

Applicants who do not have access to the Web site may fax their entries; look for the blue festival flyer with the application form appearing desk-to-desk throughout NIH. Researchers may also email the the necessary information required on the form.

For more information, contact Gregory Roa at the NIH Visitor Information Center, 6-1776; email address: [gr25v@nih.gov](mailto:gr25v@nih.gov). □

## Symposium on Chemokines Planned, May 23

The NIH Cytokine Interest Group is sponsoring "Minisymposium II: The Biology and Biochemistry of Chemokines and Their Receptors—An NIH Perspective," on Thursday, May 23, from 1:15 to 5:40 p.m. in the Bldg. 549 conference center, NCI-Frederick Cancer Research and Development Center. Speakers include Howard Young, Joost Oppenheim, Philip Murphy, Christophe Combadiere, Yu Feng, Marius Clore, Josh Farber, Teizo Yoshimura, Ji-Ming Wang, Dennis Taub, Giovanna Tosato and Andrea Rubbert. The meeting is free but registration is required. Call (301) 846-5864 or email [FanningM@mail.ncifcrf.gov](mailto:FanningM@mail.ncifcrf.gov). □



NIAID director Dr. Anthony S. Fauci recently recognized 50 individuals for their special contributions to the institute at NIAID's Annual Report and Awards Ceremony. He said the honorees, who received various Presidential, HHS, PHS, NIH and NIAID awards in 1995, "represent the best among the many dedicated and talented people" at NIAID. He thanked all NIAID employees for another extraordinary year. He also gave an update on the institute's research programs and talked about the challenges ahead.

## Wednesday Afternoon Series

On Wednesdays at 3 p.m. in Masur Auditorium, Bldg. 10, the Wednesday Afternoon Lecture Series takes place. On May 29, Dr. Tadatsugu Taniguchi will speak on "The Molecular Basis of Cytokine Response." He is professor, department of immunology, faculty of medicine, University of Tokyo. His visit is hosted by the Immunology Interest Group.

Visiting on June 5 will be Dr. John A. Todd, senior scientist, Nuffield department of surgery, Wellcome Trust Centre for Human Genetics, Oxford University. He will speak on "A Genetic Basis for Familial Clustering of Type 1 Diabetes." His talk is hosted by the Genetics Interest Group.

For more information or reasonable accommodation, call Hilda Madine, 4-5595.

## Summer Skin Care Advice

Summer is just around the corner. June is the kickoff for many summer outdoor activities and also the month for the Skin Cancer Awareness Program, sponsored by the Occupational Medical Service (OMS). This program highlights the fact that excessive exposure to sunlight can lead to skin cancer.

In June, OMS provides information regarding skin cancer: warning signs, associated risk factors and advice to reduce your risk of the disease. This information will be available at all OMS health units. Although OMS does not endorse any particular sunscreen product, it hopes to provide samples of various brands.

OMS also offers two videotapes on skin cancer showing how it looks and ways to treat and prevent it. The tapes will be shown in the main OMS unit, Bldg. 10, Rm. 6C306, every Wednesday in June at 9, 10, and 11 a.m. and at 1, 2 and 3 p.m.

You should know that: skin cancer will kill an estimated 6,900 Americans this year; sunscreens can provide some protection against skin cancer—NCI recommends sunscreens with a "sun protection factor" (SPF) of 15 or higher for the best protection; use of sunscreen products may give a false sense of security as prolonged exposure to ultraviolet rays may still accelerate the development of melanoma, the most serious form of skin cancer; the safest approach is to limit exposure to the sun, especially between 10 a.m. and 2 p.m. □