

"Still
The Second
Best Thing
About Payday"

The NIH Record

Granddaddy of Interest Groups

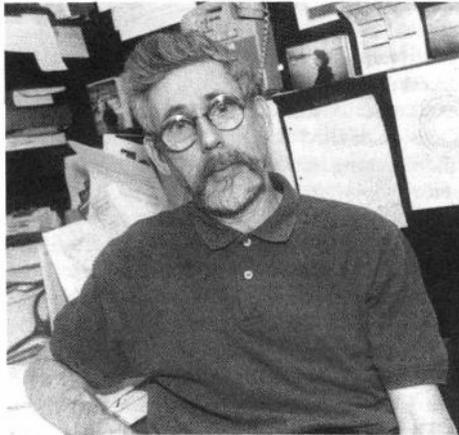
'Lambda Lunch' Still Hungry for Brain Food

By Rich McManus

If you plan on attending the weekly meeting of the Lambda Lunch, arguably NIH's oldest special interest group, feel free to bring anything you want, but you're best advised not to bring baloney.

At a time when small, subject-specific intellectual coteries are popping up on campus like mushrooms on a summer lawn, L², formed in 1965 as a group that met over lunch but which is now too mature to support so mundane an activity, reigns as the granddaddy of NIH interest groups. For all of its 29 years, it has prided itself on an intellectual rigor that does not kindly suffer undisciplined thinking. Observes founding member Dr. Michael Yarmolinsky, chief of the microbial genetics and biochemistry section of NCI's Laboratory of Biochemistry, "We don't let anyone get away with sloppy thinking, or we try not to."

An intramural scientist who began working at NIH in the mid-1950's, Yarmolinsky invites a visitor into the broom-closet-sized office appended to his laboratory in Bldg. 37's fourth floor. "This is actually considered rather a large office," he chuckles, indicating with a loafered toe the extra 4 or 5 inches of space his office gained during a renovation. In front of him—represented by a computer screen on which his latest article flickers—is a symbol of the career he opted for back in high school, when, attracted by the world seen through a microscope (See LAMBDA LUNCH, Page 4)



Dr. Michael Yarmolinsky

OIRM: New Unit Prizes Information, Teamwork

What is the value of information, to you, to NIH, and to the public? Are you interested in finding out more about increasing access to the Internet or making sure data on your workstation is secure from computer virus attacks and attempted break-ins from "hackers"? Do you want to know about ways to speed up the process and reduce the costs of purchasing needed computer equipment? NIH's Office of Information Resources Management (OIRM) was established to help NIH deal with these questions (See INFORMATION, Page 2)

'Give Hope,' NIH's CFC Drive Kicks Off Oct. 5, Bldg. 1 Lawn

"Give Hope Through Your CFC" is the theme of the 1994 NIH Combined Federal Campaign (CFC). The NIH/CFC kickoff will be on Wednesday, Oct. 5 at 11:45 a.m. in front of Bldg. 1.

Featured will be jazz music by Questet, food by George Starke's Head Hog Restaurant (a barbecue lunch for \$4), and the NIH/R&W race/walk. Starke, a former Redskin "hog," will be on hand to talk about how you can give hope through your CFC (he'll talk football, too).

It's all for a good cause—whether for food, fitness or fun, come on out!

NIA Takes Lead Scholarship Program Benefits Black Scientists

By Suzanne M. Lewis

Top African-American students in Maryland are taking advantage of a program focused on increasing the number of Black scientists earning Ph.D.s, and NIH is helping them reach their goals.

The National Institute on Aging's Gerontology Research Center in Baltimore is one of the first to sponsor scholars from the Meyerhoff Scholarship Program as part of its summer student program, according to Barbara Hughes, manager of NIA's Office of Minority Recruitment and Human Relations. Other NIH institutes are being encouraged to participate also.

As part of the program, Kalonji Collins, Adrien Janvier, Phillip Marshall, and Damon Tweedy conducted research this summer in, respectively, the Laboratory of Clinical Physiology, Laboratory of Biological Chemistry, Laboratory of Cellular and Molecular Biology, and the Laboratory of Cardiovascular Science.

Dr. Freeman A. Hrabowski, a mathematician and now president of the University of Maryland Baltimore County, launched the Meyerhoff Scholarship Program in 1989 with a \$520,000 grant from Baltimore philanthropists Robert and Jane Meyerhoff. The program provides African-American students with opportunities to pursue advanced science degrees, and it is hoped that the effort will significantly increase the number of African-Americans in science and research.

Since the original grant from the Meyerhoffs, major funding for the program has been provided by the National Science Foundation, NASA, and the National Security Agency. Additional

'BRCA1' Breast Cancer Gene Found By NIEHS, Utah Scientists

By Carla Garnett

Since 1990, when UC-Berkeley researcher Dr. Mary-Claire King first predicted that a breast cancer gene existed on chromosome 17, there has been a race to isolate it. On Wednesday, Sept. 14, at NIH, scientists from NIEHS announced they, and NIH-supported colleagues in Utah, had crossed the finish line first. Their peer-reviewed work will be published in the Oct. 7 issue of *Science*.

Called BRCA1, the breast cancer gene is thought to be a key player in only 5 percent of all breast cancer cases and 25 percent of breast cancer cases in women under age 30. A woman found to have the faulty BRCA1 gene is said to have about an 85 percent chance of developing breast cancer. Found in several tissues throughout the body, BRCA1 probably manages a role in normal cell function as well as its newly confirmed but still incompletely understood role in disease predisposition. Scientists believe the gene is responsible in large part for increasing a woman's risk of developing inherited ovarian cancer, and that BRCA1 could be implicated in malignancies of the (See CANCER GENE, Page 8)



NIA director Dr. Richard Hodes (c) meets with current Meyerhoff scholars Adrien Janvier (l) and Phillip Marshall, who spent the past summer working in Gerontology Research Center laboratories.

(See MEYERHOFF, Page 6)

INFORMATION

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and more.

In 1992, NIH established OIRM. Headed by NIH's senior IRM official Dr. Francis Hartel, OIRM is dedicated to recognizing and protecting the value of NIH's information and information systems. OIRM is the NIH focal point for information resources management functions that support the NIH mission. These functions include coordinating the planning, development, acquisition and management of information resources such as:

- personnel, finance and other automated information systems;
- telecommunications and computing networks; and
- all federal information processing (FIP) hardware, software, and support services.

OIRM has approached the task with an eye toward achieving success through teamwork, with NIH ICDs, and with organizations outside NIH as well. OIRM has fostered a collaborative relationship with its IRM oversight organizations such as the Public Health Service, the Department of Health and Human Services, and the General Services Administration. This relationship, based on trust and the recognition that NIH is committed to a program of sound information management and adherence to all regulatory and legal IRM requirements, has been beneficial to NIH.

One of the more visible benefits has been access to government-wide agency contracts through OIRM's Division of IRM Oversight and Clearance. These contracts, which include NASA's scientific workstation contract and the Air Force Desktop IV PC contract, have provided millions of dollars worth of FIP equipment to NIH at competitive rates. For example, OIRM placed 88 NIH orders worth \$7.4 million under the NASA contract, with an average processing time of approximately 30 days.

Because of the positive relationship between OIRM and the IRM oversight community, NIH has received increased delegated authority to approve FIP acquisition requests and OIRM has redelegated some of this increased authority to the ICDs. This greatly enhances the timeliness of approvals required for compliance with FIP acquisition regulations, and results in faster FIP procurements. In addition OIRM:

- has revised FIP acquisition clearance guidelines and is developing a *FIP Acquisition Handbook* in response to a recent needs survey;
- is exploring various automated methodologies for disseminating other FIP acquisition information; and
- is developing an automated clearance tracking system to expedite responses to ICD requests for FIP acquisition approvals.

To improve communications with the NIH user community, OIRM established IRM focal points in each of the ICDs and reactivated the ICD computer security coordinators group to facilitate the cross-fertilization of computer security ideas across the "virtual" campus.

OIRM has also worked with the ICDs on the development of an improved IRM planning process that emphasizes the active participation of the NIH user communities in the planning process.

In the area of computer security, OIRM is working as a team with the ICDs to protect the integrity of vital information by increasing NIH-wide awareness of automated information systems security. By establishing the NIH Computer Security Information List as an NIH-wide e-mail group, NIH users now have access to timely information on computer virus attacks, attempted break-ins by "hackers," and the real or suspected compromise of networks and systems. All NIH computer systems have access to this e-mail group, so anyone at NIH may subscribe to its services. Also, OIRM's Division of IRM Security, Standards, Policy and Planning has developed a computer security local area network risk assessment methodology for ICDs. This easy-to-use, comprehensive risk assessment package, which is applicable across NIH networking and computing environments, has won a 1994 Government Computer News Agency Award.

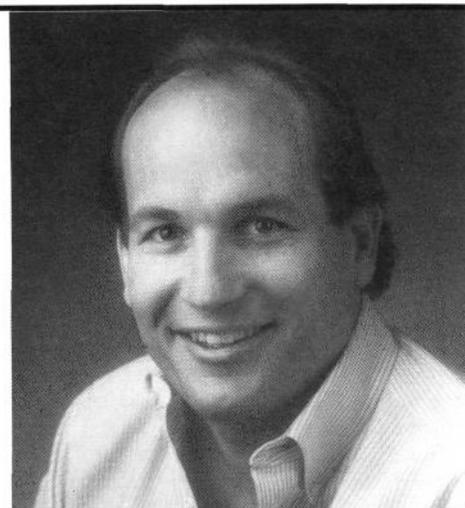
Examples of other OIRM initiatives to assist NIH users include:

- Developing an on-line database that all ICDs may query to easily locate all existing NIH software applications that may satisfy their software needs.
- In response to the exploding interest in and use of the Internet, OIRM is sponsoring an NIH-wide conference, "Internet Today and Tomorrow," on Oct. 24. Nationally recognized experts will address the NIH community and discuss current issues and future trends predicted for the world's largest computer network. Panel discussions will be arranged to give NIH employees opportunities to share information with each other. The conference is open to all NIH employees, and all are encouraged to attend.

OIRM is committed to the protection and enhancement of information and information resources management at NIH through teamwork, and enlists support in this effort. Suggestions for future initiatives are actively sought and appreciated. Hartel and his staff are eager to hear concerns and address your IRM needs. Call them if you have any questions about FIP acquisition, planning, security, etc. OIRM's management team includes: Dona Lenkin, deputy director, 2-4444; Marie Monsees, director of the Division of IRM Oversight and Clearance, 2-4449; and Jaren Doherty, director of the Division of IRM Security Standards, Policy and Planning, 2-4445. Let them know what you think, and what you need. □

Shop in Williamsburg

Do your holiday gift shopping at the discount outlets in Williamsburg, Va., with R&W on Saturday, Nov. 19. Leave Bldg. 31 at 8:15 a.m. Cost is \$27 per person; historic passes available at an additional cost. Call the R&W Activities Desk, 6-4600, for more information or to reserve your seat. □



Dr. Robert S. Balaban, chief of NHLBI's Laboratory of Cardiac Energetics, received the Gold Medal of the Society for Magnetic Resonance. Awarded at the society's annual meeting in San Francisco in August, the Gold Medal is the group's highest scientific award. In its citation, the society noted Balaban's pioneering work in the application of nuclear magnetic resonance (NMR) in biology and medicine, especially on the quantitation and visualization of water-macromolecule interactions in biological tissues. Also cited were his numerous contributions in improving scientists' understanding of tissue energetics, both in vivo and in vitro. The society is an international association based in Berkeley, Calif. Its more than 4,000 members are interested in the biological and medical applications of NMR.

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Princeton's Levine To Give Khoury Lecture

NIH scientists have organized a lecture in honor of the late physician-scientist and valued mentor Dr. George Khoury. The speaker for this event, Dr. Arnold Levine, will deliver the lecture in Masur Auditorium, Bldg. 10, at 3 p.m. on Monday, Oct. 24.

A long-time friend and former colleague of Khoury's, Levine is currently the Harry C. Wiess professor in life sciences and chairman of the department of molecular biology at Princeton University. The title of his talk is "The Functions of the p53 Tumor Suppressor Gene."

In April 1987, NIH lost one of its most outstanding scientists to the complications of lymphoma. Khoury had just been elected to the National Academy of Sciences when he died at age 43. He was recognized for his contributions to the fundamental understanding of viral gene regulation and for his discovery of elements that enhance gene activity. Even beyond his scientific contributions, however, Khoury's greatest pride was in his role as mentor to young scientists.

He began as a research associate in NIAID's Laboratory of Biology of Viruses and later became chief of NCI's Laboratory of Molecular Virology. Those who worked with him remember Khoury as a caring individual who went out of his way to encourage and cultivate the abilities of younger colleagues. It came as no surprise that his laboratory, in a brief period of time, produced many outstanding scientists, including Peter Gruss, Jim Alwine, and Lou Laimins, among others.

Khoury's human qualities are perhaps best illustrated through the recollections of one of

the last of his medical staff fellows, Dr. K.T. Jeang, currently in NIAID's Laboratory of Molecular Microbiology. Jeang describes Khoury's final days and his primary concern: the future welfare of his postdoctoral fellows. Shortly before he succumbed to his illness,



Dr. George Khoury

Khoury went to great lengths to write personal letters of recommendation to be placed in each staff fellow's file. In addition, he made the rounds of his NIH lab chief friends, extracting from each a promise to "take care of my people" after he was gone. As a measure of his fierce devotion to his younger colleagues—and with recognition of human frailties—Khoury then wrote a letter to each of the lab friends, reminding them of their promise to watch over his staff fellows. Rather than mailing the letters directly, however, Khoury gave them to his attorney with instructions to postpone the mailing until 6 months after Khoury's death. Jeang recalls, "Six months after George died, one of the lab chiefs came to me and said, 'I just got a letter from a ghost; he wanted me to make sure that you are doing alright.'"

The George Khoury Lecture, sponsored by NIAID and NCI, celebrates the legacy of the man and his science.—Karen Leighty □

Jorge Gomez Joins Office of Extramural Research

Dr. Jorge Gomez has recently joined the Grants Associates Program, Office of Extramural Research.

He received his M.D. from the Universidad de Guadalajara School of Medicine in Mexico. Following this he pursued a research career by enrolling in graduate studies at the University of Texas at El Paso, where he earned a master's degree in science, and subsequently received his Ph.D. in immunology and pharmacology from the University of Arizona.

During postdoctoral training at Thomas Jefferson University, he was supported in part by an NIH research supplement through the NIGMS Initiatives for Underrepresented Minorities in Biomedical Research Program. He completed his postdoctoral training in the chemical immunology section of NIAMS' intramural program.

Gomez' research has focused on understand-



Dr. Jorge Gomez

ing molecular mechanisms of cell activation, in particular those mediated by receptor molecules.

The Grants Associates Program prepares scientists interested in science administration to become health scientist administrators. The program has contributed to the formation of future leaders at NIH and has a history of increasing diversity in the workplace. □

Free Clinic Needs Volunteer Physicians To Care for Poor

Zacchaeus Free Clinic, a primary care clinic caring for the stable poor of Washington, D.C., for more than 25 years, needs physicians for general medical and pediatrics clinics. Clinics are held in the evening during the week and on Saturday mornings (daytime clinics during the week are also available). Specialists are needed as well. D.C. licensure is not required. The clinic is located in a beautiful, newly renovated building near Howard University. The facility is within a few blocks of the Metro and has its own secured parking lot. For more information, call Dr. Daniel Fierer, 6-8274, or Dr. Randi Abramson, (202) 265-2400.

Broadcaster Berry To Address Media Relations, Federal Workers

Paul Berry, one of Washington, D.C.'s most respected journalists and coanchor of WJLA-TV's "News Seven-Live at Five" newscast, will address the NIH Executive Speakers Series Seminar (ESSS) on Oct. 6 at 1:30 p.m. in Lipsett Amphitheater, Bldg. 10. The ESSS focuses on senior- and middle-level managers' concerns and those raised most frequently in the NIH scientific community.

Citing the vital role media plays in shaping today's institutional policies and attitudes, Berry will discuss "Media Relations in the Federal Workforce."

Berry came to WJLA-TV in 1972 from his native Detroit where he spent 4 years as an anchor/reporter at WXYZ. Previously, Berry was assigned to Tuy Hoa Air Force installation where he worked as program director and sportscaster, and established the first independent FM radio station in South Vietnam.



Paul Berry

Regarded in the Washington area as a "man of the people," Berry established two WJLA community service programs: "Crime Solvers" and "Seven on Your Side." Over the years, he has been recognized countless times for his relentless work and commitment to the community. In 1982, Washington Mayor Marion Barry honored him by declaring Nov. 12 "Paul Berry Day" in the District. Also that year, Berry won the Ted Yates Award for demonstrating outstanding professional and personal qualities in Washington television. Most recently, Berry was named "Washingtonian of the Year" by *Washingtonian* magazine.

Berry is a member of several local charitable and professional organizations. He serves on the board of directors of several organizations including the D.C. Special Olympics; National Rehabilitation Hospital; the Leukemia Society of Washington; the Neediest Kids, Inc.; and the National Academy of Television Arts and Sciences.

No registration for the seminar is needed. Attendance will be on a first-come, first-served basis (limit 200). For more information, call Dr. James Moone, 6-2497. □

Biomedical Calendar Available

The 1994-1995 *Calendar of Biomedical Meetings and Events*, which includes meetings sponsored by NIH as well as those of major medical societies and biomedical research associations, is available from the Division of Public Information, OD. To obtain a copy, call Betty Riley, 6-8855. □

LAMBDA LUNCH*(Continued from Page 1)*

and inspired by a cousin studying biology, he chose that subject as a taskmaster. Over a desk suffocating under stacks of paper hangs evidence of the career he might have had, a painting he completed in the 1950's of a sun-drenched urban landscape.

"If we don't like the title (of a Lambda talk), we say so," he continues, alive amid the clutter. "Most invited speakers are advised that they are likely to be interrupted from the very start. The atmosphere is one of continuous challenge, not in the spirit of contentiousness but in the spirit of trying to get to the heart of things."

Fond enough of precision not even to claim that Lambda Lunch is the oldest special interest group on campus—"My guess is that it's the oldest, though there may be an older one in the heart institute," he says—Yarmolinsky traces L²'s beginnings to the spring of 1965. A year earlier, he had returned to what was then the National Institute of Arthritis and Metabolic Diseases to study a bacteriophage (a virus that attacks bacteria) that had intrigued him during a research stint at Johns Hopkins. Called lambda, this virus attacks a very common and thoroughly studied bacterium, *E. coli*.

"In 1965, (lambda) was just becoming appreciated as a valuable tool," he remembers. "It has been and continues to be useful for studying a great many diverse aspects of life—replication, regulatory circuits, recombination, and even physiology. It is one of the most-studied bacteriophages. Two major volumes have been written on it."

Two NIH scientists were already working on lambda when Yarmolinsky joined NIAMD—Arthur Weissbach (now retired from Roche Pharmaceuticals) and David Korn (now dean of Stanford Medical School). They and coworkers J. Protass, Robert Shuster and Lois Salzman (now with NIDR) were studying the biochemistry of lambda. Yarmolinsky, who was interested in the genetics of lambda, had recently "inherited" a postdoc from Yale named Lee Rosner (now at NIDDK). Together, the group began meeting weekly for lunch in Bldg. 10, near Weissbach's lab. Shortly thereafter, the loose confederacy shifted to Bldg. 2, where Yarmolinsky worked.

"We used the attic library in Bldg. 2," he recalls. "For more than 20 years, Lambda Lunch met in that library, which got more and more crowded. You rarely got a seat if you came late."

The group met on Thursdays, when scientists could actually bring a sack lunch and eat while chewing over ideas.

"By 1968 and '69, we began to get quite a few additional people, including Max Gottesman, David Friedman and Leon Kass, who were members of my lab," Yarmolinsky remembers. "Others, like Martin Gellert, joined in. Initially, we had just talked among ourselves. Then we began to get guest lecturers as the quality of the talks became known. Nowadays, it's about 50 percent guest lecturers."

When Bldg. 2 was gutted for renovation several years ago, L² moved to its current home on the first floor of Bldg. 36, near Howard Nash's laboratory.

Yarmolinsky, whose Bethesda career has been interrupted by a 7-year stay in France and 8 years in Frederick ("Each had their charms," he divulges diplomatically), has been a regular Lambda Luncher for the last decade.

"A large number of people come regularly," he says. "But we do not keep attendance." Though anyone can come to its meetings, L² does not advertise and membership currently stands at about 50.

In Yarmolinsky's view, three main characteristics define the long-lived interest group: First, its membership crosses institute boundaries. "It's really an NIH community, including alumni as well," he says. "Many have a strong genetic interest or 'temperament.' I believe there's a considerable difference between the biochemical and genetic points of view. It's hard to define, but it is real. The biochemists who attend generally appreciate genetics, which not all biochemists do."

The second distinguishing characteristic is

Don't bring any baloney.

informality. "The agenda is really very pliable, depending on what's interesting at the moment. We wouldn't preempt a scheduled talk, but if somebody's problem were interesting enough, it might bump something else off the agenda." Allowing that the march of science has, to a degree, rendered the Lambda name somewhat obsolete, Yarmolinsky says the boundaries of discussion have always been wide. "It doesn't faze us if talks are occasionally a little far afield."

The third facet is intellectual rigor. Yarmolinsky noted a recent conversation with Howard Nash on the role of "a certain amount of terror" in setting high standards. The net result of such standards, however, is an enviable reputation. "People feel honored to be invited from outside. In the prokaryotic community, we are well known."

At a recent "lunch" (actually, no one eats lunch at L² meetings anymore since they're held in the late morning, though some members carry on discussions in the cafeteria afterwards), members debated whether a sufficiently critical attitude characterized some of the newer groups springing up on campus. "The young peers who meet in these groups may not feel comfortable criticizing one another," Yarmolinsky cautions.

Did the founders of L² want for the fear factor?

"The people in the original Lambda were very demanding, but we had no authority figures," concedes Yarmolinsky, discovering in the course of conversation—in perhaps lambdaesque fashion—a fourth important factor, group personality.

"That's been a nice feature from the beginning," he realizes. "The personalities of the individuals in it make a lot of difference.

It's always had some very imaginative and articulate people in it, which has kept discussion lively."

That liveliness can be an important counterpoint to the sober solitude of much bench science.

"Science is a very lonely activity," Yarmolinsky observes. "That's one of the features of scientific research. You need to have some stimulation. There's a lot of give-and-take that occurs at the Lambda Lunch."

Besides L², Yarmolinsky belongs to several other groups that help intramural scientists share ideas. Within Bldg. 37, he is a member of the Vegetable Club's two subsets—data club and journal club—each of which meets once a week to discuss research on bacteria. He also participates in the Laboratory of Biochemistry's weekly "Show and Tell," a data club that he deems more formal than the Vegetable meetings.

Why Vegetable Club?

"Animal was already taken."

Asked why interest groups seem all the rage at the moment, Yarmolinsky is pensive. "I don't know quite why at this particular moment," he answers. "They are, in a way, an acknowledgment that one's interests are not localized to some bureaucratic category such as an institute. The names of the institutes really don't have much meaning. They're not to be taken too seriously. And that's a good thing."

He also acknowledges that the arrival of NIH director Dr. Harold Varmus last year has contributed to interest group fever; the director's office now supports outside speakers invited by the special interest groups, an incentive Yarmolinsky says may benefit the newer, smaller groups, but is largely irrelevant to L², which can draw distinguished speakers on the strength of its own reputation.

As might be expected, none of the extracurricular groups to which Yarmolinsky belongs is quite as close to his heart as L². "One's allegiances, scientifically, have little to do with the lab one is in," he comments.

Overall, the interest groups, be they a month old or pushing 30, are good for NIH and good for science, he opines.

"I think it is a good thing for the advance of knowledge, not just as a way of meeting friends. You'll get a lot of trenchant criticism when you expose your work to the group."

Deep into composition of a review paper on programmed cell death in bacteria, an offshoot of his work on P1, the bacteriophage that has supplanted lambda as the object of his research, Yarmolinsky confesses, "I'm one of the few scientists I know who actually enjoys writing, although it is very difficult for me. It's a creative process, a clarifying process. It's a very helpful thing to write a paper."

One can almost imagine a jury of feisty Lambda Lunchers in his mind, editing this observation, amplifying that. Which is all to the good in a profession about which Yarmolinsky has remarked: "Science is very unforgiving. Any discipline that's taken seriously is unforgiving." □

Computer-Assisted Imaging Sees Fetus as Patient

By Anne Blank

Advanced computer imaging techniques will enable diseases to be diagnosed, and, in some cases, treated, in a group of patients that has had only limited access to medical care. These patients cannot make a doctor's appointment, or even describe what may be ailing them.

These patients are human fetuses.

To examine state-of-the-art research in computer-assisted fetal imaging, as well as future research directions and issues, the Developmental Biology, Genetics and Teratology Branch, NICHD, recently held a 2-day workshop. Attended by basic and clinical scientists from across the country, the workshop was entitled "Computer-Assisted Imaging of Embryonic and Fetal Development."

According to Dr. Steve Klein, health scientist administrator at the DBGT and organizer of the workshop, these techniques permit visualization of multiple structures in many different dimensions. The structures can be enlarged, colored and shaded for clarity, viewed from any angle, and sliced on the screen. "This enables us to observe structures and events in three and four dimensions," Klein said. "For example, one could examine how the internal structures of the heart develop over a period of weeks by speeding up the development in the computer so that it seems to occur in a few minutes. This technology enables us to see things that can't be visualized in any other way."

Part of the goal of embryonic and fetal imaging projects should be to provide clinicians, researchers, and students instant access, via their computer, to a complete collection of "virtual" human and nonhuman embryos and fetuses, Klein said. "Investigators then would be able to study and to interact with animated three-dimensional representations of normal and abnormal developing embryos and fetuses," he explained. "This would enhance our ability to detect and treat birth defects, would facilitate research on the causes of birth defects, and would enable advanced training of obstetricians."

By enabling physicians to diagnose certain birth defects prenatally, computer-assisted imaging of fetal development may help improve pregnancy outcome. Early diagnosis offers several significant advantages. First, in the event of a high-risk pregnancy, it prepares parents and caregivers by giving them time to develop an appropriate plan for pregnancy management. Second, these techniques aid in confirming gestational age. Finally, prenatal detection of an abnormality enables physicians to perform early and timely evaluation after birth. In addition to these significant clinical benefits, fetal imaging techniques can be used in the classroom to train future obstetricians, and in the laboratory to facilitate a basic, scientific understanding of both normal and abnormal development.

With Roentgen's discovery of x-rays in 1895, the field of medical imaging moved to another

plane. For the first time, instead of relying only on visible light to produce images, physicians were able to use invisible parts of the electromagnetic spectrum to create exquisitely detailed pictures of internal human organs. This breakthrough, in turn, opened up a host of possibilities. Today, imaging techniques not only use x-ray waves, but also radio, infrared, ultraviolet, and gamma ray waves, explained Robert Beck, director of the Center for Imaging Science at the University of Chicago/Argonne National Laboratory.

Because the fetus is highly vulnerable to the damaging effects of ionizing radiation, however, these techniques are not suitable for fetal imaging. It was not until the 1950's that a new method was developed, enabling physicians to produce images of the developing embryo and fetus safely.

"It was really with the advent of ultrasound that embryo and fetal research moved into the high-tech era," said Dr. Duane Alexander, NICHD director.

If the development of ultrasound imaging was the precipitating event, computer-assisted imaging currently is the propelling force behind fetal imaging. After obtaining an image of an embryo or fetus via an imaging procedure such as ultrasound, magnetic resonance imaging (MRI), computerized tomography (CT), or endoscopy, computer technology is used to reconstruct the image and store it in a computerized database. In addition to the benefits derived from easy manipulation and magnification of pictures, computer imaging offers advances in noninvasive diagnostic testing. Because the whole process is done on a computer screen, the actual fetus is never touched. "We do our slicing and cutting after the fact, in the computer," said Dr. Brad Smith of Duke University Medical Center's department of radiology.

Much of the research on embryonic and fetal development, both normal and abnormal, is done using animal models such as the mouse, which represents an ideal model for research because its genetics are well characterized and many of its mutant phenotypes have already been identified. Scientists currently are using ultrasound combined with computer imaging to study the process of embryogenesis in the mouse. Although this application is still in the early stages, investigators are able to study embryonic phases, and analyze the dynamic progression of development in both normal and abnormal embryos.

One of its main advantages is that the three-dimensional image produced via computer provides scientists with a much clearer idea of how abnormal development progresses, according to Dr. Dan Turnbull of the department of imaging research at Sunnybrook Health Science Center, University of Toronto. Furthermore, the advantages of these and other imaging studies of animal models are not limited to basic science, but extend to clinicians and their patients, as well.

"From a clinical standpoint, I think physicians who understand normal and abnormal development will be better able to diagnose abnormalities," said Dr. Wesley Lee of the fetal imaging department at Beaumont Hospital, Royal Oak, Mich.

Speaker Dr. Robert Ledley of Georgetown University Medical Center's department of physiology and biophysics and inventor of the whole-body CAT scan, demonstrated a stereo ultrasound imager that he recently invented. The imager scans different sections of the fetus from two angles to produce stereo pairs. The images from the entire fetus are then reconstructed in the computer. From this computer reconstruction, pairs of images are projected onto a special stereo television monitor, creating a three-dimensional image of the fetus.

According to Ledley, this imaging technique represents the optimum method of visualization because it depicts a highly realistic, three-dimensional image that is more representative of the fetus *in utero* than are two-dimensional images.

"Most important, this newest noninvasive method of viewing the fetus promises to be a significant addition to the clinician's ability to diagnose structural and soft-tissue fetal deformities and malformations," he said.

As fetal visualization techniques become increasingly sophisticated, physicians are able to combine these diagnostic methods with therapeutic procedures to treat these tiny patients. Certain new treatment methods such as gene and drug therapies, and highly precise surgical techniques can already be used on a fetus to treat specific disorders *in utero*, before the disorder can produce irreversible damage or death.

Speaker Dr. Roberto Romero, chief of NICHD's new Perinatology Research Branch at Georgetown University, has played a leading role internationally in developing and using imaging techniques to treat the fetus. In the first successful operation of its kind, Romero and a team of investigators saved the life of a fetus whose heart was forced to pump blood not only for himself, but for his twin, a malformed fetus lacking either a heart or a brain. The operation to stop the blood flow to the malformed twin was performed with thin, elongated surgical instruments. The twins and the instruments were seen during the procedure with the aid of ultrasound and a television camera hooked up to a minuscule lens at the end of a fiber-optic cable.

More information about the workshop can be obtained over the World Wide Web computer network (use Mosaic at <http://visembryo/ucsf.edu/>). There you will find the workshop agenda, a list of the participants, and their abstracts. This multimedia program takes advantage of the very technology discussed at the workshop by linking the abstracts to photographs and movies that illustrate the projects. □

MEYERHOFF SCHOLARS COME TO NIH VIA NIA SUMMER PROGRAM

(Continued from Page 1)

funding comes from AT&T, Meridian Health Care, Chevron, the Abell Foundation, and private donors. Apple Computer, Inc., provides personal computers for students.

According to the National Research Council, in 1992, 201 African-Americans earned doctorates in math, science, and engineering in the United States. This accounted for only 1.5 percent of all the degrees awarded in those fields.

Earnestine B. Baker, director of the Meyerhoff Scholarship Program, said the program provides both full and partial scholarships to outstanding African-American students, competitively selected from across Maryland, who major in mathematics, science, engineering, or computer science and then pursue Ph.D.s in these disciplines.

The program includes support components such as a 6-week residential experience for incoming freshmen to prepare them for the transition to university course work and campus living, and study groups that continue throughout their college careers. This is in addition to the basic scholarship including tuition, fees, room and board, semester stipends, personal computers and software, and summer internships.

Several Meyerhoff scholars earned their summer internship credit working at the GRC, beginning last year. Adrien Janvier conducted research to design a system to help grow cartilage *in vitro* that can be used to repair damaged cartilage. His research is part of an osteoarthritis study in the Laboratory of Biological Chemistry. This was Janvier's second summer working on the project.

Dr. Walter Horton, principal investigator and one of Janvier's mentors, said he has worked with consistently excellent summer students. However, he was especially pleased to have Janvier work in his laboratory. "We jumped at the chance to bring someone on with his qualifications," Horton said, adding that he and his colleagues were impressed with Janvier's conscientiousness and focus on his work. "He wants to know the whys of what we are doing," Horton explained. "He's as important a resource as anyone working in the lab."

Janvier, who just began his junior year, said the experience of working in the laboratory is invaluable. "I had never purified DNA before or performed the types of tissue culture techniques I use in this research," he explained.

Furthermore, Janvier said his experience in the lab is a bit different from conducting experiments in a college laboratory. "You get hit with the reality that things don't always go as planned," he observed. "But you do have to plan."

In addition, Janvier said both Horton and another mentor, Dr. Douglass Bradham, have made him feel his work is an important contribution to the laboratory. "It's a welcoming environment," he said. "I don't think all research settings are like this."

Hrabowski is looking forward to a productive partnership between NIH and UMBC's Meyerhoff Scholarship Program. "My vision is that UMBC will become a strong partner with NIH in scientific research and science education," he said. "We can provide many opportunities for NIH to connect with minority students."

NIH director Dr. Harold Varmus, an ardent supporter of the Meyerhoff program, said, "I am enormously impressed with the Meyerhoff scholars. I have visited UMBC, and this program is a paradigm for encouraging minority students to pursue research careers. Every NIH lab should give serious consideration to having a Meyerhoff scholar participate in its summer program."

To learn how to recruit Meyerhoff scholars for your laboratory as part of next year's summer student program, contact Paula Ashby, the program's internship coordinator, (410) 455-3139. □

Blue Cross To Hold Service Day

Blue Cross/Blue Shield of the National Capital Area will be on the NIH campus Wednesday, Sept. 28, to assist Blue Cross/Blue Shield enrollees who have claims or enrollment problems. A Blue Cross/Blue Shield representative will be available 10 a.m.-1:30 p.m. on that day in Bldg. 31, Conf. Rm. 9 (C wing, 6th floor) armed with a laptop computer to directly access the enrollee's records at Blue Cross/Blue Shield headquarters. No appointment is necessary; assistance will be provided on a first-come, first-served basis. □

Neuroscience Seminars Begin

The Integrative Neuroscience Group begins its fall seminar series on Thursday, Sept. 29 in Bldg. 49's conference room, with coffee and an opportunity to meet colleagues beginning at 3:30 p.m. in the lobby. NEI's Bob Wurtz and Lance Optican will give the first seminar at 4 p.m. On alternate Thursdays, other speakers will include Mark Hallett and James Olds, NINDS; and Steve Suomi, NICHD.

The group was organized last year by the integrative neuroscience steering committee. To receive announcements about future seminars, or to have your laboratory represented, send a request with laboratory name, proposed representative's name and an alternate by fax to 2-0511 or by e-mail to jls@Isr.nei.nih.gov. □

October Designated National Physical Therapy Month

The physical therapy section of the Clinical Center's department of rehabilitation medicine is sponsoring a health fair on Oct. 12 to celebrate October as National Physical Therapy Month. The fair will be held in Bldg. 10's Visitor Information Center between 10 a.m. and 2 p.m.

In keeping with the month's theme, "Posture Yourself for Good Health," the fair will feature tips on posture, workstation ergonomics, and back care. CC physical therapists will supervise activities at each demonstration station.

Those attending are eligible for door prizes including T-shirts, pens, water bottles, and magnets.



Dr. John Ruffin (c), NIH associate director for research on minority health, recently received two awards from the National Medical Association (NMA) at its 1994 board of trustees meeting. Above, NMA 1993-1994 president Dr. Leonard E. Lawrence (l) and NMA board of trustees chair Dr. Ezra C. Davidson, Jr. present Ruffin a glass plaque in recognition of his "leadership, dedication, support and contributions toward improving the quality of life for youth." Also, an NMA certificate of appreciation was given to Ruffin for supporting the work of the association "in its endeavors to improve both the overall status of African American practitioners and the quality of health care for all Americans, especially the underserved."

'Wednesday Afternoon Lectures' To Bring Research Stars to NIH

If it's Wednesday afternoon, there must be something terrific going on in Masur Auditorium or Lipsett Amphitheater.

That's what NIH scientists are soon going to be conditioned to think. On Oct. 5, NIH launches a new scientific seminar series, The Wednesday Afternoon Lectures. The new series is an effort to combine NIH's most important lecture events under one tent—that is, one place and time. Incorporated in the lectures, for example, will be the NIH Lectures, including the first Margaret Pittman Lecture, the Stetten Lecture, the FAES Ehrlich Lecture, the Fogarty International Lecture, General Motors Laureates Lectures, and speakers from NIAAA's 25th anniversary celebration.

The weekly series will be filled out with some of the top biomedical scientists in the world, hosted by NIH's interinstitute interest groups (immunology, structural biology, genetics, neurobiology, cell biology, molecular biology, and clinical research). The NIH fellows have also invited speakers, as have the drosophila,

apoptosis, glycobiology, yeast, and DNA repair interest groups. NIH's Office of Education will award CME credits for attending the lectures.

"I am very pleased that NIH now has a regular slot for an outstanding outside speaker each week," says NIH director Dr. Harold Varmus. "We are all slaves to our schedules and creatures of habit, so I am glad to be able to block out Wednesdays at 3 p.m. for the coming academic year to listen to the wonderful people who have agreed to tell us about their latest work."

Coming early to the lectures may be advisable. Dr. Michael Gottesman, acting NIH deputy director for intramural research, notes, "The list of speakers for this series reads like a *Who's Who* of contemporary biomedical research. We are grateful to members of the special interest groups who invited these outstanding speakers and who are hosting poster sessions and social get-togethers after the talks."

Varmus actually hopes the star-studded events create a little pandemonium. "I hope there is a mob scene every week," he says. "The speakers will love it and want to come again."

MIT's Nobel Laureate Susumu Tonegawa, hosted by the Immunology Interest Group, will lead off the series at 4 p.m. on Oct. 5 in Lipsett Amphitheater, Bldg. 10. Most subsequent lectures will be in Masur at 3 p.m.

Frances Jurnak, hosted by the Structural Biology Interest Group, will present the second talk, "The Parallel Beta Helices of Pectate Lyases and Implications for Infectious Agents," at 3 p.m. on Oct. 12 in Masur. She is with the department of biochemistry, University of California, Riverside. Other speakers in 1994 include Stuart Schreiber, Bonnie Dunbar, Laurie Glimcher, Leland Hartwell, David Housman, David Baltimore, and David DeRosier.

For more information, contact Hilda Madine, 6-3475, fax 2-4296, or e-mail: Hilda_Madine@smtpgateway.cc.nih.gov. □

NIH Observes Fire Prevention Week, Oct. 9-15

Fire Prevention Week, Oct. 9-15, commemorates the "Great Chicago Fire" of October 1871, which resulted in 250 deaths and more than \$168 million in property damage. The technology and expertise of the fire-fighting profession has improved dramatically since that era; however, more than 6,000 Americans still die each year in fires. This loss is especially tragic as fire prevention and survival tactics are easy to learn and implement.

Unfortunately, these fire safety procedures are typically taken for granted since people always believe a serious fire "can't happen to me."

This year's Fire Prevention Week theme, "Test Your Detector for Life," centers on the importance of installing and maintaining smoke detectors. The need for home smoke detectors is especially important as 80 percent of fatal fires occur in homes. Smoke detectors should be tested once a month. Battery operated detectors should have new batteries installed at least once a year. Pick a date easy to remember and then change the battery every year on that date.

Fire Prevention Week is an opportunity for all NIH employees to learn more about fire safety procedures to be used both at home and at work. The Emergency Management Branch, Division of Safety, will host exhibits at several locations during Fire Prevention Week. This year, a special display of home smoke detectors and a model of a typical residential sprinkler system will be featured. In addition, fire safety

information will be available at the exhibits including brochures, videos and displays of home fire safety devices.

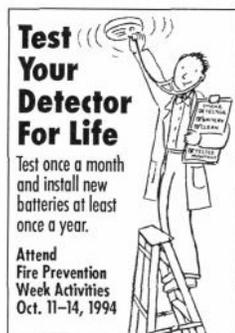
During Fire Prevention Week there will be a raffle giving away smoke detectors, fire extinguishers and other home fire safety items. The raffle is free, with tickets available at each exhibit. Winning tickets will be drawn on Friday afternoon in the Bldg. 31A lobby; you need not be present to win.

Fire safety displays, brochures, videos and Sparky the Fire Dog, will be at the following locations:

- ◆ Tuesday, Oct. 11, 11 a.m.-2 p.m., Executive Plaza South lobby.
- ◆ Wednesday, Oct. 12, 11 a.m.-2 p.m., Bldg. 49 lobby.
- ◆ Thursday, Oct. 13, 11 a.m.-2 p.m., Bldg. 10 lobby near the flower shop.
- ◆ Friday, Oct. 14, 11 a.m.-2 p.m., Bldg. 31A lobby and patio area.

On Friday, Oct. 14, between 11 a.m. and 2 p.m., the NIH Fire Department's hazardous materials response unit and the University of Maryland's sprinkler system demonstration trailer will be on display in the patio area of Bldg. 31A, weather permitting. The Haz-Mat vehicle has a number of unique features including a cascade system that refills self-contained breathing apparatus tanks, air sampling instrumentation and computer databases for chemical and toxicological information. The sprinkler trailer provides a look at the operation of a residential sprinkler system and how sprinklers function in the event of a fire.

The information provided during Fire Prevention Week can help you, your coworkers and your family learn how to survive a fire. For more information, contact the Emergency Management Branch, 6-1985. □



Disability Awareness Program Will Focus on Ability, Oct. 13

"Employ Ability: We Can Do It" is the theme for NIH's 12th annual Disability Employment Awareness Program set for Thursday, Oct. 13 from 11 a.m. to 1 p.m., in Wilson Hall, Bldg. 1.

The program features a panel moderated by Dr. Steve Hausman, NIAMS deputy director and chair of PHS's advisory committee on employment for persons with disabilities.

Ophelia Falls, director of the Target Center at the Department of Agriculture, will discuss and exhibit some technology resources for better accessibility and reasonable accommodations for people with disabilities. Three other speakers—NIH employees Jerry Haley, Frances Cannon, and W. Craig Easter—will discuss their ability to perform the duties of various positions with appropriate accommodations.

This activity celebrates National Employment of People with Disabilities Awareness Month and is cosponsored by the NIH Disability Employment Program, Office of Equal Opportunity, and the NIH advisory committee for employees with disabilities. Naomi Churchill, newly appointed OEO director, and Carlton Coleman, newly appointed Disability Employment Program manager, will be introduced. Sign language interpretation will be available. For more information or special accommodations, call Coleman, 6-2906 (voice/TTY).

In addition to this program, DCRT will sponsor a vendor's exhibition on Oct. 20, from 10 a.m. to 2 p.m. in the Visitor Information Center, Bldg. 10. The exhibit will display computers, assistive devices and state-of-the-art technology for persons with disabilities.

CANCER GENE DISCOVERED BY NIEHS, UTAH SCIENTISTS

(Continued from Page 1)

colon and prostate gland as well. Incidences of so-called sporadic breast cancer—which account for the majority, or 95 percent, of breast cancers—may or may not be influenced by BRCA1, according to researchers. The finding of the errant gene is merely a key piece of breast cancer's gigantic puzzle.

"This is an extremely important development in our understanding of cancer—breast cancer, in particular—as it will ultimately impact our ability to make predictions and hopefully decrease the incidence and mortality of breast cancer," said NIH director Dr. Harold Varmus, at the Sept. 14 afternoon news briefing. "It does not, at this stage, represent a cure, nor something upon which American women can take action today."

Although practical use—development of a test to detect the gene's presence in women, for example—of the BRCA1 discovery is estimated to be years away, the enormity of its implications are immediate.

NIEHS director Dr. Kenneth Olden likened the BRCA1 isolation to the NIEHS work that proved the toxicity of the synthetic hormone DES in the 1970's. These are the "two most important discoveries in the 26-year history of the institute," he said. "Most importantly, however, this present discovery represents the best in American science in that it is a result of a collaboration, a partnership between industry, academia" and government.

Dr. Mark Skolnick, an NIH grantee at the University of Utah Medical Center whose laboratory teamed with the private firm Myriad Genetics, Inc. in Salt Lake City and with NIEHS researchers in the race to isolate the gene, could not be reached to participate in the announcement.

Flown from Research Triangle Park, N.C., to Bethesda in a sudden whirl of activity, two scientists from NIEHS's Laboratory of Molecular Carcinogenesis admitted they were still getting used to the attention generated by their discovery.

Looking slightly shell-shocked in the face of brightly lit media cameras in Masur Auditorium, Dr. Roger Wiseman, an LMC senior staff fellow, said he and his colleagues had only just finished revising their manuscript in the late-night hours of Sept. 13 when a 9 a.m. phone call the next morning brought the news that they were flying to Washington within the hour to announce their discovery.

"I can only say I'm overwhelmed by the turn of events," he said, haltingly, when asked about his initial reaction to the research breakthrough. "We're just happy the race is over. Since breast cancer is such a terribly common disease—roughly 180,000 cases will be diagnosed this year—when you think of 5 percent of that, we're happy to have found out about even a small part of it. It's a step in the right direction. It's not as large a step as we'd like it to be, but perhaps it will grow larger as time goes on."

Describing the technique used to isolate

BRCA1, LMC postdoc P. Andrew Futreal said the novel process was "laborious and tedious," especially given that the gene is relatively large.

"The technique is the closest thing to magic that I've ever been associated with in my scientific career," Wiseman added.

Cautioning that it is far too early to know all the implications of the recent discovery, Dr. J. Carl Barrett, chief of NIEHS's LMC, put the finding in perspective.

"We have made a major advancement in understanding a complex disease," he said. "Unfortunately this finding creates as many questions as it answers. We've still got a long way to go in understanding exactly how this gene operates and how to use that information to diagnose cancer. On the other hand, this creates an exciting time in science." □

Inn Needs Weekend Volunteers

Weekend volunteers are needed to staff the Children's Inn, especially on holiday weekends.

Weekend resident volunteers typically serve one or two times a year, managing the inn from 6 p.m. Fridays through 3 p.m. Sundays. On 3-day holiday weekends and other special occasions, two volunteer teams may divide the responsibilities. Full-time staff are on call at all times.

The two-person, overnight teams are most frequently married couples, two friends or mother/daughter pairs. The teams receive inn operations and procedures training and reside at the inn during their weekend experience as on-site hosts, facilitators and managers. The training is easy. The weekend is the best time to come to know just how special the children and their families are. To help, call Peggy Nelson, director of volunteers, 6-5672. □



Dr. Clarence J. Gibbs, Jr., deputy chief of NINDS' Laboratory of Central Nervous System Studies, was recently elected an honorary member of the American Neurological Association (ANA). He was chosen for his substantial academic contributions to the field of neurology. He will be presented with a certificate of membership at the first executive session of the 119th annual ANA meeting on Oct. 10 in San Francisco.

Ski Club Meeting Set

The NIH Ski Club will hold its preseason meeting on Thursday, Oct. 6 at 7 p.m. in Bldg. 31, Conf. Rm. 8 (6th floor, C wing). Everyone is invited to attend. Topics covered will include the club trip to France, other trips and activities, and general information.

Also, the NIH Ski Club is sponsoring a benefit dance for Special Love/Camp Fantastic at the Bethesda Holiday Inn ballroom on Friday, Nov. 11 from 8 p.m. to midnight. Entertainment will be provided by the band Retrospect. Tickets will be available at the R&W Activities Desk in Bldg. 31, Rm. B1W30. For more information on the club or its activities, call Bob Bingaman, 2-2600. □

Louise Ramm Named NCRR Deputy Director

Dr. Louise E. Ramm has been appointed deputy director of the National Center for Research Resources. "Dr. Ramm's scientific and administrative experience will help NCRR move forward, both on this campus and across the country," said NCRR director Dr. Judith



Dr. Louise E. Ramm

L. Vaitukaitis in announcing the appointment.

As deputy director, Ramm oversees NCRR's extramural programs, which sponsor national networks of clinical, animal and nonanimal, and technological resource

centers and include initiatives to strengthen biomedical research infrastructure and science education. Ramm also helps coordinate

operation of the center's intramural programs and branches, which include the NIH Library and provide medical arts and photography, biomedical engineering and instrumentation, and veterinary resources.

Ramm earned a bachelor of science degree in biology at Marquette University, and master's and Ph.D. degrees at the University of Virginia. After a 3-year postdoctoral fellowship at the University of Virginia, she joined the faculty of Johns Hopkins University in 1977.

Ten years later, Ramm joined the Division of Research Resources (later merged with the Division of Research Services to form NCRR) as a health scientist administrator in the biological models and materials resources section of the Animal Resources Program. After being named acting director of the Biological Models and Materials Research Program in 1989, she became the program director in 1991. She continues to serve as the program's acting director.

Screening Offered for Depression

We all feel down or blue at times. However, if these feelings are very strong or last for more than 2 weeks, they may be due to a medical condition called clinical depression.

On Thursday, Oct. 6 as part of National Depression Screening Day, NIH employees and the public will have an opportunity to learn more about the signs and symptoms of depression, and participate in free and confidential depression screening.

Each year more than 17.6 million Americans suffer from depression; unfortunately, nearly two-thirds do not seek treatment. More than 80 percent of the clinically depressed can be treated effectively and, often in a matter of weeks, relieved of symptoms. In the workplace, depression affects productivity, judgment, the ability to work with others, absenteeism and overall job performance.

On screening day, depression information tables will be set up in the lobby of Bldg. 10 and outside the cafeteria in Bldg. 31, from 8 a.m. to 2 p.m. These tables will offer written material about clinical depression, and allow interested employees to arrange to be screened for depressive symptoms.

Between noon and 4 p.m., depression screenings will take place in the Employee Assistance Program offices in Bldg. 31. Employees wishing to be screened may schedule appointments ahead of time at the information tables, or can be seen on a walk-in basis between noon and 4 p.m. The screening offers the opportunity to view a video and to complete an anonymous and confidential self-rating questionnaire. A mental health professional will be available to privately discuss your questionnaire if you desire, and to answer questions. If further evaluation is recommended, EAP counselors will provide guidance about available community mental health resources, and a written list of resources will also be available.

For more information about screening day, or about depression, call Denise Juliano, 3-4140. Nonemployees should call Amy, 6-6827.

National Depression Screening Day was first held in 1991. Last year, more than 56,000 people were screened at 1,300 sites across the nation. The screening of NIH employees is cosponsored by the NIH worksite health promotion action committee, the Occupational Medical Services, and NIMH's Depression/Awareness, Recognition, and Treatment (D/ART) Program. □

Hispanic Heritage Month

A scientific symposium in observance of National Hispanic Heritage Month will be held on Thursday, Sept. 29 from 2 to 4 p.m. in Wilson Hall, Bldg. 1. The symposium theme is "The Hispanic Legacy: A Portrait of Biomedical Research." All NIH employees are invited to attend. Sign language interpretation will be provided. For more information and reasonable accommodation, call 6-9281. □

DCRT Goes 'Back to School,' Announces Fall Classes

Traditionally, school starts in September, and this year is no exception. The fall term of the DCRT Computer Training Program will begin in the last week of the month with "GCG Sequence Analysis." Altogether, 86 courses and seminars will be offered before the term ends in late December.

For the first time, the training program will include the DCRT Speakers Series. This monthly series will feature speakers of interest to the NIH community. The speakers will be: Oct. 14, Dr. Temple Smith of Boston University speaking on "Computational Challenges of the Protein Folding Problem"; Nov. 11, Dr. Jacob Beck of Boston University talks about "Visual Processing in Texture Segregation"; and Dec. 9, Dr. John Hopfield of Caltech will talk on "Aspects of Olfaction."

Internet information resources are expanding rapidly. Two new seminars highlight the tools that are available: "Automated Information Retrieval Using Autogopher" and "The World Wide Web, Mosaic, and NIH"; while "Using the Internet for Sequence Analysis" explains a specific scientific use. "Gopher for the Macintosh" and "Gopher for the Personal Computer" are courses that will cover installing, configuring, and using this popular means of accessing the information superhighway.

A special feature of the fall term is the DCRT-sponsored "Statistical, Mathematical, and Graphics Software Fair" on Oct. 11 in Wilson Hall, Bldg. 1. The products presented will include BMDP/DIAMOND, Chaos Data Analyzer, SPSS, STATISTICA, STATlab, HiQ, MLAB, MATLAB Neural Network Toolbox, and many more.

The fall term is reflecting the trend toward easier-to-use statistical software with a 2-part class, "Easy Statistical Software for Windows: Overview" in the morning with an optional hands-on lab in the afternoon. Two new courses, "Basic Statistics Using SAS/STAT Software" and "Using SAS/STAT Procedures to Perform ANOVA and Regression," presented by SAS Institute, strengthen the DCRT program in this vital area. Other offerings in the statistical area are "SAS Fundamentals for Nonprogrammers," "SAS Fundamentals for Programmers," and "Preview of the SAS Systems for Windows."

David Songco, chief, Distributed System Branch, will introduce a variety of management concepts in the seminar, "Perspectives on Management in the NIH Technical Environment: Organizing Chaos."

"System Modeling for Application Development," given by Marvin Katz and Nan Miller of the Information Systems Branch, will present experiences of a team of system analysts who utilized system-modeling techniques to perform the analysis for a subsystem of the administrative database.

Dan Zoll, DSB, will present techniques and equipment for scanning data accurately into a Windows environment in the seminar titled "Optical Character Recognition Technology

Overview." There will be two sessions of the very popular "PC Trouble Shooting," which was introduced in the spring.

Don Preuss and Alan Graeff of NIAID will share their security experiences in a new seminar discussing workstation, LAN, and network security, "Security Lessons Learned in the Trenches."

A new offering in the IBM MVS area is a revamped 2-part class by Tom Mason and Steve Gearing, Computing Facilities Branch, "ENTER MAIL-the Electronic Mail System on the Mainframe," that offers a morning lecture and an optional afternoon hands-on lab.

Unix systems are increasingly popular in the scientific community at NIH. The SGI Challenge XL System and the Convex supercomputer will be described in the revamped seminar, "Introduction to the Helix Systems," in October, which will demonstrate the use of e-mail, access to network services, and scientific applications. Other seminars in this area include "DCRT Support for Unix Workstations at NIH" and "Andrew File System for Advanced Laboratory Workstations."

In "Supercomputing on the Internet," Richard Feldmann will describe how to access massive supercomputer power on facilities located throughout the country.

The courses and seminars in the DCRT program are free and available to all NIH employees and others who are registered users of DCRT systems. Full information on classes offered in the fall program is published in a brochure, *DCRT Computer Training*, which is available from the Training Program, Bldg. 12A, Rm. 1017, phone 4-DCRT (4-3278). The information is also available online from the NIH gopher server and via Wylbur's Enter Training command. □

DCRT Training Classes

Genetics Computer Group	
Sequence Analysis	9/28, 9/30
Relational Database Overview	9/30
Fundamentals of Unix	10/3, 10/4
SQL: The Language for Relational Databases	10/4-10/6
Electrical "Noise" as a Tool for Molecular Kinetic Studies	10/5
PC Trouble Shooting	10/6-10/7
Statistical, Mathematical and Graphics Fair	10/11
Deregistration of Users for the NIH Computer Center	10/11
Macintosh Networking with TCP/IP	10/11
Image Processing on the Macintosh	10/11
Graphical Access to the ADB and the ADBIS	10/12
Basic Statistics Using SAS/STAT Software	10/12-10/14
Scientific Data Analysis: Methods	10/12-10/14
Introduction to the Helix Systems	10/13
Computational Challenges of the Protein Folding Problem	10/14
Getting Started with Windows	10/17
Getting Started with C	10/17-10/20
Introduction to WYLBUR	10/17-10/28

'Science in the Cinema'

OSEP Sponsors Series of Films on Science

By Ellen Orjala

Hundreds of film and science buffs recently attended "Science in the Cinema" to discover whether the science they see in movies reflects reality. The film festival was sponsored by the Office of Science Education Policy, which organized the NIH Mini-Med School last spring, as part of a continuing effort to find creative ways to increase public understanding of science.

The series, which ran Thursday evenings from Aug. 18 through Sept. 8 in the Clinical Center's Masur Auditorium, consisted of four movies that featured a biomedical theme. Preceding and following each film, a guest scientist led a discussion with the audience about the science in the film.

Opening night featured *The Story of Louis Pasteur*, a 1936 film for which leading man Paul Muni won an Oscar for best actor. The film is a biography of Pasteur's life as a scientist as he struggled to get the medical establishment to accept his cures for anthrax and rabies. Dr. James Cassedy of the National Library of Medicine's History of Medicine Division led the discussion of the film and Pasteur's life. Cassedy, who once lived near the Pasteur Institute in Paris, had prepared an exhibit for



Michaela Odone, the real-life mother of Lorenzo from the film Lorenzo's Oil, talks with Dr. Bruce Fuchs, coordinator of Science in the Cinema.

the library celebrating the 100th anniversary of the institute in 1987.

The second film was *Benny and Joon*, a 1993 film starring Johnny Depp and Mary Stuart Masterson. It is a story of a love complicated by schizophrenia, although the screenplay never says that Joon is afflicted with that condition. Following the film, Dr. Danny Wedding, director of the Missouri Institute of Mental Illness (MIMI), led a discussion of the film and took questions from the audience. Wedding has run a film festival at MIMI for several years and is in the process of completing a book, *Movies and Madness: Using Films to Understand Abnormal Behavior*, which will be published by Springer.

The unquestionable audience favorite of the film series was *Lorenzo's Oil*, a 1993 film starring Nick Nolte and Susan Sarandon. The movie is based on the true story of a couple's fight to save the life of their son, Lorenzo, who has been diagnosed with a rare nerve disease called adrenoleukodystrophy (ALD). The



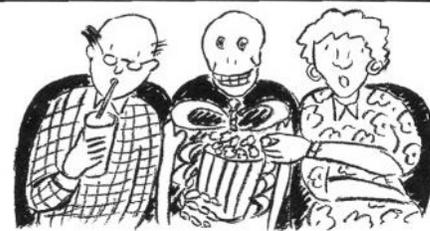
The Odone, the real-life parents of Lorenzo, talk with members of the audience.

guest scientist was Dr. Hugo Moser from the Kennedy Krieger Institute in Baltimore. Moser, portrayed in the film by Peter Ustinov, is the scientist who worked with Lorenzo's parents in their quest to develop a treatment for ALD. He presented his latest results on the therapeutic efficacy of Lorenzo's Oil.

Adding to the drama, the real-life parents of Lorenzo, Michaela and Augusto Odone, were also in attendance. Mrs. Odone spoke about Lorenzo's courage and told the audience how Lorenzo was doing today, including the unique way she communicates with him. After her comments, the crowd embraced her with a standing ovation. Many people stayed after the presentation to talk informally with Moser and the Odone.

The series closed with *Awakenings*, a 1990 film based on the work of neurologist Oliver Sacks. It stars Robert De Niro as a victim of encephalitis lethargica who has been "frozen" into a sleep-like condition for more than 30 years and Robin Williams as the physician who works to "awaken" him. Following the film, Dr. Leo Verhagen from the Experimental Therapeutics Branch of the National Institute of Neurological Disorders and Stroke led a discussion with the audience about encephalitis lethargica and its depiction in the film. Verhagen, an expert on the related condition of Parkinson's disease, also discussed current treatments for Parkinson's and the development of new therapies.

With between 225 and 500 people in attendance for each film, the series drew a varied audience, from high school students working on a class project to retired NIH employees. Once minor technical problems were resolved, the response to the program was overwhelmingly enthusiastic.



One filmgoer said, "The experience was a good combination of entertainment and education." Another participant commented, "It's an excellent way to draw the general community to NIH and be exposed to new scientific developments."

The coordinator of the program, Dr. Bruce Fuchs of the Office of Science Education Policy, was happy with the success of Science in the Cinema. "I was pleased with both the number of people who attended as well as the interaction between the audience and the guest scientists," he said. "Many people stayed after the film and asked good questions."

According to Fuchs, people who watch movies should be aware that even films based on true stories import elements of fiction. "None of these films aspire to be scientific textbooks," he said. "Each film introduced elements purely for dramatic effect. It's important for people to realize where the science stops and the fiction starts."



Dr. Hugo Moser, the scientist portrayed in the film Lorenzo's Oil by Peter Ustinov, leads a discussion with the audience about the film.

Fuchs said that an important aspect of the program is its ability to reach adults who might not attend a straightforward science lecture. "In some respects, it's easier to engage children in science education," he said. "We need to be more innovative in how we approach adult audiences." Fuchs thinks this program achieved its mission.

The Office of Science Education Policy plans to sponsor another Science in the Cinema film festival next summer. For those who can't wait that long, the office plans to showcase a number of its programs next spring. As part of this, Fuchs says the office intends to show Steven Spielberg's *Jurassic Park* followed by a panel of guest scientists who will discuss how realistically the film depicts the state of current DNA technologies. □

Dental Lecture To Be Held

"Dentistry in the Arts" is the topic of a lecture to be delivered Oct. 11 by Dr. Jens J. Pindborg, professor, school of dentistry, University of Copenhagen, Denmark. The lecture will be held from 1:30 to 3 p.m. in the Lister Hill Center Auditorium (Bldg. 38A) and features a visual anthology of dentistry in the



Inside the Temple of Borobudur in Java, erected approximately 800 A.D., is a relief depicting a dentist filling the upper front teeth of a villager. This is just one of the dental images that Dr. Jens Pindborg will highlight at his "Dentistry in the Arts" lecture on Oct. 11.

arts from antiquity to modern times. The lecture, cosponsored by the National Institute of Dental Research and the Fogarty International Center in celebration of the 1994 Year of Oral Health, is open to the entire NIH community. For more information, call 6-4261. □

Camera Club Meeting Scheduled

The monthly meeting of the NIH/R&W Camera Club is scheduled for Tuesday, Oct. 11, at 7:30 p.m., Bldg. 31, Rm. 6C08.

The guest speaker of the evening is Stan Klem, a hobbyist and freelance photographer for 25 years. His specialty is portrait and experimental photography. He has been doing commercial photography such as products (still life) and wedding photography. Klem has obtained a status of master photographer at Silver Spring Camera Club and the Greater Washington Council of Camera Clubs. He will talk about various techniques of experimental photography that anyone can try at home.

The subject for the competition of the evening is people interaction, which means a minimum of two people interacting, e.g., holding hands, talking and walking together etc., but not people interacting with animals. Formats include: black and white prints (novice and advanced levels), color prints, color slides (novice and advanced levels).

The NIH Camera Club is open to anyone interested in photography. Only members can submit for the competition. However, nonmembers are welcome to attend the meetings. For more information, call club vice president Dr. Yuan Liu, 6-8318. □



Free Influenza Immunizations for NIH Employees

Last year a severe "flu season" was predicted, with influenza activity reported as early as August in Louisiana. The influenza virus can cause severe respiratory symptoms and result in serious medical complications for persons with other ongoing health problems. Last year, in its annual effort to minimize an outbreak of the flu at NIH, the Occupational Medical Service (OMS) immunized more than 6,400 employees—more than twice the number of employees immunized during the 1992-1993 campaign.

Annual influenza immunization is necessary since the strains of influenza change from year to year. Each year the vaccine is prepared specifically to protect against the influenza strains predicted to be most common that year. This vaccine is noninfectious and will not cause influenza. Immunization prevents or reduces the severity of influenza and decreases the opportunities for spread among patients and staff.

Influenza immunization is recommended for high risk groups listed below:

- ◆ Healthcare workers and support staff, especially those who have contact with patients;
- ◆ Persons age 65 or older;
- ◆ Persons with cardiovascular, pulmonary,

or metabolic disorders;

◆ Persons who are immunocompromised. Free influenza immunization for NIH employees will be offered by OMS between Oct. 11 and Nov. 18. The clinic hours are based on the first letter of the last name (see schedule below); no appointment is needed. Flu immunizations are also available in Bldg. 10, 6C306, during evening hours, 5-8 p.m. on Mondays and Wednesdays between Oct. 11 and Nov. 18. In addition, OMS staff will visit patient care units to immunize healthcare workers on Oct. 25 and Nov. 1. The schedule will be posted in the units. Additional information can be obtained from OMS, 6-4411, or the Hospital Epidemiology Service, 6-2209. □

String Quartet Series Opens

The Manchester String Quartet returns to NIH for a sixth season on Oct. 24. The series will be presented in Masur Auditorium, Bldg. 10, from 12:30 p.m. to 1:30 p.m. The musicians—all members of the National Symphony Orchestra—will also perform Nov. 21, Dec. 19, Jan. 23, Feb. 6, Mar. 20, Apr. 10 and May 1. For more information, call Sharon Greenwell, Visitor Information Center, 6-1776. □

Influenza Immunization Schedule 1994

Bldg. 10, Main Health Unit, 6C306

Last name begins with:	Date	Day	Time	
			Morning	Afternoon
A-B	Oct. 27	Thur.	7:30-11	1-3
C-F	Oct 13	Thur.	7:30-11	1-3
G-I	Oct. 11	Tues.	7:30-11	1-2
	Nov. 7	Mon.	7:30-11	1-3
J-L	Nov. 15	Tues.	7:30-11	1-2
M-O	Oct. 25	Tues.	7:30-11	1-2
P-R	Oct. 18	Tues.	7:30-11	1-2
	Nov. 9	Wed.	7:30-11	1-3
S-T	Oct. 19	Wed.	7:30-11	1-3
	Nov. 1	Tues.	7:30-11	1-2
U-Z	Nov. 2	Wed.	7:30-11	1-3
Make-up Day	Nov. 16	Wed.	7:30-11	1-3

Immunizations will be given on a walk-in basis during evening clinics: Bldg. 10, 6C306, 5-8 p.m., Mondays and Wednesdays, between Oct. 11 and Nov. 18

Bldg. 13, Health Unit, G-904, Fridays, 8-11 a.m. and 1-3 p.m.

By first letter of last name:

A-C	D-G	H-L	M-R	S-Z
Nov. 18	Nov. 4	Oct. 28	Oct. 14	Oct. 21

Off Campus Facilities:

Executive Plaza North, Health Unit, Rm. 103; Thursdays, 8:30-11 a.m. and 1-3 p.m.

By first letter of last name:

A-L	M-Z	Make-up Day
Oct. 20	Nov. 10	Nov. 17

Federal Bldg.—Thursdays: Oct. 13 and Oct. 27, Rm. 1C05, 1-3 p.m.

Poolesville—Tuesday, Nov. 8, Conf. Rm. 102, 8-11 a.m. and Conf. Rm. 110, noon-3 p.m.

Solar Bldg.—Thursday, Nov. 3, Rm. (to be announced), 8:30-11 a.m. and 1-3 p.m.

Westwood—Mondays: Oct. 17, Oct. 24, and Oct. 31, Rm. 11, 8:30-11 a.m. and 1-3 p.m.

October Is National Mammography Month

Early detection of breast cancer greatly increases a woman's chance of survival. Regular mammography screening is an important part of an early detection program. To make it more convenient for employees (and their families) to get a mammogram, NIH is again offering low-cost mammography screening at sites on campus and at the Westwood and Executive Plaza Bldgs. This service, provided by the University of Maryland Cancer Center (UMCC), is coordinated through the Office of Disease Prevention, OD. The cost of \$60 is reimbursable through any health insurance company in the state of Maryland that also pays for breast cancer treatment.

NCI describes a mammogram as simply a picture that can detect breast cancer in its earliest, most treatable stage—up to 2 years before other methods. Not all lumps found are cancerous, however, and the discovery of a lump does not necessarily mean the loss of a breast.

NCI recently released the following statement concerning breast cancer screening: There is general consensus among experts that routine mammography and clinical breast cancer screening every 1 to 2 years can reduce by about one-third breast cancer deaths in women ages 50 and over. Experts do not agree on the role of routine screening mammography for women ages 40 to 49.

All women who fall within the eligibility criteria are urged to have breast cancer screening performed regularly through clinical exam and mammography. To participate in the University of Maryland program, a woman must:

- Be asymptomatic—experiencing no current breast problems and have no history of breast cancer;
- Not have had a mammogram within the last 12 months;
- Not have breast implants;
- Not be nursing or pregnant.

The UMCC screening program has been accredited by the American College of Radiology. A female radiology technologist will perform a clinical breast exam and conduct the mammogram. This combination achieves maximum detection rates. The procedure itself may cause brief, slight discomfort, but is not painful. The results will be read by a board-certified radiologist and sent to each woman and her physician of choice.

UMCC has been awarded a grant to make mammography screening and diagnostic services available to low-income women free of charge. Eligibility guidelines are as follows:

No. household dependents	Total household income
1	\$17,025
2	\$22,975
3	\$28,925
4	\$34,875
5	\$40,825
6	\$46,775
7	\$52,725
8	\$58,675

Questions regarding eligibility may be referred to the program director, Sandee Kolodny-Katz, 1-800-787-0506.

Representatives from UMCC will be available for registration on Oct. 6, outside the Bldg. 31 cafeteria from 11 a.m. to 12:30 p.m., and outside the Bldg. 10 cafeteria from 1 to 2 p.m. All others can schedule an appointment by calling UMCC, 1-800-787-0506. Payment options include a personal check, money order, Visa or Mastercard. Space is limited and requests will be handled on a first-come basis.

Dates and Locations:

- Oct. 12 All Day Bldg. 10 Convent Dr. shuttle turn
- Oct. 20 All Day Bldg. 31C parking lot
- Oct. 21 8:30 a.m.-12:30 p.m. Westwood parking lot
- 1-5 p.m. EPN&S parking lot

For more information, call Susanne Strickland, NIH Health Promotion Program manager, 6-1105. □

Genome Lecture Series Starts

The National Center for Human Genome Research's 1994-1995 Human Genome Lecture Series will begin Sept. 29. The series will feature nine distinguished speakers from the fields of law and genome research, and covers topics that span the breadth of the goals of the Human Genome Project. The schedule follows:

Sept. 29, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "Sequence Database Searches and Statistical Significance," Dr. Michael Waterman, professor of mathematic and biological sciences, University of Southern California.

Oct. 25, 10-11:30 a.m., Masur Auditorium, "DNA Sequence Analysis Using Oligonucleotide Arrays," Dr. Stephen Fodor, scientific director and chief technical officer, Affymetrix.

Nov. 17, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "Towards a Complete Physical Map of Human Chromosome 7: A Front-Line View of the Human Genome Project," Dr. Eric Green, section chief, Diagnostic Development Branch, NCHGR.

Dec. 15, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "The Role of Patents in Technology Transfer," Rebecca Eisenberg, professor of law, University of Michigan Law School.

Jan. 19, 1995, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "Fishing for Complements: Finding Genes by Direct Selection," Dr. Michael Lovett, associate professor of biochemistry, University of Texas Southwestern Medical Center.

Feb. 16, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "A Proposed Technical Scenario for the Sequencing of the Human Genome," Dr. Maynard Olson, professor of biotechnology and medicine, University of Washington.

Mar. 16, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "Emerging Issues in Genetic Testing," Lori Andrews, Chicago Kent College of Law.

Apr. 20, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "Construction and Applications of High Resolution Human Meiotic Maps," Dr. Jeffrey Murray, professor of pediatrics, divisions of medical genetics and neonatology, University of Iowa.

May 18, 11:30 a.m.-1 p.m., Lipsett Amphitheater, "Multiplex Technologies for Genome Sequencing and Analysis," Dr. George Church, associate professor of genetics, Harvard Medical School and associate investigator, Howard Hughes Medical Institute.

For more information call 2-0911; to schedule an appointment with the speaker call Dr. Elise Feingold, 6-7531. □

Catoctin Mountains Are Calling

Travel to the Catoctin Mountains with the R&W on Saturday, Oct. 22 for \$68 per person. Price includes bus transportation, train ride through the Blue Ridge Mountains, buffet lunch and orchard visit. Bus leaves Bldg. 31 at 7:30 a.m., and Ft. Detrick at 8:15 a.m. For information, call 6-4600. □

Pumpkin Chase 5K Planned to Benefit Friends of CC

Come in costume or come as you are, but don't miss the third annual Great Pumpkin Chase 5K Run to benefit the Friends of the Clinical Center at NIH. The run will take place Saturday, Oct. 29 at 9 a.m., starting in NIH parking lot 41. The course is around the perimeter of the NIH campus.

Radio personalities from WBIG-FM 100.3 will host the event. Prizes will be awarded in several categories, and all participants will receive a T-shirt. Registration fee is \$12 before Oct. 21; from Oct. 22 to race day, registration fee is \$15. Race applications can be picked up at any R&W store. For more information, call the R&W office, 6-6061.

