

Still The Second Best Thing About Payday

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

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**Bomb Scares Threaten NIH'ers in Four Bldgs.**

In the wake of the TWA Flight 800 tragedy and the pipe bomb explosion at the Olympics in Atlanta, a plague of bomb threats—all of which turned out to be hoaxes—befell NIH during the last week in July; warnings logged by phone and written note turned up in four buildings, including the Children's Inn.

Employees at the Federal Bldg. in downtown Bethesda elected to leave the facility around noon on July 24 when Montgomery County Police investigated a call that a bomb had been placed there in retaliation for the government's handling of the Waco incident of April 1993.

SEE BOMB THREATS, PAGE 10

'Share Your Life'  
**Howard's Callender Gives 2nd John Diggs Lecture**  
By Carla Garnett

If anyone had a right to quit life practically before it began, it's Clive Callender. Born a virtual orphan after his mother died in childbirth, reared for a couple of years by a foster mother (and then a stepmother, who later was committed to a mental institution), deemed a failure throughout his school days and disabled for a year and a half by tuberculosis in adolescence,



Dr. Callender

Callender had already faced enough misfortune to last most folks a lifetime—and he wasn't even 20 years old yet. His strong faith, he acknowledged, helped him develop an uncom-

SEE DIGGS LECTURE, PAGE 8

New, Improved Access

**NLM Reinvents Information Products, Customer Service**

By Carla Garnett

(This is another story in a summer-long series on "Reinventing Government" projects at NIH.)

Jane Doe, a science writer for the local paper, is at her office computer writing about rare neurological disorders when she decides to elaborate on a somewhat unfamiliar term: hydrocephalus. She clicks once to send her article-in-progress to the bottom of the screen and clicks again to launch her WWW browser. Seconds later, she finds a list of the more than 1,400 journal articles written in the last 3 years on hydrocephalus staring her in the face. She clicks on the first underlined title and scans the abstract that appears. She's spent a little over a minute and a little less than \$1.

SEE REGO AT NLM, PAGE 6

Civil War Re-enactor

**CC's Minor Lives, 'Dies,' History**

By Laura Bradbard

Your ears ring. A stinking blast of burning black gunpowder stings your face like hot salt as the battle lines grow closer. Three thousand men stand rank and file. You fall face down, dead. Again.

Dr. Jim Minor dies a lot. As a Civil War re-enactor, he assumes the role of a Confederate Army private, a front-line combatant who all too often is killed or taken prisoner. The final outcome is always the same.

Several times a year, thousands of modern Americans dress in authentic period clothing and march off to war. A few fight in the name of their ancestors. Many more do what Minor did. He created a character to portray on the battlefield. The Clinical Center pharmacist researched the Civil War history of his own hometown and assumed the role of Charlie Gibson, the 17-year-

SEE PHARMACIST/SOLDIER, PAGE 4



Dear Editor:

Hi! I just received my copy of The NIH Record, and I love the new look. I used to design my college newspapers and I love to critique newspaper/letter designs. The newly designed Record is great! I love the way you're using your sans serif fonts for emphasis and serif fonts for body text. The photographs are much better and used really well. There's just enough white space, too. And page number/date bar on the edges works wonderfully. And the black and white/gray and white images of the computer, DNA, and cap work nicely.

I love the new design! Keep up the good work!

**Heather Bigio, NICHD/IRMB**

Dear Editor:

I almost mistook the new issue as a junk mail. The "NIH Record" heading is not conspicuous enough. The lines forming each letter (are) too thin, and the width of the letters (is) too narrow. The heading should be, I think, made more striking to viewers' eyes.

**Dr. S. Yamaguchi, NINDS/ERB**

Dear Editor:

Love the new look. It was definitely time for a change. I do have a couple of suggestions, though—if you're interested. 1. Consider a way to further distinguish the beginning of a new article when it shares a page with another one (see page 5). 2. For consistency's sake and to further highlight the item, keep all of the request for volunteers in bold and in the sidebars. Otherwise, looks great!

**Kathleen Jones, NICHD**

Dear Editor:

All three of us in our office find this NIH Record much more difficult to read than the old design. There are too many columns. They are too wide not to have to move your eyes as you read but too narrow to be comfortable to read. We feel like our eyes are just bouncing back and forth. Page 4 is the only page that looks good. There's an old saying, "If it ain't broke, don't fix it!" Not exactly correct grammar but the sentiment is exactly how we feel.

**Beverly Miller, Edna King, May Liu  
Laboratory of Biochemistry, NCI**

### **Overweight Kids Needed at NICHD**

Healthy overweight children are needed for an NICHD study investigating body composition and the causes of overweight: African American and Caucasian boys and girls, ages 6-10. There will be two visits, one during the day and one overnight. Participants receive a thorough evaluation for medical causes of overweight including a physical exam, blood tests, metabolism tests, and X-rays. This is not a treatment study. Participants will be paid. Call 6-4168 for more information.

Dear Editor:

Let me go on the (record) as not thrilled about the remake. I can't possibly appreciate and don't have an interest in knowing what financial, staffing and other resource constrictions may have been at play in the development of the "New Look." I do know that you and the medical arts people know your stuff because I thought the Record read well and I like the art work. So it may have been out of their hands and yours. But I can only hope the "New Look" grows on me. It is a disappointing appearance and the masthead "E" is impossible to see against the Shannon Building photo. You may want to run it in (the "e" that is) white for contrast. It also seems as though there wasn't much content or is that a trick of the increased white space? Well, good luck. You folks are a quality operation and sure must have looked into this pretty thoroughly. If it pleases others, good for them. As for me, this particular change didn't seem refreshing. But you can't please everyone and I don't have any specially trained eye. Best wishes on the "New Look!"

**Charles MacKay, OD**



*Dr. Eleni E. Kousvelari, director of the saliva and AIDS program in NIDR's Division of Extramural Research, was honored as a distinguished alumnus at Boston University Goldman School of Dental Medicine recently. She received the award for outstanding contributions to the dental profession. She is recognized internationally for her work in the areas of regulation of gene expression in exocrine glands and the development of salivary glands.*

## NIH RECORD

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

*The Record is recyclable as office white paper.*

### **Meet for Free at FAES House**

NIH seminars may be held free of charge at the FAES Social and Academic Center for 2 hours between 10 a.m. and 4 p.m. on weekdays. The center is located at the corner of Old Georgetown Rd. and Cedar Ln. across from the county firehouse. Up to 40 people can be seated in a classroom arrangement in a room equipped with both carousel and overhead projectors, a screen and whiteboard. Food and beverages may be served. Reservations may be made by calling 530-2194.



## How Does HIV Bind to Cells?

One of the longstanding challenges in AIDS research has been figuring out exactly how gp120, the large protein on the surface of HIV, latches onto its target CD4 receptor on cells as the first step in HIV infection.

In the mid-1980's, several studies implicated a short region of gp120, called C4, as the likely binding site. But the studies also raised questions about whether it was the sole binding site for CD4.

Now a team of researchers at NIH reports they may have answered the question. Writing in the July 26 *Journal of Biological Chemistry*, they report that they were able to create synthetic, three-dimensional copies of C4 that in laboratory studies bind to CD4 and block the binding of gp120 to the receptor.

This, they say, provides strong evidence that C4 is the single binding site for the CD4 receptor on cells.

Taking the finding a step further, the researchers also discovered how C4 is able to recognize CD4. The new results, scientists said, offer AIDS researchers a more coherent molecular picture of gp120 binding that could be useful for designing new drugs and vaccines to fight HIV infection. This work included investigators from NIDR, NCI and NCRR.

## New Concept Improves HIV Vaccines

To improve the safety of experimental AIDS vaccines based on live but weakened HIV, scientists at NIAID have made a prototype of such a vaccine drug-susceptible so it can be eliminated from the body soon after use.

"We know how to attenuate HIV, but now we've also given it an off-switch that may make live-attenuated HIV vaccines even safer," noted Dr. Stephen M. Smith, an infectious diseases specialist in the Laboratory of Molecular Microbiology (LMM).

An article in the July 23 issue of the *Proceedings of the National Academy of Sciences* describes the research to date on developing this novel strategy. Lead author Smith and LMM retrovirologist Dr. Kuan-Teh Jeang conceived of the idea and performed all the experiments except the tests in mice.

**www** This story is available online: <http://www.niaid.nih.gov>.

## Sleep Study Needs Volunteers

**The Clinical Psychobiology Branch, NIMH, is recruiting healthy volunteers under age 35 for a 4-night sleep study. Volunteers should have no history of mental illness nor be on any medications including over-the-counter and birth control. Contact Holly Giesen, 6-6981, for more information.**

## Colorful Chromosomes Point to Disease

*"Toto, I have a feeling we're not in Kansas anymore. We must be over the rainbow."*—Dorothy Gale, 1939  
 Nearly 60 years after Dorothy left gray Kansas for the vibrant land of Oz, wizards of a different sort have concocted a powerful new way to visualize the full set of human chromosomes in a rainbow of colors. The new technique, called "spectral karyotyping," translates computer-gathered light waves into a full-color palette and assigns each chromosome its own distinct hue. With all 23 pairs of human chromosomes identified by a different color, scientists can more easily examine the entire group of chromosomes for changes that could lead to disease such as missing or extra pieces, or parts from different chromosomes that have swapped places. The technique could prove to be valuable in diagnosis of disease based on chromosome alterations.

"The value of chromosome examination in understanding the changes that take place during disease progression could be greatly enhanced if we could study the entire genome at once, and clearly distinguish genetic material belonging to one chromosome from that of another," said NCHGR scientist Dr. Thomas Ried, who led the group that developed the technique. They report their findings in the July 26 issue of *Science*.

**www** This story is available online: <http://nchgr.nih.gov>.

## Key Plague Genes Found

Throughout human history, no other infectious disease has inflicted more havoc, or aroused more fear, than the plague. The Black Death, as it came to be known during the 14th century pandemic, originates with a bacterium called *Yersinia pestis*, transmitted from rodent to rodent by fleas and to humans usually incidentally.

Centuries after the peak of its destruction, scientists at NIAID's Rocky Mountain Laboratories have identified a critical genetic link to its transmission. As reported in the July 19 issue of *Science*, they found that three genes in *Y. pestis* change it from a harmless, long-term inhabitant in the flea midgut to one that amasses in its foregut. As a result of this obstruction, the flea begins to starve, leading to a blood-feeding frenzy during which it regurgitates the mass of bacteria and thereby efficiently transmits the plague.

Although scientists have known that plague transmission depends on the plug of bacteria developing in the flea's foregut, until now, they had little understanding about the molecular and genetic mechanisms by which this colonization occurs.

**www** This story is available online: <http://www.niaid.nih.gov>.

## Register To Vote in '96

The Bethesda chapter of Federally Employed Women will launch a voter registration drive to motivate NIH employees to vote in the 1996 elections. The drive will kick-off in honor of Women's Equality Day on Aug. 26 in Bldg. 10's main lobby, by the Red Cross desk. Volunteers will be on hand to help NIH'ers complete voter registration forms. Subsequent registration dates and locations will be posted in the lobbies of Bldgs. 31, 10, 45, Solar and EPS on Monday of each week through Sept. 27.

## PHARMACIST/SOLDIER, CONTINUED FROM PAGE 1

old son of a haberdasher from Reidsville, N.C.

"When you talk to observers after the re-enactment, you stay in character, you keep your mind in the 1860's," Minor says. "Children may ask what I watch on television. The answer is, 'What is television?' I love to watch the surprise on their faces when I say that."

Getting ready to take part in a re-enactment isn't easy. The uniform, an authentic reproduction, is handmade of wool and lined in heavy cotton. The 9-lb., .58 caliber Enfield musket, crafted in England, is identical to the weapons used by the Confederate Army. Minor's glasses are actual Civil War period frames carefully fitted with his present-day prescription. A tin cup, leather belt, canvas haversack, bayonet scabbard, and rough leather brogans complete the ensemble. Altogether, the uniform, weapons, and accessories cost each participant over \$1,000.

"We are not a bunch of people who get together to hoot 'n' shoot," he explains. "Participants are well-educated students of Civil War history. They aren't involved in order for the South to rise again. There are no sides, really. Most men and women participate to share the history of this important time in our nation's past with interested adults and especially with children."

Re-enactment activities are well organized. Participants must attend the "School for Soldiers," an annual, 2-day formal field training seminar, at their own expense. Both sides study *Hardee's Manual for Infantry Tactics*, first published in 1860—mistakes and inaccuracies are not allowed. Even the food they eat is chosen for the time period—dried bread, peanuts, and fruit—items Charlie Gibson would have eaten.

Recordkeeping during the Civil War was amazingly accurate, Minor notes. Re-enactments unfold almost exactly the way the real engagements took place, usually occurring on the weekend closest to

the actual battle date. Senior officers from both sides meet the night before to plan the outcome. Minor will be told if he lives or dies. He will know at which point in the hour-long confrontation Charlie Gibson will fall or be taken prisoner.

"It's an emotional experience to go through. You are always aware that this really happened with dire consequences," Minor adds.

During the first 30 minutes of most Civil War battles, the casualty rate averaged about 40 percent. It was the last war fought using Napoleonic tactics. Soldiers advanced shoulder-to-shoulder for massed fire power. The weapons of the time—cannons, muskets, and bayonets—created brutal injuries. Foot soldiers often fought man against mounted-horse cavalry and in many instances, the horse won.

The painstaking accuracy of the re-enactors paid off in 1992 when Ted Turner, Turner Broadcasting media mogul, began production of his movie, *Gettysburg*. Turner put thousands of Civil War enthusiasts in his movie and at times the re-enactors corrected inaccuracies in the scripted battle. Minor and his 49th Virginia Infantry are veterans of that movie re-enactment.

History has always interested Minor, but his participation in re-enactments resulted from a conversation 5 years ago with a CC patient and artist from Clifton, Va. She shared Minor's love for antiques and suggested he attend Clifton Days in Virginia. It was there that he witnessed his first Civil War battle encampment. The rest, of course, is history.

Minor says it gets so hot standing in ranks—waiting for the artillery barrage and the cavalry charges to end before his part, the infantry assault, begins—that he usually loses about 6 pounds during each re-enactment.

"I got the worst sunburn in my life one day as I lay dead on the New Market [Virginia] battlefield," he says. "I fell face up and had to lay there for almost an hour in full sun."

After that experience, Minor learned how to survive the fall—drink large volumes of water, wear hats with wider brims, and lie face down to avoid the sun.

"Another time I just fell out. I was sick with heat prostration. So I crawled under a captured cannon to get in the shade. A woman in period costume came up to me with a basket of ice and handed me a few pieces to rub on my head to cool off."

Soon, Minor, who holds a Ph.D. from the University of Southern California, will leave the Clinical Center for a new job. He returns home to North Carolina where he will join Glaxo Wellcome Co. and Charlie Gibson will join the 26th N.C. Regiment.

"Fellow citizens, we cannot escape history." Abraham Lincoln said it. Jim Minor lives it. ■



Dr. Jim Minor, CC pharmacist and Civil War history buff, participates in Civil War battle reenactments authentically dressed as Confederate Army private.

## Mideast, U.S. Biotechnologists Discuss Collaboration

The Fogarty International Center coordinated a week of productive meetings for Egyptian biotechnologists recently, coinciding with BIO '96, the annual meeting of the Biotechnology Industry Organization. The week began with an historic partnership meeting between Egyptian and Israeli biotechnologists in Philadelphia, sponsored by the U.S.-Israel Biotechnology Council, and ended with a workshop on U.S.-Egypt cooperation in biotechnology at NIH. The NIH workshop was sponsored under a U.S.-Egypt science and technology agreement signed last year by Vice President Al Gore and Egypt's President Hosni Mubarak.

Biotechnology is a natural area for cooperation between Egypt and Israel. Both countries contain large areas of desert and suffer from similar agricultural pests and health problems, and stand to gain from successful partnerships and shared expertise. Biotechnology is also a priority for U.S. foreign policy cooperation with Egypt. Unique resources in Egypt, including desert plants and animals, and organisms in the Nile, Red Sea, isolated oases or hot springs, all are potential sources of new pharmaceuticals and industrial enzymes. Egypt may also be an ideal proving ground for organisms that remove pollution from soil and water. Biotechnology could lead to hardier crops that are able to withstand the extremes of a desert climate and fight parasites with fewer pesticides, and may also lead to improved vaccines and diagnostics to combat human disease.

Dr. Charles Gardner, FIC program officer for Africa and the Middle East, called the Egyptian visit an "outstanding success; we already have reports that U.S. and Egyptian and Israeli biotechnologists are planning new collaborations, including vaccine work." He hopes to involve other agencies once joint projects are funded under the agreement. An RFA will be released this fall for awards to be made in spring 1997. ■



*Sen. James M. Jeffords (R-Vt.) visited NIH on July 22 for briefings by several ICD directors and intramural scientists and a visit with NIH director Dr. Harold Varmus. Jeffords (above, r), a member of the Senate labor and human resources committee—which gives NIH its authorization—takes in a view of the campus from the 13th floor of the Clinical Center, and (below) listens to a presentation by NCHGR director Dr. Francis Collins (r).*

(Photos: Ernie Branson)



## Sailing Lessons Offered

Join the fun with the R&W NIH Sailing Association. Basic training classes start Wednesday evening, Aug. 21. Cost is \$110 plus \$35 club membership dues. Course includes 6 evening classroom sessions, a Saturday morning orientation at the marina and 3 or 4 weekday afternoons on South River near Annapolis in the club's Flying Scots (19-foot sloop-rigged centerboard daysailers). Students completing basic training qualify to sail these boats for very low charter fees. Students must be NIH/NOAA employees, patients or onsite contractors, as well as R&W members. Application forms and more information on the sailing club are available at the Bldg. 31 R&W activities desk.

Across the nation, at his home computer, grad student John Smith decides to write his next term paper on the groundbreaking pediatric diabetes research Dr. June Brown did in the 1980's. A visit to the library is in order. He points his browser to NLM, enters the keywords and sits back as moments later the computer presents him a list of Brown's journal citations from 1980 through 1989. He checks the bottom of the screen: finding the list cost him 88 cents—one-way bus fare to the nearest medical library.

In yet another spot on the globe, cardiology specialist Dr. Enrique Hernandez uses his PC to research a troubling case involving drug toxicity and hyperthyroidism. As it turns out, a Belgian journal provides details on a patient with similar circumstances, suggests a substitute therapy and averts the need for a heart transplant.

Several years ago, the science writer, the grad student and the physician could have performed the same searches of medical/scientific literature with relative ease; it just might have taken a bit longer to get the results, and they might have had to leave their chairs en route to area libraries. Today, searches are done a lot quicker and on more familiar turf.

Through such offerings as Grateful Med and Medline, the National Library of Medicine had been putting information electronically at the fingertips of inquiring minds for more than 20 years when it was designated a "reinvention lab" 2 years ago this August. Its REGO challenge? Target customer service: Develop a system that improves NLM information products and updates product delivery.

In April, NLM introduced the first part of its new User Access Services project—Internet Grateful Med (IGM), an interactive retrieval mechanism that brings the capabilities of NLM's popular Grateful Med program to the World Wide Web. More than 250 users in 20 countries test drove IGM before its debut last spring. Although the most recent versions of the original Grateful Med—in both the MS-DOS and the Macintosh incarnations—were themselves already Internet-capable, they did not use the World Wide Web, explained Dr. Lawrence Kingsland, NLM assistant director for applied informatics and IGM project leader.

"There was no adapting of the original Grateful Med," he said. "IGM is a wholly new program designed from the outset as a World Wide Web application. Internet Grateful Med is an intelligent gateway system running on a server at NLM we call the IGM Request Manager. The time from project go-ahead to the production release in April 1996 was 26 months."

The IGM Request Manager server receives about 33,000 connections each weekday from more than 1,300 host computers in about 28 countries. About 9,000 to 10,000 connections are made each Saturday and Sunday.

"Not all of these connections result in Medline searches," Kingsland said, "since some are by persons who have found the IGM Web site, but do not yet have NLM user accounts." In an average week, more than 1,600 user IDs are used to perform about 11,500 Medline searches with IGM. Just last month, 4,193 user IDs were used with IGM to perform 46,355 such searches.

"Since some people may be sharing user IDs and passwords," Kingsland explained, "this almost certainly represents more than 4,193 individuals. This is more than 22 percent of the total number of user IDs used with all the versions of Grateful Med during June, and 13 percent of the total number of Grateful Med searches done in Medline and its backfiles that month." Since early December 1995, the server has received more than 2.4 million connections from more than 58,000 individual host computers in 68 countries.

As illustrated by the hypothetical examples featuring Doe, Smith and Hernandez above, IGM offers a well-tailored search of medical literature for a nominal fee. In addition, it combines access to several of NLM's online information resources and is more convenient and easier to use than some previous versions of the electronic research tools. For instance, some Medline users used to have to type commands in order to perform certain steps of their search—PRT for print or SU for subject search. With IGM, users simply print from their browser or choose SUBJECT from a convenient pull-down menu. In fact, even the most obscure article can be found by filling in IGM's electronic form—which helps the user narrow or widen the search criteria as necessary—and clicking the PERFORM SEARCH button.



*Dr. Kyung Joo Kwon-Chung, head of the molecular microbiology section of NIAID's Laboratory of Clinical Investigation and an international authority on medical mycology, was honored recently with three tributes to her work: She is the recipient of the 1996 Korean Overseas Compatriots' Prize for Science, which includes \$20,000. At a meeting of the Medical Mycology Society of the Americas, she accepted the Rhoda Benham Award, and also this summer she won the NIH Director's Award.*

“The biggest single advantage of Internet Grateful Med is that the Unified Medical Language System Metathesaurus is tightly integrated into the system,” explained Kingsland. “That means 589,000 names for 253,000 concepts from 38 biomedical vocabularies, thesauri, and classifications are available to help users map from their own terms to others that might give better retrieval in Medline. Millions of additional links and relationships among these terms are also available and really can help in searching.”

There are many other advantages to using IGM to search Medline, he continued. A detailed categorization of the program’s functions is available as a 20-slide slide show from a hyperlink on the system’s introductory screen; individuals interested in taking an IGM deluxe tour from their own seats should point their browsers to <http://igm.nlm.nih.gov>.

“We often get 30 email messages from users a day,” Kingsland commented. “The feedback in general has been very positive. Many of the messages are in the form of, ‘I really like this new system, but could you make it do...’ Several of the most common user requests have already been incorporated into an upcoming Internet Grateful Med V2.1 currently being tested.”

Most recently, online self-registration has been added for users who find the IGM Web site, but do not have NLM Medlars accounts (sort of like charge accounts for NLM computer use), and would like to establish an account and use their new user ID and password immediately. It went live in mid-June.

“More than 800 users have registered by this means so far,” Kingsland said. “They are very pleased at being able to establish an account and search right away.”

As word spreads about IGM, the program’s numbers swell. About 3 weeks ago, syndicated columnist Ann Landers ran a letter from a physician who had used the program and touted its success. That day alone, NLM saw online registration via IGM nearly triple.

Continuing to implement improvements, programmers estimate the new IGM V2.1 will be available before the end of the summer and will include downloading of selected records, several new download format options, enhanced limits, and searching in additional databases including HealthSTAR and AIDSLINE.

“In the aggregate,” Kingsland concluded, “we believe IGM will increase the use of NLM’s systems: some users will switch from the existing Grateful Med, but many more new users will be added.”

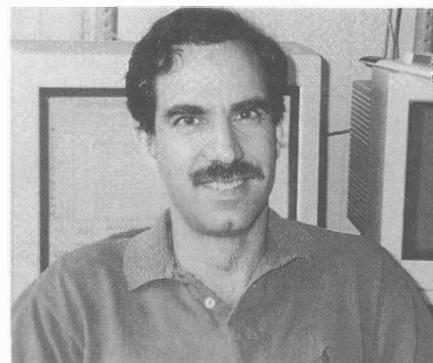
The next phase of the User Access Services project is to extend the IGM capabilities to more databases and additional retrieval systems as NLM’s major online systems evolve, he said. Links across databases will be emphasized when they make sense. ■

## Mac Expert Promotes WWW to Deaf Groups

By Joan Chamberlain

For the 4,500 Macintosh users at NIH, Charles Mokotoff is a Big Man on Campus. “The Mac buck stops at my desk,” jokes Mokotoff, who counts NIH director Dr. Harold Varmus among his customers. But only the thorniest of the 350 Mac-related questions coming into DCRT each month get past the division’s Help Desk staff, so Mokotoff focuses most of his energy on evaluating software for the Mac and teaching DCRT classes on Pubnet, HTML, and publishing on the World Wide Web. With his knowledge of Web technologies and sign language, he’s also making a difference outside NIH by teaching deaf communities about the Web.

“I see the Web opening up information for everyone, and it’s especially helpful for the deaf,” says Mokotoff, who has partial hearing loss and is active in the deaf community.



“Deaf people seem to be catching on quickly because they realize how useful it can be to them. They’re no strangers to the Internet—Gallaudet University had e-mail many years before it became popular elsewhere.” Recently, Mokotoff set up a home page at <http://dowland.dcrn.nih.gov/DEAF-NIH/index.html> for the approximately 50 deaf and hard-of-hearing employees at NIH.

The site, which receives a few hundred visits a week, offers interactive forms designed by Mokotoff enabling employees to request the services of a sign language interpreter at an NIH event. He also gives lectures on computers and the Internet to deaf groups around the country such as Gallaudet, the Maryland Association for the Deaf, and the Learning Center for Deaf Children in Framingham, Mass.

“Charles has strong technical expertise in Mac and Web technologies, and he’s exceptionally skilled at explaining the mysteries of computer technology in down-to-earth terms,” says Dave Songco, assistant director of DCRT.

That teaching skill may come from Mokotoff’s background in writing and lecturing. One thing’s clear: a typical techie he’s not. After earning a B.A. and M.A. in music and fine arts, he spent the first 10 years of his professional life studying classical guitar and giving recitals around the world. To earn more money, he turned to writing and desktop publishing using the Mac, then gradually got into Mac troubleshooting full time.

After a stint with the Peace Corps, he came in 1994 to DCRT, where he began working in Mac support.

Teaching deaf groups about computers is satisfying work, says Mokotoff, who has fluent signing skills. “Usually, lectures to the deaf are delivered by a knowledgeable hearing person and then interpreted. The problem is that many interpreters don’t know much about computers, so the audience doesn’t get the full benefit of the speaker’s lecture.” Mokotoff adapts his presentations to fit the learning style of his audience, deaf or hearing.

“I find that some groups are interested in a Web tour, while others want to know about HTML or Java. Typically, my deaf audiences have been interested in learning to connect to the Internet, touring the Web, and writing home pages.” ■

promising belief system that carried him through. Sharing that philosophy, he said he always offers the following counsel: Use adversity to your own advantage.

"There is no mountain that can stop you, but you," said Callender, chairman of Howard University Hospital's surgery department and keynote speaker at "Organ Donation and Transplantation: Issues for Minorities," the second annual John W. Diggs Lecture sponsored July 18 at the Natcher Auditorium by the NIH Black Scientists Association in collaboration with OD, NIAID, NINDS, and NHLBI. "Obstacles are but stepping stones to success."

At age 59, Callender, who is founder and principal investigator of the National Minority Organ/Tissue Transplant Education Program (MOTTEP), said four character traits led him to achieve the success that is MOTTEP and to realize what many of his critics had called his "impossible dream": faith in God, a strong work ethic, persistence against incredible odds and a willingness to give credit to the Creator. "Once I learned these things, there was no ceiling on what I could accomplish," he said. "It never occurred to me to be discouraged or disconsolate about adversity."

Dedicated to the memory of former NIH deputy director for extramural research Diggs, who spent more than 30 years promoting the health and science careers of minorities, the lecture featured opening remarks by NIAID director Dr. Anthony Fauci, who worked closely with Diggs and whom Diggs had often referred to as his mentor.

"John Diggs had an extraordinary commitment to underrepresented minorities," Fauci recalled. "He approached these issues with a great passion and in a highly dignified manner that was characteristic of the man himself. In all the time he worked with me, he never presented a problem and dropped it in my lap as if to say, 'Here, you solve it.' He always came not only with the problem, but also with several different avenues to address the problem and fix it. It's so easy to identify problems, but it's difficult to identify solutions. Dr. Diggs did that though."

Following the keynote speech, an expert panel assembled on stage to present various perspectives—both professional and personal—of organ donation and transplantation. Panel members ranged from grantee researchers investigating various aspects of the science of transplantation to national organ procurement facility administrators to a local bone marrow donor, all of whom brought home the importance of an often-neglected, but statistically growing health field. As each finished his or her comments, the consensus became clear: Organ donation, especially following a tragedy, is never going to be a popular discussion to have with family, but it is a necessary one that often makes the

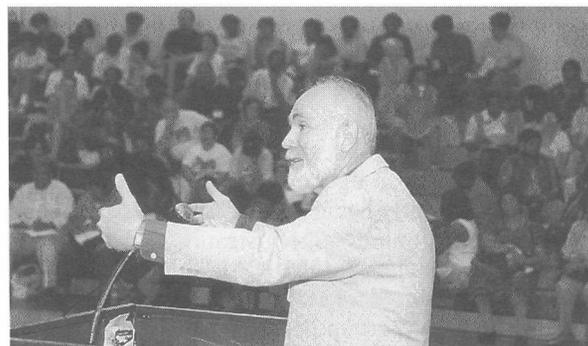
difference between life and death.

"There are similarities in sadness," commented panelist Margaret Schaeffer, director of Recovery Services of the Washington Regional Treatment Consortium, explaining that even though people designate themselves as potential donors, it is ultimately their families who have to make the call during the worst possible time to decide such a crucial issue. "Families of all races are similar during times of bereavement. The heartbreak and pain are the same. I felt it when they came and asked me to consider my son's wishes.

"You're going to hear this message over and over again during the upcoming campaign," she concluded, "but it's important for families to discuss this. The slogan really says it, 'Share your life...share your decision.'" ■



*Dr. Melody H. Lin has been named deputy director of the Office for Protection from Research Risks. A native of Taiwan, she received her pharmacy degree from Taipei Medical College and her Ph.D. in microbiology/immunology from George Washington University Medical Center. A captain in the Commissioned Corps, she joined OPRR in 1987, serving as AIDS assurance coordinator, chief of the Compliance Oversight Branch of the Division of Human Subject Protections, and director of DHSP. Prior to joining OPRR, Lin was a health scientist administrator at NCI. She will continue as acting director of DHSP.*



*Speaking before 1,200 teachers participating in a summer program to improve mathematical, scientific, and technological literacy in the Washington, D.C., public school system, NIDR director Dr. Harold Slavkin stresses why these fields are so important as we move into the 21st century. He spoke recently at Ballou Senior High School in the District. Calling for science, math, technology and health instructional programs across all grade levels, he stated that these programs should be child-centered, developmentally appropriate, engaging to the family and community, and teacher-initiated.*

#### Guidebook Wins Award

The publication *Structural Biology at the NIH* was awarded an APEX '96 award from Communications Concepts, Inc., a firm that helps organizations improve professional publications and communications programs. The award recognizes excellence in graphic design and editorial content.

The book is a colorful guide to the many laboratories and senior investigators at NIH studying biological macromolecules from a structural perspective. It covers the work of 66 investigators in eight subgroups. Thirteen NIH institutes and divisions are represented.

The publication was compiled by the Structural Biology Interest Group. Editors were Drs. Craig Hyde and Alasdair Steven of the NIAMS Laboratory of Structural Biology Research. Copies are available from Bldg. 31, Rm. 4C05, phone 6-8188. ■



The Office of Science Education's site on the World Wide Web, "Snapshots of Medicine and Health," is now in operation. A collaborative effort of OSE, the Office of Information Resources Management, and the Office of Research on Women's Health, "Snapshots" has been created by staff members from the three offices who are dedicated to providing "the process and progress of medicine and biomedical research" to middle-school, high school, and college students, and teachers across the globe, comments Dr. Frank Hartel, senior IRM official.

A cognitive psychologist by training, Hartel began conceptualizing "Snapshots" a few years ago with two goals in mind. "At the time, there was little empirical information about what appeared to work in hypermedia environments with adolescents and what did not," he explains. "I wanted to find out if we could use hypermedia to convey scientific concepts to kids more effectively than text alone." His second goal was to explore using "Snapshots" as a way for NIH to reach out to science teachers.

Deviating from the more traditional format of many government Web sites, "Snapshots" is intended to be a fun and interactive way to "turn kids onto science," thereby helping them to begin learning the scientific facts and orientation they will need to succeed in tomorrow's world, says Hartel. With its cartoon illustrations and easy language, the site presents the lives of scientific professionals—a speech pathologist, bioethicist, biomedical researcher, and a marine scientist—making them interesting and challenging, not completely unattainable, as some adolescents may believe. Another story-in-progress will profile student scientists at NIH during their summer and year-long stints.

Real-life problems that have happened to real-life people are the themes of "Research in the News," a feature of the site that introduces fascinating stories to discuss complex medicine. One story highlights the altered behavior of Phineas Gage—a railroad worker who lived 150 years ago—whose frontal lobes were damaged from a dynamite blast. X-rays and photographs of Gage are being investigated today by well-known researchers. Another story depicting the lost remains of the Russian Imperial Family is quite eerie. Appropriately titled "Tales of the Crypt," it traces, from the early 1900's, the disappearance of the family and its servants and

how today's technology applied to examination of bone fragments can attempt to solve the mystery. The current rage about melatonin and its sleep-inducing effect is the subject of "Help for Cuckoo Clocks," a creatively spun article about the advantages of hormones in treating people's health problems.

"Snapshots" also builds students' confidence in grasping scientific methodology. For example, in "Hands On," a tutorial still being developed, students learn DNA identification through virtual participation in tissue sampling and testing performed in the Genetics and Biochemistry Branch, NIDDK. The author takes readers on a "tour" through procedures for each experiment, and uses many photos and animation to illustrate important points.

But learning this material is no easy feat. Students are challenged to remember certain concepts and techniques as they proceed through the stories; concepts build upon already-explained material. Interactive opportunities to interpret DNA gels and other laboratory results enable students to test their skill and mastery of the material.

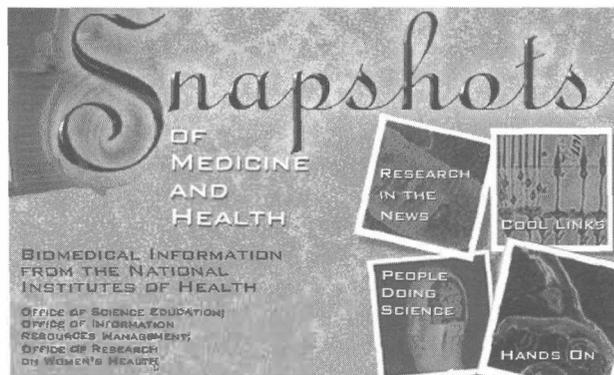
"I would like 'Snapshots' to be an ongoing collaboration in getting the NIH message to adolescents," says

Hartel. "We can grow this site as big as we want." Even before being linked to the NIH home page, "Snapshots" had 1,000 visits from scientists, students, and teachers who were asked to critique the site. Now, with its linkage to an NIH server, its creators hope to share in the more than 30,000 hits the server receives from all over the world each day.

In fact, Yahoo's survey of the "100 Hottest Web Sites" ranks NIH as the sixth most frequented site, along with other federal government sites: FBI, CIA, and the U.S. Business Advisor. Producing a site as popular as NIH takes much skill, but most of all requires interesting content.

In their effort to provide fresh material to readers, the "Snapshots" staff welcomes contributions of copy, especially with multimedia (animation, video, and audio components), as well as crisp photographs to add to the site.

"Snapshots" can be accessed directly at <http://irma.od.nih.gov/> or through the NIH home page by clicking on "Welcome to NIH." To supply story ideas, call Hartel, 2-4453.—Michele Bupp 



## Postmenopausal Vols Needed

The Cardiology Branch, NHLBI, needs postmenopausal volunteers for an outpatient study comparing estrogen and lipid-lowering therapies. Participants must not be taking any medications, hormone replacements or vitamins or be willing to stop medications for 2 months. Volunteers will be paid. Call Rita Mincemoyer, 6-3666.

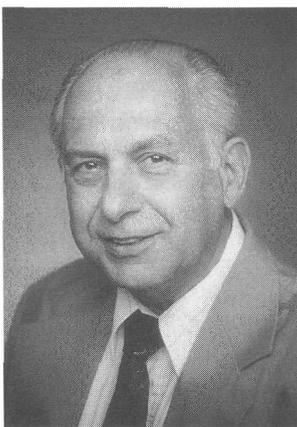
## Joseph Ciardi Retires from NIDR

Dr. Joseph Ciardi, a health scientist administrator at the National Institute of Dental Research, retired recently after 38 years of federal service, the last 25 of which were with NIDR.

His career followed a path through four of NIH's organizational components, beginning in 1959 as a medical technologist in the Clinical Center and leading, in 1988, to the directorship of what is now the Caries, Nutrition, and Fluoride Program in NIDR's Division of Extramural Research. In this latter capacity, he used his extensive background in biochemistry, microbiology, and immunology to oversee a complex grant portfolio. Most recently, he also served as acting director of the Craniofacial Development and Disorders Program, the division's largest and most diverse program area.

Originally from Quincy, Mass., Ciardi came to the Washington area while in the military and worked in radiation biology at the

Walter Reed Armed Forces Institute of Pathology. In 1968, while working in the laboratories of NCI, he



*Dr. Joseph Ciardi*

received his Ph.D. in biochemistry from George Washington University. He was subsequently awarded a postdoctoral fellowship with NHLBI, and ultimately came to NIDR as a staff fellow. While in NIDR's Laboratory of Microbiology and Immunology, he investigated the mechanisms by which bacteria adhere to teeth and cause decay. After transferring to the institute's National Caries Program, he expanded his research focus to include the evaluation of antimicrobial agents and screening of bacterial antigens as

candidates for a caries vaccine. In 1984, he returned to the intramural laboratory where he studied the interactions of oral bacteria and their products with host salivary components.

Ciardi's retirement culminates a rewarding career at NIH that has provided major contributions to both the intramural and extramural research communities. He and his family will stay in the area where they can enjoy their nearby mountain retreat and he can participate in NIDR's extramural activities. **R**

### BOMB THREATS, CONTINUED FROM PAGE 1

NIH Police Chief Tom Rufty said the threat, which turned out to be unfounded, came from a caller who warned that a bomb was set to go off at 1 p.m. County canine units, including seven dogs that had been in the area on a training session, searched the building, assisted by NIH's bomb-sniffing dog Turbo. Police gave occupants the option of leaving the building, which is standard procedure in such cases, and the 400-some tenants—hailing from DCRT, NINDS and OD programs—obliged. They were permitted to return to their offices around 2 p.m.

Dr. Charles Sherman, who works on the sixth floor of the building, discovered, upon return from lunch that day, that the building was cordoned off. Then he noticed that traffic was snarled. "Wisconsin Ave. was closed. Traffic was diverted onto Old Georgetown Rd...it wasn't pretty," he related. Sherman and colleagues didn't let the incident color their day; they repaired to a local ice cream parlor until police reopened the building.

There is some speculation that the Federal Bldg. bomb threat was a diversion employed by a thief who robbed the neighboring Riggs Bank shortly after 1 p.m. on July 24, said Lt. Will Liston of the NIH Police. The suspect was photographed on videotape and an investigation is under way.

Rufty said the current national spate of

explosions has resulted in heightened sensitivity to unusual mail and unattended packages at NIH, but added that bomb threats are fairly rare here.

However, as he spoke, he mentioned that someone had left a note in a Bldg. 37 elevator warning of a bomb in that facility; police were on the scene investigating on July 29. Because Bldg. 37 is the site of an NIH day care center, authorities evacuated that facility immediately once the note was found. (Later that morning, a second bomb report—also a hoax—was received in Bldg. 21, which was temporarily evacuated since the caller said an explosion was imminent.)

One of the oddest threats was solved almost immediately: a 911 call to county police threatening a bomb at the Children's Inn was logged at 12:15 a.m. July 30. A trace of the call indicated it originated at a pay phone just outside the inn. NIH police discovered that the brother of a youth staying at the inn with his family had made the call. No bomb was found and no charges will be filed unless authorized by the U.S. attorney.

Rufty said that bomb dogs have been dispatched on a number of suspicious package calls recently, most involving mailings of laboratory specimens and books arriving unexpectedly on campus.

Though security has been stepped up on campus recently, Jim Sweat, director, Division of Public Safety, is surprised at some employees' reluctance to comply with a request that they wear ID badges at all times. Public safety employees conducted a visual survey of 14 NIH buildings recently and

found that only about 36 percent of the people using these facilities wore IDs. "It's pretty bad news for all employees," he noted. "People are not following the bare minimum needed to enhance the security of each other."

Rufty said NIH's increased vigilance, especially regarding suspicious packages and mail, is both warranted and welcome. Unusual packages should be reported at once to the police, who can examine packages either with trained dogs or with X-ray machines. Dial 6-5685 for nonemergencies and 115 for emergencies.—Rich McManus **R**



### Former NCI Scientist Dawe Dies in Accident

Dr. Clyde J. Dawe, 75, former chief of the National Cancer Institute's comparative oncology section in the Division of Cancer Biology and Diagnosis, and a former U.S. Navy flight surgeon, died July 9 after sustaining injuries in a glider crash. He was a research consultant in the department of pathology at Harvard University Medical School at the time of his death.

During his years at NCI, he pursued two major interests: analysis of the interactions of the polyoma virus with various cell types, and comparative oncology, the study of cancer in lower animals such as sharks, clams, frogs, insects and worms. Dawe was well-known for his expertise on cancer in wild animal populations. He played a crucial role in establishing the Registry of Tumors in Lower Animals at the Museum of Natural History at the Smithsonian Institution. He was also cowriting and editing a book on fish tumors.

"He was a warm, giving, selfless man who touched literally everyone he met," said Dr. Thomas Benjamin, professor of pathology at Harvard Medical School. "By integrating his knowledge of pathology with molecular biology, he was one of the world's experts on tumors in natural animal populations, and polyoma virus-induced tumors of the mouse."

Dawe was born in Easton, Pa. He earned his bachelor of science degree from Lafayette College in Easton in 1942, and his M.D. degree from Johns Hopkins University School of Medicine in 1945.

Dawe worked for 6 years as a surgical pathologist at the Mayo Foundation and Clinic in Rochester, Minn., where he earned his Ph.D. in pathologic anatomy at the University of Minnesota. He joined NCI in 1955.

He held several editorial positions in his lifetime including associate editor of the *Journal of the National Cancer Institute* from 1957 to 1959 and editor-in-chief from 1965 to 1967. He was the founding editor of *In Vitro*, the publication of the Tissue Culture Association. He had served as associate editor of *Cancer Research* since 1977.

Dawe was the author of hundreds of scientific papers, and was a member of numerous societies including the International Academy of Pathology.

He is survived by his wife of 49 years, Elinor M. Dooley Dawe; two daughters, Kathleen Dawe of Arlington, Va., and Laurie Dawe-Lindy of Harrisonburg, Va.; and one son, James Dawe of Watkinville, Ga.—Francis X. Mahaney, Jr. ■

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

Courses and Programs	Starting Dates
<i>Management and Supervisory</i> 6-6211	
Interacting with Difficult Employees	8/22
The Straight Talk Program	8/28
Successful Management	9/10-12
Practical Management Approaches	9/11-12
Managing Stress, Maximizing Effectiveness	9/17-19
The Winning Leader	9/18-20
Effective Supervision: A New Role Perspective	9/24-27
<i>Career Transition</i>	
Resume Writing & Cover Letter Preparation	9/18
Successful Interviewing Techniques	9/18
<i>Administrative Skills Development</i>	
Listening and Work Relationships	9/4
<i>Administrative Systems</i>	
Determining Price Reasonableness in the Award of Simplified Acquisition	8/29
<i>Communication Skills</i>	
Ten Secrets to Powerful Business Writing	8/15
<i>Special Courses</i> 6-6211	
NIH Retirement Seminar	9/16
<i>Personal Computing</i> 6-6211	
WordPerfect 6.1 for Windows	8/27
Advanced WordPerfect 6.1 for Windows	8/19
Intro to Windows 3.1	9/10
MS Excel 5.0 for Windows	8/13
Lotus 5.0 for Windows	9/04
Microsoft Word for Windows	9/16
Access 2.0 for Windows	8/21
Macintosh Courses:	
MacDraw Pro 1.5	9/9
Welcome to Macintosh	9/11
Introduction to Excel 5.0 (Mac)	9/16
Advanced Macintosh Techniques	9/19

### DCRT Training Classes

HTML Tables and Forms Using the PC	8/15
First Look at Eudora Pro 3.0	8/15
Database Technology Seminar	8/16
SQL Extensions for DB2 Version 4	8/19
Introduction to Oracle PL/SQL	8/19-20
Recurrent Problems in Data Analysis	8/20
Advanced Macintosh Operations	8/20
Delphi Overview	8/21
LAN Concepts	8/21
Oracle for Application Developers	8/21-23
Relational Database Design	8/22
Backup/Recovery Facility for Personal Computers and Servers	8/27
BRMUG Macintosh Users Group	8/27
Windows NT Overview	8/27-28
Oracle Data Browser	8/28
Getting Started with Windows	8/29

### Hopkins, Suburban Affiliation Benefits CC

Expanded clinical practice and research opportunities for Clinical Center physicians, clinical associates, and fellows will be a byproduct of a recently announced affiliation between Johns Hopkins Medicine and Suburban Hospital.

The Hopkins-Suburban alliance, designed to foster exploration of new, cooperative health-care ventures, will include satellite outpatient clinics in the Washington area.

"This venture opens up new training, clinical research, and patient-care opportunities for CC and Hopkins physicians while strengthening the clinical services available at Suburban Hospital," said Dr. John I. Gallin, CC director.

This will allow CC patients access to areas such as obstetrics and gynecology, orthopedic surgery and gastroenterology.—Sara Byars



Twins Halla Ruth (above, r) and Silja Bjorg Halldorsdottir, 8, of Reykjavik, Iceland, frolic in a butterfly garden—encountering here a bee rather than a monarch—on the south side of the Children's Inn. The garden, now in full bloom, was dug last April by volunteers including NIH director Dr. Harold Varmus and his wife, Connie Casey (below, r), who enlisted the help of friend and landscape specialist Ruth Chalfont (below, l). Other volunteers included local landscaper Buffy Brownstein, who helped choose the site, and Lynn Mueller of NIH's groundskeeping branch, who delivered a load of compost. The garden, which includes pink and purple sages, verbena, joe-pye weed and black-eyed susans (inspected by the kids, above, l), is designed to attract butterflies, which it did later on this occasion.



Nearly 100 physicians reported for duty at the Clinical Center last month as clinical associates. Participants, who have completed residency or dental programs before coming here, spend 2 or more years in subspecialty and research training. Their first year typically is spent caring for CC patients. Clinical research is the second year's focus. On hand for a welcoming picnic were (from l) Dr. Philip Chen, NIH associate director for intramural affairs; Dr. Corina Gonzalez of Argentina; Dr. Michael Fordis, director of the NIH Office of Education; and Dr. Nadir Ali Syed of New Jersey.



Photos: top, Bill Branson, bottom, Ernie Branson

**And Coming Next Issue...**

See those two strange images on the right? They might not look like much but they are transforming the way NIH'ers in several institutes are getting paid. They will be featured next issue as the NIH Record continues its summer-long series on Reinventing Government. Will we ever get off that topic? Check back here in 2 weeks...

The image shows two screenshots of the NIH Integrated Time and Attendance System. The left screenshot is a login window with fields for 'LAN ID or ISN' and 'Password', and 'OK' and 'Cancel' buttons. The right screenshot is a 'Timecard for All Administrators' report for the period 08/01/98 to 08/31/98. It includes a table with columns for Date, Time, and various codes (M, S, C, O, etc.), and a summary table at the bottom showing totals for hours worked and other metrics.