

The NIH Record

Former NIDR Chemist

Conn Helps Lay Groundwork for NIH Invention Policy

There is a new Office of Invention Development being created at NIH. Managing it at the moment is a woman who has invented a new career for herself.

As is often the case with discoveries, serendipity played an important role.

Kathleen Conn came to NIH in 1974 to work as a chemist in what is now NIDR's Bone Research Branch, headed by Dr. John Termine.

A native of Washington, she had graduated from Dunbarton College in D.C. with a B.A. in chemistry. She spent her first year out of college as a volunteer at a Catholic charity organization in Omaha.

"I was sent to the inner city of Omaha and ran a tutor program," she said. "I also did some welfare referral work and community organization."

Returning to Washington, Conn took a job in NCI's Immunology Branch in Bldg. 10 for a year. Then she got married and returned to Nebraska.

"I worked in research at the VA hospital there and taught at Girls' Town for two and a half years," she said.

She and her husband then moved to Rapid City, S.D., for a year and eventually returned to Washington in 1973 to start a family.

Six months after the birth of her first child, Conn joined Termine at NIDR.

"We studied mineralization of tissue—it



Kathleen Conn

was very basic research and very interesting," Conn said. "I enjoyed working with John and I learned many things from him, both about research and management."

After more than a decade of laboratory investigation, she began to look around for new opportunities and challenges.

"I had been a GS-11 for a number of years and I wanted something new," she said. "I began interviewing around NIH, just to get information."

In the midst of her informal search, Conn

received a phone call from Lorraine Jackson, EEO officer for her institute. Serendipity was on the line.

"She said that a brochure had crossed her desk announcing a program that might interest me," Conn recalls.

The flyer touted a new course offered by the Office of Personnel Management called the Women's Executive Leadership (WEL) Program. It offered high-potential women a year-long stint of managerial training designed to equip them for future careers as federal managers and supervisors.

Conn quickly updated her SF-171 and got an extension from OPM on the rapidly approaching application deadline. In December 1986 she was admitted, along with 32 other women, into one of OPM's first WEL classes.

"The program basically offers core training for management skills," she said. "We had rotational assignments, did in-depth executive interviews, shadowed exemplary government managers, and also learned team-building skills by participating in a work team called a 'cluster group' made up of eight class members."

"Our cluster group took an unusual step beyond the OPM requirements. In researching

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Results of NIH Drinking Water Survey Reported

By Ellyn Pollack

If you have been wondering what the recent commotion has been around the NIH drinking fountains, it's because the Division of Safety has been conducting a reservation-wide survey to determine lead levels in the drinking water.

"The results of this survey indicate that higher lead levels were found in newly renovated areas in Buildings 6A, 8 and 8A, 13 and 41 and in limited areas of the hospital section of Building 10. This is not uncommon," said Dr. Harry Mahar of DS.

Newly installed copper pipes are soldered with lead-based solder. In new piping, lead can leach out of the solder and into the water when the water is stagnant for 8-10 hours. As the pipes age, a scale builds up inside that prevents leaching from occurring. NIH recently implemented a new policy prohibiting the use of lead solder in new plumbing

installations.

"The lead levels in the drinking water do not represent a health hazard," Mahar says. "The elevated lead levels only occur in the water for a short period of time, and only if the tap water has not been turned on within eight to 10 hours."

Adults are not at risk by drinking water containing the lead levels measured at NIH. However, children under the age of six and pregnant women need to be more cautious, Mahar notes. Young children absorb lead more readily than adults and are more susceptible to its toxic properties. Pregnant women need to be cautious because the developing fetus is very sensitive to elevated lead exposure.

"As a precaution, a couple of steps have been taken," Mahar says. Fountains where elevated lead levels were found during the survey

have been turned off and bottled water is being supplied where needed. In addition, warning signs have been posted.

"The lead levels in most areas of the campus are not of concern," said Mahar. Most fountains are on a centralized water system where the water continually runs through a recycling loop rather than remaining stagnant in the pipes. "If you're concerned, it's always a good idea to run the water for a minute," Mahar noted.

If you have been notified by your administrative officer that the lead content of the drinking water in your work area is high and you are pregnant and concerned that you have consumed large quantities of that water, contact the Occupational Medical Service for consultation, 496-4411. □

CONN

(Continued from Page 1)

our assignment on 'Women in Management: Creating Opportunities and Overcoming Barriers,' we found we had all the significant elements of a critical study. We decided to commit ourselves to the extra work of publishing our study. The whole process was a very good learning experience."

Conn's first "rotation" was at NIH, where she worked for Dr. Philip Chen Jr., NIH associate director for intramural affairs. Chen put her to work interpreting a new piece of legislation—the Federal Technology Transfer Act of 1986.

"That was my first taste of patent policy," said Conn, who spent three and a half months with Chen.

Her second assignment was at the Pentagon, where she immersed herself in civilian personnel policy under the tutelage of a gifted woman manager.

Conn's last rotation found her back at NIH; she spent three months working with Joel "Moe" Hedetniemi, executive officer for NICHD (and, recently, acting director of the Division of Personnel Management).

"That gave me a good overview of how the institutes operate at NIH," she said.

During the WEL program, Conn continued to be paid by NIDR.

"They were very supportive of my move," said Conn. Indeed, NIDR has since placed another of its talented women in the WEL program—Frances Cannon of the Laboratory of Developmental Biology and Anomalies.

Another recent WEL program graduate, and coincidentally also a former NIDR employee, Dorrette Worrell, was sponsored this year by DRG in the WEL program.

"The program really broadened me a lot," says Conn. "I had been working in one area for a long time and was ready for a change. The requirements of the WEL program force you out of yourself and get you out there asking questions."

Upon graduating from WEL last December, Conn was offered a job in Chen's office at NIH. Her assignment? Helping to establish the Office of Invention Development.

"The Federal Technology Transfer Act of 1986 requires all federal agencies to formalize mechanisms for assuring that technologies invented in federal laboratories find their way to the public domain," Conn explained.

The law is designed to encourage government scientists to establish cooperative research and development agreements with industry. As an incentive, innovative scientists are guaranteed 15 percent or more of the royalties on their inventions, with a maximum of

\$100,000 per year. Most inventions, however, do not have such high returns.

"Each agency—not just NIH—must establish its own policy to deal with this law," said Conn.

While Chen has yet to name a chief of the Office of Invention Development, Conn is doing much of the groundwork at the moment. It is complicated and sensitive work. Among the issues are: patent applications, both U.S. and foreign; licensing of patents and other intellectual property; royalty distribution; training of NIH staff regarding invention development; and managing data on patents and license income.

"It's exciting and interesting work because the NIH policy is just now being developed," says Conn.

The work is also stimulating because, in recent years, the number of patents applied for annually by intramural investigators is on the rise. That puts Conn's office on the brink of medicine's technological frontier.

Asked whether her new responsibilities have resulted in an exalted title, Conn shrugged and admitted, "I'm still a chemist." But a chemist whose career has undergone a happy catalysis.

For more information on the WEL program, contact your institute's EEO officer.—
Rich McManus □



The Friends of the Clinical Center recently donated \$8,900 to the Patient Emergency Fund. The gift represents a portion of FOCC's 1987 income that is earmarked for the PEF. On hand for the check presentation ceremony were (from l) Maryanne Guerra, Dr. Charlotte Berg of the CC Social Work Department, Dr. Dan Cowell, CC associate director, and Mary Etta Roberts. Those wishing to contribute to the FOCC or learn more about it may call 496-2563.

One Thousand Thanks

A thousand thanks to the man who found my gold link bracelet 3-1-88. J.B. 496-5633. □

The NIH Record

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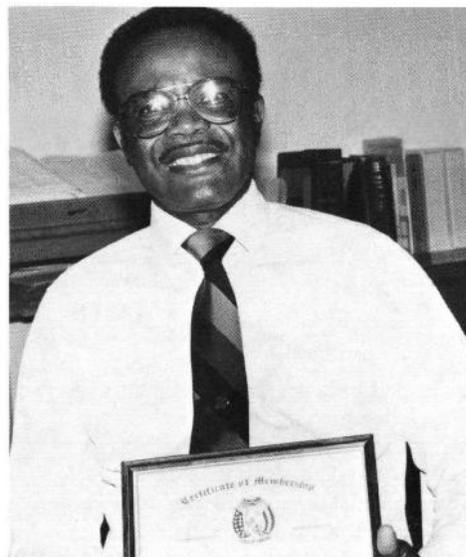
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Jasper Cummings, an employee of the Division of Financial Management and an NIH'er since 1964, was recently named a member of the American Sons of Liberty. An admirer of Patrick Henry (who, like Cummings, was one of 11 children and was fond of public speaking), he has been a Toastmaster for 11 years.

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OD Establishes Its Own EEO Advisory Committee

The Office of the Director recently established its own Equal Employment Opportunity (EEO) advisory committee.

"NIH itself is unique, and so are the operations of the office of the director," said Dr. William F. Raub, NIH deputy director. "We don't necessarily match up with the basic functions, procedures, and structures that the other institutes have established within their EEO advisory committees.

"We need to identify our own issues and come up with our own solutions.

"The committee was established because the primary feeling in OD was that this was a major element lacking in our overall management, and something we could address," Raub continued.

One of the major purposes of the committee is to advise Raub on policies and practices affecting the employment and working conditions of minorities, women and the handicapped.

"I would also like the committee to provide strong and effective program guidance in affirmative action," he said.

Margaret Gordon, chairperson of the committee, said, "All of us on the committee are unfamiliar with these issues, so to get a sense of what we are supposed to accomplish, we arranged a training course for ourselves.

"After taking it, we feel that a similar course should also be offered to OD employees as well as supervisors," she continued.

Gordon emphasized that mechanisms are in



ODEEO Advisory Committee members: front row (l to r): Anita Harris, Darlene Ross, Margaret Gordon, Eleanor Burnham, and Judy Fouche; back row (l to r): Elaine Twillman, Nathaniel Lindsey, Diane Charubas, Winfred Alston, Dr. William F. Raub, Janet Pritts, Gene Spruill, and Bernard Matthews.

place at NIH that the committee could tap into for resource information if needed. "I would like to point out that we are not EEO specialists," she notes, "but we can certainly listen and refer employees to the proper people."

The committee has been establishing bylaws for itself and devising future goals for OD. "We welcome any suggestions and comments from employees," she said.

"I have been delighted with how Margaret Gordon and the others on the committee have gotten involved," Raub says. "Eventually, I would like to see members serve on a rotating basis so that we constantly have new ideas,

new energy and new talent.

"I look forward to working with the committee in ensuring that OD's commitment to equal employment opportunity and affirmative action is realized," he stated.

The committee members, in addition to Gordon, are: Diane Charubas, DFM; Judy Fouche, OC; Anita Harris, OPPE; Darlene Ross, OPRR; Geoffrey Grant, OERT; Nathaniel Lindsey, DCG; Elaine Twillman, DMP; Gene Spruill, DPM; Winfred Alston, DMSR; and Janet Pritts, DFM. There are also two committee advisers, Susan Edwards and Bernard Matthews, both from ORS.—Anne Barber □

'Iodine and the Brain' Conference To Be Held at NIH, Mar. 21-23

A 3-day conference on "Iodine Deficiency and the Brain" will be held at Wilson Hall, Bldg. 1, Mar. 21-23. Attendance is open to all NIH staff.

Co-sponsored by the Fogarty International Center and the International Council for the Control of Iodine Deficiency Disorders, the conference will focus on iodine deficiency, a major cause of mental disability in many parts of the world. An estimated 800 million people worldwide are at risk of iodine deficiency disorders, in particular defects in brain development and function.

Participants at the conference will review recent work on the role of the thyroid in development of the nervous system *in utero*, neurologic findings in endemic cretinism, and the neuropsychological consequences of iodine deficiency during gestation.

Participants will include Dr. Joseph E.

Rall, NIH deputy director for intramural research; Drs. Cary Weinberger and Jacob Robbins of NIDDK; Dr. Louis Sokoloff of NIMH; Dr. Jacques Nunez of the French National Institute for Health and Medical Research (INSERM); Dr. Basil Hetzel of the Commonwealth Scientific and Industrial Research Organization, Adelaide, Australia; Dr. John Stanbury of MIT; and Dr. Ma Tai of the Tianjin Medical College, Peoples Republic of China.

The program includes:

Monday, Mar. 21

9 a.m. Molecular Biology of Iodine and Thyroid Hormones in the Brain
1:40 p.m. Thyroid Hormone Control of Brain Development

Tuesday, Mar. 22

9 a.m. Thyroid Hormone Control of Brain Development (Continued)
1:40 p.m. The Fetus and Iodine Deficiency

Wednesday, Mar. 23

8:30 a.m. Human Studies of Iodine Deficiency and Endemic Cretinism
1:30 p.m. Iodine Deficiency and Psychomotor Function □

NCAB Plans Seminar

The 16th annual seminar of the NCAB/AAALAS—"Biotechnology and Laboratory Animals: Partners in Progress"—will be held Nov. 9-10 at the Hunt Valley Inn in Hunt Valley, Md. □

Vector Computing Seminars Scheduled

The Vector Processing Service available at the NIH Computer Utility (on IBM 3090 mainframes) provides supercomputer performance for scientific computations using existing, unmodified FORTRAN programs at extremely low cost.

Use of the IBM 3090 Vector Facility can increase performance by a factor of 10 compared to the same program running on the 3090 without the vector feature and by a factor of hundreds or thousands compared to running on a mini- or microcomputer.

The Vector Facility has been used by a variety of NIH researchers to attack large-scale computational problems in fields such as molecular dynamics, x-ray crystallography and statistical analysis. Two seminars have been scheduled to describe this easy-to-use facility and to update users on the performance gains realized with this service.

By capitalizing on the nature of the interactive computations present in many research computing tasks, the Vector Facility takes a powerful general purpose scalar computer (the IBM 3090) and, through special hardware facilities, performs "vector" computations via "pipeline" and "parallel computation."

In essence, this means that the hardware and software are capable of performing multiple operations and overlapping the processing of other operations simultaneously. This architecture has the added advantage that it is

integrated into the vast existing array of data management, communications, printing, etc., facilities which already exist and are familiar to many users of the central facility.

Each Vector Facility is capable of a theoretical maximum of 108 million floating-point computations per second (megaflops). Although this is an impressive theoretical maximum, it is significant to note that several large-scale computations were observed to achieve a sustained computational speed of more than 70 megaflops—comparable to many machines billed as true supercomputers.

Perhaps more important than the raw speed of the Vector Facility is the slight effort needed to make use of it—all it takes is a standard FORTRAN program. The FORTRAN compiler automatically recognizes those parts of the program that are suitable for vector analysis and generates the appropriate instructions to use the vector feature. No changes to the FORTRAN source program are required at all. In most cases, merely requesting that the compiler do "vectorization" results in substantial performance improvement of 2 to 1, or more. Additional performance improvements of up to 5 or 10 to 1 can frequently be obtained by minor modifications to key loops in the program.

In addition to the compiler and the hardware, a new library of scientific subroutines, called the Engineering and Scientific Sub-

routine Library (ESSL), provides specialized computing functions widely used in various scientific computations such as linear algebra, matrix operations, linear algebraic equations, eigensystem analysis, signal processing, etc. These subroutines are very highly optimized to make use of the 3090 Vector Facility and achieve extremely high performance and accuracy.

The full capabilities of the IBM 3090 Vector Facility hardware and software will be discussed in two seminars—Thursday, Mar. 24 from 9 a.m. to noon and Thursday, Mar. 31 from 1 to 4 p.m. Both seminars will be held in classroom B51 in Bldg. 12A. Seating is limited. Please reserve a seat by calling the Training Unit, 496-2339. □

Attention Commissioned Officers

Hear the experts speak on CHAMPUS, the Delta dental plan and Veterans Administration benefits, including survivor benefits, on Wednesday, Mar. 16, from 7 to 10 p.m. in the Mortimer B. Lipsett Auditorium (formerly the ACRF Amphitheatre), Bldg. 10.

For additional information, contact the commissioned officer staff, 496-4212. □

Do We Train in Vain?

On Mar. 17, 2-4 p.m., in Wilson Hall, Bldg. 1, the STEP committee will present as a topic for discussion, "Research Training: Dinosaur or Dynamo?"

One of the key areas of NIH responsibility, biomedical research training, covers a gamut of individual and institutional assistance programs. Dr. Porter Coggeshall (National Academy of Sciences), Dr. Ruth Kirschstein (NIGMS), Dr. William Pitlick (OD, NIH), and Dr. Samuel Thier (National Academy of Sciences) will discuss how effective these programs are in providing research experience, what happens to the trainees after completion of training, and how efficient the mechanisms are in meeting our present and future needs in biomedical research.

The forum series is open to all NIH professional and support staff. No preregistration is required. For additional information, contact the STEP Program Office, 496-1493. □



Members of the Blades, the undefeated champions of the NIH R&W Basketball League, met recently on the 14th floor of the Clinical Center to receive trophies. They are (seated, from l) Vern Bundick, team captain David Hubbard, and Wes Thorn. Standing are (from l) Marvin Goffe and David Osborne. Teammate Derrick Cobbs, who helped the team post a 9-0 record, is not pictured.

Scientists Discover New Markers For Cystic Fibrosis

By Kate Ruddon

Scientists at NCI's Frederick Cancer Research Facility and the University of Utah have discovered new genetic markers useful in the diagnosis of cystic fibrosis (CF).

These new markers, combined with previously identified ones, make it possible to diagnose CF prenatally and to detect carriers (individuals who do not have the disease but carry the gene that causes it) in more than 70 percent of families with a history of cystic fibrosis. With earlier identified markers, prenatal diagnosis and carrier detection were possible in only about 50 percent of these families.

Although marker testing plays an important role in detecting carriers in families affected by CF, the tests are not specific enough to screen for asymptomatic carriers in the general population. Such a test requires isolation of the CF gene itself, a goal becoming technically feasible as more specific markers are identified. No test presently exists for identifying the 10 million Americans, one in 20, who are symptomless carriers.

Cystic fibrosis is the most common fatal genetic disease, affecting one in every 2,000 children in the United States. In cystic fibrosis, the body produces abnormally thick, sticky mucous that clogs the lungs and digestive system, interfering with breathing and digestion. Nearly 95 percent of patients die of respiratory complications that result from the progressive breakdown of lung tissue. Today, only about half of patients survive beyond their early 20s.

Although scientists have not identified the exact defect that causes cystic fibrosis, they know that the disorder is caused by a defective gene in the middle of the long arm of chromosome 7. The disease is recessive; that is, individuals must inherit two defective genes—one from each parent—to be affected.

One method of diagnosing cystic fibrosis is testing for genetic markers (genetic variations) located close to the gene responsible for the disease. Detection of these markers indicates the presence of the nearby CF gene on the chromosomal DNA.

Some of the first markers for cystic fibrosis were identified by NCI-FCRF and University of Utah scientists in 1985. Following discovery that the *met* oncogene was tightly linked with the inheritance of CF and, thus, was likely to be located close to the CF gene, the researchers identified a group of markers in *met* that were useful for detecting the presence of the CF gene. Recently, the researchers discovered additional markers isolated from *met*.

With a greater number of CF markers avail-

able, scientists are now able to pinpoint more specifically the location of the CF gene, further improving the ability to diagnose CF prenatally and detect carriers for the disease.

In a recent study published in *The Journal of Pediatrics*, the scientists used the new CF markers along with the old markers for prenatal diagnosis and detection of carriers in 29 families with a history of CF. Eight prenatal tests and 21 carrier analyses were performed. Complete results from the carrier analyses were not reported, although the researchers noted that, based on the laws of genetic inheritance, two-thirds of unaffected siblings of CF patients should be carriers.

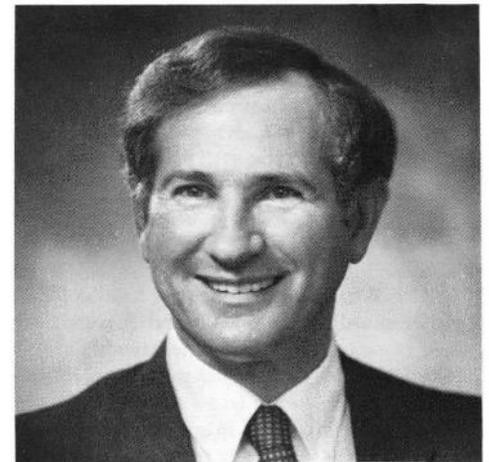
Of the eight prenatal cases tested, six unborn children were found to be normal and one was diagnosed with CF. One was found to have a 50 percent risk of the disease because the researchers were unable to follow markers on the chromosome inherited from one parent.

The standard diagnostic test for cystic fibrosis—measuring levels of chloride and sodium in sweat—confirmed the results of prenatal marker testing in three infants found to be unaffected before birth and in one infant who was diagnosed with cystic fibrosis prenatally and tested positive for the disease after birth.

Prenatal diagnosis of cystic fibrosis can be done using amniotic fluid enzyme analyses; but the researchers report that genetic marker tests have several advantages, including earlier detection of the disease (at nine to 11 weeks gestation versus 15 to 17 weeks for enzyme analyses) and the potential for increased accuracy. Recently published studies have shown that the accuracy of genetic testing in diagnosing cystic fibrosis can approach 99 percent. The use of both enzyme testing and genetic testing is currently the most effective strategy for prenatal diagnosis, the researchers say.

The original discovery of the association of *met* and the gene for CF resulted as an offshoot of the collaborative effort of NCI-FCRF and Utah scientists to look for patterns of genetic susceptibility in families with a history of cancer. Certain blood cancers are associated with exposures, such as radiotherapy and chemotherapy treatments for cancer and, to a lesser extent, with exposures to chemical carcinogens in the environment. The *met* oncogene was originally isolated from laboratory cultures of human cells that had been treated with a known carcinogen. *Met* was found to lie along a region of DNA on human chromosome 7 known for characteristic genetic mistakes in patients with certain leukemias.

Genes are mixed during maturation of egg and sperm cells, and this helps explain the great diversity of species characteristics among individuals. Yet, the CF gene and the *met* gene appear to migrate together during germ cell maturation. Because of this, the FCRF and Utah scientists determined that the two genes must lie within the same region, making up 1 to 5 percent of the total (approximately 100 million nucleotide) length of chromosome 7. □



Charles McL. Hadley, III, has been named personnel officer of the Division of Research Grants. He has been with the DRG personnel office since 1978, when he transferred from the Food and Drug Administration. He attended Duke University, where he received his B.A. degree in 1970.

Golf League Begins Season

The R&W Golf Association will begin its 1988 medal-play season on Apr. 19 at Crofton Country Club.

The eight-match season will also include: EagleHead Country Club, May 5, Lake Arbor Country Club, May 19, Algonkian, June 1, Montgomery Village Country Club, June 13, Germantown Country Club, June 28, Fort Meade Country Club, July 12, and Hidden Creek Country Club, July 25.

In September the league plays a second season in a match-play format. The league has eight teams of up to 25 members each and there are approximately 30 openings for new members. It is not necessary to play every match to belong to a team.

For more information or to join a team, call Ralph Stork, 496-1985. □

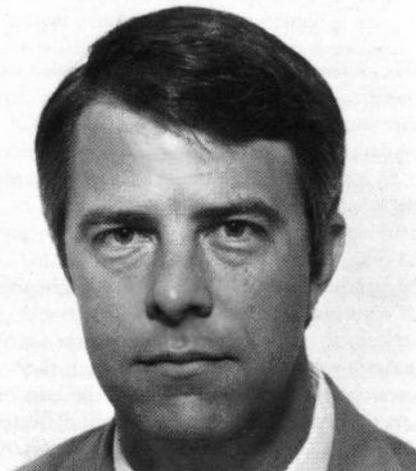
NIDR Names Extramural Program Deputy Director

Dr. G. Wayne Wray has been appointed deputy director of the National Institute of Dental Research's extramural program. He was a health scientist administrator in the NHLBI Review Branch prior to accepting his new position.

As the new deputy director, Wray will be the principal adviser to extramural program director Dr. Marie Nylen, and will assist her in drafting, implementing, and maintaining program policy.

"I expect Dr. Wray to play a critical role in the management of the extramural program," says Nylen. "He brings with him a valuable variety of science and administrative skills."

A native of Elk City, Okla., Wray received a B.A. degree in chemistry from Phillips University in 1963, as well as a M.S. degree in biochemistry from Oklahoma State University in 1965, and a Ph.D. from the University of



Dr. Wayne Wray

Texas at Houston in biomedical sciences in 1970. He was also a postdoctoral fellow in cancer biology at the McArdle Cancer Laboratory at the University of Wisconsin from 1971 to 1972.

After completing his education, Wray was on the faculty of Baylor College of Medicine in the Department of Biomedical Sciences for 11 years, and was selected as a Sigma Xi national lecturer from 1982 to 1984.

"I am very computer oriented," said Wray about his new position. "My initial goal is to develop and improve the extramural program's automated approaches, its data processing and its grant management program."

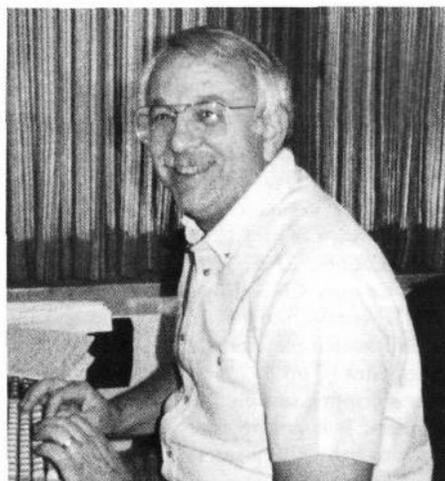
Since coming to Bethesda in 1984 as a grants associate for NIH's Office of the Director, Wray has engaged his substantial computer skills with impressive results. While he served as a grants associate, Wray was instrumental in developing the new computer-based concept for the *NIH Guide for Grants and Contracts*.

Wray is also an accomplished badminton player—having played in the U.S. National Badminton Tournament six times—and is a member of the National Intercollegiate Soccer Officials Association. □

NIDR Veteran Weaver Dies After 30 Years at NIH

Kirk Weaver, a management analyst for the National Institute of Dental Research, died of cancer on Feb. 4, one day after completing 30 years of federal service at NIH.

He began his career in government in 1958 as a histopathology technician in the Clinical Research Ophthalmology Branch of what was then the National Institute of Neurological Diseases and Blindness. In 1961, he joined the NIDR Clinical Investigations Branch as a medical technician, a position he later held in a supervisory capacity until 1967. During this time, he earned a B.A. degree from the University of Maryland.



Kirk Weaver

Weaver left the laboratory in 1967 and, over the next decade and a half, served the institute as administrative officer, staff specialist and budget analyst. In 1981 he was named management analyst in the Office of the Director, NIDR, the position he held at the time of his death.

To his friends and colleagues, Weaver was a reliable, unselfish coworker—a good listener with a quick wit and a penchant for practical jokes. He was a carpentry buff and a devoted fan of classical music, particularly the works of Bach and Beethoven. In contrast to the delicate sounds of the classics was his enthusiasm for World War II aircraft. He enjoyed assembling complex models of planes from that era, and his office was adorned with posters of the P51 Mustang, B17 bomber and others. Animals were also a special part of his life. In the 1970's, he trained and showed Irish setters, capturing several awards at area dog shows. All of the family pets, however, whether from pedigree or pound, shared equally in his affection.

In January 1987, Weaver was honored with a plaque from the Clinical Center's Department of Transfusion Medicine for his many blood donations during the past 25 years.

Weaver is survived by his wife, Antje Borchman; a daughter Bridget, two sons, J. Christian and Bruce D., and a daughter-in-law, all of Frederick, Md. A memorial service was held Feb. 7 at the Hood College Chapel.—Pat Sheridan

Free College Courses at NIH

Are you interested in moving ahead in your career? The Training Development Services Program (TDSP), continuing education program for NIH staff interested in improving job skills and earning college credit, offers a range of courses including English, math, American government, computer applications, psychology, career development and study skills.

Courses are taught by Montgomery College faculty before and after regular work hours in Bldg. 31. They are approved by NIH as job-related, and provide skills that can be used for career mobility or to improve present job performance.

Applicants must meet the following criteria to be eligible to enter TDSP: GS-8 (or WG equivalent) and below NIH employees who are in 1-grade promotional series; have permanent appointments and work at least 32 hours per week; have a high school diploma or GED but do not possess a bachelor's degree.

For more information contact the TDSP office in 31C/B2C17, call 496-9228, or come to one of the following orientations, held from noon to 1 p.m.

Mar. 10 Blair Conf. Rm. 110

Mar. 15 Federal Bldg. Rm. B1-19

Mar. 18 Bldg. 10 Medical Bd. Rm. □



TRAINING TIPS

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

<i>Courses and Programs</i>	<i>Dates</i>
<i>Management and Supervisory 496-6371</i>	
Working With Difficult Employees	3/15
Creative Problem Solving	4/15
Effective Communications	3/29
Scientific Writing	4/19
Managing Stress	5/9
Introduction to Supervision	5/16
Developing Motivational Strategies	3/22
Creative Problem Solving	4/13
Introduction to Supervision	5/16
The Management Tactics Clinic	6/6

Office Skills 496-6211

Supervisory Skills for Secretaries Administrative Assistants	4/13
Effective Listening & Memory Developing	5/19
Improving Managerial Skills for Secretaries	5/3
Telephone and Receptionist Techniques	5/16

Adult Education 496-6211

Training and Development Services Program 496-6211

Personal Computer training is available through User Resource Center (URC) self study courses. There is no cost to NIH employees for these hands-on sessions. The URC hours are:

Monday-Thursday	8:30-9:00 p.m.
Friday	8:30-4:30 p.m.
Saturday	9:00-3:00 p.m.

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Comedy Auditions Planned

Auditions for the NIH spring comedy, "A Bad Year for Tomatoes," will be held Wednesday, Mar. 16, in Masur Auditorium at 7:30 p.m.

The play is set in the Vermont countryside. It calls for 4 women and 3 men, including a famous Hollywood actress, her long-suffering agent, and an illiterate New England handyman. Rehearsals start late this month with performances scheduled at Masur Auditorium for the first three weekends in May.

According to Larry Salkin, who will direct the production, "This very funny play has been a favorite with audiences since it opened in 1974. I urge those who enjoy comedy to turn out next week."

Auditions are not restricted to NIH employees, and reading scripts will be furnished. For further information, call 498-3461. □

Dr. Thaddeus Domanski Dies; Former NCI Employee

Dr. Thaddeus J. Domanski, 76, former chief of the NCI Chemical and Physical Carcinogenesis Branch in the Division of Cancer Cause and Prevention, died of cancer Jan. 22 at Bethesda Naval Hospital.

Domanski, a retired colonel in the Biomedical Sciences Corps, U.S. Air Force, served 23 years in the military before joining NIH in 1966.

Born in Jersey City, he was a resident of Bethesda, Md. He graduated from New York University with a doctorate in biochemistry. His specific research interests while working at NCI, which he joined in 1966, included carcinogenesis and interspecies variations in response to chemicals.

Domanski joined the Army Air Forces in 1943 and served in the Pacific during World War II and in South Korea after the war.

He came to the Washington area in 1961 as chief of the Toxicology Branch of

the Armed Forces Institute of Pathology and was principal laboratory consultant to the Surgeon General, U.S. Air Force, for Clinical and Bioresearch Laboratory Sciences, an assignment he held until he retired from the Air Force in 1966.

In 1975, Domanski was chief of the NCI Cooperative Minority Biomedical Program and from 1975 to 1983 he served on the Cancer Minority Program Advisory Council.

Before retiring from NCI in 1983, he was responsible for monitoring more than \$38 million a year in grants and contracts in the fields of chemical and physical carcinogenesis.

Domanski was also the recipient of the NIH Director's Award in June 1978.

He is survived by his wife, Beatrice Nancy, and one son, Dr. Michael John Domanski, both of Bethesda.

Dr. Brackett, Prominent Physicist, Dies

Dr. Frederick S. Brackett, a prominent and renowned biophysicist, died Jan. 28 of a heart attack.

Brackett was recognized internationally for his work in the field of spectroscopy and was well known for his 1922 discovery of a series of hydrogen lines in the infrared spectrum called the "Brackett Series."

His 1928 publication *Characteristic Differences in the Spectra of Saturated Hydrocarbons* laid the groundwork for much important academic and industrial use of infrared spectra in the determination of molecular structure.

Brackett was born in Claremont, Calif. He graduated from Pomona College and received a doctorate in physics from Johns Hopkins University. He taught physics at the University of California at Berkeley before moving to the Washington area in 1927.

He joined the Department of Agriculture's Fixed Nitrogen Lab in 1927 and transferred to NIH in 1936 as director of biophysics research and consultant on biophysics in cancer.

During World War II, he served in the Army, where he directed a research optics program and developed vision and fire control equipment for combat vehicles. He was promoted to the rank of lieutenant colonel and received the Legion of Merit for his work.

Brackett returned to NIH as chief of the

photobiology section. He helped introduce the use of advanced computer technology through his work in designing and interfacing early computers with other instruments.

Brackett retired in 1961 and served as a consultant to the NIAMD.

In 1974 Brackett was selected by the International Astronomical Union to have a moon crater bear his name.

He is survived by his wife of 69 years, Agnes L. Brackett of Rockville; two daughters, Lucille B. Streets of Las Cruces, N.M., and Marian B. Titus of Ann Arbor, Mich; four grandchildren, and four great-grandchildren.—Marilyn Berman

Normal Volunteers Needed

The Developmental Endocrinology Branch, NICHD, is recruiting healthy women as well as infertile women with luteal phase defect, corpus luteum insufficiency or unexplained infertility for research studies. Candidates must be 18-50 years-old and have regular menstrual cycles of short (less than 26 days) or normal length (26-32 days). They should not be currently taking chronic medication, including birth control pills.

Studies last for one menstrual cycle and require frequent blood drawing but no hospital admission. Compensation is available.

For further information, please call 496-4244 or 496-6751. □

Distinguished Lecturers Explore Frontiers in Genetics

The revolution in biotechnology is changing our world. It brings enormous potential and peril, perhaps even ways to alter the course of natural history.

Understanding development, cancer and AIDS, mapping the entire human genome, finding abnormal genes that cause disease, treating genetic diseases through gene therapy, improving agricultural products to feed the hungry, making new drugs—these breakthroughs are happening because of modern genetics.

To help people understand these developments, Dr. Jeffrey Green, an NCI medical geneticist, has put together a panel of eight distinguished scientists to present lectures for the layman at the Smithsonian Institute.

The eight 1½ hour sessions will be held on Tuesday evenings beginning at 8. Tuition for the course is \$84 for Smithsonian members; \$114 for nonmembers.

The schedule is as follows:

- Apr. 12 "Structure, Regulation and Cloning of Genes" Howard Goodman, professor of genetics, Harvard University, discusses the composition and structure of genes, their regulation, and how they can be cloned and altered by genetic engineering.

- Apr. 26 "The History of Medical Genetics" Victor A. McKusick, university professor of medical genetics, Johns Hopkins University, explains the development of major concepts in medical genetics.

- May 3 "AIDS: Understanding and Treatment Through Molecular Genetics" Robert C. Gallo, chief of NCI's Laboratory of Tumor Cell Biology, explores how our rapid understanding of AIDS and possible treatments has been made possible through molecular genetics.

- May 10 "Mapping the Human Genome and Finding Disease Causing Genes" James Gusella, director of neurogenetics, Massachusetts General Hospital, traces how abnormal genes such as those responsible for Huntington's disease and Duchenne muscular dystrophy are found, isolated and studied.

- May 17 "Gene Targeting: Prospects for Gene Therapy" Theodore Friedman, professor of pediatrics, University of California, San Diego, explains how replacing defective genes in people may soon be a reality.

- May 24 "Viruses, Genes and Cancer" J. Michael Bishop, professor and director, G.W. Hooper Foundation, University of California, San Francisco, discusses how genes important for normal development have been captured by viruses and may, in certain circumstances, cause cancer.



The NIH Ski Club and the R&W Association recently held a winter outing for children of Camp Fantastic at Bryce Mountain in Virginia. The trip allowed the 50 youngsters pictured above to learn how to ski—and all did master the slopes. Below are three skiers who enjoyed the trip. They are (from l) Elaine Scow, Shaun Long and Paul Miller.



- May 31 "Biotechnology and Industry: Promise or Peril?" Ronald Cape, chairman of Cetus Corp., relates how the new genetics is being applied to the creation of drugs and medically related products, as well as the agricultural industry.

- June 7 "Drawing Moral Lines in the Uses of Genetic Knowledge" John C. Fletcher, former chief of the Clinical Center's bioethics office and currently professor of biomedical ethics at the University of Virginia, reflects on the ethical dilemmas that modern genetic technology has generated, particularly in the areas of prenatal diagnosis, gene therapy, and the creation of new strains of bacteria and animals.

For further information, call 357-3030. □

NIAAA Seeks Volunteers

The National Institute on Alcohol Abuse and Alcoholism is seeking normal volunteers between the ages of 21 and 44 who smoke cigarettes. Participants must be in good physical health and without a history of psychiatric problems.

For further information, call Debra Garnett, 496-8074. □