

# The NIH Record

## Research Day Promises Stimulating Speakers

You won't have to travel far to meet and chat with young and senior scientists from every NIH institute when they present their newest research findings at Research Day '88, NIH's annual, day-long science festival set for Tuesday, Sept. 27. In various locations around the NIH campus, the day's three symposia, 20 workshops, and more than 240 scientific posters will offer NIH scientists a chance to meet and discuss research results and ideas and to encourage collaborations between the institutes. The festival will also offer a view of intramural research to the NIH extramural staff.

"The NIH scientific community has heartily endorsed Research Day's focus on exciting, emerging topics that are of interest to researchers in every institute," says Dr. Arthur S. Levine, NICHD scientific director and chair of this year's Research Day organizing committee. "The celebration and collegiality of Research Day will give all NIH scientists a forum in which to share their newest findings with each other."

To cap off the event, Research Day participants can relax, have fun and metabolize the day's ideas at a free picnic dinner (5:30-8 p.m.), featuring the eclectic bluegrass, swing and jazz sounds of Grazz Matazz. Dinner and music will be in the two large Research Day tents, located in parking lot 10-I, next to Bldg. 30.

A synopsis of the Research Day program follows. Registration is not required for any of the Research Day events.

Symposia (the two morning symposia will run concurrently)

**Signal Transduction**, 8-11:30 a.m., Masur Auditorium, Bldg., 10, Douglas Lowy NCI, chair. 8 a.m., Welcome to NIH Research Day '88, James Wyngaarden, NIH director; 8:10, Introduction, Arthur S. Levine, NICHD; 8:20, Regulation of Signal Transduction by Guanine Nucleotide Binding Proteins, Joel Moss, NHLBI; 8:50, Phosphoinositide Turnover in Calcium Signaling, Kevin Catt, NICHD; 9:20, Spatial and Temporal Domains of Cellular Memory, Daniel Alkon, NINCDS; 9:50, Signaling and the Immune System, William Paul, NIAID; 10:20, Transforming Growth Factor-Beta: A Multifunctional Protein, Anita Roberts, NCI; 10:50, Membrane Proteins and Cell Transformation, Douglas Lowy, NCI.

**Gene Structure and Expression**, 8-11:30 a.m., Lipsett (ACRF) Auditorium, Bldg. 10,

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## Glutamate and Its Receptor Can Help You Recall Important Things or Blow Your Mind

By Leslie Fink

The many people who have left a Chinese restaurant, wan and in a cold sweat, know that MSG, the flavor enhancer often used in Chinese cooking, can powerfully affect the nervous system. Now scientists are finding out how MSG's main ingredient, a natural amino acid called glutamate, influences by way of special receptors a range of mental processes—from memory to injury. Knowing the role glutamate and these receptors play in both normal brain function and injury will help researchers design new drugs to reduce brain damage from stroke, epilepsy, and birth complications.

In the brain, glutamate acts as a neurotransmitter, exerting its effects on neurons by binding to specific sites called NMDA receptors. But, "activation of NMDA receptors by glutamate makes a cell super excitable in a way that conventional neurotransmitters don't," says Dr. Mark Mayer, an NICHD neurobiologist and biophysicist who has spent the past 5 years analyzing these peculiar receptors. Today, figuring out the NMDA receptor has so challenged scientists that Nobel laureate Francis Crick has called it the "hottest piece of

protein in the universe."

Under normal circumstances, glutamate and NMDA receptors work well together, says Mayer. Indeed, turning on the receptors stimulates nerve cell changes that appear to form the physical basis of memory and that lay down nerve circuitry in the infant brain.

But, Mayer says, NMDA receptors are also key players in a mind-blowing phenomenon called excitotoxicity. "In a sense, the brain is loaded with the seeds of its own destruction," he says. Because cells also use glutamate for day-to-day metabolism and protein building, the substance is distributed widely throughout the brain and body. Along with this excess of glutamate, the brain contains large numbers of NMDA receptors. On an off day, matching up the two can unleash a frenzy of nerve activity that kills cells.

According to Mayer, NMDA receptors act like minute gates in the nerve cell membrane through which positively charged molecules, called ions, pass. Usually, this influx of ions, or stimulation by a neurotransmitter such as glutamate, excites a neuron. But Mayer has

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## Of Radio and Radiation: A Career in Art and Science

When John Zimbrick was a boy growing up in North Dakota, the sky came alive each evening with radio waves from exotic metropolises located far from the prairie—Chicago, New York, Detroit, Los Angeles. As the horizon grew dark, the AM radio dial lit up with stations that couldn't be received during the day.

Reared in Killdeer, a small farming town populated by ethnic enclaves—his was German—Zimbrick could not have imagined that one day his voice and the music that he loves would rise into the atmosphere from such places as Dickinson, N.D., Northfield, Minn., Chicago, Lawrence, Kan., Los Angeles, and Washington, D.C. Or that a finer species of the same radio waves that carry music would one day occupy him in a science career.

Zimbrick is presently a health scientist administrator for the Division of Research Grants and executive secretary of a 20-member study section that evaluates the effects of radiation on living systems. That is his day job. Evenings and weekends, however, are devoted to jazz. A radio disc jockey, he has a program called "Jazz Cornucopia" that can be heard



Dr. John Zimbrick

from 2 to 5 p.m. Sundays on WPFW, an FM radio station in Washington.

"From the earliest years that I can remem-

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## GLUTAMATE

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discovered that the NMDA receptor is different from other receptor types because it requires both electrical and neurotransmitter stimulation to work fully.

Mayer and his colleagues found that, in a neuron's resting state, the NMDA receptor gate is plugged by magnesium ions so other ions cannot pass through. With magnesium blocking the channel, the response of both the receptor and the cell to glutamate is small. But when electrical events change the cell membrane's usual negative charge to positive, the magnesium is repelled out of the channel. With the magnesium dislodged, glutamate, by binding to the NMDA receptor, can fully open the gate.

With the receptor channel wide open, a mixture of ions necessary for the neuron to function properly can enter the cell. Like other receptors, the NMDA receptor is a conduit for both sodium and potassium ions. But, Mayer and his colleagues discovered, unlike other receptors, the NMDA receptor is also a gateway for calcium. This was a surprise, he says, because "calcium ions are supposed to go through separate pores called calcium channels."

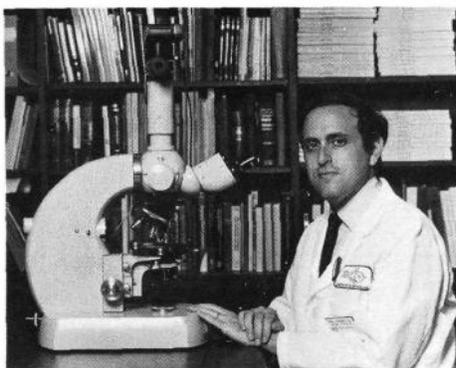
Calcium coming into cells is a natural event that contributes to all kinds of normal and important cell functions. "It's thought that calcium coming through NMDA receptors turns on a huge molecular machinery that ultimately gives you memory," says Mayer. Calcium ions enhance a nerve cell's sensitivity to incoming signals, a process called long-term potentiation, which appears to play a role in memory. But too much calcium triggers the release of neuron-eating enzymes that kill brain cells. When essential blood vessels to the brain are choked during stroke or heart attack, or a difficult birth, normal cellular mechanisms are upset. Glutamate-releasing cells become "leaky," and the amount of glutamate available to NMDA receptors changes from a trickle to a torrent. "When that much glutamate is released, and it starts turning on NMDA receptors, it's bad news," says Mayer. "Too much calcium floods the brain cells, and they may be injured or die."

Mayer and other scientists in the U.S. and Europe have begun studying drugs that bind to the NMDA receptor to glean further clues about how the receptor works. This information will also shed light on the basic mechanisms of diseases resulting from excitotoxicity. Drugs that mimic the effects of glutamate, for example, appear to be useful in producing laboratory models of nerve cell activity during epileptic seizures. And drugs

that block the flow of calcium into nerve cells also prevent long-term potentiation. Indeed, laboratory animals given these drugs show evidence of memory loss.

Drug studies also help scientists search for compounds that may help reduce or prevent disorders produced by abnormalities in glutamate levels or in NMDA receptors. "Knowing the role NMDA receptors play in brain injury will be a major step toward developing treatments for seizures and certain types of brain damage," says Mayer. In laboratory studies, the drugs ketamine, MK801, and the street drug PCP, all quiet excited neurons by preventing glutamate from binding to the NMDA receptor. In animal studies, these drugs, even when given hours after blood to the brain had been cut off, spared much of the brain from injury.

Although most NMDA-receptor blockers have side effects that currently bar them from becoming medicines, refinements in drug design may produce a drug that will one day be used in emergency rooms to halt brain damage in stroke victims. "It is probably naive to expect that any one process will be exclusively involved in excitotoxicity," says Mayer. "But results from neurophysiology labs like ours suggest some hope that clinically useful drugs will be produced in the near future." □



*Dr. Robert Nussenblatt, clinical director of the National Eye Institute, received an honorary Ph.D. from Bar-Ilan University in Ramat-Gan, Israel recently. He was honored for his work in the immunology of eye diseases, including studies using the immunosuppressant drug cyclosporine to treat uveitis, an inflammatory eye disease. He also is involved in clinical detection of the AIDS virus in tears and conjunctival epithelium, and treatment of AIDS patients with cytomegalovirus retinitis, a potentially blinding eye disease caused by this opportunistic infection. Professor Emanuel Rackman, chancellor of Bar-Ilan, said that Nussenblatt was one of the youngest scientists, if not the youngest, ever to have been chosen to receive an honorary doctorate by Bar-Ilan University.*



*Dr. John C. Donovan was recently installed as a member of the board of directors of the American College of Laboratory Animal Medicine. As director of NCI's Office of Laboratory Animal Science, he is being honored for his expertise in the field of laboratory animal medicine. He was certified as a diplomate of the college in 1983, a position achieved through successful completion of experience requirements and a comprehensive examination. As a board member, he will be responsible for the legislative and administrative operations within the college constitution and bylaws. He received his B.S. degree in 1972 from the United States Military Academy and his D.V.M. from Ohio State University in 1977.*

## The NIH Record

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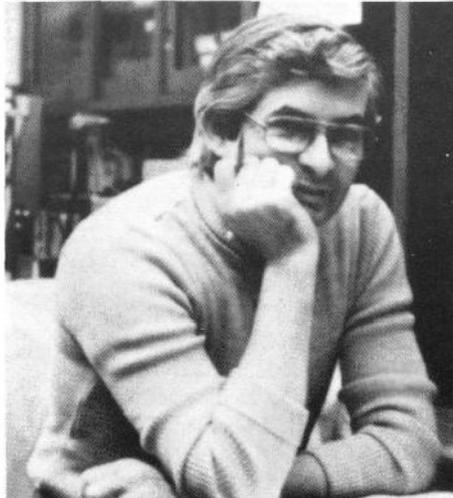
## Symposium To Honor Dr. Herbert G. Windmueller

A symposium honoring NIDDK scientist emeritus Dr. Herbert G. Windmueller, who is known for his pioneering research in lipoproteins as well as glutamine metabolism, will be held on Sept. 29 from 8:30 a.m. to 12 noon in the Lipsett Auditorium. Although Windmueller will be unable to attend the symposium due to illness, a special audio hook-up at his home will allow him to participate.

"The Windmueller style of science—great independence of ideas, patience in resolving problems others found too difficult to attack, and a vigorous insistence on controls in interpretation—gives us a model of the quintessential scientist," said former NIH director Donald S. Fredrickson, himself an expert on lipoprotein metabolism who collaborated with Windmueller on several projects.

Lipoproteins are the main carriers of lipid, or fatty substances, in the blood. The once obscure area of lipoprotein metabolism now plays a major role in the understanding of nutrition as well as cardiovascular and metabolic diseases. "The field has been singularly advanced by Dr. Windmueller's work," said Frederickson. "One of the many mysteries that has been brought into view over the last 30 years has been the origin and metabolism of the proteins that carry the poorly soluble lipids throughout the body. Windmueller was one of the first workers to develop methods describing where these apoproteins arise and how they are utilized."

Windmueller first came to NIH in 1958 as a summer student from Virginia Polytechnic Institute and worked with Dr. Olaf Mickelsen, chief of the Laboratory of Nutrition and Endocrinology, NIAMD (now NIDDK). As Windmueller's interests turned to the synthesis and metabolism of lipoproteins, he became an expert in rat perfusion



Dr. Herbert G. Windmueller

techniques and developed an isolated small intestine preparation that was more viable than had been achieved previously. The technique he developed enabled him to study the synthesis of apoprotein B, a major structural protein of the larger lipoproteins, VLDL and chylomicrons. His perfusion work also allowed him to observe that the amino acid glutamine is a main source of energy for the small intestine, an observation later confirmed by detailed experiments.

The symposium for Windmueller will include introductory remarks by his friends and colleagues from NIDDK and will feature presentations on lipoprotein metabolism by Drs. Julian Marsh of the Medical College of Pennsylvania and Lawrence Chan, Baylor College of Medicine. Drs. Dieter Haussinger, University of Freiburg, and Michael Kilberg, University of Florida, will discuss aspects of glutamine metabolism.—Joan Chamberlain □

## Employees Invited To Design New NIH Logo

How does \$500 in your pocket sound? Maybe to pay for those favorite Christmas presents, or even a snow blower for the coming winter months? You can win \$500 if you are creative and design the winning NIH logo.

Yes, once again employees are asked to become creative in their spare time and design an NIH logo that will reflect what NIH is all about.

Entries are to be received by Nov. 15. You may submit as many designs as you like, however each design must be a black and white drawing on unlined 8½" by 11" paper. Be sure to put your name, NIH address and

phone number on the back of each design so if your design is chosen we can contact you and hand over the cold cash.

An NIH Logo Committee will critique each entry whether it is a design or the expression of an idea and a winner will be selected from its review. Professional artists from DRS' Medical Arts and Photography Branch will refinish the winning design.

Send your entry today to: NIH Logo Contest, NIH Visitor Information Center (VIC), Bldg. 10, Rm. B1C218. If you need further information, call 496-1776. Who knows, you may be the lucky NIH'er whose design will represent our institution. □

## BIG Receives Service Award

The NIH chapter of Blacks in Government (BIG), a support group that monitors the concerns of black civil servants, received the Distinguished Service Award from the national Blacks in Government organization. The award is the highest a chapter of BIG can receive from the national organization.

The NIH chapter was recognized for its continuing efforts in eliminating institutional racism. Philanthropic and educational programs aimed at encouraging pride and professional development in black employees were also significant factors in the selection process.

The presentation was made at a banquet during the 10th National Training Conference, Aug. 10-14, at the Washington Hilton Hotel in Washington, D.C. The keynote speaker was Dr. Alan Boesak, president of the World Alliance of Reformed Churches in South Africa.

Oscar Eason Jr., chairman of the national board of directors of BIG, presented the award to Sylvia Stewart, president of the NIH chapter of BIG. Stewart is a computer systems analyst at the National Library of Medicine, and has been an active member of BIG since 1982.

"BIG has come a long way in gaining stature among the other special interest groups in existence at NIH," Stewart says, adding that, "[the award will] enhance our visibility and credibility as a valuable resource in the decisionmaking process concerning a large chunk of the NIH workforce."

BIG was conceived by DHEW black federal employees at the Parklawn building in 1975 to address racial problems faced by black DHEW employees in Rockville. The NIH chapter was established in 1982. BIG now has a network of 11 regions covering the United States, Puerto Rico, and the Virgin Islands.

The major goals of BIG include advocacy of equal opportunity for blacks in government. BIG also strives to be an information resource network that provides programs and training to enhance professional, social and economic wellbeing among black employees in federal, state and local governments.

—Michael M. Daniel □

## Back Scan Vols Wanted

Normal volunteers are wanted to undergo a Magnetic Resonance Imaging (MRI) scan of the lower back. Volunteers will be paid and will be given a copy of their state-of-the-art scan. There is *no* radiation exposure. Anyone over age 21 is eligible if they have *not* had low back problems or previous back surgery. To schedule a scan appointment contact Dr. Boden, 223-8492. □

## RESEARCH

*(Continued from Page 1)*

Alan Schechter, NIDDK, chair. 8 a.m. Welcome to NIH Research Day '88, J. E. Rall, NIH deputy director for intramural research; 8:10, Introduction, Alan Schechter; 8:30, Structural and Dynamic Aspects of Site Specific Recombination, Howard Nash, NIMH; 9, Lymphoid V(D)J Gene Recombination in Normal and Mutant Cells, Martin Gellert, NIDDK; 9:30, Transcriptional Regulation of the Papilloma Virus, Peter Howley, NCI; 10, Regulation of Heat Shock and Segmentation Genes in *Drosophila*, Carl Wu, NCI; 10:30, Mechanisms of Control of Globin Gene Transcription, Gary Felsenfeld, NIDDK; 11, Regulation After Transcription: RNA Regulatory Elements, Richard Klausner, NICHD.

**Molecular and Cellular Biology of the Nervous System, 1:30-4:15 p.m.**, Masur Auditorium, Bldg. 10, Monique Dubois-Dalq, NINCDS, chair. 1:30, Introduction, Monique Dubois-Dalq; 1:35, Receptors, Michael Brownstein (NIMH); 2, Myelin-Forming Cells: Lineage and Gene Expression, Monique Dubois-Dalq (NINCDS); 2:25, Proteins in the Ig Superfamily that Mediate Cell-Cell Interactions in the Nervous System, Richard Quarles (NINCDS); 2:50, Nerve Growth Factor and Other Growth Factors Affecting the Nervous System, Gordon Guroff (NICHD); 3:15, Regulation of Opioid Peptide Gene Expression, Joan Schwartz (NINCDS); 3:40, Adrenal and Mesencephalic Grafts in Experimental Parkinson's Disease of Monkeys, Irwin Kopin (NINCDS); 4:05, Wrap Up.

Scientific Posters, 8:30 a.m. to 3 p.m.

More than 240 scientific posters covering molecular biology, cell biology, receptors, oncogenes, signal transduction, clinical research, immunology, infectious diseases, neurobiology and information systems will be on display in the Research Day tents. Senior authors will be at their posters from 11:30 a.m. to 1:30 p.m. Among the scientists who will be presenting posters are, Sankar Adhya (NCI), Bob Simpson (NIDDK), Julian Ambrus (NIAID), French Anderson (NHLBI), Gilbert Ashwell (NIDDK), Carolyn Bondy (NINCDS), Bryan Brewer (NHLBI), Samuel Broder (NCI), Michael Challberg (NIAID), Janice Chou (NICHD), Ronald Crystal (NHLBI), Hal Gainer (NINCDS), Ed Ginns (NIMH), Michael Good (NIAID), Curtis Harris (NCI), Paula Hoffman (NIAAA), Deborah Hinton (NIDDK), David Klein (NICHD), Lance Liotta (NCI), George Martin (NIDR), John Minna (NCI), Brian Murphy (NIAID), Abner Norkins (NIDR), Paul O'Brien (NEI), Keiko Ozato (NICHD), Takis

Papas (NCI), Steven Paul (NIMH), Harvey Pollard (NIDDK), Steven Rosenberg (NCI), David Sachs (NCI), Joan Schwartz (NINCDS), Alfred Steinberg (NIAMS), Steven Strauss (NIAID), Martha Vaughn (NHLBI), and Heiner Westphal (NICHD).

Box lunches (\$3 plus drink) will be on sale in the Research Day tents from 11:30 a.m. to 1:30 p.m.

Workshops, 2-5 p.m.

**Clinical Research, Bldg. 10, Lipsett (ACRF) Auditorium I.** Loriaux (NICHD) and S. Broder (NCI), chairs. Speakers: R. Nussenblatt (NEI), W. Gahl (NICHD), J. Hoeg (NHLBI), M. Linnoila (NIAAA), G. Cutler (NICHD), D. Weinberger (NIMH), S. Rosenberg (NCI), J. Doppman (CC), R. Yarchoan (NCI).

**Calcium and Protein Kinases, Bldg. 30, Rm. 117 C.** Klee (NCI) and K.-P. Huang (NICHD), chairs. Speakers: M. Beaven (NHLBI), P. Blumberg (NCI), D.C. Klein (NICHD), S.G. Rhee (NHLBI), J. Zimmerberg (NIDDK).

**DNA Replication, Repair and Mutagenesis, Bldg. 60 (The Cloister), Chapel S.** Gottesman (NCI) and K. Dixon (NICHD), chairs. Speakers: S. Wickner (NCI), J. Tomizawa (NIDDK), T. Kunkel (NIEHS), R. Schaaper (NIEHS), K. Tindall (NIEHS), K. Dixon (NICHD), M. Protic (NICHD).

**Cell Motility, Contractility, and the Cytoskeleton, Bldg., 10, 8th Floor Solarium R.** Adelstein (NHLBI) and E. Korn (NHLBI), chairs. Speakers: J. Gallin (NIAID), E. Hamel (NCI), J. Hammer (NHLBI), E. Lakatta (NIA), H. Pollard (NIDDK), J. Sellers (NHLBI), B. Kachar (NINCDS), R. Horowitz (NIAMS).

**Structure and Function of Macromolecules, Bldg. 31A, Rm. 2A52 J.** Maizel (NCI) and D. Davies (NIDDK), chairs. Speakers: C. Hyde (NIDDK), M. Clore (NIDDK), E. Padlan (NIDDK), D. Lipman (NIDDK), J. Maizel (NCI), A. Stevens (NIAMS).

**Recombination and Transposition, Bldg. 31A, Conf. Rm. 4 R.** Weisberg (NICHD), chair. Speakers: R. Craigie (NIDDK), R. Weisberg (NICHD), A. Klar (NCI), M. Lichten (NCI), D. Camerini-Otero (NIDDK).

**Transcriptional Response to the Environment, Bldg. 60 (The Cloister), Large Classroom A.** Hinnebusch (NICHD) and C. Wu (NCI), chairs. Speakers: M. Cashel (NICHD), S. Adhya (NCI), A. Hinnebusch (NICHD), D. Nebert (NICHD), B. Paterson (NCI), T. Evans (NIDDK).

**Developmental Biology, Bldg. 60 (The Cloister), Cloister Lecture Hall I.** Dawid (NICHD) and S. Morse (NIAID), chairs. Speakers: W. Davidson (NCI), J. Kennison

(NICHD), A. Kimmel (NIDDK), J. Piatigorsky (NEI), T. Sargent (NICHD), B.J. Fowlkes (NIAID).

**Molecular Genetics of Human Disease, Bldg. 10, 11th Floor Solarium M.** Israel (NCI) and E. Ginns (NIMH), chairs. Speakers: J. Marini (NICHD), S. Chang (NINCDS), M. Israel (NCI), B. Zbar (NCI), E. Ginns (NIMH), M. Dean (NCI).

**Extracellular Matrix and Cancer: Molecular Mechanisms, Bldg. 36, Rm. 1B13 L.** Liotta (NCI), chair. Speakers: L. Liotta (NCI), W. Stetler-Stevenson (NCI), M. Sobel (NCI), P. Steeg (NCI), G. Davis (NIDDK), D. Roberts (NIDDK), G. Martin (NIDR), K. Yamada (NCI).

**Molecular Biology of Infectious Diseases, Bldg. 10, Rm. 9S237 L.** Miller (NIAID), chair. Speakers: M. Good (NIAID), R. Schlegel (NCI), B. Mock (NCI), B. Moss (NIAID), N. Copeland (NCI).

**Research Day Shuttle Service**

Shuttle service will be provided from several NIH buildings on campus to the tents by the NIH Motor Pool on Sept. 27—Research Day.

The shuttle will begin at 11 a.m. and run every 20 minutes throughout the day until 4:30 p.m.

The shuttle will begin in front of Bldg. 10 and will stop at Bldgs. 60, 31A, 12A, and 41, ending the route at the tents located in the parking lot of Bldg. 30 (parking lot 10-1).

The shuttle will return to the buildings listed above; there will be a sign identifying the shuttle on the vehicle.

**Intracellular Trafficking and Antigen Presentation, Bldg. 41, Rm. A206 R.** Schwartz (NIAID) and M. Gottesman (NCI), chairs. Speakers: R. Schwartz (NIAID), M. Gottesman (NCI), J. Hanover (NIDDK), J. Bonifacino (NICHD), A. Robbins (NIDDK), K. McCoy (NIAID).

**Cellular Communication: Neuropeptides and Protein Growth Factors, Comparisons and Contrasts, Bldg. 37, Rm. 6B23 W.** Paul (NIAID) and H. Gainer (NINCDS), chairs. Speakers: J. Pierce (NCI), L. Eiden (NIMH), J. Oppenheim (NCI), D. Brenneman (NICHD), W. Klee (NIMH), W. Leonard (NICHD).

**HIV Science, Bldg. 37, Rm. 1A15 S.** Koenig (NIAID) and G. Franchini (NCI), chairs. Speakers: K. Strebel (NIAID), P. Nara (NCI), G. Pavlakis (NCI), S. Gartner (NCI), S. Koenig (NIAID), H. Mitsuya (NCI), J. Kovacs (CC), A. Rabson (NIAID), J. Leonard (NIAID), H. Takahashi (NCI), G. Jay (NCI).

*Receptor-Mediated Targeting*, Bldg. 10, Medical Board Room. I. Pastan (NCI) and T. Waldmann (NCI), chairs. Speakers: I. Pastan (NCI), T. Waldmann (NCI), D. Segal (NCI), H. Metzger (NIAMS).

*Progress in Epidemiology and Population Genetics*, Bldg. 31C, Conf. Rm. 9 J. Mulvihill (NCI) and W. Rogan (NIEHS), chairs. Speakers: K. Nelson (NINCDS), W. Rogan (NIEHS), R. Fabsitz (NHLBI), M. Tucker (NCI), P. Bennett (NIDDK), E. Gershon (NIMH), J. Byrne (NCI), J. Mulvihill (NCI).

*Genomic Analysis and Gene Transfer*, Bldg. 60 (The Cloister), Small Classroom S. O'Brien (NCI), chair. Speakers: S. O'Brien (NCI), D. Bodine (NHLBI), K. Carnetta (NHLBI), D. Singer (NCI), S. Smith-Gill (NCI).

*Neurobiology of Behavior*, Bldg. 36, Rm. 1B07 S. Paul (NIMH) and S. Kety (NIMH), chairs. Speakers: S. Kety (NIMH), P. Skolnick (NIDDK), B. Richmond (NIMH), T. Insel (NIMH).

*Evolutionary Biology*, Bldg. 31 A, Conf. Rm. 2 T. Fanning (NCI), chair. Speakers: R. Benveniste (NCI), L. Forman (NCI), A. Furano (NIDDK), T. Fanning (NCI).

*Scientific Computing at the NIH: Manuscript and Poster Preparation, Image Analysis, Data Processing and Accessing Medical/Scientific Databases*, Bldg. 12A, Rm. B47-B51 G. Combs (OD), chair. Speakers: J. Strickland (NCI), D. Powell (DCRT), NLM staff, NIH Library staff.

Further information for speakers (symposia, workshops and posters) about time, place and format of presentations has been distributed to each scientific director's office. Speakers and session chairpersons who have not received this information should contact their scientific director now. □

## Normal Volunteers Needed

The National Institute of Dental Research seeks healthy male and female volunteers (ages 18-45), who have no history of cardiovascular disease or chronic pain problems, to participate in a study examining the effects of relaxation on sensory perception and physiological responses to stressors. Perception and physiological responses will be assessed before and after a 1 to 4-week relaxation training period. Volunteers will be paid for their participation, which will include five to nine visits to the Clinical Center. Please call Alexandra Gaughan, 496-5483, 8-4:30 M, T, Th; 8-12 W, F. □



NIAID's 1988 Equal Employment Opportunity Awards were presented recently by director Anthony S. Fauci. Recipients pictured (from top, l) are: Dr. Richard Asofsky, chief, Laboratory of Microbial Immunity; Michael Goldrich, chief, office of administrative management; Fauci. Seated are William Humphrey, Jr., biology laboratory technician, Laboratory of Immunology; and Jean M. Hudgins, supervisor, financial management unit. Not pictured are Rocky Mountain Laboratories awardees Elizabeth S. Hamby, medical science librarian; and Dr. Robert K. Bergman, chief, Operations Branch.

## Safety Class Well Received

"How to Survive in Biomedical Research" was the focus of a half-day course for summer students, fellows and volunteers of the National Institute of Diabetes and Digestive and Kidney Diseases. The new safety course, dealing with safe laboratory practices in the use of chemicals, radioisotopes and infectious materials was developed by Dr. Jonathan Richmond and Michael Spillane of the Division of Safety and Dr. Calvin Foltz, NIDDK safety officer, at the suggestion of Dr. Jesse Roth, scientific director for NIDDK's Division of Intramural Research. The course was taught by experts from DS.

The course, attended by 29 students, covered principles of safe laboratory practices, responsibility for safety, containment of hazardous chemicals and organisms, personal protection gear, general waste management, decontamination and management of emergencies at NIH. "This course is designed to introduce young scientists to the information and tools needed to cope with the hazards of the research laboratory while pursuing productive and creative research. It is part of our continuing commitment to safety in the laboratory," said Roth.

Foltz reported that the course was very well received. "We will offer this broad introductory course in laboratory safety on a regular basis to all NIDDK summer workers as a way of enhancing the quality and safety of the young scientist's laboratory experience at NIH and beyond." □

## Computers in Cardiology

The 15th annual International Conference on Computers in Cardiology will be held Sept. 25-28 at the Hyatt Regency in Bethesda. The meeting, cosponsored by DCRT, NHLBI, the Clinical Center and the European Society of Cardiology, will involve clinicians, physiologists, engineers and computer scientists and will focus on the emerging applications of computer technology to clinical cardiology and cardiovascular research.

Papers covering a wide variety of topics will include cardiovascular image processing, ventricular function and psychologic modeling, arrhythmia and diagnostic ECG analysis and medical decisionmaking and data management. Internationally respected faculty will present a series of half-day tutorials on the Sunday preceding the conference. Material will introduce attendees to new technology in areas such as ECG analysis and silent ischemia detection.

New this year is the Industry Forum, which will focus on the solid-state ambulatory ECG arrhythmia analyzers, devices that are worn on the waist and monitor arrhythmias in real-time using an internal microcomputer. This event will consist of two parts—a scientific session of invited papers from seven manufacturers and a hands-on demonstration of all presented devices. For further information or registration, call 496-1111. □



Dr. Jia-Yeong Tsay, NINCDS, has been elected president of the International Chinese Statistical Association (ICSA). He will serve as president-elect in 1989, president in 1990 and past president in 1991. Some objectives of ICSA are: to promote the theory and applications of statistical disciplines through scholarly activities; to promote better understanding and interest by the general public in statistical methodology and related applications; and to promote better communication through the development of standards and common terminology. Before joining the Epilepsy Branch at NIH in 1981, Tsay served on the faculty of the University of Cincinnati Medical College and the staff of Biometrics Division, Center for Drugs and Biologics, FDA.

**ZIMBRICK***(Continued from Page 1)*

ber, I've been interested in radio and science," he said. "Killeer had some interesting atmospheric. As soon as the sun went down, the AM dial was filled with stations. There was a real smorgasbord of radio at night."

Radio waves and therapeutic radiation are closely related entities in physics; both are forms of electromagnetic energy. Where radio waves occupy a frequency range above the audio range at which humans hear, therapeutic radiation is much further up the frequency scale, beyond the ultraviolet into the X- and gamma-ray range. Zimbrick has made a career of putting both forms of energy to their most benign, if not entertaining, use.

"Very early on, I got interested in jazz—back in the 1950's," he said. "I listened to Brubeck, Ellington, Fitzgerald and Vaughan. My parents were very musical, but not in jazz. My dad, who was only one generation removed from Germany, played accordion. The local dances were very much like European ones with waltzes, polkas and schottisches. My parents encouraged me in music but didn't dig what I was into."

Zimbrick picked up a clarinet when he was 8 and played it through his college years.

"We had a little jazz band in high school," he recalls. "We played Dixieland, mainly."

During high school he took his first radio job at KDIX in Dickinson, N.D. The year was 1955 and he was 16 years old.

"Radio was very community oriented in those days, kind of like WMAL is today in Washington," he said. "We had music, news, farm shows. I had an afternoon show during the summers of my junior and senior years. Every once and a while I tried to slip some jazz in."

Zimbrick entered Carleton College in Northfield, Minn., during the fall of 1956. He chose the school for two reasons—it had a good reputation in the sciences and a good college radio station.

"There were no decent schools in the hard sciences in North Dakota," he said. "And Carleton had a very active student-run commercial radio station."

He joined KARL shortly after arriving on campus.

"They lost a crop of seniors every year and recruited new people from the incoming class. Anyone with experience was wanted."

Zimbrick not only had his own morning show on which he could play jazz, but also sold and wrote commercials, produced programs and ended up his junior and senior years as news director and program director, respectively.

"It was an ideal way to learn radio."

The physics and math major had several highlights during his campus radio career. He conducted his first live radio interview ever at age 18 with Duke Ellington, who was swinging through Minnesota on a concert tour.

"I wish I had had the foresight to tape the interview," he says. "There was no way to assess at the time how important a figure Ellington really was. But I have nothing but good things to remember about it. Duke was very nice and polite."

The second highlight occurred when Zimbrick was news director at KARL.

"One day a tall, lanky kid came in and asked to learn about radio news. He was very shy and his name was Garrick Utley."

Presently an NBC television news correspondent, Utley also looms as one of Zimbrick's "claims to fame. I guess I was his first mentor."

After graduating from college, Zimbrick received an Atomic Energy Commission fellowship to study the effects of radiation on living systems at the University of Kansas.

"I got interested in applying physics to biology," he said. "There were a lot of advances being made in instrumentation for studying biological problems. At Carleton there had been a lot of interdisciplinary cross fertilization. And Kansas had a department of radiation biophysics. It was perfect for me—that's exactly what I wanted to do."

No sooner did he begin master's degree studies than he snagged a Friday evening jazz show on KUOK, the student station at the university in Lawrence, Kan. For the two years it took him to obtain his degree, he remained on the air. Then in 1962 Zimbrick got married and moved to Chicago to work at the Illinois Institute of Technology. Once again he reached the air, hosting a Saturday afternoon jazz show on WEBH, an FM station originating in Chicago's Edgewater Beach Hotel.

Realizing he needed a Ph.D. to get further in his profession, Zimbrick returned to Lawrence where his dissertation on "Electron Paramagnetic Resonance Studies of Trapped Electrons, Hydrogen Atoms and Free Radicals in Irradiated Solids" effectively smothered his radio career.

"You have to eat, sleep and breathe your work to finish a Ph.D.," he laments.

Because his studies were interdisciplinary, Zimbrick had to compete with graduate students concentrating solely on chemistry, biology or physics.

"It's hard to find people who like all the sciences well enough to beat their brains out in each of them," he admitted. "But it has served me well over the years."

The airwaves were to remain Zimbrick-less when he took his first postdoctoral job at the Idaho National Engineering Laboratory. His assignment? To create a small scale dairy farm, complete with cows and pastures, in order to test the effects of airborne radioactive iodine on milk.

"I thought that was kind of an interesting challenge," he recalls. Borrowing cattle from Montana State University and farmers, chemists and meteorologists from their disciplines, Zimbrick turned a patch of Idaho desert into a farm in just over a year. Results of his research are still used to evaluate the environmental dangers of a Three Mile Island-type nuclear reactor accident.

From Idaho, Zimbrick migrated to UCLA's laboratory of nuclear medicine and radiation biology.

"It was a good place to do what I'd always wanted to do," he said—study the effects of radiation at the level of DNA molecules and genes. He concentrated on bromouracil, a molecule still studied today at NIH. It makes DNA more sensitive to radiation.

"It is of value to therapy since smaller doses of radiation could be used in cancer patients," he said.

When not in his UCLA lab, Zimbrick found time to do substitute disc jockey work at KCRW, the radio station of Santa Monica City College.

However, as Zimbrick's radio career began to heat up again, so did the antiwar movement. The year was 1968 and campuses were becoming hotbeds of student protest. Back in Kansas, however, two forces were shaping the next decade and a half of Zimbrick's life—the radiation biology department at UK was expanding and seeking faculty members, and National Public Radio was just blossoming on university campuses across America.

"We had just adopted our first child when the war protests broke out," he remembers. "The Midwest seemed like a calmer locale."

For 15 years prior to joining NIH 4 years ago, Zimbrick enjoyed total artistic license on his weekly jazz show on KANU-FM, an NPR station with a whopping 110,000 watts of power. First on Thursday afternoons, then on Fridays, he played music that could be heard in substantial portions of the Great Plains.

Today Zimbrick is the king of his own great plain—a three-hour swath of Sunday afternoon onto which his upbeat and friendly programming ripens like a prairie sunrise. Featuring straight-ahead mainstream jazz played primarily on acoustic instruments, Zimbrick's "Jazz Cornucopia" is an oasis of optimism and romance. Shunning the avant-garde, his show substitutes openness for some of jazz's sharper angles and passions.

He insists that his soft, though resonant, broadcast voice is not something he practices or is even particularly conscious about.

"I didn't ever work at it," he says. "It was just there."

Located at 89.3 on the FM dial, WPFW is a listener-sponsored jazz and information station operated by Pacifica Foundation. It relies almost totally on its listeners for financial support, much of it solicited by its disc jockeys while on the air.

The 50,000-watt station also depends on its volunteer DJs to bring their own records; some even bring their own microphones, headphones and needles for the turntables.

Since 1984, Zimbrick has had a show on WPFW. Though he started as a substitute, he progressed quickly to a Friday morning show, then a regular Sunday afternoon slot beginning in the winter of 1985.

Every Sunday, Zimbrick lugs a suitcase full of records, tapes and compact discs to the WPFW studios in lower northwest Washington's Chinatown. Culled from his collection of more than 5,000 LPs, including some rare old 78 rpm discs, the music includes such favorites as Duke Ellington, Count Basie, Ella Fitzgerald, Sarah Vaughan and Carmen McRae. Having spent several hours during the week deciding what to play, and in some cases doing his own production work on audio equipment at home, Zimbrick settles in to let the music do the talking.

"I try to balance the content of the show so that the listener gets a wide variety of music," he said. "I tend to program through the instruments, too—the saxophone, trumpet, trombone, guitar, piano, big band. I have total artistic control—nobody tells me a thing."

He also enjoys taping interviews with artists visiting Washington for concerts.

"I'll go anywhere for an interview," he said. "I try to present the artist as a person, then examine how they write, arrange and practice. If I can, I try to get the artist to play for me. The interviews go over well on the show. I get a lot of phone calls."

Zimbrick says he imagines his audience as "one or two people," which may account for the intimacy he is able to convey. Like his friends and colleagues Felix Grant, Paul Anthony and Bill Mayhugh, he has a soothing on-air personality that makes listening to his show almost therapeutic.

"I have a surprising number of younger listeners," he says, clearly pleased with "Cornucopia's" success. Many listeners are fellow NIH'ers who are aware of both his musical interests and his good advice on what kinds of stereo to buy.

Regarding the connection between science and music he has this to say:

"There is a big relationship between any kind of serious music and science. The patterns and underlying concepts are there in both cases—they seem very harmonious for some reason. Both require analysis. In both you are constantly trying to find out what makes it likeable, what makes it hold together."

If that explanation doesn't satisfy you, there is an alternative. Listen to the music.—

Rich McManus □



*Dr. Donald M. Jerina, chief of the section on oxidation mechanisms in NIDDK's Laboratory of Bioorganic Chemistry, was given the 1988 Alumni Achievement Award by Knox College, Galesburg, Ill., "in recognition of his outstanding career as a research chemist." He discovered that ellagic acid, found in grapes, nuts and strawberries can prevent the carcinogenic action of benzopyrene, an environmental pollutant. He is the recipient of the 1982 B. B. Brodie Award for Research in Drug Metabolism and the 1979 Hillebrand Prize for his leadership in the area of chemical carcinogenesis and metabolism.*

## KERMIT Seminar Offered

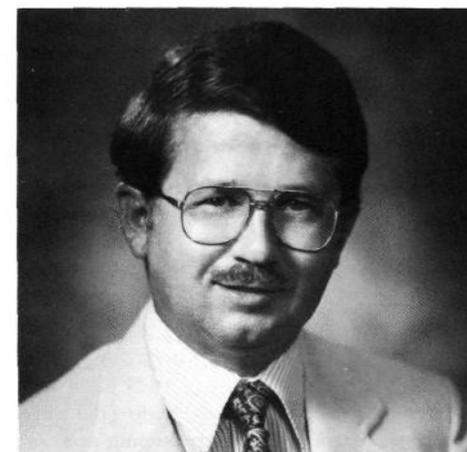
The DCRT training program is sponsoring a KERMIT seminar Sept. 27, 9–11 a.m., Bldg. 12A, Rm. B51.

KERMIT is a software package used for downloading and uploading from the mainframe to the PC. Topics covered include how to install and use KERMIT on the PC, and the commands used with it.

To register for the seminar, please contact the DCRT training unit, 496-2339, or TDD (Telecommunication Device for the Deaf) 496-8294. No formal application is required. □



*Dr. Richard M. Krause (l), who, during his tenure as director of NIAID, was responsible for fostering relationships and establishing collaboration between NIAID and its constituency groups, receives a recognition plaque from current director Dr. Anthony S. Fauci during the institute's 40th Anniversary Constituency Meeting held recently to provide its national outside interest organizations with a formal review of NIAID's research goals and achievements.*



*Dr. Bela J. Gulyas has joined DRR as executive secretary of the General Clinical Research Centers Committee where he is responsible for reviewing grant applications submitted to the GCRC program. Prior to his recent appointment he was executive secretary for the reproductive endocrinology study section in DRG. He began his federal career in 1971 with NICHD as a senior staff fellow, later becoming chief of the section on gamete physiology.*

## Kirsten Named Frederick Cancer Research Chief

Dr. Werner H. Kirsten has been named the new associate director of the NCI-Frederick Cancer Research Facility (FCRF). The government-owned facility located in Frederick, Md., is a federally funded research and development center operated by multiple contracts between NCI and the commercial sector totaling about \$100 million annually.

Kirsten comes to NCI-FCRF from the University of Chicago's department of pathology where he has been chairman since 1972. He was chairman of the FCRF scientific advisory committee from July 1985 to March 1988.

Outgoing NCI director Dr. Vincent T. DeVita Jr., said, "I am very pleased to have Dr. Kirsten join NCI. He brings with him considerable understanding about FCRF's unique research operations." Kirsten co-chairs the AIDS vaccine subcommittee of PHS's AIDS Executive Task Force along with Dr. Anthony Fauci, director, NIAID. He will also represent NCI at the meetings of the NIH AIDS program advisory committee.

Since FCRF began operation in 1972, it has been internationally recognized for its advances in laboratory cancer research. The facility also has a major role in research on vaccine development and diagnostic testing for AIDS. The numerous scientific research programs within the 67-building facility are funded through contracts awarded to various firms for continuation of the facility's established expertise in cancer research.

Kirsten said he "plans to maintain the high



Dr. Werner H. Kirsten

level of research excellence at FCRF and to continue to attract first-rate scientists to participate in the facility's basic research program."

From 1978 to 1982, Kirsten served as chairman of NCI's cancer special program advisory committee and has been president of the Association of Pathology Chairmen since 1982. He has served on 6 editorial boards and is the author or coauthor of more than 75 scientific articles. Kirsten also serves on the board of directors of the Damon Runyon-Walter Winchell Fund for Cancer Research and the Leukemia Society of America. □

## Griesemer To Direct Toxicology Research at NIEHS

Dr. Richard A. Griesemer has been named director of the Division of Toxicology Research and Testing at the National Institute of Environmental Health Sciences in Research Triangle Park, N.C.

Before joining NIEHS, Griesemer, a diplomate of the American College of Veterinary Pathologists, had been senior research scientist at the Oak Ridge National Laboratory, Oak Ridge, Tenn., since 1980. He also has held positions as director of the biology division at Oak Ridge from 1980 to 1987, deputy director of the National Toxicology Program from 1979 to 1980, and from 1977 to 1980 was associate director of the Division of Cancer Control and Prevention, and director of the bioassay program at the National Cancer Institute.

The division Griesemer will head is the NIEHS component of the National Toxicology Program that was established by the secretary in 1978 to coordinate and strengthen the department's activities in characterizing the toxicity of chemicals.

Griesemer received the D.V.M. degree in 1953 and the Ph.D. degree in pathology in 1959, both from Ohio State University. The College of Veterinary Medicine there presented him with the distinguished alumnus award in 1987. He also won the NIH Director's Award in 1979, and the American Veterinary Medical Association's Gaines Award and gold medal in 1968 for research on diseases of small animals. □

## Dr. James Hill Named NIAID Deputy Director

Dr. James C. Hill has been named deputy director of the National Institute of Allergy and Infectious Diseases. He has served as acting deputy director for the past year. Hill has been assistant to the director since 1984, and from July 1983 to December 1984, NIAID's associate director for intramural research. He holds the rank of scientist director in the Commissioned Corps, PHS.

Hill joined the institute's Microbiology and Infectious Diseases Program in 1974 as bacterial vaccines program officer. He directed a complex program aimed at developing and evaluating bacterial vaccines—particularly for pediatric populations.

After a serious outbreak of meningitis A in Finland, Hill arranged for field trials of candidate meningitis vaccines with the Finnish government. The results of these trials conclusively showed the effectiveness of a meningitis A vaccine in preventing infection in very young children. The results of these studies were instrumental in extending the



Dr. James C. Hill

licensing of the group A meningococcal vaccine to all age groups. For this important work, he received the PHS commendation medal in 1979.

During his first year as assistant to the director, NIAID, Hill also served as coordinator for research on acquired immunodeficiency syndrome (AIDS). For his key role in developing and championing the AIDS research initiatives, he earned the PHS outstanding service medal in 1986. He was cited for "Outstanding contributions to the development of new research initiatives on acquired immunodeficiency syndrome."

Hill has recently been appointed a member of the NIH Grants Associates Board, and he previously served as a member and chairman of the Staff Training in Extramural Programs committee.

Born in Manila, Ark., he earned the B.S. degree from Arkansas State University and the M.S. and Ph.D. degrees from the University of Arkansas. □

## NIDDK Scientists Write Nutrition Textbook

By Jim Fordham

A newly revised, enlarged edition of the textbook *Human Nutrition*, written by Dr. Benjamin T. Burton, NIDDK associate director for disease prevention and technology transfer and Dr. Willis R. Foster, a senior staff physician of NIDDK, has been published by McGraw-Hill Book Co.

The 46-chapter text is an extensively expanded and updated fourth edition of the book *The Heinz Handbook of Nutrition*, first published in 1959 when the senior author was nutrition director for the Heinz company. The new edition includes a foreword by Sen. H. T. Heinz III, as a tribute to this background. The first edition was chosen by the Pan American Health Organization for translation into Spanish, and was distributed in Latin America under the title *Nutricion Humana*. Since then, subsequent editions have also been translated and published in Portuguese and in Arabic.

"We think this is the most up-to-date, authoritative and practical book available, not only for physicians or dietitians who treat or supervise patients with diseases that require special diets," said Burton, "but also for the average person who would like to prevent disorders such as heart disease, stroke and diabetes."

The book begins by describing the physiology of digestion from the time food is placed in the mouth through the processes of absorption, cell metabolism and excretion. Early chapters cover such topics as energy metabolism, caloric requirements and the physiology and psychology of hunger, appetite and food intake.

Later chapters cover the various nutrients, the nutritional requirements of the human body and nutrition at different stages in the life cycle and during periods of stress. Major additions have been made in the areas of disease prevention, cardiovascular diseases, diabetes, cancer, osteoporosis, obesity, anorexia nervosa and bulimia, alcoholism, total parenteral nutrition, food allergy and toxicology. Interesting sections are also included on nutrition and dental health and nutrition in relation to community health, in natural disasters and in wartime emergencies.

Twenty-one chapters devoted to nutrition in different diseases cover everything from abetalipoproteinemia to xerophthalmia, constituting a virtual compendium of modern knowledge on the range of diseases known to be affected by nutritional factors or requiring special therapeutic diets. These chapters

include a wealth of helpful information for dietary management of patients, including a vast spectrum of therapeutic or preventive diets and pre- and postsurgical regimens. The book incorporates extensive tables of food composition that enable the reader to formulate diets and analyze patterns of food intake.

"The book is of paramount interest today," said Foster. "Many people are vitally concerned about nutrition and its role in disease prevention. For example, women want and need to know the facts and limitations concerning calcium nutrition and osteoporosis."

The authors say that their collaboration came about because the field of nutrition allowed expression of long term personal interests and experience and because nutrition is one of the most fundamental emphases and unifying themes of the research programs of their institute. □

## R&W Singers Season Begins

The NIH R&W Singers are starting their fall season and seek singers in all sections. Works planned for this year are madrigals, motets, carols and modern works. Rehearsals are in Masur Auditorium from 7:30 to 9:30 p.m. on Thursdays starting Sept. 22. A great voice is not required, but some background in reading notes is helpful. For further information call Richard Shrager, 496-1122. □

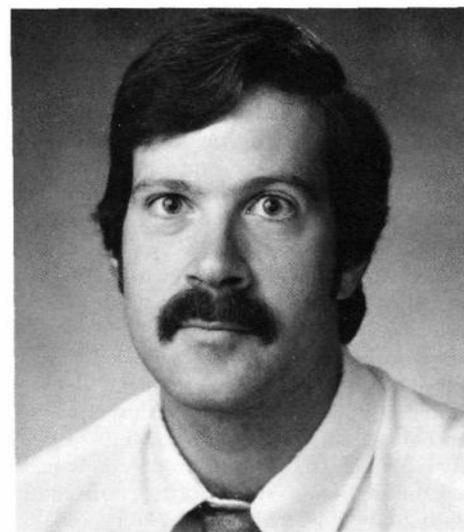
## DCRT Announces Three New Appointments



*Colleen Henrichsen was recently appointed public information officer at the Division of Computer Research and Technology. She comes to DCRT from the Clinical Center where she had been a public affairs specialist since 1980. She also served as deputy chief and acting chief of what is now Clinical Center Communications during that time.*



*Marian L. Dawson was recently appointed executive officer, Division of Computer Research and Technology. Previously, she was personnel officer at DCRT, a position she had held since 1981. Prior to joining DCRT, she held positions as a personnel management specialist with assignments in OD and NHLBI.*



*K. P. Murphy was recently appointed personnel officer at the Division of Computer Research and Technology. He came to DCRT in 1987 as a personnel management specialist. He was formerly a personnel management specialist at DRG from 1983 to 1987, and the Environmental Protection Agency from 1980 to 1983.*

## Dr. Abraham Goldin Dies; Was NCI Scientist Emeritus

Dr. Abraham Goldin, a scientist emeritus with the National Cancer Institute and one of the fathers of cancer chemotherapy, died of cancer on Aug. 5 at age 76. During his four decades of service at NCI, he was internationally recognized as a leader in the development of experimental models of human malignancy. He used those models to design effective drug regimens that are now successfully employed in clinical medicine.

Dr. Vincent DeVita, Jr., former director, NCI, said of Goldin, "We are saddened by his loss. Dr. Goldin's life was a life of service to science. His contributions to the development of cancer chemotherapy have earned him a permanent place in the history of cancer research. In a sense, the patients who benefitted from his dedicated research are his best memorial."

Goldin was born in New York City and received his bachelor's degree in biology from Brooklyn College in 1933. He did graduate work at Columbia University and received a doctorate in zoology from Columbia in 1942.

Following military service in World War II, Goldin served as a laboratory instructor at Queens College and at Brooklyn College. In 1946, he joined the staff of the Army Chemical Center at Edgewood, Md., and also served as research associate in the department of preventive medicine at Johns Hopkins University.

In 1949, Goldin joined NCI at the U.S. Public Health Service Hospital in Baltimore, where he headed the biology group and later the pharmacology section. When the NIH Clinical Center was completed in 1954, he moved to the Bethesda campus as a biologist in the laboratory of chemical pharmacology, where, under the tutelage of Dr. Murray Shear, he began investigation of the effects of intermittent schedules on experimental drug therapy. This work led to considerations of the optimum doses and schedules in treatment with the use of two or more drugs.

After the discovery of L1210 leukemia, which was induced in mice with a carcinogen, Goldin developed the L1210 murine model into a qualitative tool for studying anti-leukemia drugs. Most currently useful anticancer drugs were developed in this system. His observations on the intermittent administration of methotrexate were an important contribution to the use of this drug and illustrate the importance of scheduling and pharmacokinetics in the treatment of leukemias and lymphomas. He is credited with developing the concept of leucovorin rescue following methotrexate therapy, a widely used regimen in clinical cancer treatment.

In 1963, Goldin was appointed chief of the Drug Evaluation Branch of the Cancer Chemo-

therapy National Service Center. Later known as the Developmental Therapeutics Program, this organization has evaluated more than 400,000 synthetic compounds and pure natural products for anticancer activity against a variety of animal tumor models.

In 1966, Goldin became associate chief of laboratory research, drug research and development in the Division of Cancer Treatment (DCT). From 1977 to 1979, he served as assistant director for international affairs. From 1979 until his retirement in 1982, Goldin was assistant director for international treatment research, DCT.

He was appointed scientist emeritus at NCI in 1983. He served as adjunct professor on the staff of the Lombardi Cancer Research Center at Georgetown University beginning in 1981. Goldin had also been an adjunct professor of biochemistry at Brandeis University and was a research consultant in pharmacology to the George Washington University School of Medicine.

Surviving are his wife, Jessica W. Goldin of Bethesda; two brothers, David Goldin of

North Hollywood, Calif., and Isaac Goldin of West Hempstead, N.Y.; two daughters and three grandchildren.



*Dr. Jean Flagg-Newton has recently joined the National Institute of General Medical Sciences as executive secretary of the minority access to research careers review committee. She received her Ph.D. in physiology from Harvard University and her B.S. in zoology from Tennessee State University. Prior to coming to NIH, she was an assistant professor of pathology at the University of Oklahoma Health Science Center in Oklahoma City.*

## Sadler Named Grad School Dean

Dr. William A. Sadler, chief of the Reproductive Sciences Branch in the National Institute of Child Health and Human Development since 1979, has been named dean of the Graduate School of Arts and Sciences at Howard University.

"As dean, I will—among other things—be responsible for 24 Ph.D. and 40 master's degree programs as well as their research components," said Sadler. "Strengthening the research infrastructure at Howard University will be one of my principal goals."

Sadler has been at NICHD since 1972. He started as a health scientist administrator at what was then the population and reproduction branch. From 1973 to 1979, he served as chief of that branch in the Center for Population Research. From 1975 to 1979, he was also executive secretary of the population research committee.

He is widely published in professional journals and has coedited seven books on the subject of reproductive biology. In 1986, Sadler was the recipient of the highest civil service award, the Public Health Service Superior Service Award. He also received the highest NIH award, the NIH Director's Award, in 1977.

According to Sadler, his most gratifying accomplishment at NICHD was the establishment of the National Network of Major Research Centers in Reproductive Sciences,



*Dr. William A. Sadler*

which targets research in subjects ranging from recombinant DNA technology to investigations of early embryonic development. His branch also led the NICHD in developing a comprehensive computer-based system of information management utilizing the latest in computer technology.

Prior to coming to NICHD, Sadler was a member of the faculty at Texas Southern University in Houston. A native of Valley Mills, Tex., he earned his bachelor's and master's degrees from Texas Southern University and his Ph.D. in endocrinology from Purdue University in Lafayette, Ind. □



## 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</i> 496-6371	
Managing Behavior in the Work Environment	10/26
Working With Personal Differences: MBTI 1 for Technical & Support	10/12
Working With Personal Differences: MBTI 1 for GS-12 and above	10/19
Voice for Success for Professional Credibility	10/21
 <i>Office Operations Training</i> 496-6211	
Time Management and Organization for Secretaries, Clerks, and Administrative Assistants	10/3
Medical Terminology	10/11
Proofreading & Editing	10/17

### *Adult Education* 496-6211

### *Training and Development Services* 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 a.m.—9:00 p.m.
Friday	8:30 a.m.—4:30 p.m.
Saturday	9:00 a.m.—3:00 p.m.

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## Lillian Wathen Retires from NCI

After 27 years at NCI, Lillian Wathen retired at the end of August. "I have to stop sometime," says Wathen, "and now seems like a good time to 'stop and smell the roses.'"

Wathen had been a secretary in the Dermatology Branch of the Division of Cancer Biology and Diagnosis since the branch was created in July 1961. At that time, she was the only support person for the dozen department members, handling all administrative and clerical work. As the department grew to its current size of about 40, Wathen became the lead secretary of a three-person support staff. "I enjoyed my work," says Wathen, "NCI is fast-paced . . . It's an exciting world of medicine, and I feel I've been part of it."

Dr. Stephen Katz, chief of the Dermatology Branch, agrees. "Lillian Wathen has been an integral part of the successes of the branch," he says. "She was the backbone of the organization."

Dr. Arnold Ratner, a former clinical associate in the Dermatology Branch, now in private practice, recalls, "If there was ever a problem anywhere in the department, the answer was 'ask Lillian.'"

Many members of the department formed close friendships with Wathen. "It's very difficult to have anything but positive feelings when you're doing anything that involves Lillian," says Ratner. "She emanates an infectious warmth."

Born in New York City, Wathen moved to Maryland when she was 18 years old. She later moved to Rockville, where she has lived for 34 years. About her retirement, she says, "I



Lillian Wathen

plan to do all the things that I've been wanting to do. I'm starting a new phase of my life and I'm really looking forward to it." She jokes, "Everyone says that they are going to travel, and plant gardens, and see the world . . . but I do plan to travel." Wathen recently returned from a trip to the Orient where she visited one of her daughters living in Okinawa, Japan.

She has four children—three daughters and one son, and four grandchildren—three granddaughters and one grandson. One daughter, Tricia Wathen, works in NIH's Division of Financial Management.

"I'll miss the people," says Wathen. "It's the people that make the job. I feel I've been very rich when it comes to having friends here. Friends are worth more than gold."

A reception was held in her honor at the FAES house on Old Georgetown Rd. □

## Former NIDDK Secretary Mourned; Spent 13 Years at NIH

Alma Martinson, longtime secretary to the chief of the Laboratory of Molecular Biology, NIDDK, died on Aug. 3. She had been living in retirement in New Port Richey, Fla., with her husband.

Martinson came to NIH in September 1966, as secretary to Dr. Bruce Ames. By 1969, she had become secretary to NIDDK's lab chief, where she worked until her retirement in June 1982. Everyone who knew her remembers her for her warmth, friendliness and competence.

She is survived by her husband, Merritt L.; a son, Richard, Clarksville, Va.; a daughter, Merrith Wilson, Westminster, Md.; a brother, M.J. Kehrberg, Correll, Minn.; and two sisters, Virginia Thymian, of Correll, Minn., and Iva Kennedy, of Largo, Fla.



Brent Jaquet, chief, public inquiries and reports section of the Office of Planning, Evaluation and Communications, NIDR, has been selected to receive the NIH Merit Award. He was chosen for his "exceptional leadership in developing a positive, assertive communications program for the National Institute of Dental Research." Most recently, he coordinated an extensive assortment of activities to commemorate NIDR's 40th anniversary.

## Genetic Link to Epilepsy Found by NINCDS Grantee

By Pat Duncan

Scientists supported by the National Institute of Neurological and Communicative Disorders and Stroke have found the first evidence linking epilepsy to a specific chromosomal region. This work is reported in the September issue of the *American Journal of Medical Genetics*.

For more than 5,000 years, epilepsy has been believed to be heritable because in some families it appears more frequently than in the general population. But the seemingly sporadic and unpredictable occurrence of epilepsy in those families has complicated attempts to understand how it might be transmitted from generation to generation. Fortunately, developments on the diagnostic and genetics fronts are now providing scientists with the information they need to track down the alleged epilepsy gene, or genes.

The newest findings are reported by NINCDS grantee Dr. David Greenberg of the Southwest Regional Veterans Administration Epilepsy Center and colleagues at the UCLA School of Medicine, both in Los Angeles. The team chose as its model for studying the genetics of epilepsy a disorder called juvenile myoclonic epilepsy (JME). As are most heritable epilepsies, JME is a generalized seizure disorder, one involving electrical abnormalities throughout the entire brain. JME begins in adolescence, continues throughout life and can usually be medically controlled. Between 4 and 10 percent of the 2.5 million Americans with epilepsy have this type.

JME is ideal for studying the genetics of seizure disorders because families of JME patients have a higher-than-normal incidence not only of JME but also of other generalized epilepsies. Even more intriguing is the fact that some relatives of JME patients have electroencephalograms (EEGs), or electrical recordings of brain activity, that are indicative of generalized seizures, even though they themselves have no symptoms of epilepsy.

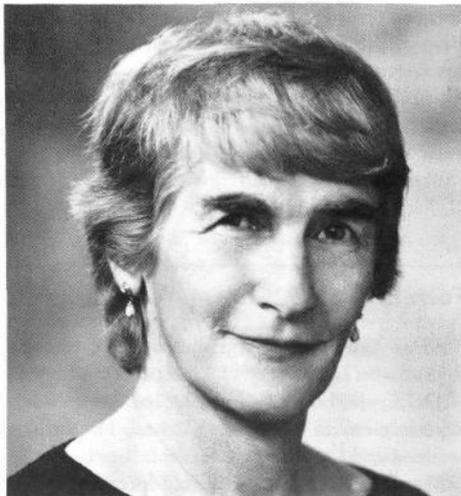
JME is also an attractive research model because the disorder almost always occurs between the ages of 8 and 20 years in persons destined to develop it. Some other seizure disorders can begin at any age or are not lifelong, complicating efforts to assess their inheritance patterns. By studying only adult relatives of JME patients, as Greenberg's team did, uncertainties about the possible occurrence of the disorder either in an individual's past or future can be reduced.

To try to locate a gene responsible for the JME and the abnormal EEG traits, the scientists analyzed genetic markers from the blood of persons with those traits and of their

unaffected relatives. Genetic markers are chemicals that indicate the presence of genes whose locations on chromosomes are usually known. Some markers were found to be usually inherited with the traits, suggesting that the genes for these markers and the gene for the traits are likely to be near one another, or linked, on the chromosome. Because the marker genes are on a particular region of chromosome 6, the location of the gene for the JME and the abnormal EEG traits is probably in that region as well.

In order to be officially established on the human gene map, Greenberg's result must be confirmed in an independent laboratory. Scientists in West Germany are working toward this goal.

No specific chromosomal location of a gene associated with either epilepsy or abnormal EEGs has previously been demonstrated. Much work remains to be done to find the gene on chromosome 6 and learn what it does. But even before the gene is found, the linkage detected by Greenberg and colleagues is likely to be of diagnostic value and to provide encouragement to others searching for genetic culprits of epilepsy. □



Dr. Tbressa C. Stadtman, chief of the section on intermediary metabolism and bioenergetics of the Laboratory of Biochemistry, NHLBI, has been awarded the Klaus Schwarz Commemorative Medal for 1988. The award is sponsored by the International Association of Bioinorganic Scientists and was presented during the Conference on Immunomodulation by Metals, Minerals, and Trace Elements on Sept. 10 in Stuttgart, West Germany. The award is in recognition of Stadtman's pioneering work on the biochemistry of selenium. She and her coworkers have discovered and characterized a number of selenium-containing enzymes and tRNAs.

## Gibbons Gives Kreshover Lecture

Dr. Ronald J. Gibbons, associate director of Forsyth Dental Center in Boston and clinical professor of oral biology at Harvard School of Dental Medicine, will deliver the sixth annual NIDR Seymour J. Kreshover Lecture, Monday, Sept. 26 at 3:30 p.m. in the Mortimer B. Lipsett Auditorium, Bldg. 10.

His lecture on "Bacterial Adhesion to Oral Tissues: A Model for Infectious Diseases" will cover factors that modulate bacterial attachment to surfaces of the mouth and the critical role attachment plays in colonization.

Gibbons is recognized as a pioneer in the field of bacterial adherence. His studies of the oral cavity not only have increased understanding of the infectious process of dental caries and periodontal diseases, but have also created an awareness of the importance of microbial adherence as the first step in the infection process in other human body surfaces. His innovative research is applicable to a wide range of infectious diseases and provides new insight into host-parasite interactions. These studies may permit the development of new therapeutic agents and vaccines to control infections.

Gibbons has been associated with the Forsyth Dental Center and Harvard School of Dental Medicine since 1958. In 1968 he was a visiting scientist at the NIDR Laboratory of Microbiology.

Former president of the American Association for Dental Research from 1975 to 1977, Gibbons belongs to the International Association for Dental Research, the American Society for Microbiology and the American Association for the Advancement of Science. He serves on the editorial boards of *Infection and Immunity*, *Microbial Ecology* and *Microbial Ecology in Health and Disease*, and was regional editor of the *Archives of Oral Biology*.

Among his many awards, he has received the Birnberg Research Award from Columbia University and the IADR award for Basic Research in Oral Science. He is a member of the Current Contents List of Most Cited Contemporary Scientists, an honor given to researchers whose published papers are recognized as trend setters that have stimulated valuable work by others. Gibbons also served on the NIDR Scientific Advisory Committee for Intramural Programs and has been an NIDR grantee for the past 20 years.

The lecture was established in 1983 to recognize outstanding accomplishments in basic and clinical research and to honor scientists who have made important contributions in areas of research directly related to the interests of NIDR. □