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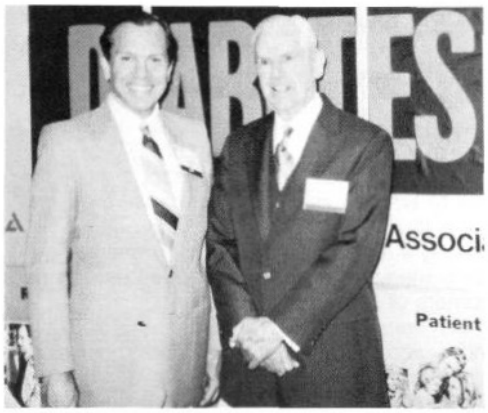
National Institutes of Health

Dr. Jesse Roth, Receives Top Endocrinology Prize

Dr. Roth

Dr. Jesse Roth, Director, Division of Intramural Research, National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, has received the Fred Conrad Koch Award for scientific research achievements of special distinction in endocrinology.

(See DR. ROTH, Page 10)



Dr. James B. Wyngaarden, Director of NIH, and Congressman William H. Natcher (r) of Kentucky chatted at the recent first annual Congressional Reception of the American Diabetes Association which was hosted by three U.S. Senators and three U.S. Representatives, including Congressman Steny Hoyer of Maryland. Congressman Natcher is a member of the House Appropriations Committee and the Subcommittee on Labor-Health and Human Services—Education.

Scrapie-Suspect Prion-Protein Gene Found In Healthy Animals' Brain Tissue as Well

Dr. Bruce Chesebro and his colleagues at the NIAID's Rocky Mountain Laboratories (RML) in Hamilton, Montana have discovered the genetic material for the protein associated with scrapie in brain tissue of both healthy and scrapie-infected animals.

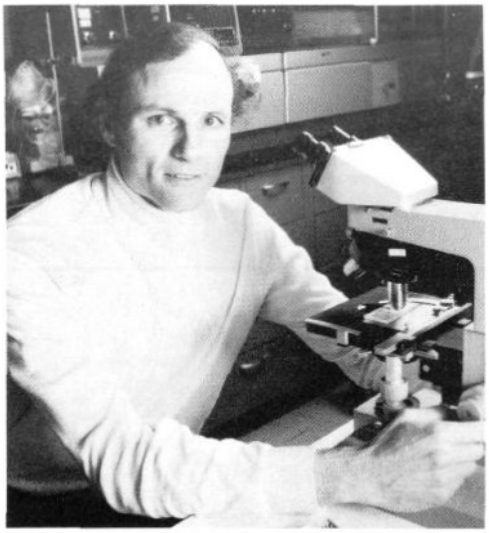
These results indicate that the prion-protein is not a self-replicating protein as has been speculated in the past, and that it is probably a component of normal brain tissue.

Scrapie, a slowly progressive neurologic disease of sheep and goats, has been of particular interest to scientists since 1959 when former RML investigators noted its clinical and pathologic similarity to kuru, a degenerative disease of humans. Since then, two other similar human diseases have been recognized—Creutzfeldt-Jakob disease and Gerstmann-Straussler syndrome.

All three have very long incubation periods, then slowly progress to dementia, loss of coordination, and eventually death. All three have been shown to be transmissible.

The study of scrapie and discovery of its infectious agent may provide clues to understanding these human diseases.

One characteristic of scrapie infection is the presence in the brain of amyloid plaques, resilient deposits of fibrillar material, that are somewhat like scars on the brain. Purified samples of scrapie-infected tissue contain amyloid fibrils, and these samples transmit disease to healthy animals.



Dr. Chesebro in his lab.

(See PRION-PROTEIN, Page 10)

Parents Turn Down Hot Water Heater Temperatures After Attending Burn Prevention Class at Clinic

By Tineke Boddé

The statistics are telling and compelling: Burns are the leading cause of death in the home among children age 1 to 4 years. Scald burns—many from home faucets—are responsible for 40 to 50 percent of all burns in children.

A recent study at the University of Kansas Medical Center in Kansas City demonstrates that burn prevention counseling can make a difference. When offered by health care providers in a well-child class, such counseling motivated 65 percent of the participating parents to turn down the temperature of their hot water heaters. The research was supported by the Human Learning and Behavior Branch of the National Institute of Child Health and Human Development.

"I hope that these findings combined with the alarming mortality rate for burns will prompt pediatricians and other health professionals to include in their health education efforts the suggestion that parents lower the setting of their hot water heaters," said Dr. Duane F. Alexander, NICHD Acting Director.

The researchers worked with 55 couples who had enrolled in a well-baby class at an urban health maintenance organization. Parents were randomly assigned to an experimental and a control group. Three different pediatric nurse practitioners served as instructors for the 90-minute class.

Both groups received standard information and written literature on nutrition, dental care, child development and child rearing, illness management, immunizations, and safety in the car and home (falls, poison and toys).

In addition, the experimental group received a lecture on burn prevention, literature on home fire protection and tap water burns, and a discount coupon for smoke alarms.

(See BURNS, Page 10)

The NIH Record

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TRAINING TIPS

The following courses are sponsored by the Division of Personnel Management, Development and Training Operations Branch.

Administrative Systems (call 496-6211)	*Course Starts*	*Deadline*
Delpro (for new users only)	9/9	8/26
Technical/Occupational Related Training (496-6211)		
Introduction to Working At NIH	7/24	7/12
	or	
Introduction to Working at NIH	8/21	8/9
Computer Literacy	7/30	7/19
	or	
	8/1	7/19
	9/19	8/22
Lotus 1, 2, 3	9/17	8/22
d-Base, I, II, III	9/30	8/30
Computer Literacy for Secretaries	10/3	8/19
Refresher Typing	10/1	8/20
Proofreading	10/2	8/18
Travel Orders & Vouchers	9/23	7/31
Time & Attendance	9/9	7/20
Implementing Office Automation at NIH	8/6	7/19
	or	
	10/1	9/16
Executive, Management, and Supervisory (call 496-6371)		
Making Time Productive	8/12	7/26
Communicating for Results	8/6	7/19

Pals Volunteers Needed

The Pals Program, sponsored by the Mental Health Association of Montgomery County, will be training volunteers this summer on July 23, 24, and 25. If you are over 17 years of age, would like to be a Big Pal to a boy or girl in need of your friendship, and can spend time with a little pal at least twice a month, call 949-1255 for an application and interview or further information.

Male volunteers are especially needed. □

Birds Help Camp Fantastic

The Baltimore Orioles join with Camp Fantastic for a special evening at Memorial Stadium on July 31, at 7:30 p.m. (Baltimore Orioles vs Toronto Blue Jays.)

Camp Fantastic, a project of Special Love, Inc., a non-profit, all-volunteer organization, provides meaningful experiences for children who fight against cancer every day of their lives. The camp is held at the Northern Virginia 4-H Education Center located in Front Royal, Va., in the Blue Ridge Mountains. It will be held August 18 to 24 this year.

Children ranging in age from 6 to 18 years who are being treated for cancer at the National Cancer Institute, Children's Hospital, National Medical Center, Georgetown University, Johns Hopkins, and University of Virginia Hospital, attend the camp, spending a week living out a summer fantasy—learning to swim, canoe, horseback ride and archery. Hot air balloon rides, a carnival, and magic show are some of the outstanding events planned for this year's camp.

The Orioles will donate $2 from every ticket purchased to help sponsor children for the camp.

To support this worthwhile program, join R&W for this special game, July 31. Checks for $6 per ticket should be made out to Special Love, Inc., and forwarded along with a self-addressed, stamped envelope, to: Randy Schools, NIH, R&W, 9000 Rockville Pike, Bldg. 31A, Rm. B1W30, Bethesda, MD 20205. □

The National Institute of Dental Research has recently initiated a series of scientific poster sessions to promote exchange of information among members of NIDR laboratories. Pictured at the first session, held May 31 in Bldg. 30, are (l to r): Dr. Abner Notkins, Director of Intramural Research, and Dr. Harald Löe, NIDR Director.

See Orioles Play

R&W is planning a trip to Memorial Stadium on Friday, July 12, to see the Orioles play the Chicago White Sox.

The bus will leave Bldg. 31C at 5:15 p.m. All persons 15 years and older will receive a complimentary T-shirt. Cost is $14 (bus and upper reserved seat).

Sign up at the R&W Activities Desk, Bldg. 31. □

Hepatitis B Strikes Again

Two more Clinical Center employees, a physician and a laboratory technologist, have become the most recent victims of hepatitis B virus.

Unfortunately, high-risk CC employees continue to needlessly acquire this acutely debilitating disease which can lead to serious long-term complications and can unknowingly be transmitted to family members. Although most infected persons recover, there is no cure or treatment for hepatitis B, and vaccination offers the best means of protection.

According to Dee Koziol, an infection control practitioner with the Hospital Epidemiology Service, persons who frequently handle blood and other body fluids in the course of their work are at increased risk for getting the disease.

Physicians, surgeons, phlebotomists, nurses, laboratory and blood bank workers, pathologists, dentists, and dental hygienists are all high-risk employees for this serious infection and should be vaccinated to protect themselves.

Thus far over 500 NIH employees have received the hepatitis B vaccine free of charge from the Occupational Medical Service, but there are still many high-risk employees who have not been immunized.

Employees who originally deferred or refused vaccination when it was first offered 2 years ago because they needed more information should not delay their decision any longer.

Concern about safety and effectiveness of the vaccine can no longer be justified. The vaccine is safe: there is no evidence of AIDS, Guillain-Barre syndrome, or any other serious complication in over 1½ million persons vaccinated thus far.

Specifically, the AIDS virus and all other known viruses are inactivated by the vaccine preparation methods. The vaccine is effective: over 90 percent of those immunized develop protective antibodies.

Hepatitis B is not a disease to be taken lightly. Although only around 1 percent of acute hospitalized cases are immediately fatal, the most disturbing aspect of hepatitis B is the 5–10 percent of infected individuals who develop chronic complications that can result in chronic active hepatitis, cirrhosis, and liver cancer. It's not rare for health care workers to have their personal lives and careers permanently disrupted by this disease, a needless tragedy now that a safe, effective vaccine is available.

Clinical Center patients present an infection risk to employees not only because there are more than 330 known hepatitis B carriers among them, but also because there are certainly many other patients who are unidentified carriers of the virus.

Immunosuppressed patients, especially those who receive frequent blood transfusions, often become chronically infected with hepatitis B, but have no symptoms, and present an unknown risk of infection to high-risk employees.

CC employees who have any questions or need more information should call the Hospital Epidemiology Service at 496-2209. The vaccine is available from the OMS, Bldg. 10, 6th floor ACRF Clinic, 496-4411 from 8 a.m. to 12 midnight.

High risk employees should not delay in receiving this important vaccine—don't become the next NIH hepatitis B statistic. □

Six Winners in Fitness Center's Run

The NIH Fitness Center's 2nd Anniversary Run was recently held on May. 8. The winners were:

Jerry Moore	*Men (under 40)*	*13:42*
Richard Davey	*Men (40 or over)*	*14:44*
Susan Brown	*Women (under 40)*	*16:27*
Connie Lowe	*Women (40 or over)*	*19:04*
Elliot Werner	*Walker*	

Jerry Moore wins with the fastest time of 13:42.

They're off and running . . .

York Onnen (r), President's Council on Physical Fitness and Sports, presents Elliot Werner (the fastest walker) with an R&W Gift Certificate.

Dr. Richard Davey is presented with an R&W Gift Certificate for winning the Men (40 and over) with a time of 14:44.

Connie Lowe wins 40 or over with a time of 19:04.

NIH Fitness Center Offers Summer Exercise Classes

The following programs are being offered at the Fitness Center, beginning July 8 through Aug. 24. *Quik Fit:* A high level, 45-minute total workout of stretching, strengthening, muscle toning, stomach exercises and cardiovascular endurance exercises. Mon., Wed. and Fri., noon to 12:45 p.m. and 5:15 to 6 p.m.

Alive: Increase your energy, posture, poise and endurance. Mon., Wed., and Fri., 6 to 7 p.m.; Tues. and Thurs., 5 to 6 p.m.

Stretch "N" Strengthen: Combining stretching, strengthening, toning and relaxation. Tues., and Thurs., 12:15 to 12:45 p.m.

Fees: $2 per class; $14 (1x/week); $28 (2xweek); $42 (3x/week) for members of the Fitness Center; Non-Members: $2.50 per class; $17.50 (1x week); $35 (2x/week); $52.50 (3x/week). Drop-ins $3 per class.

Sign up for classes at the Fitness Center or the R&W Activities Desk, Bldg. 31, Rm. B1W30, or call 496-TRIM for further information.

Susan Brown was the winner in the Women (under 40) with a time of 16:27.

Pain Brings Many Patients to Dentist's Office But Fear of Pain Keeps Many Others Away

Although pain is a major factor that brings patients to the dental office, fear and anxiety about pain are common reasons that patients fail to seek dental care, according to a consensus panel that met at NIH, Apr. 22-24.

The safety and appropriate use of anesthesia and sedation in the dental office were examined by the panel, which noted the remarkable safety record for dental anesthesiology and made recommendations for improving that safety even further.

Some 35 million Americans avoid needed dental treatment until forced into the office with a toothache, the panel noted. An array of techniques—including psychological approaches, local anesthetics, and various types and combinations of sedative and general anesthetic agents—is available to control dental pain and anxiety.

The panel defined sedation as a depressed level of consciousness, ranging from light to deep, whose main purpose is to control anxiety. Local anesthetics are given along with sedatives to control pain. General anesthesia is a state in which the patient is unconscious and, therefore, relieved of both pain and anxiety.

Reliable national estimates of mortality or complications associated with the use of general anesthesia and sedation in the dental office are not available, the panel said, but estimates for mortality are as low as 1:350,000 to 1:860,000.

There is some indication that treatment with local anesthesia with or without conscious sedation carries less risk than does treatment with deep sedation or general anesthesia.

The risks may increase, said the panel, in the medically compromised, the elderly, and the very young.

Ultimately, however, the panel said the decision about which drug or drugs to use in a particular situation rests on the clinical judgment of the dentist. Factors to be considered include the nature, severity, and duration of the procedure; the age, physical, and psychological status of the patient; the patient's level of fear and anxiety; and the patient's previous response to pain control procedures.

The panel was made up of individuals knowledgeable in medical and dental anesthesiology, oral and maxillofacial surgery, pediatric dentistry, pharmacology, behavioral science, biostatistics, epidemiology, general dentistry, dental education, and public health concerns.

The panel's consensus statement made the following recommendations:

- *Facilities and equipment.* A quiet environment should be provided, and the office should be equipped with emergency equipment and drugs. Emergency exercises should be carried out for dental staff.
- *Monitoring.* When conscious sedation, deep sedation, or general anesthesia are used, patients must be monitored for heart rate, blood pressure, respiratory rate, and responsiveness.
- *Personnel.* For deep sedation or anesthesia, at least three individuals, each appropriately trained, are required. One is the dentist; the second is a person whose responsibilities are observation and monitoring of the patient; and the third person assists the operating dentist. Conscious sedation requires two people—the dentist or other licensed professional and an assistant trained to monitor patients.
- *Training.* Basic science courses and clinical experience in the use of conscious sedation techniques should be provided by dental schools and postgraduate and continuing education programs. All techniques should be taught to the level of clinical competence. Training for deep sedation and general anesthesia requires a minimum of 1 year advanced study.
- *Future Research.* Comprehensive research is needed on morbidity and mortality rates; drug efficacy studies; monitoring of patients; behavioral and other nonpharmacologic approaches; environmental risk assessment; new drugs; and assessment of whether there are adequate personnel to implement comprehensive teaching and research programs.

The complete statement issued by the consensus panel is scheduled to be published in the July issue of the *Journal of the American Dental Association.* Conference proceedings will be published later in the summer.

The consensus development conference was sponsored by the National Institute of Dental Research, the Food and Drug Administration, and the NIH Office of Medical Applications of Research.

Copies of the panel's statement can be obtained by writing to the Public Inquiries and Reports Section, NIDR, Rm. 2C-35, Bldg. 31, National Institutes of Health, 9000 Rockville Pike, Bethesda, MD 20205. □

NIMH Seeks Volunteers for Three Research Studies

The Laboratory of Psychology and Psychopathology, NIMH, is seeking volunteers to participate in three research studies being conducted by their laboratory.

Volunteers needed are:

- Healthy women (ages 18–35) to participate in an attention study involving EEG recordings and psychological tasks under different conditions of medication; must be available for a total of 5 morning sessions—one session per week—within a 2-month period; will be seen on an outpatient basis; transportation to and from each session will be provided. Participants will be paid after completion of all five sessions.
- Women of all ages who were once underweight (75 percent or less of average body weight) with anorexia nervosa and who have been at normal weight for 6 months or longer to participate in two or more neuropsychological testing sessions involving EEG recordings and psychological tasks.
- Men and women (ages 17–45) to participate in two or more neuropsychological testing sessions involving EEG recordings and psychological tasks.

Participants will be paid. To determine your eligibility, call Sharon Porter, 496-2551. □

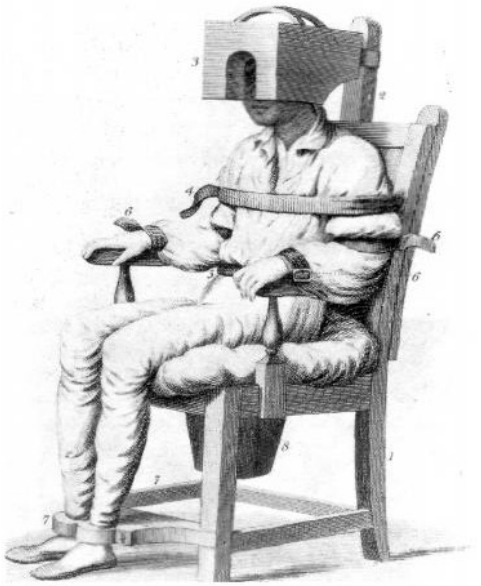
Experimental Videodisc Contains 1,000 NLM Photos

An experimental videodisc containing more than 1,000 selected images from their extensive historical prints and photographs collection has been produced by the National Library of Medicine.

This pilot project is designed to evaluate the potential of laser disc technology for improving access to still picture collections and to provide valuable information to guide future ventures.

The videodisc images were selected from approximately 70,000 prints and photographs in the Library's collection. The project was a cooperative effort by the Library's History of Medicine Division and its Lister Hill National Center for Biomedical Communications.

Four groups of pictures are represented on the videodisc: portraits of 16 noted individuals in the history of medicine such as Claude Benard, Sigmund Freud, William Harvey, Paraclesus, and Vesalius; pictures from two subject categories—history of surgery and history of psychiatry; illustrations from three important books, Vesalius' *De Humani Corporis Fabrica,* Scultetus' *Armamentarium Chirurgicum,* and Fabre's *Nemesis medicale illustree* (with illustrations by Daumier); and illustrations related to medicine and public



An example of NLM's History of Medicine Division collection on the experimental videodisc is an 1811 engraving of Benjamin Rush's design for a "strong arm chair ... for the benefit of maniacal patients," from the history of psychiatry section of the videodisc.

health published in *Harper's Weekly* between 1855 and 1900.

The disc is accompanied by a book providing instructions for use, catalog records for each of the images, and a subject index.

The NLM videodisc, designed to be used with both interactive and noninteractive players. Interactive systems (such as, the Pioneer 7820 and Sony 1000 or 1000A) contain microprocessors which will accept the digital programs encoded on the disc.

For further information on NLM's project, contact Dr. John Parascandola, Chief, History of Medicine Division, NLM, 8600 Rockville Pike, Bethesda, MD 20209, 496-5405. □

Agency-wide P.C. Assistance Now Available From Five Sources

The User Resource Center in Bldg. 31 provides a variety of training and information services. The multipurpose center contains 4 personal computer workstations, and a classroom where up to 20 persons can receive hands-on training.

Help is now available to all NIH employees using or wishing to use personal computers and associated automation technology. Five key sources are offering a wide range of training, technical information, and assistance.

Personal Workstation Office

The Division of Computer Research and Technology's Personal Workstation Office (PWO) provides technical assistance and guidance in the effective use of personal workstations.

This includes an intensive training program covering personal computer use in word processing, spreadsheets, data management, telecommunications, and operating systems. These courses are offered in the DCRT training center and at the newly established NIH User Resource Center (URC) in Bldg. 31.

The PWO has established a personal workstation consulting service for all of NIH. In addition to one-on-one telephone and in-person assistance, the PWO is compiling a data base that will include descriptions of currently supported hardware and software products, technical reports, procurement information, and miscellaneous information acquired from practical applications within NIH.

Information in the data base will be collected from the staffs of DCRT, URC, lead users, and individuals who wish to share experiences, facts, and findings with a general audience. A complete list of supported products is available from the PWO, 496-2282.

Lead Users

A Lead Users program was one of the PWO's first efforts. Each of the BIDs nominated "lead users," individuals chosen to receive hands-on training on the IBM PC architecture, PC-DOS operating system, Personal Editor, Lotus 1-2-3, dBASE III, Displaywrite 2, and telecommunications.

Now fully trained, the lead users are available to their BIDs to answer questions about personal computers, to train staff members, and to communicate information to the PC user community regarding hardware and software. Contact the PWO, 496-2282, for the list of BID lead users.

The PWO also has established lead user working groups as part of the NIH PC-user support network. The working groups provide information and identify and explore relevant PC issues for users in individual BIDs.

These groups are primarily intended for lead users, but any interested NIH employee may participate. The network is a cooperative effort among DCRT, BID lead users and personal computer user/specialists across NIH.

User Resource Center

The User Resource Center is a joint program by DCRT, the Division of Personnel Management, and the Division of Management Policy. The URC provides a variety of training and information services.

The multi-purpose center contains four PC workstations for individual practice and self-instruction, and a classroom where up to 20 persons can receive hands-on training on 10 additional workstations.

Its resource library contains a collection of software packages, self-study courses, and periodicals and books on PCs and office applications. The library also has brochures on training programs available at NIH and elsewhere; catalogs of hardware, software, and user furniture and supplies; and a range of articles on office automation topics.

The URC, located in Bldg. 31, Rm. B2B47, is open for walk-in use Mondays and Fridays from 8:30 a.m. to 4:30 p.m. URC staff may be called any weekdays on 496-5025 for information, advice on planning of training curricula, and to reserve personal computers for self-instruction or practice.

NIH Training Center

The NIH Training Center, DPM, offers vendor-taught courses on the use of PCs, word processors, and office automation. Hands-on courses now offered include: Introduction to Lotus 1-2-3, Computer Literacy for Secretaries, and Computer Literacy for Professional Staff.

Displaywrite 3, Advanced dBASE 3, Advanced Lotus 1-2-3, and Implementing Office Automation at NIH will be next.

Word processing training can be arranged for BIDs upon request. A new word-processing classroom is planned for Displaywriter and Lexitron training. For more information about the Training Center, call 496-6211. □

Personal Computer Aid Available to NIH Labs

The Computer Systems Laboratory, Division of Computer Research and Technology, in anticipation of widespread use of personal computer (PCs) in NIH laboratories, has set up a project to support laboratory applications of PCs.

Traditionally, CSL either has collaborated with, or has provided support to, investigators whose research required the use of computers in laboratory or clinical situations.

In the case of personal computer applications, members of the CSL project team will offer advice on system configuration, suitable laboratory software packages for particular applications, and hardware interfacing equipment and techniques. When appropriate, they will suggest alternative, more suitable approaches to a problem.

A major function of this project will be to try to characterize applications as they come to CSL's attention, to develop consistent approaches to these applications, and to develop solutions for commonly encountered problems that cannot be solved with commercial products.

NIH scientists who are contemplating the use of a PC for a laboratory data acquisition or processing problem are invited to call James Del Priore, 496-5361.

Calls about other applications of personal computers should continue to be referred to DCRT's Personal Workstation Office, 496-2282. □

'Power Plant' Opens in Baltimore

The Six Flags Power Plant, a unique indoor entertainment facility located on Pier 4 at Baltimore's Inner Harbor opened July 1.

R&W has family discount cards available at the Activities Desk, Bldg. 31. One card is good for the entire family and can be used many times.

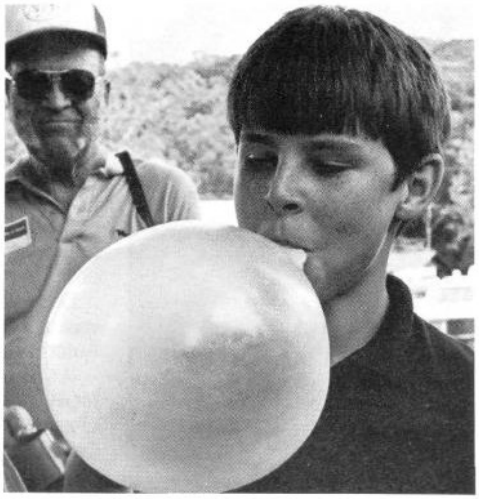
During the summer, the Power Plant will be open from 9 a.m. until 10 p.m. daily. Plan to visit this fantastic combination of the Victorian Age, the Computer Age, Star Wars special effects and slapstick humor. □

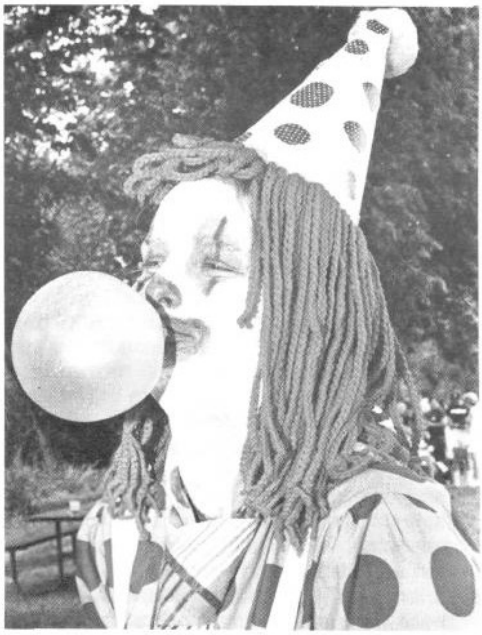
Scenes at R&W Family Picnic Held June 2

Bubbles,

Bubbles,

Everywhere....





Photos By Herb Alvord

Art Donkersloot was the 'Champion' pie eater at the NIH Family Picnic.

R&W Old-Fashioned Family Picnic, held at Pinecliff County Park, Frederick, Md., was a big success.

The days events included apple bobbing, bubble gum blowing, egg toss, pie-eating contests, tug-of-war and more.

Everyone had fun and they plan to attend next year's picnic. □

NICHD and Spanish Scientists Under United States-Spain Re

Under an agreement between Spain and the United States, Spanish and NIH scientists will exchange scientific ideas to promote the economic, technologic and social well-being of both countries. In collaboration with Spanish researchers, two NICHD intramural scientists, and one extramural grantee, received 1985 awards from the United States-Spain Joint Committee for Scientific and Technological Cooperation.

Nerve Cell Changes

Dr. David Klein, a neuroendocrinologist in the intramural Laboratory of Developmental Neurobiology, will collaborate with Dr. Antonio Garcia of the University of Alicante. The team will study changes in nerve cell membranes during the transmission of nerve signals.

Split-second changes in nerve cell membranes allow one cell to transfer rapid signals to the next cell. One key change that makes signal transfer possible may be the addition of electrically charged phosphate molecules—a process called phosphorylation—to certain proteins located in the nerve cell membrane.

Protein phosphorylation quickly changes enzyme activity, the rate at which ions travel in and out of the cell, and the rate of chemical transmitter release.

Using radioactively labeled phosphate molecules and highly specific antibodies, Drs. Klein and Garcia hope to isolate and identify the phosphorylated proteins in the cell membranes. In addition, the scientists will use computers to measure subtle changes in protein phosphorylation and compare these changes with changes in membrane function.

Such information may determine what role these proteins play in transmitting signals throughout the meshwork of communicating nerve cells that make up the brain and nervous system.

Proteins and Cell Division

In collaboration with Dr. Jesus Avila of the University of Madrid, intramural scientists Drs. Richard Klausner and Ignacio Sandoval will study certain proteins required for cell division.

Dr. Sandoval's earlier work with colleague Dr. Juan Bonifacino in the Laboratory of Cell Biology and Metabolism identified one of the proteins, p280, in the mitotic spindle—a cluster of threadlike structures in the cytoplasm (a cell's substance except its nucleus) that "pulls apart" duplicated chromosomes during cell division. They then developed a highly specific monoclonal antibody that reacts with p280.

Although the role of the complete mitotic spindle is known, most of the proteins that make up the spindle have yet to be identified. Even less is known about how the protein subunits assemble to form the threads, or microtubles, that make up the spindle.

Absent in resting cells, the mitotic spindle forms only when chromosomes replicate during cell divisions.

Because p280 stays in the cell nucleus in resting cells, Drs. Sandoval and Klausner believe that its presence in the cytoplasm during cell division may play a role in the assembly of the mitotic spindle. By injecting into cells the specific monoclonal antibody against p280, the

Will Collaborate
earch Grants Pact

scientists hope to inactivate the protein and study how this effects spindle formation.

Function of Pineal Gland

Dr. Russel Reiter, an NICHD grantee at the University of Texas Health Sciences Center in San Antonio, will focus his research on the function of the pineal gland. Continuing an ongoing collaboration with Dr. Susan Webb at the University of Barcelona, Dr. Reiter will study the role the hormone somatostatin plays in pineal cell function.

Scientists have known for some time that somatostatin is produced in a brain region called the hypothalamus, where the substance acts on the nearby pituitary gland to inhibit its release of growth hormone. Recently though, Drs. Reiter and Webb found large amounts of somatostatin in the pineal gland, an area of the brain quite distant from the hypothalamus.

Because the pineal gland also produces melatonin, a hormone that regulates reproduction in some animals, these scientists will use techniques *in vitro* (in the lab) to determine the relationship between somatostatin and melatonin production in pineal cells.

In addition, they will determine if pineal cells can themselves produce somatostatin in culture, and if this hormone, like melatonin, is produced rhythmically.

The United States-Spain Joint Committee for Science and Technology signed the agreement in 1977 to provide funding for both basic and applied research in several areas of science. These included agriculture, marine science, industrial technology, energy and space. The area of health and medical science was included when the agreement was renewed in 1983.

Eight Grants to NIHers

Of the 45 grant proposals for research in all areas approved by the United States-Spain Joint Committee this year, eight were awarded to NIH researchers or grantees. Funds for these eight grants total about $1.4 million.

The Joint Committee is part of the Agreement on Friendship, Defense and Cooperation between the United States and Spain, under which the United States pays Spain for U.S. military bases established there.

Spain, in turn, channels these funds into cooperative research grants with the United States. Approximately half of the $7 million allocated for these grants over the next 5 years will be spent in the United States. □

Yoga Classes Given on Mondays

Integral Hatha Yoga classes are being given on Mondays from 5:30 to 7 p.m. in Billings Auditorium, Bldg. 38. A donation of $2 per session is requested. The classes will continue through Aug. 5.

A qualified Integral Yoga instructor will conduct the classes in such a manner as to accommodate individuals at all levels of experience, including beginners.

For further information call Vivian McFarland, 496-4620. □

Work of Dr. Andrew Peacock, NCI, Cited as 'Classic'

The work of Dr. Andrew C. Peacock, chief of the Protein Section in NCI's Laboratory of Molecular Carcinogenesis, was listed as a "citation classic" in the April 29 issue of *Current Contents*.

Dr. Peacock and his colleagues, Wes Dingman and Sylvia Bunting, developed the materials and methods of the technique—called polyacrylamide gel electrophoresis (PAGE)—that is universally used to separate nucleic acids.

Dr. Peacock

The article that describes Dr. Peacock's original method was published in *Biochemistry* (Volume 7:668–674, 1968) and has been cited in over 1,135 publications since 1968.

According to Harry Gelboin, chief of the Molecular Carcinogenesis Laboratory, PAGE is "one of the methodologic foundations of modern molecular biology."

By combining agarose with low concentrations of the polymer acrylamide, Dr. Peacock developed a gel that provided a stable matrix for the separation of large macromolecules.

Researchers now use electrophoresis to separate and characterize molecules of DNA and protein. By examining the distances that the nucleic acid mixtures move on an electrophoresis gel, scientists can estimate the molecular weights of the individual species of these macromolecules.

The nucleic acid RNA (ribonucleic acid) cooperates with DNA (deoxyribonucleic acid), the hereditary material in our cells, to synthesize proteins.

Using electrophoresis to study and characterize DNA, RNA, and proteins, researchers can gain a better understanding of the basic molecular biology of various cells.

According to Dr. Frank Gonzalez, a member of the laboratory, the combined agarose-acrylamide gel is often referred to as Peacock's gel. Dr. Peacock also developed the buffer used in this method, which is called Peacock's buffer. The buffer is also described in the cited "classic" article.

Dr. Peacock also developed a stain for this electrophoresis technique. To develop this stain, he searched extensively through the literature to find the best solvent for his purposes.

In conjunction with Michael Seidman, also of the Laboratory of Molecular Carcinogenesis, Dr. Peacock has recently been developing a technique called two-dimensional gel electrophoresis for the analysis of DNA.

Enzymes that cleave (cut) DNA are added directly to electrophoretic gels so that distinct fragments of the DNA molecule from complex genes, including human genes, can be separated and studied.

Researchers will use this new method, which is more reliable than previous procedures, to study the internal sequence of genes, do gene mapping, and identify various gene fragments that are diagnostic of genetic diseases.

Called Master Scientific "Tinkerer"

Dr. Peacock is often called a master scientific "tinkerer," Dr. Gonzalez says. "Dr. Peacock willingly invests the enormous amount of time and patience needed to develop new and useful methods."

"He likes to solve difficult problems," says Dr. Gelboin, "and is a devoted, thoroughly honest, and highly analytical scientist. Dr. Peacock would not publish an article, like the cited article, until the technique was perfected."

A native of Boston, Dr. Peacock has been at the National Cancer Institute since 1949. He received his B.S., M.S., and Ph.D. degrees from the Massachusetts Institute of Technology after serving in the U.S. Air Force. He is interested in classical literature, participates in a variety of community activities, and also enjoys computer programming.

Dr. Peacock has received the DHEW Superior Service Honor Award and is a member of the American Association of Cancer Research and the American Society of Biological Chemists. □

Dr. Martha Bridge Denckla of the NINCDS Developmental Neurology Branch has been elected councillor of the Behavioral Neurology Society, a subspecialty group of the American Academy of Neurology. As set forth in the society's bylaws, Dr. Denckla, the Institute's chief of the Autism and Behavioral Disorders Section, will serve successive 2-year terms as councillor, secretary-treasurer, and president. The election was held at a recent AAN meeting in Dallas, Tex.

Dr. Martin Gellert Receives Two Awards For DNA and Other Biochemical Research

Dr. Martin Gellert, chief, Section of Metabolic Enzymes of NIADDK's Laboratory of Molecular Biology, recently received both the Richard Lounsbery Award from the National Academy of Sciences and the ASBC-Merck Award in Biochemistry during the annual meeting of the American Society of Biological Chemists in Anaheim, Calif.

Dr. Gellert shared the Lounsbery Award with Dr. Tom Maniatis, professor of biochemistry and molecular biology, Harvard University. They were cited for their "seminal contributions to our understanding of the structure and function of DNA, which were essential and fundamental to the development of recombinant DNA techniques."

Established in 1978 in memory of Richard Lounsbery, the award, includes a $50,000 prize shared between recipients and a medal presented in alternate years to American and French scientists in recognition of extraordinary scientific achievement in biology and medicine. An additional shared $20,000 is provided for travel to France for study, lectures, publications, or other scientific efforts.

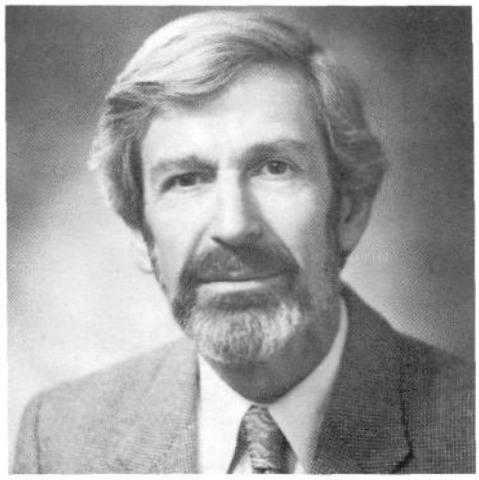
Dr. Gellert is the fifth recipient of the ASBC-Merck Award in Biochemistry. Previous winners include fellow NIADDK scientist Dr. G. Gilbert Ashwell and NHLBI's Dr. Earl R. Stadtman.

The award recognizes outstanding research in biochemistry and advances in biomedical science and consists of a bronze plaque and a $3,000 prize.

Dr. Gellert presented a keynote lecture entitled "DNA Gyrase and the Role of DNA Supercoiling in Controlling Gene Expression" at the meeting.

Both awards recognize Dr. Gellert's substantial contributions in molecular biology and biochemistry. He is internationally noted for the discovery of the enzyme DNA ligase, which he first published in 1967. DNA is the substance that stores genetic information. DNA ligase, a molecular "glue," joins DNA moelcules together.

This is important for a number of reasons. DNA molecules are lengthy, and are usually synthesized by living cells in fragments. To complete the process these fragments of DNA must be joined together, DNA ligase is the enzyme that does the joining.



Dr. Gellert is internationally recognized for discovering the enzyme DNA ligase.

DNA ligase also has applications in recombinant DNA technology. Using this technology, DNA fragments that have been cut from the genome (a complete set of hereditary factors) of one organism can be joined to the genome of another. DNA ligase is the enzyme used to rejoin the inserted portion of DNA to the host DNA molecule.

More recently, Dr. Gellert's research has focused on another DNA enzyme, DNA gyrase. This work originated as a collaborative effort with Drs. Kiyoshi Mizuuchi, NIADDK, and Howard Nash, NIMH. Unlike the DNA ligase, which is found in all types of cells, DNA gyrase is currently only identifiable in bacteria. This enzyme is responsible for "supercoiling" DNA.

In its normal configuration bacterial DNA is a double helix which is joined in a circle. DNA gyrase breaks the circle, partly untwists the helix and reforms the circle as a mechanically stressed "supercoil." Supercoiling of DNA is important in gene expression and in DNA replication. □

NLM Reference Librarian Howard Drew Retires

Howard P. Drew, reference librarian and supervisor of NLM's Main Reading Room, retired last month after serving since 1965 with the Reference Services Division as a literature specialist in military, sport, and ethnic medicine.

Mr. Drew began his career at NLM in 1948 as a library technicia while attending Howard University.

Concurrent with his retirement from Federal Service, Mr. Drew also retired from the military after a career of 36 years. A seasoned soldier of five European campaigns during World War II, he also served with the National Guard and the Special Forces (Green Beret) in the U.S. Army Reserve. He began training as a parachutist at age 38 and made his 194th jump last year at the age of 59.

During his military career, he received numerous medals and citations, among them the Army Comendation Medal, the Meritorious Service Award, the Master Parachutist's Wings and the Soldier's Medal for Heroism for his rescue of fellow soldiers from a burning bus.

Mr. Drew

Drew also has another title worth noting: he is top blood donor at the National Institutes of Health. To date he has donated approximately 17 gallons of blood and has been NIH's top contributor for many years. □

NIH's 1984 Research Grants Available In DRG Publication

National Institutes of Health Research Grants, Fiscal Year 1984 Funds, is now available from the Division of Research Grants.

Prepared by the DRG's Statistics and Analysis Branch, the publication presents 21,555 research grants and awards funded by NIH's awarding components during fiscal year 1984. Included in the book are research projects, program projects, centers, and general support grants, research career development awards (RCDA), cooperative agreements, and Small Business Innovation Research Awards shown by recipient area, principal investigator or awardee, the organization having professional responsibility for the work, and except for RCDA's, the extent of financial support.

Two companion publications, *NIH Research and Development Contracts, Fiscal Year 1984 Funds* and *NIH Grants for Training, Construction, Cancer Control and Medical Libraries, Fiscal Year 1984 Funds* are expected to be published in July.

A single copy of *NIH Research Grants, Fiscal Year 1985 Funds,* NIH publication No. 85–1042, is available from the Office of Grants Inquiries, DRG, Rm. 449, Westwood Bldg. □

R&W Goes Tubing, July 27

Enjoy tubing, swimming, and picnicking with R&W on Saturday, July 27, on the Shenandoah River.

A river-side lunch and a steak dinner cooked over open fires will be prepared by the staff of Shenandoah Outfitters.

The cost is $24 (including service charge), which may be paid at the Activities Desk, Bldg. 31 or the Westwood R&W Gift Shop. □

Keyboard Terminals User Class

Instruction in use of the keyboard terminals for the NIH Library's new automated catalog system is held every Wednesday from 3 to 4 p.m. in the library's conference room on the lower level.

Call Gladys Nelson for a reservation, 496-2184. The number of applicants is sometimes more than the conference room can handle.

Though more complex than the touch screen terminals for searching the automated catalog, the keyboard terminal provides much faster service to those who know the commands and prefix codes involved.

Besides group instruction, librarians are always available for individual assistance Monday through Friday, 8 a.m. to 5 p.m. □

NIADDK's J. H. Ager Honored By Mount St. Mary's College

J. Harrison Ager, EEO program manager and contract compliance coordinator, National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases, was presented the President's Medal May 19 during the 177th annual commencement ceremonies at Mount Saint Mary's College, Emmitsburg, Md.

Mr. Ager

The award, which honors individuals who have provided outstanding community service, was given to Mr. Ager for the high quality of leadership and fairmindedness that he brings to both the public and private sectors of Maryland's institutions of higher learning.

He was appointed to the State Board of Higher Education in 1976, which serves as a coordinating agency for all higher education in Maryland. □

Carrie McKeena, a Future Scientist at Work?

Many of today's renowned researchers had the opportunity, as very young students, to work with well-known scientists.

Such was the case with Jane Goodall who produced landmark studies on the behavior of chimpanzees and Diane Fossey who provided insight into the behavior of gorillas. Both of these primatologists were cultivated under the tutelage of famed anthropologist Louis Leakey.

The National Institute of Child Health and Human Development may have such a phenomenon in Carrie L. McKeena, a 17-year-old Poolesville, Md., high school senior, who works with Dr. Stephen J. Suomi, chief of the Institute's Laboratory of Comparative Ethology.

Carrie's 10-page research paper on "The Role of Dominance Display in Rhesus Macaques" recently won honors in the 44th Annual Science Talent Search sponsored by Westinghouse.

Of a total of 1,069 applicants, she is one of 300 in the country and six in the state of Maryland to make the honors group.

"No one from Poolesville had ever entered the contest before," allows the student-scientist.

Dr. Suomi said, "It's really encouraging to see what can happen when somebody with considerable energy and intelligence is exposed to research at such an early age. One does not have to have a Ph.D. to make a substantial contribution to an onging research program. I think Carrie has a bright future ahead of her."

She started working at the NIH Animal Center in Poolesville last summer as a volunteer for school credit. The Section on Comparative Behavioral Genetics, headed by Dr. Suomi, investigates the interactions of genetic and environmental influences on biobehavioral development of nonhuman primates and other animals.

Carrie observed the social behavior of monkeys and used some of those data to prepare her winning paper.

"When I came here I didn't know anything about monkeys. Working with them is really interesting. They each have their own personalities. You can relate to them as if they were human," she said.

Student-scientist Carrie L. McKenna stands outside the woodshed as her subjects at the NIH Animal Center in Poolesville, Md. watch her. During the winter months the monkeys live in the heated facility. The rest of the year they come and go as they please, roaming over almost five acres of land.

"I want to continue this research in the coming year," she added.

Who knows? Perhaps Carrie will someday head an NIH research team herself.—**James Hadley** □

Multiple Sclerosis Survey Published by NINCDS

A new booklet entitled *Multiple Sclerosis: A National Survey* is now available from the National Institute of Neurological and Communicative Disorders and Stroke.

The booklet summarizes findings of the Institute's survey on multiple sclerosis (MS). The study provided the first scientifically reliable estimates of the incidence, prevalence, and economic impact of MS in the United States.

Survey data were drawn from interviews with selected patients treated for MS between 1970 and 1975.

Multiple sclerosis is a chronic demyelinating disease that hinders the ability of the central nervous system to control such functions as movement, speech, and vision.

Copies Available

Single copies of *Multiple Sclerosis: A National Survey* are available from the Office of Scientific and Health Reports, NINCDS, Bldg. 31, Rm. 8A06, Bethesda, MD 20205; telephone: (301) 496-5751. □

Dr. Gerald D. Aurbacn, chief, Metabolic Diseases Branch, National Institute of Arthritis, Diabetes and Digestive and Kidney Diseases, was the 1985 honor lecturer for the Nichols Institute Edwin B. Astwood Lecture award and the recipient of a $2,000 honorarium for his scientific achievements in endocrinology. The award was made at the annual meeting of the Endocrine Society in June.

Orientation for Training Program To Be Held During Month of July

The new Training and Development Services Program scheduled to begin classes in late August will hold orientation sessions during the month of July for those interested in participating in the program.

Dates and places for the orientation sessions are as follows:

July 9 — Federal Bldg., Rm. B119
Bldg. 10, 11th fl., solarium
July 18 — Bldg. 36, Rm. 1B13
Landow Bldg., Conf. Rm. E
July 24 — Bldg. 38, Billings Auditorium
Bldg. 31, Rm. B2C06
July 29 — Westwood Bldg., Rm. 428

All sessions will be held from 11:30 a.m. to 12:30 p.m.

TDSP provides courses to NIH employees through Montgomery College. The program aims to provide increased job performance skills in areas such as career planning, English, math, time management, communication, and computers.

If you want more information or are interested in learning about this program, call Edith Pruden, 496-6211. If you want to reserve space in one of the sessions, call 496-9228. □

BURNS

(Continued from Page 1)

Results collected during home visits several weeks after the session demonstrated that the instruction had motivated the experimental group of parents to lower their hot water heating settings to 54 degrees Celsius (130° F) or less, and had increased their knowledge on a home fire safety quiz. Of the 29 experimental couples, 22 had "safe" tap water temperatures (54 degrees Celsius or less); of the 26 control couples, 20 had tap water temperatures of higher than 54 degrees Celsius.

"It is encouraging that so many parents turned down their water heaters," said RN Katherine A. Thomas who led the research project. "It shows that primary health care providers can have an impact on safety practices in the home."

Dr. Norman A. Krasnegor, chief of NICHD's Human Learning and Behavior Branch, commented: "This is an excellent example of how our behavioral pediatrics research program provides practitioners with a scientifically verified knowledge base to prevent childhood injuries."

Thomas also found high compliance but no significant differences between the two parent groups with regard to the installation of a smoke detector after the experiment. "Most parents had a smoke detector or installed one recently," said Thomas. "This may have been partially due to the fact that a local law had been passed—with much media coverage—requiring the installation of smoke detectors."

The research was conducted jointly by Thomas and Drs. Ruth S. Hassanein and Edward R. Christophersen. A report of the study was published in the November 1984 issue, Vol. 74, No. 5 of *Pediatrics*.

According to a spokesperson of the U.S. Consumer Product Safety Commission (CPSC), the old-fashioned way to test the bath water is still the best: with one's elbow, especially if the bath is meant for children or older persons who react more slowly than others to excessive temperatures. "The skin of the elbow is very sensitive; if the water feels too hot to one's elbow, it is too hot for a child," the spokesperson said.

However, most "scalds occur when children are left alone and when 1) an older child turns a hot water faucet on a younger child; 2) when the child itself stands up in the tub and turns on the hot water; and 3) another child pours hot water from the sink faucet on a child in the tub," the CPSC said in an informal statement.

For safe dishwashing, a water temperature of 54 degree Celsius is adequate, according to the CPSC. □

High Blood Pressure Study At USUHS Needs Volunteers

The U.S. Uniformed Health Services, School of Medicine, in Bethesda, is seeking volunteers for a study on high blood pressure medications.

Needed are males and females on Tenormin (Atenolol), Inderal (Propranolol) or Thiazide Diuretics (for example, hydrochlorothiazide).

Subjects must be currently married. Participants will receive $40. Call Robin Hill on 295-3263. □

Thelma Charen (l), author of the NLM Indexing Manual, receives the Marcia C. Noyes Award from Medical Library Association President Phyllis Mirsky. The award, the association's highest honor, was given for "outstanding achievements in the field of medical librarianship."—*Photo by Julie Kwan*

PRION-PROTEIN

(Continued from Page 1)

Upon closer examination, one protein was found to predominate in the infected tissue. Some investigators, led by Dr. Stanley Prusiner of the University of California at San Francisco, speculated that this protein was the primary component of a new kind of infectious agent, unique because it apparently contained no nucleic acid. Nucleic acid (DNA or RNA) carries the genetic blueprint generally believed necessary for reproduction of any organism. This new agent was called prion, meaning a protein-like infectious particle.

Used Chemical Probe

Dr. Chesebro's studies, reported in *Nature* (May 23, 1985), included the examination of the brain and other organs of healthy and scrapie-infected mice. He used a chemical probe designed to detect the messenger RNA (mRNA) sequence that corresponds to the prion protein. The mRNA sequences were found in tissues of both healthy and infected animals. In no case was the mRNA specific foir scrapie-infected tissue.

Dr. Prusiner and colleagues published similar findings in the April issue of *Cell* using tissue from healthy and infected hamsters. He theorizes that prions may occur in different forms, with their ability to infect related to changes in their structure.

The RML investigators believe that the real scrapie agent is more likely a small virus particle, but many more questions must be answered before any agent can be definitely identified.

Prion proteins seem to be part of a healthy cell's structure, according to Dr. Chesebro, and some aspect of the infection may cause them to bind together to form, the amyloid deposits found in infected animals. In other words, the amyloid deposits may be the result, rather than the cause, of infection—**Pat Randall** □

New Drug Curbs Stomach Acid Better Than Tagamet or Zantac

Patients with Zollinger-Ellison syndrome (ZES), a rare digestive disease, have unmanageable peptic ulcers, excessive stomach acid secretion and pancreatic tumors. Results of a recent study show that a new drug omeprazole is effective, safe and a long-acting inhibitor of stomach acid secretion for up to 9 months in patients with ZES.

Although the drugs cimetidine (Tagamet) and ranitidine (Zantac) effectively inhibit gastric acid secretion in such patients, these drugs have drawbacks: they require large and frequent doses. Cimetidine also produces side effects in men, such as impotence and breast enlargement.

Omeprazole is a promising new drug with strong, prolonged action against gastric hyperacidity. Unlike cimetidine and rantidine, which block histamine stimulation of acid-secreting cells in the stomach wall, omeprazole inhibits an enzyme within those cells.

Dr. Jerry Gardner and colleagues in the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases' Digestive Diseases Branch have reported that omeprazole prevents overproduction of stomach acid in patients with ZES over a period of 9 months. They reported their findings in the April 1985 issue of the Journal *Gastroenterology*.

Considering its smaller dose requirement and lack of side effects, omeprazole represents an improvement over cimetidine and ranitidine for ZES patients. The researchers state that, if proven safe over longer periods in human subjects, omeprazole will constitute a major advance in the treatment of ZES. □

DR. ROTH

(Continued from Page 1)

The Fred Conrad Koch Award is the highest honor of The Endocrine Society. The award was established in 1957 in memory of the late Fred Conrad Koch, distinguished service professor of physiological chemistry at the University of Chicago, and pioneer in the isolation of androgens.

Dr. Roth was presented a medal as well as a $5,000 honorarium during a special ceremony at the annual Endocrine Society meeting held during June in Baltimore, Md.

Dr. Roth is noted for his research in the field of diabetes and has made major contributions in the area of insulin research. He and his NIH colleagues introduced the first method to measure directly the binding of a hormone to its specific receptors on the cell surface.

The technique was first formulated for ACTH (adrenocorticotropic hormone) and extended to insulin and growth hormone binding to their specific receptors. This method has been applied widely to other biologically active materials that have cell surface receptors such as lectins, toxins, neurotransmitters, lipoproteins, and microbial agents.

Further studies including many by Dr. Roth and his collegues have shown that cell surface receptors are highly regulated by many biologically important signals from both inside and outside the cell.

In 1974, the Endocrine Society presented Dr. Roth with their Ernst Oppenheimer Memorial Award for an outstanding young investigator. □

Dr. Ann Thor, NCI Fellow, Wins 1984 Castleman Award

Dr. Ann Thor, a medical staff fellow in NCI Laboratory of Tumor Immunology and Biology since 1983, recently won the 1984 Benjamin Castleman Award. Sponsored jointly by the Massachusetts General Hospital and the United States/Canadian Division of the International Academy of Pathology, this award is given annually for a significant paper published by a researcher under the age of 40.

Titled, "Monoclonal antibodies define differential ras gene expression in malignant and benign colonic diseases," this paper was published in the Oct. 11, 1984, issue of *Nature*.

Dr. Thor and her colleagues, Drs. Pat Horan and Jeff Schlom, are using monoclonal antibodies to define differences between normal and cancer cells, with emphasis on breast and colon cancers.

Further research in this area may provide a better understanding of breast and colon cancer biology.

Dr. Thor received her B.S. in nutritional science from the University of California at Berkeley in 1977. After earning her M.D. in 1981 from Vanderbilt University School of Medicine in Nashville, Tenn., she completed 3 years of residency in anatomic and clinical pathology at the University Hospital there. She obtained further training at the Ludwig Institute for Cancer Research in London. □

Amnesty-Affiliated Scientists To Present Rights Lectures

The Medical Scientists Committee (affiliated with Amnesty International) is presenting a mini-lecture series on human rights issues.

The lectures will be held on the first Thursday of every month from 12:30 to 1:30 p.m. in Bldg. 10, Rm.1BD25.

Future lectures include:

July 11: Amnesty International's Health Professionals' Programs. Speaker: Dr. R. Cook-Deegan, National Coordinator, AIUSA Health Professional Network.

Aug. 1: Human Rights in Sri Lanka. Speaker: Dr. S. Suventhiran.

Sept. 5. Poland and Its Contemporary Problems. Speaker: Dr. Henry Panusz.

For further information, contact Dr. Patricia McKinley, 496-1521. □

Three NICHD Commissioned Officers Receive PHS Medals

Three Public Health Service commissioned officers recently received the PHS Commendation Medal during the meeting of NICHD's National Advisory Council.

Dr. Duane F. Alexander, the Institute's Acting Director, presented the awards to:

Dr. Gordon B. Cutler, head of the Section on Developmental Endocrinology of the Intramural Program's Developmental Endocrinology Branch, "for pioneering studies on the mechanism of normal pubertal development, and the development of curative therapy for precocious puberty."

Dr. Felix F. de la Cruz, special assistant for pediatrics in the Mental Retardation and Developmental Disabilities Branch, "for creative and sustained initiative in the development of the NICHD genetic research and training programs of benefit to children with special needs."

Dr. Bruce C. Nisula, head of the Section on Medical Endocrinology in the Developmental Endocrinology Branch, "for innovative studies on the biosynthesis and effects of the glycoprotein hormones, leading to new diagnostic and therapeutic approaches to hyperthyroidism and other endocrine disorders." □

NICHD recipients of the PHS Commendation Medal are (standing, l to r): Dr. Cutler, Dr. Nisula. Seated: Dr. Alexander, who presented the awards, and Dr. de la Cruz.

FAES Graduate School Announces Fall Schedule

Registration for the FAES Graduate School's fall semester will be held from Sept. 4 through Sept. 10. Classes will begin Sept. 16.

The evening classes will be given on the NIH campus.

Fall schedules are available at the graduate school in the Clinical Center, Rm. 2C207A, and at the Foundation Bookstore, Rm. B1L101. To get a schedule, call 496-7977.

Courses offered include biochemistry, biology, genetics, chemistry, physics, mathematics, medicine, pharmacology, toxicology, physiology, immunology, microbiology, psychology, psychiatry, statistics, languages and administration.

Tuition is $40 per credit hour and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with supervisors and administrative officers as soon as possible.

Course credits earned often can be transferred to other institutions for degree work, and many courses are approved for AMA Category 1 credit. □

FAES Accepting Applications For Supplemental Stipends

FAES is administering special funds known as predoctoral Wellcome Stipends to support graduate and undergratuate students from foreign countries who participate in research at NIH.

A maximum of $300 per month may be granted to each approved individual as an income supplement to a maximum total family income of $15,000/year plus $1,000 for each dependent including spouse.

The selection committee will consider the scientific merit of the research to be conducted as well as the applicant's professional qualifications.

Applications are being accepted *now* for the awards to be made on Sept. 30.

Application forms are available in the FAES Office, Bldg. 10, Rm. 2C207A, or by calling 496-7976. □

Dr. Richard Bennett (l), Minority Biomedical Research Support program director at North Carolina A&T State University, Greensboro and head of the MBRS Program Directors Association, talks to Francena Thomas, hostess of the TV talk show "Perspectives," on WSVN-TV in Miami. Dr. Sidney McNairy, director of the Research Centers in Minority Institutions Program who represented the Division of Research Resources MBRS Program, and Dr. John Early, MBRS program director of Florida A&M University and symposium director, await their turn to be interviewed. The half-hour TV show, arranged by the DRR Office of Science and Health Reports, was devoted entirely to the MBRS Program, and featured both faculty and students.

Tenor and Bass Singers Needed

The NIH R&W Singers, under the direction of Philip Candilis, are seeking to expand their tenor and bass sections for performances later this year of Bach's motet *Jesu, meine Freude* and selected portions of Handel's *Messiah*.

The Singers plan a number of presentations over the next months. These include a patients' night in August featuring soloists and ensembles from within the chorus and, on Aug. 25, a Sunday afternoon celebration of French, German, and Japanese art songs.

Interested tenors and basses should call Margarte Foster, 496-2749. □

Consensus Conference

Electroshock Eases Some Severe Depressions And Mania, But Risks Should Be Considered

Electroconvulsive therapy (ECT) is an effective treatment for certain forms of severe depression and acute mania, a Consensus Development Panel at NIH recently concluded. At the same time, the advisory group cautioned that there are potential adverse side effects with ECT and these risks should be weighed against the benefits when deciding whether to use the treatment.

The panel's recommendations are part of a report issued at the conclusion of a two and one-half day Consensus Development Conference on the NIH campus. Some 500 psychiatrists, psychologists, researchers, members of the public, ECT patients and others listened to presentations by experts and took part in discussions on the use of this controversial therapy.

The NIH Office of Medical Applications of Research and the National Institute of Mental Health sponsored the meeting, the 51st in the consensus series.

Although ECT has been used for more than 45 years, the panel noted that there is still continuing controversy over its effectiveness, complications, the disorders for which it is indicated, the best methods of administering it, and how much it should be used in various settings.

In an effort to resolve questions surrounding its use, the meeting was organized.

According to the panel, "not a single controlled study has shown another form of treatment to be superior to ECT in the short-term management of severe depressions."

According to panel chairman, Dr. Robert M. Rose, University of Texas, some of the symptoms of severe depression which indicate that ECT might be in order are:

- Marked weight loss
- Very slow body movement and slow thinking
- Continual early morning rising
- Lack of reaction to happy events—no change in mood
- Preoccupation with death and suicide
- Self blame for depressed condition
- Lack of interest in life in general.

The panel said that ECT is "highly effective" in treating delusional depression and is more effective than single drugs and at least as effective as drugs used in combination. "ECT is often effective in patients who have previously failed to respond to medication," panelists said.

ECT is not effective for patients with milder depression, according to the consensus group.

And although certain drugs are usually the preferred treatment for schizophrenia, ECT may sometimes work with patients who have a short-term illness, more intense symptoms or whose symptoms rapidly appear.

ECT and lithium "appear to be equally effective for acute mania. . ." the panel further noted.

The controversy which has followed ECT since its first use in the 1940s in the United States, was very apparent during the conference. Numbers of former ECT patients—many of whom decried their experience, while others praised it as lifesaving—stood before the microphones in Masur Auditorium and pleaded their cases for or against the treatment.

Those in favor said ECT enabled them to again lead productive, normal lives. But others strongly maintained that they had gone through a horrifying experience which left them with huge gaps in their memories.

In assessing the scientific evidence presented at the meeting and after taking into account the testimony of patients, the panel concluded that "enduring or permanent gaps in memory" do occur for events 6 months before ECT and 2 months or longer after treatments.

Besides memory problems, the panel said another significant side effect from ECT is an acute sense of confusion. This condition only occurs during the course of treatment, a period of a few weeks.

Apart from these difficulties, the panel said some ECT patients view the treatment as a "terrifying experience; some regard it as an abusive invasion of personal autonomy; some experience a sense of shame because of the social stigma they perceive as attaching to ECT; and some report extreme distress from persistent memory deficits.

Overall, the panel believes that ECT has been underinvestigated and more research is needed in a number of areas.

The panel concluded that proper administration of ECT can, however, alleviate many side effects and also improve the chances for successful treatment. Because of the numerous factors involved in making a decision on whether to use ECT, "an ongoing consultative process, requiring time and energy on the part of both patient and physician, should occur," according to the panel.

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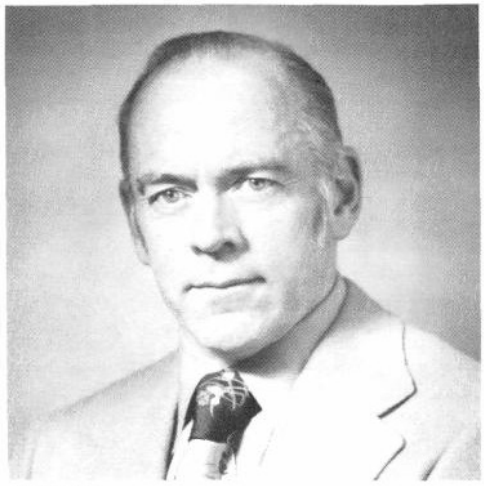
Dr. Roscoe Brady Elected To Institute of Medicine

Dr. Roscoe Brady, chief of the NINCDS Developmental and Metabolic Neurology Branch, has been elected to the Institute of Medicine of the National Academy of Sciences. The Institute advises the Federal Government on matters concerning the protection and advancement of the health of the public.



Dr. Brady

Dr. Brady, one of 29 new members, was selected in recognition of his pioneering research on lipid storage diseases, including his discovery that Gaucher's disease, Niemann-Pick disease and Fabry's disease are caused by a genetically determined shortage of enzymes.

These metabolic defects, Dr. Brady found, cause fatty compounds to accumulate in the body's cells and tissues, often resulting in mental retardation and other neurological problems.

The scientist's discoveries now provide the basis for the early diagnosis of the diseases, for the identification of those who might pass on the disorders to their children, and for the detection of these diseases prenatally. Currently he is testing the feasibility of enzyme replacement therapy for patients with these disorders.

Dr. Brady's research has brought him many honors, including the Albert Lasker Clinical Research Award and the Passano Foundation Award. □

Free, single copies of the consensus report on ECT, available in about 2 months, may be obtained from the Office of Medical Applications of Research, Bldg. 1, Rm. 216, NIH, Bethesda, MD 20205.—**Michael J. Bernstein** □

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