Dr. W. E. Barkley Named Director of New ORS Division of Safety

Dr. William Emmett Barkley has been named director of the new Division of Safety in the Office of Research Services. The Division will consist of the Radiation Safety Branch, the Occupational Safety and Health Branch, and the Environmental Protection Branch. The primary components are being transferred from the Division of Research Services and the National Cancer Institute.

"The creation of the Division of Safety reflects increasing complexity in a specific area of scientific activity—recombinant DNA and experiments with toxic substances," said NIH Director Dr. Donald S. Fredrickson.

"These require an organization that can not only protect workers and ensure adequate training, but maintain a level of awareness of hazards and see that new ways are devised to keep the laboratory a safe place in which to work.

"The new Division of Safety is a way to effectively use the extraordinarily capable people we have at NIH who have been working in more isolated groups on general issues of safety," he added.

Dr. Barkley has been an engineer with the Public Health Service for 18 years, and has been at NIH since 1963. For the past 5 years, he has served as director of the Office of Research Safety, National Cancer Institute.

"The new Division of Safety will eliminate overlap and bring the scientific community together on safety issues," Dr. Barkley said.

His goal is to improve safety conditions at NIH to a level above the existing standards.

Dr. Barkley received his bachelor's degree in civil engineering from the University of Virginia in 1961. At the University of Minnesota, he received a masters in environmental health in 1966 and a Ph.D. in 1972.

That same year, he was awarded the PHS Commendation Medal for work that led to the establishment of the Biohazards Control and Containment Segment of NCIs Special Virus Cancer Program.

In 1977 Dr. Barkley received the PHS Meritorious Service Medal for his leadership of research safety programs.

Dr. Barkley has published many articles and given numerous technical presentations on safety engineering.

New Office of Research Services Will Focus On Services to All Components, Research Safety

The new Office of Research Services, established in the Office of the Director, NIH, consists of two divisions transferred from the Office of Administration—the Division of Administrative Services and the Division of Engineering Services—plus a newly created Division of Safety.

HEW Secretary Patricia Roberts Harris approved the organizational change on Nov. 9.

"A major reason for this reorganization is a leveling out of NIH in terms of personnel and at the same time a period of growth and increased complexity of science," said Dr. Donald S. Fredrickson, NIH Director.

The ORS will focus on the management of technical and selected administrative services to all NIH components and provide national leadership in research safety policy and methodology.

While ORS will be directly responsible to Dr. Fredrickson, it will work closely with Dr. Donald S. Fredrickson has named Dr. Vincent T. DeVita as Acting Director pending the appointment of a successor.

NCI Director Upton Resigns, DeVita Is Acting Director

The resignation of Dr. Arthur C. Upton, Director of the National Cancer Institute, has been accepted by President Carter and will be effective on Dec. 31. NIH Director Dr. Donald S. Fredrickson has named Dr. Vincent T. DeVita as Acting Director pending the appointment of a successor.

Dr. DeVita is director of the NCI Division of Cancer Treatment, and has been a member of the Institute's scientific staff since 1963.

A search committee has been constituted to make recommendations to the President for appointment of a new NCI Director. The Committee consists of HEW Under Secretary Nathan Stark, chairman, Dr. Julius Richmond, Assistant Secretary for Health and Surgeon General, and Dr. Frederickson.

Dr. Upton will become professor and Director of the Institute of Environmental Medicine of the New York University School of Medicine.

Dr. Fredrickson praised Dr. Upton's leadership and commented that "his firm hand at the helm has set a sure course for continued accomplishment by the National Cancer Program." He added that "Dr. Upton's reputation and expertise as a highly respected radiation biologist have added to the lustre of a distinguished staff of scientists at the NCI engaged in the struggle against cancer."
It Is Not Too Late To Give to CFC

The CFC Victory Luncheon held at the Mayflower Hotel Nov. 26 may have signalled victory for many of the Government agencies wrapping up this year's campaign, but for NIH it was an uncomfortable reminder that we trail in both the HEW campaign and the overall Federal drive.

As the graph shows, NIH has reached only 68% of its goal, compared to 82% at the end of last year's campaign. Listed are the B/I/D's in the order of percent participation. Overall participation this year was 33%, compared to last year's 59%.

A number of NIH'ers have worked hard to achieve their goals. Within the Institutes, some sections have given 100%. The final results of the campaign will be included in the next issue of The NIH Record.

If you have not given and wish to do so, please tell your keyworker. If you do not know your keyworker, you can contact the coordinator from your B/I/D. The names of all coordinators and their phone numbers are listed below. They will be happy to assist you.

NIH CFC Contributions as of November 26

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CFC KEYWORKERS:

- NIA — David Chicchirichi, 496-5345
- NIA — Shirley Davis, 496-3345
- NIAID — Vincent Thomas, 496-4846
- DRG — Tom Ingalls, 496-3347
- NICHD — Ivalad Ford, 496-1303
- NIMH — Ruth Monaghan, 8-7746
- NIDR — David S. Isaacs, 496-6103
- NCI — Donna Spiegler, 496-4626
- NLM — Larry Willhite/Madeleine Chaney, 496-3381

FAES Schedules Spring Classes Beginning Feb. 4; Catalog Available

Spring semester evening classes at NIH, sponsored by the Foundation for Advanced Education in the Sciences Graduate School, have now been scheduled.

Courses are offered in biochemistry, biology, genetics, chemistry, physics, mathematics, medicine, pharmacology, toxicology, physiology, immunology, microbiology, nursing, psychology, psychiatry, statistics, languages, administration, and areas of general interest.

Courses are offered in biochemistry, biology, genetics, chemistry, physics, mathematics, medicine, pharmacology, toxicology, physiology, immunology, microbiology, nursing, psychology, psychiatry, statistics, languages, administration, and areas of general interest.

Frequently, earned credits may be transferred to other institutions for degree work, with many courses approved for AMA category I credit.

Tuition is $32 per credit hour, and courses may be taken for credit or audit. Students whose expenses will be paid by the Government should apply at once to their administrative offices for training assistance.

Classes will begin on Feb. 4, and registration is possible by mail now through Jan. 11, and in person Jan. 24-30. Catalogs are available in the FAES office in the Clinical Center, Rm. B11-101, or call 496-5272.

Christmas Holiday Concert Planned

The annual holiday concert and Christmas carol sing, sponsored by the R&W Association, will be held on Wednesday, Dec. 19, beginning at noon, in the Masur Auditorium. The NIH Singers and the NIH Madrigal Singers will present a varied program of sacred and holiday music that has been performed over the centuries.

This festive program is open to all NIH employees, patients, and their guests without charge. Come and join in the spirit of the holiday season.

CPR Instructors: Identify Yourselves

All certified CPR instructors and instructor trainers who work at NIH are being asked to identify themselves to the Occupational Medicine Service.

If you are currently certified as a CPR instructor from D.C., Maryland, or Virginia, your name is needed for a list of training instructors who can be called upon by OMS.

Sue Henderson, director of the CPR Training Program, is planning a campus-wide CPR employee training program and is preparing a list of qualified CPR instructors who might assist her. She can be contacted at 496-4411.

Dr. Mathai Named Asst. Chief Of CC Rehabilitation Dept.

- Dr. Mathai has been selected assistant chief of the Clinical Center Rehabilitation Department.
- Dr. Mathai at Columbia Presbyterian Hospital in New York, and was an assistant professor at the University of Colorado before coming to the Clinical Center last year.
- In addition to experience in rehabilitation medicine, Dr. Mathai has special training in orthopedic surgery.

Date Set for Christmas Trees

No Christmas trees may be displayed before Dec. 17, and all trees and decorations must be removed by 4 p.m. Dec. 28.
A young man was missed at a recent Tuesday night Medicine for the Layman lecture on Sickle Cell Anemia and Thalassemia. Although he was absent, he had already made his contribution.

His mother and several sisters attended the lecture and listened intently as Dr. Arthur Nienhuis, chief, Clinical Hematology Branch, NHLBI, spoke about what medical science had learned from their son and brother.

The family knew what contributions Nicholas “Nick” Lambis, 27, had made over the last dozen or so years to unravel the genetic mystery surrounding Cooley’s anemia, a form of thalassemia. The week before, Nick Lambis died in an intensive care unit at the CC from iron overload, a side effect of the repeated blood transfusions thalassemia patients must undergo to sustain their lives. Nick’s major problem was iron, an essential component of transfused blood, which ultimately destroys the functioning of the heart, liver, and other parts of the body. Today the best hope for these patients is to remove iron from their bodies with the drug Desferal and provide them with young, longer-lasting blood cells, called neocytes, which cuts down on the number of transfusions needed.

Gave Half of His Life to Research

For half of his life, Nicholas Lambis—as well as his sister Judy, who also has Cooley’s anemia—provided NIH doctors with blood and bone marrow for tests that led to three major breakthroughs in understanding the disease.

The Lambises came to the attention of NIH in 1965, when Dr. French Anderson, chief, Molecular Hematology Laboratory, NHLBI, was conducting hematological research into the molecular structure of Cooley’s anemia. It was Dr. Anderson’s study of Nick Lambis’ blood that led to the first molecular analysis of the disease.

A third breakthrough came in 1978, when Nick’s blood helped his doctors to develop a new treatment for iron overload through the use of an iron chelator, Desferal. The drug combines with iron to form a stable compound that prevents iron from entering into any other chemical reactions and leads to the removal of iron from the body. This drug is particularly important to patients who survive beyond 20 years of age.

Nick also assisted in the testing of a hand-size automatic syringe which infused the correct amount of Desferal into his bloodstream. Today this pump is considered standard equipment for treating Cooley’s anemia.

Family a Perfect Model

“The Lambises are a perfect model for thalassemia,” said Dr. Nienhuis. Statistically a family in which the genetic trait is present in both parents runs the risk of having one child in four with a severe form. There are eight children in the Lambis family. Also, the disease is commonly found among Mediterranean populations, and the Lambises are Greek.

Sometimes Nick would joke with Dr. Nienhuis and say, “You’ve got more out of studying me than I ever got out of it.” “It’s true,” says Dr. Nienhuis about Nick’s playful comment. “Biomedical research has benefited enormously from Nick Lambis and other patients around the world who contribute material (blood and bone marrow), because studies can be done from these cells that just cannot be done under any other conditions.” “Nick was a colorful guy,” said Dr. Nienhuis about his patient, adding that there were many “Nick stories” at the CC. Five years ago, he took a part-time clerical job in the NHLBI personnel office and got to know many of the staff and patients.

Helped Research Until the End

Two months before Nick Lambis died, he took part in a Blood Bank experiment to test the survival rate of neocytes in his blood. Since March, the Blood Bank has been using a continuous flow blood cell separator, which separates a donor’s neocytes from his other blood cells. The cell separator is used to reduce iron overloading in a patient’s body. The idea is that the new cells will last longer in the blood and will decrease the number of transfusions needed by a patient. Up until this new technology became available, Nick Lambis was receiving 2 or 3 pints of blood every 5-6 weeks.
A research paper on Enterotoxemia in Rabbits, which was funded by a Division of Research Resources animal research project at Oregon State University, recently won the 1979 Research Award of the American Association for Laboratory Animal Science. Dr. Nephi M. Patton (l), senior author, and Rosemary J. Riggs are shown with the award. Also honored were Harvey T. Holmes and Peter J. Cheeke.

Brochure Describes NIA Role In Progress of Geriatrics

The National Institute on Aging has published Recent Developments in Clinical and Research Geriatric Medicine: the NIA Role to draw attention to how geriatrics—the medical study of old age—has progressed throughout the country.

The brochure describes programs and training opportunities in geriatric medicine of interest to physicians, medical students, and other health professionals.

Attention to geriatrics in medical school training is needed to control the enormous cost of health care for the elderly and to raise the quality of that care for a rapidly expanding elderly population, the brochure says. The cost of medical care for people over 65 is now three times more than that for younger people.

The brochure urges that geriatrics be made a separate specialty and that all primary care physicians and specialists be trained in the biology of human aging and geriatric medicine.

For complimentary copies of the brochure, write to National Institute on Aging, Suite 508, 8630 Fenton St., Silver Spring, Md. 20910.

Latest Report on Arthritis Program Describes Progress in Research, Education

The Second Annual Report of the Director, NIAMDD, on the Arthritis Program has been issued. The report describes progress in implementing the Arthritis Plan, a legislated prospectus for organizing and managing programs on arthritis and related musculoskeletal diseases along three fronts: research, education, and community demonstration projects.

Research carried out through the NIAMDD arthritis program totaled approximately $28.3 million in fiscal year 1978. It continues to focus on expanding basic knowledge of connective tissues and the pathogenesis of arthritis and related disorders.

Dinner Marks Toastmasters’ 10th Anniversary

The NIH Toastmasters Club celebrated its 10th anniversary with a pot-luck dinner that was served to club members, guests, and their families at the Christ Lutheran Church in Bethesda on Nov. 4.

The toastmaster for the evening was Jerry Gordon, former club president. Dr. Padman Sarma, a charter member and past president, introduced alumni and asked them to respond with anecdotes about the Toastmasters’ early years.

Guest speaker Jerry Stiller and other guests congratulated the club on its anniversary and wished it continued success in assisting NIH members to improve their ability to communicate their ideas effectively in public.

New Members Sought

Anyone interested in joining the Toastmasters should contact club president Ivadale Ford, 496-1303. The club meets every Friday, from noon to 1 p.m., in Rm. B2C-05, Bldg. 31.

3 DES Employees Honored for Their Work

Mr. Anderson Three Maintenance Engineering Branch employees, Division of Engineering Services, recently received recognition for their work. Walter Kirk, assistant chief, Clinical Center Section, was presented with a superior performance award. Mr. Kirk has been at the CC since 1954, and has been assistant section chief since 1975.

Mr. Griffith Awards for suggestions were presented to Andrew Anderson, maintenance engineer, shift head, and Harry Griffith, industrial equipment operator.

Mr. Kirk Mr. Anderson suggested the installation of an energy saving device for the CC’s exterior oxygen field.

Mr. Griffith’s suggestion made it safer and more efficient to add water softeners in the CC’s main kitchen.

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Dr. Jeremiah Stamler Joins NHLBI Advisory Council

Dr. Jeremiah Stamler, cardiovascular epidemiologist and physiologist, medical educator, and well-known physician of preventive cardiology, has been appointed to the National Heart, Lung, and Blood Advisory Council.

Dr. Stamler is Dingman Professor of cardiology and chairman, department of community health and preventive medicine, Northwestern University and Northwestern Memorial Hospital. He is coauthor of the book Your Heart Has Nine Lives, which won the Albert Lasker Medical Journalism Award in 1965.

In 1948, Dr. Stamler joined the staff of Michael Reese Hospital Medical Research Institute, and 7 years later became director of the Chicago Board of Health’s Heart Disease Control Program. In 1963 he was appointed director of its division of adult health and aging, serving in both capacities until 1974. Since 1959, he has also taught at Northwestern University School of Medicine.

Dr. Stamler, who was Western Hemisphere editor of Atherosclerosis for years, now serves as a consultant to St. Joseph Hospital and Rush-Presbyterian-St. Luke’s Hospital.
Science Writers Hear Nutrition Research Advances

Science writers from the national and local media heard three NIH scientists describe their studies on nutrition research at a recent Science Writers Seminar.

The researchers discussed studies of vitamin A at the molecular level, the most exciting animal model for studying small intestine metabolism, and studies on calcium metabolism in premature infants using stable isotopes.

These topics were chosen to illustrate the breadth of intramural nutrition research at NIH, said seminar moderator Dr. Artemis Simopoulos, chairman, NIH Nutrition Coordinating Committee.

Nine Institutes conduct such research, she told the writers. The projects they work on include studies on the metabolism of nutrients, food toxicity, animal studies and animal models, metabolic studies on normal volunteers and patients with various disease states, the U.S. Cancer Mortality Survey, and longitudinal studies.

Dr. Gerald Chader, head of the Section on Retinal and Corneal Metabolism, Laboratory of Vision Research, NEI, described studies which show that while vitamin A, or retinol, behaves like a vitamin, its metabolic product, retinoic acid, acts much like a hormone.

Using cultures of retinoblastoma cells, Drs. Chader, Paul Russell, and Barbara Wiggert explored the activities of vitamin A and retinoic acid at the cellular level.

They found that vitamin A entered the cytoplasm of target cells, where it remained bound to a protein receptor called S-2. The retinoic acid, however, soon migrated into the cell nucleus, where it became bound to a separate receptor and possibly to the genes themselves.

This research provided the first known evidence that a vitamin A compound could interact with the genetic machinery of cells, according to Dr. Chader.

He said that retinoid activity at the genetic level will be a focus of further research. A possible clinical application of this research, he said, might be in developing more effective analogs of retinoic acid for the treatment of keratomalacia, a vitamin A deficiency disease.

Surprisingly little is known about the metabolic activity of the intestine, primarily because conventional methods of studying this tissue interrupt the blood flow and severely interfere with normal organ function, Dr. Herbert Windmueller, a chemist in the Laboratory of Nutrition and Endocrinology, NIAMDD, told the science writers.

He and a colleague, Albert Spaeth, developed two procedures for studying the metabolism of small intestine under normal physiological conditions. These techniques enable scientists to study the metabolism of nutrients, drugs, and toxins in the small intestine—a goal which was previously unattainable.

In the first technique, the small intestine is removed from a rat and kept metabolically functioning by perfusion of the isolated tissue with blood supplemented with hormones in a heart-lung machine.

In the second technique, the intestine remains in the rat, and a short segment is isolated for study.

Using these techniques, Dr. Windmueller discovered that it is the amino acid glutamine, not the sugar glucose, that chiefly fuels the activities of the small intestine. Working with colleagues at NIH, he also found that the small intestine contributes significantly to the synthesis of two major protein components of plasma high-density lipoproteins circulating in the blood.

Dr. James Hansen, senior investigator in the Neonatal and Pediatric Medicine Branch, NICHD, described studies on calcium metabolism in prematurely born infants.

The fetus normally accumulates 80 percent of its skeletal calcium during the last 2 months of pregnancy, making this a particularly important nutritional period, he explained. Babies born prematurely are therefore subject to low blood calcium, which can cause seizures and other complications. Their bones, which rapidly become calcium deficient, are fragile and easily fractured.

In spite of its clinical importance, Dr. Hansen said, the dynamics of calcium metabolism in the newborn are poorly understood. He and his colleagues are using stable isotopes of calcium in their kinetic studies to gain an understanding of how to improve calcium balance in the newborn.

One important finding from their studies is that the rate of endogenous calcium fecal excretion—the excretion of calcium which had been absorbed into the body—is much greater in newborns than in adults. Endogenous fecal excretion is responsible for a large proportion of the newborn's total calcium loss.

There are as yet no known mechanisms for controlling fecal calcium excretion, Dr. Hansen said. He and his colleagues, however, are investigating the possibility of controls for improving calcium balance in premature newborns, which involve dietary management, hormones, and enhancement of calcium absorption in the body.

Defense of Mucous Membranes Against Infection Will Be Topic of Meeting At Stone House

A group organized by Dr. Lars Hanson, Fogarty Scholar-in-Residence, is holding an all-day meeting to discuss Mucosal Membranes and the Lymphoid System on Tuesday, Dec. 18, starting at 8:30 a.m., at Stone House.

The purpose of this discussion group is to scrutinize recent information on the defense of mucous membranes against infections.

Speakers will be: Drs. John Cebra, Richard Moxon, and Nathaniel Pierce, Johns Hopkins University; Drs. Charles Elson and Lee Richman, NCI; Dr. William Pittard, department of pediatrics, Rainbow Baby and Childrens Hospital, Cleveland; and Dr. Michael Lamm, New York University.

Moderators are: Dr. Warren Strober, NCI; Dr. John B. Robbins, Bureau of Biologies; and Dr. Hanson.

For further information, call Dr. Hanson, 496-1670.

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Treatment of Pesticide Poisoning Studied

Scientists at the Medical College of Virginia, Richmond, are investigating the possibility that a drug which helps eliminate kepone from the bodies of poisoned humans may also be effective against poisoning by several other pesticides.

Research team leader Dr. Philip Guzelian is making a nationwide appeal for volunteers who suffer from poisoning by DDT, dieldrin, aldrin, endrin, chlordane, polychlorinated biphenyls (PCB's), and polybrominated biphenyls (PBB'S).

The volunteers will be hospitalized at the Medical College's General Clinical Research Center, which is funded by the Division of Research Resources. The expanded research into human pesticide poisoning is also being funded by the National Institute of Environmental Health Sciences.

About 3 years ago, Dr. Guzelian and his associates began studying a group of chemical plant workers who had undergone pesticide poisoning while manufacturing kepone at a now-closed Hopewell, Va., plant. The workers had developed manifestations of toxicity in several organs, including the nervous system, liver, and testes.

The researchers discovered that kepone is eliminated very slowly from the body, meaning that the workers would suffer its effects for an extended period of time.

They treated the workers with cholestyramine, a drug used to lower cholesterol levels in the blood, and found that fecal elimination of kepone from the body increased sevenfold. Elimination of the pesticide reversed the manifestations of toxicity.

The scientists concluded that cholestyramine is a practical means of kepone detoxification. Their findings are reported in the Feb. 2, 1978, issue of The New England Journal of Medicine and in an upcoming issue of Gastroenterology.

Dr. Guzelian now wants to see if cholestyramine can eliminate other pesticides and reverse the physical manifestations of their toxicity. He asks that anyone interested in participating in these studies, either as a research volunteer or as a treating physician, write him at the Medical College of Virginia, P.O. Box 267, MCV Station, Richmond, Va. 23298.

Volunteers Needed

While at NIH, Mr. Jackson received a DHEW Superior Performance Award, and in September earned an M.A. in education from the University of Massachusetts.

Revised Brochure Explains NIH Minority Research And Training Programs

The publication, The National Institutes of Health Minority (Extramural) Research and Training Programs, has been revised and is now available for distribution.

The 19-page brochure contains a detailed explanation of the Minority Biomedical Support Program of the Division of Research Resources, and the Minority Access to Research Careers Program of the National Institute of General Medical Sciences.

In addition, the revised booklet includes specific information on the nine Institutes currently participating in the NIH minority program.

The MBS and MARC programs have made steady progress in the development of racial and ethnic minorities as biomedical researchers. The MBS program now supports 75 grants in 80 institutions, involving over 500 research projects. Within the separate MBS projects in these institutions, there are approximately 2,000 persons, including undergraduates, graduates, graduate students, postdoctoral participants, and faculty members.

MARC Supports Over 200 Grantees

The MARC activity supports over 200 grantees involved in their Faculty Fellowship Program, Visiting Scientist Program, and Honors Undergraduate Research Training Program.

A free copy of the publication may be secured from the Office of Science and Health Reports, DRR, or the Office of Research Reports, NIGMS, Bethesda, Md. 20205.
Five High-Copper Dental Amalgams Perform Well in Clinical Study

Five of ten commercial high-copper amalgams, silver fillings used to repair cavities, received high marks in a 2-year clinical evaluation performed by grantees of the National Institute of Dental Research.

Tytin, Indiloy, Dispersalloy, Phasealloy, and Cupralloy withstood usage so well over the 2 years that margins of the fillings still conformed closely to the body of each restored tooth, reported Drs. K. F. Leinfelder, W. D. Strickland, and C. L. Sockwell, University of North Carolina Dental Research Center, and Dr. W. B. Eames, Emory University, at the annual meeting of the International Association for Dental Research in New Orleans.

Another amalgam, Sybralloy, conformed moderately well, and four—Aristalloy CR, Optalloy II, Velvalloy, and Micro II—gave less satisfactory results. Velvalloy, a conventional lathe-cut alloy, served as the control.

Amalgams are the most durable filling materials available to dentists. They are made of mercury and silver with some other metal. Traditionally, tin was used as the other metal, but this combination had a major drawback: a reaction between mercury and tin produces a weak (gamma 2) phase.

NIDR grantees found that substituting copper for most of the tin in silver fillings improves physical and mechanical properties and avoids recurrence of the weak phase. The dentists examined their 323 restorations after a year’s use and again after the second year. Most of the amalgams kept their first-year rank throughout the test period.

They also tested the 10 amalgams for compressive strength, with surprising results. One would expect alloys that harden faster and stronger to perform better in the mouth, but the tests showed no correlation.

A test for “static creep”—permanent deformation under pressure—proved predictive in that better amalgams generally had lower creep values. Sybralloy, however, which maintained only average marginal conformity, had the lowest score for creep.

Of the best group, Dispersalloy, Phasealloy, and Cupralloy are “additive” alloys that combine spherical particles of silver-copper with sharp-edged particles of lathe-cut alloys. The proportion of copper in the five high-ranking amalgams ranges from 13 to 30 percent; the amount of mercury varies from 43 to 47 percent.

Except for Dispersalloy, the high-copper amalgams have been on the market too briefly for long-term evaluation. Many manufacturers are still adjusting the composition of their products by combining lathe-cut alloys with spherical particles, varying the proportions of copper and sometimes of tin, changing the ratios of surface area to volume of the particles, and adjusting the amount of mercury used to amalgamate the particles.

Dr. Carol Schiller Works With WHO Group in Italy

Scientists from a dozen countries—including Dr. Carol Schiller, National Institute of Environmental Health Sciences—met in Italy recently to develop international guidelines for one of the most prevalent classes of chemical environmental contaminants, the halogenated aromatic hydrocarbons and their derivatives.

The meeting was convened in Venice by the World Health Organization Regional Office for Europe.

The scientists reviewed available information on the production, persistence, and toxicity of halogenated benzenes, toluenes, phenols, and their nitroderivatives, and proposed guidelines for handling contamination and for avoiding future incidents.

They recommended that specific and sensitive methods for analyzing pollutants be developed, and that the effects of low doses of these compounds over a long period of time be studied.

The meeting held immediate interest for the people of Vicenza Province near Venice, because their well water supply had been contaminated by several halogenated nitrotoluenes apparently released by a local herbicide manufacturing plant.

One of the compounds had affected the drinking water supply in the province. Although an alternative drinking water supply was provided to the area, well water is still being used for irrigation of crops and as drinking water for farm animals.

Dr. Schiller examines a slide showing the gross structure of the small intestine. As head of the Gastrointestinal Function and Toxicology Work Group in the Laboratory of Organ Function and Toxicology, she studies the effects of chemicals on the intestine.

Dr. Schiller, the only American at the meeting, was invited because she had done studies on the chemicals released by the herbicide plant.

Two years ago, she explains, the Italian doctor who is responsible for approving the usage of water in Vicenza Province came to NIEHS and asked her to screen the contaminated chemicals for toxicity.

Dr. Schiller’s in vitro research showed that one of the compounds found in the drinking water inhibited mitochondrial respiration. Her finding indicated that the compound could possibly be harmful to humans.

Dr. Robert McCauley Dies; Former Training Officer At NIGMS

Dr. Robert H. McCauley, Jr., 66, former training officer, Office of Program Activities, NIGMS, died of an acute heart attack Oct. 20 at the Bethesda Naval Hospital.

Dr. McCauley joined the Institute in 1958 as executive secretary of the Anatomical Sciences and Genetics Training Committees, and later served as deputy chief, Research Training Grants Branch. In 1973, he became OPA training officer.

Dr. McCauley, a member of the PHS Commissioned Corps, retired from NIGMS in 1974.

Service Span 30 Years

His Government service spanned 30 years, beginning in 1944 when he served as an entomologist with the Communicable Disease Center. During his 14 years with CDC, he was also a toxicologist at the Pacific Northwest Drainage Basins in Portland and an entomologist at Pan American Sanitary Bureau in Puebla, Mexico.

A native of Hagerstown, Md., Dr. McCauley received his A.B. degree from Washington and Lee University and his Ph.D. in vertebrate zoology from Cornell University.

Dr. McCauley is survived by his wife Lois, two sons, Colin and Robert III, and three grandchildren.
Part-Time Worker Wins ‘Ride Rich’ Contest

The NIH Federal Credit Union's “Ride Rich” contest ended last week, with the grand prize of $1,246.56 going to Barbara Goldberg, a Montgomery Blair Senior High School teacher and a unit clerk for the past 11 years in the CC's Cancer Nursing Service on 13-East.

Mrs. Goldberg receives her cash prize from Fred Kruhm, credit union manager.

The prize represents the interest a person would receive if he or she had $1 million on deposit for 1 week at the current rate of interest of 6½ percent.

Besides the money, Mrs. Goldberg also won the use of a chauffeured limousine for 1 day and a dinner for two at one of Washington's leading restaurants.

The contest, which began last month, was a promotional enterprise to encourage new accounts of $50 or more at the Credit Union.

For each of the past 4 weeks, a computer has randomly selected the name of a depositor and awarded him or her a check for $178.08, or a day's interest on $1 million.

Asked what she plans to do with her grand prize money, Mrs. Goldberg said, “I'll put it in my account. I don't have time to spend money.”

The weekly winners were: Jane Kendall, CC Blood Bank; Brenda Shorter, NINCDS; Vernon H. Bostelman, Office of Management Policy; and Sina Bahmanyar, an NINCDS visiting fellow.

Black Cultural Committee To Meet

The next NIH Black Cultural Committee meeting will be held on Thursday, Dec. 13, in Bldg. 31, Rm. 8A-28, at noon.

The committee is responsible for planning and implementing a Martin Luther King Commemorative Program and a Black History Observance Program at NIH. Employees wishing to participate in the organization of these programs should attend.

For further information, call Levon O. Parker, 496-5332.

Patient Emergency Fund Begins Christmas Drive

The Christmas drive for the Clinical Center Patient Emergency Fund is under way to collect money for patients and their families. Each year employees are encouraged to donate to the fund rather than send out Christmas cards.

The Patient Emergency Fund furnishes patients and their families with services and comforts that cannot be obtained with government funds. The fund assists in providing transportation costs for family members, pays for long distance telephone calls to relatives, and supplies such practical needs as haircuts, clothing, bus fare, and miscellaneous expenses.

All donations may be sent to your B/I/D administrative officer, R&W gift shops, or to the Social Work Department, CC. Those who contribute will receive a “Dove of Peace” for their desks.

During the past 19 years, many individuals have given to the fund in memory of their loved ones and friends.

Manual on Cost Analysis for Animal Resource Facilities Updated by DRR

The 1979 revised edition of Cost Analysis and Rate Setting Manual for Animal Resource Facilities has been published and is now ready for distribution.

Containing 115 pages, the manual outlines recommendations for sound financial management of animal resource facilities, including the development of guidelines for a cost analysis and rate setting system.

It also serves as a guide and reference for laboratory animal management regarding costs of acquisition, processing, and care of animals used for research institutions at health science centers and other NIH grantee institutions.

Free copies are available from the Office of Science and Health Reports, DRR, Bethesda, Md. 20205.

Booklet on Food Preservation Available From USDA

The U.S. Department of Agriculture has a free 100-page booklet, Home Food Preservation, that gives tips on food preservation.

For a copy, send a postcard to the Consumer Information Center, Dept. 664G, Pueblo, Colo. 81009.

Dr. Elijah Adams Dies

Dr. Elijah Adams, retired head of the biochemistry department at the University of Maryland Medical School, died recently.

A specialist in the metabolism of amino acids and collagens, Dr. Adams served as a member of DRC's Pathobiological Chemistry Study Section from 1975 to 1978.
DRR Funds San Antonio Primate Facility For Major Research

The largest baboon animal breeding colony in the U.S. was put in operation recently at the Southwest Foundation for Research and Education in San Antonio, Tex., upon completion of a 6-acre free-ranging corral.

Approximately 325 baboons were placed in the new corral, the most spacious primate outdoor enclosure in the country. The project will help ensure future supplies of baboon laboratory animals for biomedical researchers.

The funds for colony maintenance and part of the initial facility costs come from the Animal Resources Program of the Division of Research Resources.

Long recognized for its research with baboons, the SFRE imports several hundred baboons annually from Kenya, East Africa. The Foundation and the University of Texas Health Sciences Center at San Antonio are currently heavily committed to projects using baboons as experimental animals.

The most popular Old World species used at SFRE is the yellow baboon. Body size, which averages 66 pounds for males and 46.2 pounds for females, is probably one of the major advantages in using the animal. The baboon, which is easily maintained and reproduces well in captive colonies, has an average gestation period of 175 days.

Physiologically, the baboon is considered the right size for implant research, as well as for fetal investigations. The baboon fetus is approximately twice the size of the rhesus monkey fetus. Newborns average about 1 1/2 pounds.

Major studies conducted with baboons at SFRE include cardiovascular disease with emphasis on atherosclerosis, hypertension, and hyperlipidemia; pulmonary diseases; fetal and perinatal physiology; infectious viral diseases; and behaviorism. NIH researchers have been using SFRE baboons in the past and anticipate increased usage in the future.

The starting ratio for the nucleus of the breeding colony will be 10 females to 1 male. It is anticipated that there will be approximately 150 newborn baboons annually.

The yearly harvesting of offspring will begin 2 years after the initiation of the project. The colony will serve as a national resource for the scientific community, with concentrated use by field NIH biomedical researchers.

The breeding stocks, obtained from primate importers, have been carefully processed through a 5-week quarantine period during which comprehensive health evaluations were carried out.

A regular health care program has been established, including daily observation, treatment as required, annual physicals, and a disease monitoring program. The data will be computerized and will contain blood genetic and microbiological profiles as well as clinical chemistry of each animal.

"Each animal will be fully defined upon ultimate release to the biomedical researchers," says Dr. Gary Moore, principal investigator for the new SFRE baboon breeding colony.
Two NCI Units Receive Group Awards for Handling Excessive Workload

The NCI Awards Unit, DCRRRC, was honored for its work during a major reorganization and expansion of NCI staff responsible for the review and management of grants. The unit was cited for handling a large and complicated workload and for its positive and cooperative attitude.

The staff of the Committee and Board Preparation Unit, GAB, DEA, is responsible for correctly identifying program director assignment of grant applications in order to properly distribute material and accurately collate the board books.

This unit accommodated an abrupt expansion of program staff and programs while short of staff itself. At the same time, it dealt with the largest number of grant applications ever received for one meeting.

## VISITING SCIENTIST PROGRAM PARTICIPANTS

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<tr>
<th>Date</th>
<th>Name</th>
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<th>Laboratory/Institute</th>
<th>Sponsor</th>
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<td>10/29</td>
<td>Dr. Katie R. Duruwalla, Ngaia, Laboratory of Biochemical Genetics</td>
<td>Sponsor: Dr. Alan Peterkofsky, NHLBI, Bg. 36, Rm. 4C09</td>
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<td>11/15</td>
<td>Dr. Sofia Becerra, Peru, Laboratory of Biochemistry</td>
<td>Sponsor: Dr. Samuel Wilson, NCI, Bg. 37, Rm. 4D23</td>
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<td>11/18</td>
<td>Dr. Millicent Coker-Vann, Sierra Leone, Laboratory of Central Nervous System Studies</td>
<td>Sponsor: Dr. Paul W. Brown, NINCDs, Bg. 8, Rm. 100</td>
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<td>11/19</td>
<td>Dr. Jose Alvarez, Spain, Laboratory of Immunology</td>
<td>Sponsor: Dr. Guy Bonnard, NCI, Bg. 10, Rm. 8B09</td>
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<td>11/19</td>
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<td>Sponsor: Dr. Thomas Reese, NINCDs, Bg. 36, Rm. 3B26</td>
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<td>11/19</td>
<td>Dr. Kuldeep R. Dharwai, India, Laboratory of Molecular Biology</td>
<td>Sponsor: Dr. Ernst Freese, NINCDs, Bg. 36, Rm. 3D02</td>
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<td>11/20</td>
<td>Dr. Yoshimi Tomita, Japan, Laboratory of Viral Carcinogenesis</td>
<td>Sponsor: Dr. Charles B. Benveniste, NCI Bg. 37, Rm. 1C09</td>
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<td>11/23</td>
<td>Dr. Aharon Lev Tov, Israel, Laboratory of Neural Control</td>
<td>Sponsor: Dr. Robert Burke, NINCDs, Bg. 36, Rm. 5A29</td>
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<td>11/23</td>
<td>Dr. Avner Rami, Israel, Pediatric Oncology Branch</td>
<td>Sponsor: Dr. Daniel Glaubiger, NCI, Bg. 10, Rm. 3B04</td>
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<td>12/2</td>
<td>Dr. Hisanobu Yoshida, Japan, Laboratory of Chemistry</td>
<td>Sponsor: Dr. John J. Pisano, NHLBI, Bg. 10, Rm. 7N262</td>
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## NCI Tests Show 3 Chemicals Cause Cancer, 5 Do Not

Two chemicals used as intermediates in the manufacture of dyes and a third chemical used in research have been found to cause cancer in laboratory animals, the National Cancer Institute reported recently.

Rats fed 4,4'-methylenebis(N,N-dimethyl)benzeneamine developed thyroid cancers, while female mice who ingested the compound developed liver cancers.

Michler's ketone caused liver cancers in rats and female mice, and blood vessel cancers in male mice.

The research chemical, 3-nitro-p-acetophenetid, produced liver cancer in male mice.

Five other compounds tested did not cause cancer in laboratory rats and mice. These chemicals were malathion, an insecticide; malaoxon, which can be formed in the body from malathion; bis(2-chloro-1-methylethyl) ether, a by-product of the manufacture of some chemicals and a contaminant of water supplies in some areas; and styrene and beta-nitrostyrene, industrial chemicals used in manufacturing plastics, synthetic rubber, and resins.

The tests were conducted as part of NCI's Carcinogenesis Testing Program. Chemicals that cause cancer in laboratory rats and mice are generally considered carcinogenic in humans.

Reports on the animal tests performed are available from the Office of Cancer Communications, NCI, Bethesda, Md. 20205.

### Pamphlet Discusses Children With Learning Disabilities

Many parents don't realize that their child may have a learning disability. The National Institute of Mental Health has a free pamphlet which explains all about learning disabilities, how to recognize them, and what to do.


The NIH Record

December 11, 1979
Five Researchers Share Vest Grant Prize

Drs. Ian Love, Klara Horvath, John Doppleman, and Thomas Shawker, of the Clinical Center Diagnostic Radiology Department, and Dr. Nasser Javadpour, Surgery Branch, NCI, were recently honored with the Samuel A. Vest Grand Prize Award for their scientific exhibit.

Exhibit Displayed in New York

The exhibit, entitled The Role of Computed Tomography and Ultrasonography in Disseminated Testicular Cancer, was on display at the American Urological Association Mid-Atlantic Section Meetings held in New York last May.

Bonnie Moy, Therapist, Honored for Her Work

Bonnie Moy, an occupational therapist in the Clinical Center Rehabilitation Department, was honored last month with the "Recognition of Excellence" award at the Maryland Occupational Therapy Association state conference in Annapolis.

Ms. Moy's award was "in recognition of outstanding contributions and promoting of Occupational Therapy both within and outside the profession."

As an occupational therapist, Ms. Moy specializes in hand rehabilitation and arthritis. Her work, however, allows her to see all patients who need occupational therapy.

She received her B.S. from San Jose State in 1972 and her M.S. in education from Johns Hopkins in 1977. She has been at the CC since August.

NIGMS Grantees Receive Aid To Improve Analytical Research Instrumentation

To improve the analytical research instrumentation available to its grantees, the National Institute of General Medical Sciences has awarded 65 grants totaling $7.6 million.

The awards to scientists at 55 universities and medical schools in 25 states will support the purchase of new major instrument systems or the cost of modernizing existing systems whose use will be shared by groups of investigators, all of whom hold NIH grants.

To further increase award benefits, the recipients will also make 25 percent of the instrument time available to other qualified investigators who need not have NIH research support.

Proceedings Issued on Burn Care Consensus Conference

The Proceedings of the NIH Consensus Development Conference on Supportive Therapy in Burn Care has been published as a supplement to the November 1979 issue of The Journal of Trauma.

The conference, held at NIH in November 1978, was organized by the National Institute of General Medical Sciences in collaboration with the American Burn Association and the NIH Office for Medical Applications of Research.

Several hundred experts participated in the conference, which included discussions on fluid resuscitation, infection, metabolism, smoke inhalation, and excisional therapy in severely burned patients. Consensus was reached on a number of critical issues.

Copies of the proceedings may be obtained from the NIGMS Office of Research Reports, 496-7301.

Public Can Comment on Changes Proposed in NIH Guidelines For Recombinant DNA Research

NIH Director Dr. Donald S. Fredrickson has sent to the Federal Register for public comment proposed revised NIH Guidelines for Research Involving Recombinant DNA Molecules, along with an explanation of the background and reasons for the proposed decision and an Environmental Impact Assessment.

These documents reflect changes in the Guidelines recommended by the NIH Recombinant DNA Advisory Committee at its last meeting, Sept. 6-7.

Lower Levels Proposed

The major proposed action would lower containment levels for most recombinant DNA experiments involving the bacterium E. coli K-12 to P1 +EK1, and eliminate the requirements for registration of these experiments with NIH. These experiments, however, would not be exempt from the Guidelines.

The documents appeared in the Federal Register on Dec. 4, and will be available for 30 days of public comment.

Copies are available from the Office of Recombinant DNA Activities, Bldg. 31, Rm. 4A-52, 496-6051.

NLM Sets 'Cumulated Index Medicus' Price

A price has been announced for Cumulated Index Medicus, 1979—the National Library of Medicine's annual compilation of citations to journal articles and chapters in selected monographs.

Use of Recombinant DNA Techniques To Improve Vaccines And Diagnose Diseases Explored at Meeting

The use of new technologies to uncover some of the secrets of disease-causing microorganisms and to provide new approaches to vaccine development was explored recently in a meeting sponsored by the National Institute of Allergy and Infectious Diseases.

The meeting, Molecular Approaches to Vaccine Development, was chaired by Sir Charles Stuart-Harris, a Fogarty International Scholar.

The participants discussed the use of recombinant DNA technology to identify the pieces of viruses and bacteria which are most important for stimulating the human immune system. They also considered new ideas for vaccine ingredients, and examined recent findings that may assist in the production of novel types of vaccines.

One of the new ideas centered on the use of recombinant DNA technology to produce selected parts, or subunits, of microbes for vaccine material.

Theoretically, subunit vaccines would stimulate immunity with less risk of side effects than current vaccines and no risk of accidental infection, since whole, potentially infective, organisms would not be used. The choice of subunits would be based on knowledge of the exact molecular signals that organisms use to stimulate immunity to disease.

At present, it is difficult to isolate subunits that retain their immune-stimulating properties. Recombinant DNA technology offers a potential solution to this problem.

Ideally, recombinant DNA technology would be used to remove from disease-causing organisms the pieces of DNA that control the immune stimulation process. The pieces would be placed into a harmless cell system, which could then produce pure, immune-stimulating factors for vaccine material.

Application of recombinant DNA technology to subunit production has not yet been attempted, because much background research remains to be done. Some of the first steps have been taken, however.

Three researchers at the meeting discussed the distinctive immune-stimulating proteins produced by three microorganisms: the F protein of measles virus (Dr. Purnell Choppin, Rockefeller University), the hemaglutinin protein of reoviruses (Dr. Bernard Fields), and the M protein of group A streptococcal bacteria (Dr. Maclyn McCarty, Rockefeller University).

Several other presentations focused on the imaginative use of DNA-splitting enzymes to take apart viruses and learn how they work.

Dr. Aleem Siddiqui, Stanford University, presented preliminary data on the location of a gene in the DNA of the hepatitis B virus which is believed to be related to one of the hepatitis immune substances.

Dr. Ching-Juh Lai, Laboratory of Infectious Diseases, NIAID, reported on the genetic composition of influenza viruses. Working with enzymes, he is dissecting pieces of influenza DNA to determine which segments allow the virus to mutate. He is trying to collect information on all possible genetic variations, so that important combinations can be considered for vaccine materials.

One researcher at the meeting discussed the use of DNA techniques to study and diagnose a bacterial disease. Dr. Stanley Falkow, University of Washington, Seattle, described a test he developed for rapidly detecting the presence of one type of diarrhea-causing bacteria.

For the test, a segment of the bacterial DNA that is found only in diarrheal strains is isolated and tagged with chemical markers. When mixed with patient samples, the tagged DNA homes into sections of similar DNA from the diarrheal strains, but cannot attach to DNA from other strains or organisms. Thus, patients with a specific bacterial diarrhea can be easily identified and treated.

This model may spark the development of similar tests urgently needed for rapid viral diagnosis.

CC Plans Holiday Festivities To Cheer Patients

Every Christmas the Clinical Center staff goes out of its way to make the holiday season a little nicer for patients unable to be with their families.

To start the holiday off, the Patient Activity Department is sponsoring a holiday concert tomorrow (Dec. 12) at 7 p.m. The Catholic University Chorus and Folk Song Society of the Jewish Community Center will be singing festive holiday songs. Also, there will be a menorah lighting ceremony that evening.

The next evening, a Christmas dance is held, featuring the U.S. Army Band. Then, on Dec. 14, the “Trim a Tree” program will be in full swing, with prizes going to the prettiest trees decorated by patients. A trip to the national Christmas tree is planned for Dec. 17, at 6 p.m.

Finally, the Annual Patients’ Open House will be held on Dec. 19, from 2 to 4 p.m., in the 14th floor Assembly Hall. This year, as in years past, NIH employees will join CC patients and their families in singing Christmas carols and meeting Santa Claus.