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Dr. G. Galasso Appointed To Extramural Affairs Post



Dr. Galasso

Dr. George J. Galasso has been appointed NIH Associate Director for Extramural Affairs, a new position in the NIH Office of Extramural Research and Training (OERT). He will be working with Dr. William F. Raub, NIH Deputy Director for Extramural Research and Training.

In his new position, Dr. Galasso manages all matters relating to the substance, quality, operations, and effectiveness of NIH extramural research and training activities. He aids in planning, coordinating, developing and making policy for the NIH extramural program, providing guidance to the NIH Director, his staff, and the bureaus, institutes, and divisions.

The OERT also coordinates research and training policy with other agencies, and represents NIH to the Assistant Secretary for Health on overall DHHS grants policy.

Dr. Galasso was born in New York City and earned his B.S. degree from Manhattan College and his Ph.D. degree in microbiology, from the University of North Carolina (UNC), his area of specialization being virology.

He served on the faculties of UNC and the University of Virginia Medical School where he was an associate professor in the department of microbiology. He joined NIH in 1968 through the Grants Associates Program.

In 1969 he initiated and was named head of the Antiviral Substances Program in the National Institute of Allergy and Infectious

(See DR. GALASSO, Page 3)

Routine Ultrasound Screening of Pregnant Women Not Recommended by Consensus Conference Panel

The use of ultrasound imaging in pregnancy should be limited to situations in which there is an accepted medical reason for the procedure, a panel of experts meeting recently at NIH concluded.

The panel said they could not endorse routine ultrasound screening of pregnant women because there is not enough evidence that routine screening benefits either the mother or the fetus.

Ultrasound imaging uses high-frequency sound waves to produce an image of the fetus and its surroundings on a screen. Doctors use the procedure to evaluate fetal growth and activity, to detect multiple pregnancies and physical abnormalities, to determine fetal age and for many other purposes.

The use of ultrasound in obstetric practice has grown rapidly in the United States. The procedure is now available in nearly all hospitals, and many obstetricians have ultrasound equipment in their offices.

Concerns about the safety and efficacy of the procedure prompted the NIH and the Food and Drug Administration to sponsor a Consensus Development Conference, held Feb. 6-8, to assess the use of ultrasound during pregnancy.

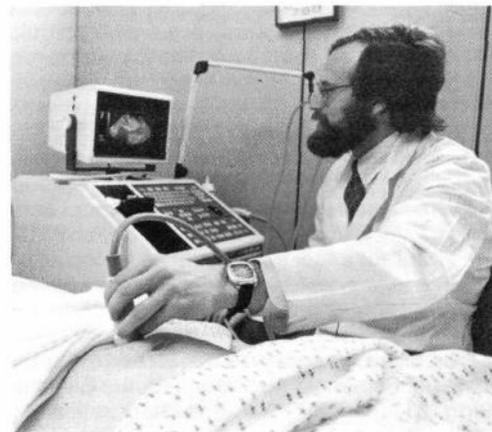
For almost a year before the conference, a panel headed by Dr. Fredric Frigoletto of the Brigham and Women's Hospital in Boston reviewed the scientific literature and research related to the use of ultrasound during pregnancy.

The panel concluded that ultrasound evaluation can improve the outcome of high-risk or complicated pregnancies. They listed more than two dozen situations in which the procedure can be beneficial.

The efficacy of routine ultrasound screening in pregnancy, on the other hand, has not been proven, the panel said. They recommended that a randomized clinical study be conducted to determine whether routine screening improves pregnancy outcome.

The panel also concluded that there is not sufficient information available to reliably assess the risks of ultrasound. While it is encouraging that no harmful effects to either mother or fetus have been reported in more than 20 years of use, they said it is likely that any ill effects would be subtle and delayed in expression.

Many of the studies reported to date on the safety of ultrasound in humans have been "inadequate," said the panel. They noted,



Dr. Steven Warsof performs an ultrasound examination on a pregnant woman at Georgetown University Hospital in Washington, D.C.

however, that several studies have shown there is no association between ultrasound exposure and low birth weight or hearing loss.

Animal and cell culture studies have suggested that ultrasound exposure can retard fetal growth, impair the immune response, and produce cell damage and chromosomal changes.

Most of these studies involved higher levels of ultrasound energy than are used in diagnostic evaluations, and some of the findings could not be reproduced by other investigators, said the panel. Nevertheless, they said, the reported effects cannot be ignored.

To help answer questions about the safety of ultrasound in pregnancy, the panel recommended that animal studies designed to detect the long-term effects of *in utero* ultrasound exposure be conducted. From these studies, scientists could develop reasonable estimates of the risk from diagnostic ultrasound. □

Rubella Conference To Discuss Research Needs and Strategies

Scientists from more than 20 nations will meet Mar. 13-14, at the Pan American Health Organization in Washington, D.C., to discuss research needs and strategies available to prevent congenital rubella (German measles) infection.

(See RUBELLA, Page 11)

The NIH Record

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Training Tips

The following courses sponsored by the Division of Personnel Management, are given in Bldg. 31.

Executive, Management and Supervisory	Course	Starts	Deadline
Problem Solving and Implementation		3/12	2/28
Time Management		3/19	3/2
Capitol Hill Workshop		3/29	3/13
Effective Supervision		4/2	3/16
Behavioral Strategies for Supervisors and Managers		5/23	5/7
Communication Issues		4/10	3/23
Manage Your Meetings		5/4	4/19
The Judiciary, Media, and Interest Groups: Influencing Public Policy		4/26	4/10
Technical			
Effective Listening		3/15	2/29
Effective English Workshop		4/5	3/16
Medical Terminology II		4/3	3/13
Human Relations Workshop		4/23	3/23
Labor Relations for Personnel Specialists		4/10	3/23
Proofreading		5/30	5/18
Administrative Systems			
DELPRO (Delegated Procurement)			
For new Delpro users only		4/2	3/19
Stock Requisition		5/11	4/27

To learn more about these and other courses, contact the Development and Training Operations Branch, DPM, 496-6371.

Toastmasters Will Hold Two Contests Mar. 2, 9

The NIH Toastmasters Club, an R&W sponsored organization, will hold its speech and evaluation contests, Mar. 2 and 9.

The contests will be held at the club's regular meeting time, Fridays at noon, in Bldg. 31, Rm. B2C05. NIH employees are invited to attend both events. □

Women's History Week To Be Observed at NIH

The United States Congress designated the week beginning Mar. 4 as National Women's History Week. The third annual NIH observance of Women's History Week will include the following activities:

The National Cancer Institute's Federal Women's Program will sponsor two noontime seminars on past and present patterns of nonverbal communication.

Dr. Joanne S. Yamauchi, professor of communication, American University, and a leading authority on nonverbal communication, will conduct the seminars from noon to 1 p.m. on Tuesday, Mar. 6, in Bldg. 31, Rm. 11A10 and Wednesday, Mar. 7 in the Westwood Bldg., Rm. 428.

The NCI sponsored seminars are open to all employees. Anyone needing accommodation for a handicapping condition in order to attend

the program on Mar. 6 or 7 should call 496-6266.

The NIH Federal Women's Program and Women's Advisory Committee will sponsor a presentation on "Comparable Worth" on Thursday, Mar. 8 in Wilson Hall, Bldg. 1, from noon to 1 p.m.

The speaker, Elvira Valenzuela Crocker, is a member of the Montgomery County Commission for Women and chairs the Commission's Comparable Worth Committee. An award-winning member of the National Federation of Press Women, Ms. Crocker also serves on the board of the Hispanic News Media Association in Washington, D.C.

Sign language interpretation will be provided at the Mar. 8 program. Any individual needing accommodation for a handicapping condition in order to attend this program should call 496-2112. □

NIADDK Lecture Series Starts Tuesday, February 28

The Division of Intramural Research, NIADDK, has announced the third series of lectures, "Topics in Receptor Biology," in its Tuesday morning lecture series.

Significant advances are currently being made in studies of the structure, function, and genetics of hormonal and nonhormonal receptors.

"Topics in Receptor Biology" will cover the present state of knowledge of receptors involved in several important functions of the cell and organism.

The first lecture in the series will be on Feb. 28. Dr. Jesse Roth, scientific director, NIADDK, will speak on *Cell Surface Receptors for Hormone Action: Where We Are and How We Got There*.

On Mar. 13, Dr. Richard D. Klausner, Laboratory of Biochemistry, NIADDK, will address the *Transferring Receptor: Structure, Function, and Regulation*.

On Mar. 20, Dr. Henry Metzger, chief Arthritis Branch, NIADDK, will speak on *Immunoglobins as Cell Receptors; The IgE-*

Mast Cell System.

Dr. Phil Skolnick, chief, Section on Neurobiology, NIADDK, follows on Apr. 17, with a talk on *Benzodiazepine Receptors in the Central Nervous System*.

The last lecture in this series will be on Apr. 24, and features Dr. Elizabeth Neufeld, chief, Genetics and Biochemistry Branch, NIADDK, speaking on *The Natural History of Lysosomal Enzymes*.

The format of the series is designed to encourage an exchange of ideas between young investigators and senior scientists. It aims at general appeal rather than for the specialist.

A lecture given by a senior scientist is scheduled from 8 to 9 a.m. in the ACRF Amphitheater, followed by a workshop session from 9 to 10 a.m. in the Medical Board Room. The workshop covers research findings presented by young investigators over coffee in a less formal environment.

For additional information, contact Dr. Ann Dean, 496-5408. □

NIH To Sponsor Nat'l. Symposium On Animals Used in Research

The National Institutes of Health has scheduled a 2-day symposium on animals involved in research. It will be held Apr. 11 and 12, at the National Academy of Sciences auditorium, 2100 C St., N.W., Washington, D.C.

The purpose of the meeting is to develop a consensus among the research community and the general public on the use of laboratory animals in health research and related animal welfare issues.

Symposium participants will also address Public Health Service concerns, policies, and procedures for ensuring humane care and use of laboratory animals involved in PHS-supported projects.

Advance registration by Friday, Mar. 30, is strongly recommended. This can be done by sending name, address and affiliation to NIH's Office for Protection from Research Risks, c/o Prospect Associates, 2115 E. Jefferson St., Suite 401, Rockville, MD 20852. Prospect Associates can be reached by phone at (301) 468-6555. □

'Buckle-Up' Decals Available At Parking Sticker Office

"Buckle-Up" decals to be placed inside the front door window of your car can be obtained from the NIH Commuter Assistance Office, Rm. B1C19, Bldg. 31, when you get your new parking stickers.

Those who already have their 1984 stickers can go by and get decals.

The decals are part of a campaign by the NIH Division of Safety to get NIH employees to wear their seat belts when driving. Details were announced in the Feb. 14 issue of *The Record*. □

Federal Employees Almanac Available

The 31st edition of the Federal Employees Almanac is now on sale at all R&W Gift Shops and the Activities Desk for \$3. The book includes information on retirement benefits, new Medicare coverage, appeals and grievances, life insurance, new flexitime law, merit promotions, merit pay, performance appraisal system, garnishment rules, and labor management law. □

March Is National Nutrition Month; Activities Are Planned Throughout NIH

In this year of the Olympic games, everyone is talking about athletes, exercise and practice sessions, winning medals, diet and foods. During March—National Nutrition Month—activities at NIH will emphasize the theme "Nutrition and Exercise—Team Up for Good Health . . . The Olympic Way."

Sound nutrition practices through an adequate diet in combination with an appropriate exercise program is important not only for Olympic athletes, but for everyone to stay fit

and maintain health.

Activities scheduled for Nutrition Month are cosponsored by the NIH Nutrition Coordinating Committee, its Subcommittee on Nutrition Education, the Occupational Medical Service, the Recreation and Welfare Association, the GSI Cafeteria Service, and the NIH Fitness Center. The following lectures, special exercise demonstrations, and films on nutrition are scheduled:

Mon., Mar. 12 12:30–1:30 p.m. ACRF Little Theater	Lecture—	"Nutritional Factors in Hypertension" Speaker: Dr. Norman Kaplan Prof. Internal Medicine Head, Hypertension Div. Univ. of Texas, Southwestern Med. School
Thurs., Mar. 15 10–11 a.m. Masur Auditorium	Lecture—	"Total Fitness and Joy!" Speaker: Dr. George Sheehan Author and Sports Philosopher
Thurs., Mar 22 12–1 p.m. NIH Fitness Center	Lecture—	"Exercise and Weight Control" Speakers: Janet Vizard, director, NIH Fitness Center; and Tom Klein, assoc. director, NIH Fitness Center
Tues., Mar. 20, Fed. Bldg., Rm B-119	Films—	"Eat Well, Be Well II": Segments on "Body Weight and Health," and "Cholesterol", Special Presentation on "Prevention of Coronary Heart Disease Through Cholesterol Lowering" by Dr. Basil Rifkind, chief, Lipid Metabolism/Atherogenesis Branch, NHLBI.
Fri., Mar. 23, Bldg. 1, Wilson Hall		
Mon., March 26, ACRF Auditorium		
Tues., Mar. 27, Bldg. 31, Conf. Rm. 6		
Wed., Mar. 28, Bldg. 38A, Conf. Rm. B1N30B		
Thurs., Mar. 29, Blair Bldg., Rm. 110		
Fri., Mar. 30, Westwood Bldg., Rm. D 11:30–12:30 p.m.		
12:00–12:45 p.m.	Exercise—	Demonstration and Participation Classes for "Quik Fit" . . . A coed class featuring cardiovascular exercises with stretching and strengthening (not dancing). Participants are to wear exercise clothes (tennis shoes, shorts, t-shirts).
Mon., Mar. 26		
Wed., Mar. 28		
Fri., Mar. 30 12:00–12:45 p.m. NIH Fitness Center		
Every day All Cafeterias	Activity—	"Nutrition Month Luncheon Specials of The Day" and complete listing of calories in the salad bar toppings, along with the sodium count of some special items.

All NIH employees are invited to join the NIH Nutrition Month's Team of "Nutrition and Exercise." □

DR. GALASSO

(Continued from Page 1)

Diseases and became chief of the Institute's Infectious Diseases Branch in 1973.

He was later made chief of the NIAID Development and Applications Branch of the Microbiology and Infectious Disease Program. There he was responsible for extramural research on control of infectious diseases through both vaccine and antiviral agent development and clinical efficacy testing.

The Antiviral Substances Program is currently supporting clinical studies on the role of interferon in genital herpes, laryngeal papilloma and genital warts, programs which he helped initiate, as well as considerable basic research.

Through the antiviral program, Dr. Galasso was also responsible for clinical studies evaluating vidarabine against herpes encephalitis, zoster and neonatal herpes. These studies resulted in approval of the first sys-

temic antiviral agent for the treatment of a serious ongoing viral disease, herpes encephalitis. The drug has also been shown effective against the other two diseases. Studies are currently underway comparing vidarabine and acyclovir.

Influenza A

He has also participated in efforts to reestablish the value of amantidine against influenza A disease and the efficacy of rimantidine in prevention and treatment of influenza A.

In addition to his role in antiviral research, Dr. Galasso has also been active in vaccine development. Most recently he was responsible for the multicenter clinical evaluation of an attenuated chickenpox vaccine in immunosuppressed leukemic children where the disease could be life threatening. The study has demonstrated the high efficacy of the vaccine.

Dr. Galasso has received several awards

'Medicine for the Layman' Videocassettes Now on Loan

The National Library of Medicine's Audiovisual Resource Section (AVRS) has added 10 videocassettes to its loan program which explore the inner workings of the human body, new developments in the treatment of disease, and measures to reduce health risks.

These videocassettes enable people across the country to "attend" the "Medicine for the Layman" lecture series presented at NIH.

NIH Scientists Featured

Each program features an NIH scientist who makes a particular field of medical research accessible to a broad audience, including health professionals. Additional descriptive details on these programs is available through AVLINE and in the *NLM Audiovisuals Catalog*.

The new cassettes are listed below by title and NLM call number and should be requested separately on a standard interlibrary loan form. The loan procedure from the AVRS videocassette collection follows generally the NLM policy on interlibrary loans for journal articles and books. A fee of \$5 is charged for each videocassette title.

For more information on NLM's videocassette loan service, call or write: Audiovisual Resources Section, National Library of Medicine, Bethesda, MD 20209 (301) 496-4244.

Arthritis	WE 344 vc no. 6 1980
Blood transfusions	WB 356 vc no. 4 1980
Cancer and the environment	QZ 202 vc no. 12 1980
Cancer treatment	QZ 266 vc no. 6 1980
Cancer, what is it?	QZ 200 vc no. 19 1980
Cholesterol, diet, and heart disease	WG 300 vc no. 41 1980
Genetics and recombinant DNA	QH 431 vc no. 3 1978
Heart attacks	WG 300 vc no. 42 1979
Obesity and energy metabolism	WD 210 vc no. 7 1979
Peptic ulcer	WI 350 vc no. 3 1980 □

including the PHS Superior Service Award (1978), PHS Special Achievement Award (1981), and Assistant Secretary of Health's Award for Exceptional Achievement (1983). He was also selected by former HHS Secretary Patricia R. Harris for the SES Candidate Development Program. He was the only NIH representative on the program, successfully completing it in February 1983.

Viral Diseases

Dr. Galasso is the Director of the WHO Collaborating Center for Interferon Reference and Research and is on the WHO Expert Panel on Viral Diseases (interferon and antivirals). He also serves on the Viral and Rickettsial Diseases Subcommittee of the Walter Reed Army Institute of Research, and on the editorial boards of *Antiviral Research* and the *Journal of Medical Virology*. He is also coeditor of the textbook *Antiviral Agents and Viral Diseases of Man*, and has authored over 65 articles. □

Dr. Lloyd Herman, Retired NIH Microbiologist, Dies; Discovered a Bacterium, Received Various Honors

Dr. Lloyd G. Herman, 72, an NIH microbiologist who retired in 1979, died Feb. 1 at his home of an inoperable brain tumor.

Dr. Herman served 21 years in the Environmental Services Branch of the Division of Research Services (now the Occupational Safety and Health Branch of the Division of Safety, Office of Research Services).

A native of Canada, Dr. Herman graduated from Guelph University in Ontario. During World War II he served as a commissioned officer in the Royal Canadian Army Medical Corps.

He received his doctorate in microbiology from McGill University in 1948. After working at several private laboratories in the United States, he joined the staff of NIH in 1968.

In 21 years of service, he published and lectured extensively and accumulated various honors in his field. He was the first to identify a strain of yellow-pigmented water-borne bacteria that the Centers of Disease Control named *Escherichia Hermannii* in his honor in 1982.

Dr. Herman was very active in the American



Lloyd G. Herman

Society for Microbiology and its Washington branch. For over three decades he never

missed an ASM annual meeting, where he acted as unofficial photographer and became well known to the entire membership. He held all offices in the Washington branch of ASM, including president, and continually held branch posts until his death.

Dr. Herman was also a past president of the Canadian Club of Washington and of the Environmental Management Association, which named him Sanitarian of the Year in 1976.

Dr. Herman helped charter the NIH Toastmasters Club in 1969 and was honored in 1981 as a lifelong member by his fellow toastmasters for his many contributions in service. Toastmasters International honored him in 1983 with the title of Distinguished Toastmaster.

Dr. Herman also participated generously in community and church activities. He frequently judged science fairs, and at the Stoneridge School he kindled interest in starting a Youth Leadership Club sponsored by Toastmasters International.

Dr. Herman was also a serious collector of fossils, shells, and stamps. He and his wife Jean traveled extensively to countries throughout the world.

NIA Director Urges Study of Drug Treatment of Elderly

Dr. T. Franklin Williams, Director, National Institute on Aging, called pharmacology for the elderly "a fundamental problem," in a speech at the Drug Information Association Workshop on Feb. 27 in Washington, D.C.

Dr. Williams noted that, given increases in the number of older Americans, and, by extension, the number of people suffering multiple and chronic diseases, the issue of effective drug treatment will become extraordinarily important.

Treating an older patient demands basic information about age-related changes in the body, Dr. Williams continued. While in other fields of medicine baseline data have long been established, this is not the case in the field of aging.

Studies of such basic information for body composition, lung function, brain metabolism, absorption, transport, and clearance of medications are being carried out today in the intramural laboratories of the NIA and through grants.

Older patients typically suffer from several disorders and illnesses, for example, a heart condition and arthritis. Consequently drugs are often prescribed by a number of physicians for a single patient. In such cases the patient often must coordinate the treatment.

Elderly patients have an average of 13 prescriptions a year, it is estimated. As a group they are the highest consumers of medications. The risk of drug-related reactions is therefore high.

Dr. Williams stressed the need for better coordination of treatment as well as more knowledge about the pharmacokinetics and the pharmacodynamics of drugs in the older body. All too often guidelines for the use of drugs are based on the experiences of younger adults. While special cautionary advisories are often given for treatment of children or pregnant women, few are given for the elderly or even the debilitated patient.

For an older patient, drug therapy must be



Older patients suffering from several disorders and illnesses are sometimes confused by all the medicines available and often drug-related reactions occur.

placed in the context of a full social and clinical assessment. A searching evaluation of dysfunctional side-effects of potential medication must be made when prescribing for the older patient.

Effects such as confusion, unsteadiness, agitation, loss of libido, or loss of appetite need to be weighed against therapeutic gains even more rigorously for the older patient than for a younger adult.

Care must also be given to make sure that the patient and the patient's family understand the side-effects of a drug since such symptoms are often attributed to age-related declines.

Dr. Williams noted that research attention is needed on pain control, easily managed methods of dispensing medication, improved patient information, patient adherence to recommended therapy and anesthesia. There is a threefold increase in mortality with surgery

for persons over age 70.

The NIA is funding a number of grants at the University of California, San Francisco, to study the issue of anesthesia for the older patient.

Dr. Williams urged that conservative drug treatment be advised, but that therapeutic pessimism be avoided. Concluding, he pointed out that we should not assume what we have learned about treating younger people will transfer to older individuals.

The Drug Information Association, founded in 1965, is a multidisciplinary international organization of professionals involved in dissemination of accurate information in medicine, biology, pharmacy, and allied fields. This workshop was organized with the participation of pharmaceutical associations, government agencies—including the Office of the Surgeon General, the Office of Health Promotion and Disease Prevention, the Food and Drug Administration, the NIA, and clinicians.

For more information, contact Steven R. Moore, FDA, 301-443-5373. □

Predocutorial Stipends Available At FAES for Foreign Students

FAES is administering special funds known as Predocutorial Wellcome Stipends to support graduate and undergraduate students from foreign countries who participate in research at NIH. A maximum of \$250 per month may be granted up to a maximum total stipend of \$750 per summer.

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

Applications for the summer of 1984 must be received in the FAES office by Mar. 31. Awards will be made by Apr. 30.

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

Nuclear Medicine: 'Astonishing Stuff' Produced by High Technology

Nuclear medicine's beginning can be traced to bad boarding house soup or so a probably apocryphal story told by Dr. Steven Larson, chief of the CC's Nuclear Medicine Department, puts it.

Back in 1915, the story goes, a European scientist named Hevesy was conducting experiments by day and living in a rooming house at night. He suspected that his landlady was not serving fresh food but leftovers at each meal.

To test this, Hevesy allegedly ate half of the soup served to him at lunch one day, then dosed the rest with radioactive lead, which he could later detect if the same soup showed up in his evening bowl.

Sure enough, when he tested it for the presence of the lead, the results were positive. Thus began radioactivity's career as a tattle-tale.

Where it once served to rat on a miserly landlady, today it can travel like a spy through the body, illuminating and sometimes even destroying sites of human disease.

Dialogue Among Disciplines

Nuclear medicine is a dialogue, according to physicist Michael V. Green, Dr. Larson's colleague. Its needs are identified by doctors and its means are developed by specialists in physics and chemistry.

An expert in charting the aftermath of nuclear collisions, Mr. Green and nuclear medicine had a chance encounter of their own back in 1963 when the Army drafted him fresh out of the University of California at Berkeley where he had earned a bachelor's degree in physics.

The son of two artists, Mr. Green had never heard of nuclear medicine at the time he was drafted and stationed at Letterman Army Medical Center in San Francisco. "Nuclear medicine was an unrecognized subspecialty at that time, as far as I know," he said.

A serviceman with a degree in history trained him to be a technician in the nuclear medicine department at Letterman. "Things are quite different today" for training, he said.

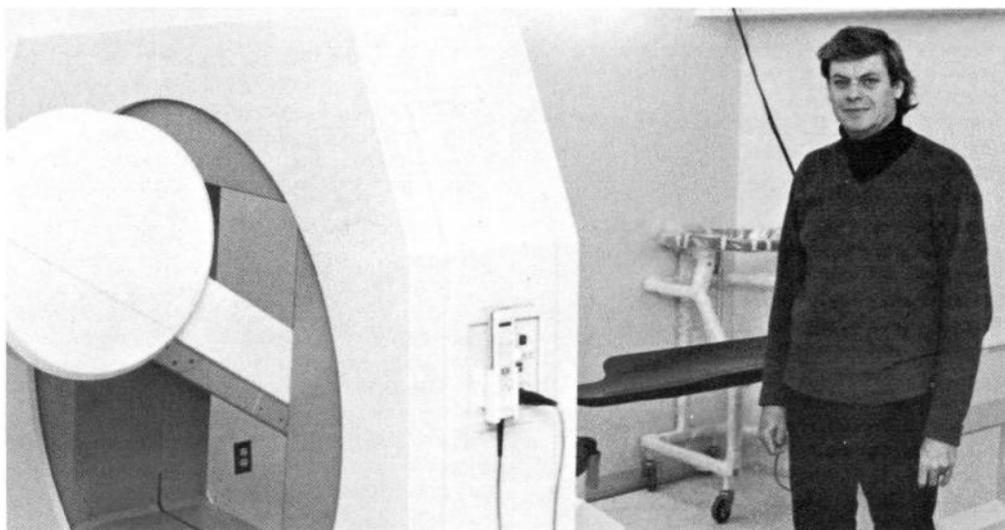
Single-Photon Imaging

One of the latest developments in the field is single-photon imaging, which permits clinicians to view larger sections of the body than previous techniques. On Jan. 18, Mr. Green and his colleagues saw the first images from his new piece of hardware at the CC. "It is just fascinating. We could create the impression that the torso we were examining was rotating three-dimensionally in space," he said.

Unlike positron emission tomography (PET), which requires an expensive sort of high-test isotope that emits two photons, the single-photon machine runs on regular gas, so to speak. (NIH is building a cyclotron to provide two-photon isotopes).

The most common and cheapest isotopes emit a single photon. The new machine at the CC can read these emissions with its scintillation camera.

Though PET offers researchers an absolute value for the amount of biological activity



Mr. Green, head of the Nuclear Medicine Department's Imaging Physics Section, displays the new single-photon emission camera, which uses radiation to create pictures of internal organs.

occurring at a given point, cheaper single-photon technology permits a more general sampling area and can scan virtually the entire body, including the brain. "Somebody will probably get a Nobel Prize for this," Dr. Larson said.

"We've got enough technology to keep us busy forever," Mr. Green said. "It is really no small task to refine and adapt the current methods."

Like his parents, physicist Green is an artist, only his art must explain itself in excruciating detail to the people who see it. He has kind words for the "studio" that employs him: "The cooperation between disciplines around here can be enormous. If I have a problem, I can pick up the phone and enlist the aid of computer experts at the Division of Computer Research and Technology to get an answer."

His colleague, Dr. William Eckelman, is happy with nuclear medicine because it yields metabolic and biochemical information about patients on an individual basis. "It allows you to monitor treatment patient by patient, not just on an average."

"There has been a rapid evolution since the days when radioactive albumin was injected and a probe was held near the skull to determine where to perform surgery," Dr. Larson said. "Today we have computer-assisted three-dimensional reconstruction of parts of the body."

All diagnostic imaging modalities, including nuclear magnetic resonance (NMR, which is part of the Diagnostic Radiology Department, not Nuclear Medicine) and CT scans are parts of a puzzle, he said. "The whole picture is the entire disease process."

The Nuclear Medicine Department places tremendous emphasis on computer processing. On a tour of the department led by Dr. A. Eric Jones, associate chief, door after door led to rooms full of high-technology equipment.

"We're going as fast as we can into the advanced stages of data processing, with the help of DCRT," said Dr. Larson. Persuading numbers to run faster is one of the department's challenges.

Another is tagging monoclonal antibodies with isotopes that can destroy specific cells

while leaving neighboring cells intact.

Much of the department's collaboration has been with neurologically related Institutes—NIMH, NINCDS and NIA. There are still a few organs—the pancreas and prostate, for instance—that have resisted the noninvasive probings of nuclear medicine.

"We've gone from putting isotopes in test tubes and measuring the radioactivity to putting people in these scanners and measuring radioactivity," said Dr. Eckelman. "It's pretty astonishing stuff."—Richard McManus □

Pellet Implant: New Method Of Sustained Drug Release

An implantable pellet that will contain a user-controlled supply of a drug such as insulin may be the result of research by Dr. Robert S. Langer of the Massachusetts Institute of Technology, a NIGMS grantee.

The pellet, designed to be implanted just under the skin, should have several advantages over other methods—such as implantable pumps—that have been proposed to provide patients with continuous drug release. Unlike some systems, the pellet can't break and re-lease fatal amounts of the drug.

Dr. Langer first found a polymer that is excellent for embedding drugs. He then mixed and embedded in the polymer a 3-year supply of powdered drug that can be released at a steady rate through pores in the surface of the pellet.

He next discovered that the rate of drug release from the capsule can be greatly increased when small stainless steel spheres are added and the pellet is exposed to an oscillating magnetic field, thus providing a mechanism by which a patient can control the drug supply.

A patient would only require a magnetic source, perhaps one that is small enough to be worn on a belt or watchband. Dr. Langer expects the system to be appropriate for any drug with a short half-life, or any disease state that requires pulses of drug administration. Drugs for inflammatory bowel disease, various heart conditions, postorgan transplant medications, and insulin are candidates for use with the implant. □

Parking Changes Effective In ACRF Garage, March 5

Beginning Monday, Mar. 5, the parking spaces within the three levels of the ACRF garage will be reallocated as follows:

- Level P-1 will be reserved for general employee parking. Those spaces on the P-1 level now reserved for handicapped employees will remain. The only entrance to the P-1 level will be at the west end, via Convent Drive; there will be no access to the P-1 level from the P-2 level.

- Level P-2 will be reserved—until 3 p.m.—solely for employees with Preferential (red) and Patient Care parking permits. After 3 p.m., the P-2 level will be open for vehicles displaying any type of NIH parking permit.

The parking spaces on the P-2 level now reserved for handicapped employees will remain. The only entrance to the P-2 level will be at the east end, via Memorial Road; the entrance will be monitored.

- Level P-3 will be reserved until 5 p.m. solely for outpatients and visitors. After 5 p.m., the P-3 level will be open for vehicles displaying any type of NIH parking permit.

The only entrance to the P-3 level will be at the east end, via Memorial Road. An NIH Police Officer will be at the entrance to provide information to those unfamiliar with the campus, and to ensure that NIH employees do not park in this reserved area prior to 5 p.m.

These changes are necessary to accommodate the rising numbers of outpatients and visitors to the ACRF. The number of outpatients has more than doubled since the construction of the ACRF began in 1977, and there is an additional 20 percent increase projected for 1984. This rapid growth has placed new demands on the parking spaces most convenient to the clinics.

The end result of this reallocation is that approximately 275 additional parking spaces in the ACRF garage will be available for outpatients and visitors to the Clinical Center, while approximately the same number of spaces in the garage will no longer be available for general employee parking.

To help offset this loss in employee parking spaces, and to further increase the number of spaces for outpatients and visitors to the Clinical Center, 63 new parallel parking spaces will be added in the ACRF garage immediately: 13 spaces on the P-1 level; 26 spaces on the P-2 level, and 24 spaces on the P-3 level.

Also, immediately, parallel parking spaces will be added to the east and west sides of Lincoln Drive, and the north side of South Drive, allowing for approximately 89 new on-street parking spaces. Other areas are being considered for additional on-street parking.

More good news is that this spring, a new parking lot will be constructed north of the newly acquired Bldg. 60, the former Convent of the Sisters of the Visitation of Washington. Preliminary plans for this parking lot include approximately 180 spaces.

The NIH campus will still have ample parking for all NIH employees. Lot 41-B, located at the south end of the NIH campus, has approximately 400 vacant parking spaces.

Many employees are particularly mindful of the distances between lot 41-B and some

(See ACRF, Page 7)

New and Improved Westwood Bldg. Shuttle Schedule Increases Its Daily Round Trips to Forty

On Jan. 3 the Vehicle Dispatch and Shuttle Section, Transportation Branch, began an all new, improved shuttle service to Westwood Bldg., stopping at the Bloch, Federal and Landow Bldgs. along the way. The number of daily round trips was increased to 40, and the older full-size busses were replaced with newer, more comfortable, 12 and 15 passenger vans.

James Dickerson, motor vehicle operator, is one of the regular drivers of the new vans now serving the Westwood Bldg. He says "ridership is up and increases by the week. I have heard lots of good comments from the riders about the schedule and the quality of the service." He added, "the runs around noontime usually have the most passengers, but we always have room for more."

Leonard Coombs, motor pool foreman, summed up the many favorable comments he has received from NIH employees. "The shuttle is quieter, faster, and just much better altogether," he stated.

The new schedule has 20 shuttles leaving both the NIH campus and the Westwood

Bldg. daily, at 25-minute intervals. The first shuttle leaves Bldg. 10 at 8 a.m.; the last at 3:55 p.m. A separate shuttle leaves the Westwood Bldg. at 8:25 a.m.; the last at 4:20 p.m.

Thirty-nine of the shuttles stop at Bldgs. 10 and 31, and the Federal, Landow and Westwood Bldgs. The 4:20 p.m. shuttle leaving the Westwood Bldg. goes directly to Bldg. 10. Thirteen shuttles stop at Bldgs. 12A, 36, and 38; 10 shuttles stop at the Bloch Bldg. The remaining 16 shuttles are express shuttles, stopping only at Bldgs. 10 and 31, and the Federal, Landow, and Westwood Bldgs.

The new shuttle schedule both to and from the Westwood Bldg. is printed below and on opposite page.

The Vehicle Dispatch and Shuttle Section will operate this shuttle schedule through March, monitoring ridership. After that time, further changes in the schedule may be made as necessary.

Suggestions for additional improvements to the shuttle service are welcome. Please forward your comments to Cheryl Amatucci, Bldg. 31, Rm. 4B30.

WESTWOOD BUILDING TO NIH CAMPUS

Westwood	Landow	Federal	38	12A	36&37	Bloch	31	10
8:25	8:38	8:40					8:46	8:48
8:50	9:03	9:05				9:09	9:12	9:13
9:15	9:28	9:30	9:34	9:35	9:37		9:38	9:39
9:40	9:53	9:55					10:00	10:03
10:05	10:18	10:20				10:24	10:27	10:28
10:30	10:43	10:45	10:48	10:49	10:51		10:53	10:54
10:55	11:08	11:10					11:19	11:20
11:20	11:33	11:35	11:39	11:40	11:42		11:44	11:45
11:45	11:58	12:00				12:04	12:07	12:08
12:10	12:23	12:25	12:29	12:30	12:32		12:34	12:35
12:35	12:48	12:50					12:55	12:56
1:00	1:13	1:15	1:19	1:20	1:22		1:24	1:25
1:25	1:38	1:40					1:48	1:49
1:50	2:03	2:05				2:09	2:12	2:13
2:15	2:28	2:30	2:34	2:35	2:37		2:39	2:40
2:40	2:53	2:55					2:59	3:00
3:05	3:18	3:20				3:24	3:27	3:28
3:30	3:43	3:45	3:49	3:50	3:52		3:54	3:55
3:55	4:08	4:10					4:15	4:20
4:20								4:45



Leonard Coombs (l), motor pool foreman, and James Dickerson (c), motor vehicle operator, assist several employees boarding one of the new vans now used for the Westwood Shuttle. The increased number of daily round trips, and the improved efficiency of the service has been well received by the growing number of shuttle users.

NIH CAMPUS TO WESTWOOD BUILDING

10	31	Bloch	36&37	12A	38	Landow	Federal	Westwood
8:00	8:02					8:07	8:09	8:23
8:25	8:26	8:29				8:33	8:35	8:48
8:50	8:51					8:55	8:57	9:13
9:15	9:16		9:18	9:20	9:21	9:24	9:26	9:33
9:40	9:41	9:44				9:47	9:49	10:03
10:05	10:06					10:10	10:12	10:28
10:30	10:31		10:33	10:35	10:36	10:40	10:42	10:53
10:55	10:56					11:00	11:02	11:18
11:20	11:21	11:24				11:28	11:30	11:43
11:45	11:46					11:50	11:52	12:08
12:10	12:11		12:13	12:15	12:16	12:20	12:22	12:33
12:35	12:36					12:40	12:42	12:58
1:00	1:01		1:03	1:05	1:06	1:10	1:12	1:23
1:25	1:26	1:29				1:33	1:35	1:48
1:50	1:51					1:55	1:57	2:13
2:15	2:16		2:18	2:20	2:21	2:25	2:27	2:38
2:40	2:41	2:44				2:48	2:50	3:02
3:05	3:06					3:10	3:12	3:28
3:30	3:31		3:33	3:35	3:36	3:40	3:42	3:53
3:55	3:56					4:00	4:02	4:18

ACRF

(Continued from Page 6)

NIH buildings, especially Bldgs. 30, 31, 36 and 37, but because of the limited number of spaces elsewhere, some employees arriving

later than most employees may find lot 41-B as the only area with available parking spaces.

For additional information or suggestions, contact Cheryl Amatucci, Bldg. 31, Rm. 4B30, 496-7644. □

Parking Permits for E, F, G Names Must Be Renewed During March

Parking Permits for NIH employees whose last names begin with E, F, or G must be renewed in March. General employee parking permits for those persons will expire on the last day of March.

Employees may renew their parking permits any workday at the NIH Commuter Assistance Office, Bldg. 31, Rm. B1C19, between 8:30 a.m. and 3:30 p.m.

Affected employees will receive a memo reminding them of the upcoming renewal and providing specific instruction on obtaining the replacement permits.

New March general employee parking permits must be displayed beginning Monday, Apr. 2. For additional information, contact Cheryl Amatucci, Bldg. 31, Rm. 4B30, 496-7644. □

Indirect Research Costs Subject of STEP Forum

Indirect costs of research will be discussed at a STEP forum on Mar. 14 from 9 a.m. to 3 p.m. in Wilson Hall, Bldg. 1. All NIH employees are invited to become better informed about this controversial issue. No prior registration is required.

Topics to be discussed include whether indirect cost rates reflect accurately the actual indirect costs at each institution, how rates are determined, differences among rates, costs that are classified as indirect, and how these costs should be reimbursed.

Short presentations will be made by invited experts, who will discuss each presentation as it is given and then answer questions.

Panelists are Robert M. Bock, dean of the University of Wisconsin Graduate School; Walter Boland, director of the Division of Cost Allocation for Region I of the Department of Health and Human Services; Thomas A. Fitzgerald, director of the Office of Grants Administration at the New York University Medical Center.

Also, Robert W. Krauss, executive director of the Federation of American Societies for Experimental Biology; William Mann, Coopers and Lybrand public accountants, and Dr. William F. Raub, NIH Deputy Director for Extramural Research and Training.

Further information is available from Arlene M. Bowles, STEP program coordinator, 496-1493. □

Dr. Sheehan, the 'Guru' of Runners, To Speak Mar. 15, Masur Auditorium

The NIH R&W Association will present a free lecture by Dr. George Sheehan at 10 a.m., on Mar. 15, in Masur Auditorium, Bldg. 10.

Dr. Sheehan, a 64-year-old cardiologist, has competed in countless races over the last 20 years, including about 60 marathons, and written several books on running. His book, *Dr. Sheehan on Running*, has sold 500,000 copies to date and *Running and Being* was a *New York Times* bestseller.

Dr. Otto A. Bessey Dies; Former NIEHS Biochemist

Dr. Otto A. Bessey, one of the founding members of the scientific staff of the National Institute of Environmental Health Sciences in Research Triangle Park, N.C., died Feb. 6, at the age of 79.

A longtime resident of Kensington, Md., and a distinguished biochemist and science administrator, Dr. Bessey joined what was then the Division of Environmental Health Sciences in 1967.



Otto A. Bessey

Dr. Bessey, as NIEHS' associate director for extramural programs, was responsible for the administration of research and training grants and awards that climbed in value from just over \$10 million in 1967 to well over \$17 million in 1974, and had surpassed \$50 million by 1982.

Dr. David P. Rall, NIEHS Director, said, "Dr. Bessey had a guiding hand in the development of NIEHS from the very beginning. He combined excellence as a scientist with practical administrative know-how.

"Just as important, he is remembered with deep affection by his many colleagues and friends at the Institute. After his retirement, he never lost touch with us, nor us with him."

Dr. Bessey first joined the Federal Government in 1956 when he worked at the U.S. Army Natick Laboratories as associate chief of the Environmental Protection Research Division, and later was research and training grants administrator at the Division of Occupational Health, PHS, the position he held before coming to NIEHS.

Born in Niotaze, Kans., Dr. Bessey graduated from Montana State University and received his Ph.D. in biochemistry from the University of Pittsburgh. He received the DHEW Superior Service Honor Award in 1972 for his pioneering administrative efforts at NIEHS.

Donations in memory of Dr. Bessey will be used for the University of Montana library fund, and should be sent to the University of Montana Foundation, Attn: Mr. William Zader, 600 University Ave., Missoula, MT 59812. Donations should be made out to the University of Montana Foundation.

Gene Transfers Successful With Fly and Rat Hormone

Specific genes have been successfully inserted into embryos of various experimental organisms by a number of NIGMS grantees.

These genes were incorporated into the reproductive cells of these organisms and passed on to future generations.

In several different experiments, three groups of NIGMS-supported researchers have successfully transferred different genes into embryos of *Drosophila melanogaster*, the fly commonly used in genetic research.

These scientists used transposable elements—movable pieces of genetic material—to ferry the new genes into the embryos, where they integrated with the reproductive cells and functioned normally.

Transposable elements have not been identified in most higher organisms, including humans, although it may be that all species will be shown to have them.

The technique was first used by Dr. Allan Spradling of the Carnegie Institute of Washington in Baltimore and Dr. Gerald M. Rubin, now at the University of California, Berkeley, who transferred a gene that changed the flies' eye color.

Later, two other teams of NIGMS grantees—one led by Dr. Jay Hirsch and one by Dr. Thomas P. Maniatis, both of Harvard Uni-

versity in Cambridge, Massachusetts—succeeded in transferring other genes using this method.

Their work confirmed that the transferred genes integrate stably into the flies' genetic material, produce the correct gene products, and are regulated normally.

In another important set of experiments, Dr. Ronald M. Evans, an NIGMS grantee at the Salk Institute in San Diego, collaborated with scientists from four other laboratories to transfer a gene for rat growth hormone into fertilized mouse eggs.

The eggs were then implanted in foster mother mice and some of the resulting baby mice grew to almost twice normal size.

Although the growth hormone did not function normally, this marks the first time that genetic engineering has been used to alter the physical characteristics of a mammal in such a profound way.

The work of these scientists will facilitate further investigation of how genes are regulated and perhaps someday help induce beneficial changes in plants and animals. At present, however, much more needs to be known about this process before genetic engineering might be used to correct gene defects. □

Four FIC Scholars-in-Residence Arrive

Four Fogarty International Center scholars-in-residence have recently arrived at NIH.

Dr. Kurt J. Isselbacher is professor of medicine at Harvard Medical School and chief of the Gastrointestinal Unit at the Massachusetts General Hospital.

He began his research career with fundamental studies on enzymatic mechanisms of hormone metabolism, in particular, steroid hormone glucuronide formation.

He then published a series of papers on the nature of congenital galactosemia. With his collaborators he showed that congenital galactosemia is due to a single enzymatic block, one of the earliest examples discovered of a single gene heritable disease.

After joining the staff of the Massachusetts General Hospital, he began the fundamental studies of intestinal function for which he is best known.

He also began an equally important series of clinical investigations into the metabolism and absorption of lipids in man, and the role played by disturbance of the normal patterns of lipid absorption in disease states, in toxic situations, and in other alterations of the normal state.

During his first term, Dr. Isselbacher will be associated with Dr. George Khoury, NCI, and Dr. Herbert Tabor, NIADDK.

Dr. Harold Scheraga, professor of chemistry at Cornell University, is also embarking on his first term as a Fogarty scholar-in-residence.

He was educated at the City College of New York, where he received his B.A. in 1941. He took his Ph.D. in the Chemistry Department at Duke University in 1946.

Dr. Scheraga's career has been devoted to the study of macromolecules, especially proteins, and to the physical chemistry of aqueous solutions.

He is a world-renowned authority on the three-dimensional structure of proteins and has developed methods for prediction of such structure from a knowledge of the primary amino acid sequences of proteins.

Dr. Scheraga will be associated with Dr. Alan Schechter, NIADDK.

Dr. Franz Seitelberger, professor of neurology at the University of Vienna, Austria, also is beginning his first term as a Fogarty scholar.

Dr. Seitelberger, a leading neuropathologist, has published extensively on progressive cerebral disorders of children, dementias associated with the aging process, and the etiology and pathology of multiple sclerosis.

Dr. Seitelberger was born and educated in Vienna and graduated from the city's medical faculty in 1940. He was appointed to the Institute of Neurology, University of Vienna, in 1950. In 1958, he obtained his professorship, and in 1959 became "ausserordentlicher" professor of neurology and director of the university's Institute of Neurology.

Dr. Seitelberger will be associated with Drs. Igor Klatzo and Henry Webster, NINCDS.

Dr. David Shemin has returned to resume his FIC scholarship-in-residence.

A graduate of the City College of New York, he received his Ph.D. at Columbia University at a time when Dr. Rudolph Schoenheimer had come from Germany and was beginning his studies on biochemical processes using stable isotopes of carbon and nitrogen as markers.

Dr. Shemin was one of the early workers to apply these new techniques and in a classic series of studies elucidated the pathway by which porphyrins and heme pigments are synthesized.

The four FIC scholars will have offices in Stone House, where they can be reached at 496-1213. □

Two New NLM Regents Named by Secretary Heckler



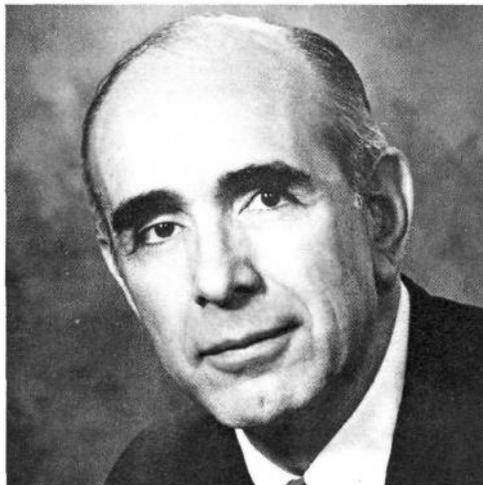
Dr. Gunn

Secretary of Health and Human Services Margaret M. Heckler has appointed two new members to the National Library of Medicine's Board of Regents. The new Regents are Dr. Albert E. Gunn, of Houston, Tex., and John K. Lopez, of Los Altos, Calif.

Dr. Gunn is medical director of the Rehabilitation Center of The University of Texas M.D. Anderson Hospital and Tumor Institute. He is also assistant dean for admissions of The University of Texas Medical School at Houston.

He earned his medical degree from the National University of Ireland in 1967, having earlier received degrees from Fordham College and Fordham Law School.

He is a Fellow of the American College of Physicians and has been a member of the National Health Advisory Council to the former U.S. Department of Health, Education, and Welfare and the Advisory Committee of the National Institute of Law Enforcement and Criminal Justice.



Mr. Lopez

Dr. Gunn is the author of articles and editorials on a number of medical topics, including ethics and legal issues, and is the editor of *Cancer Rehabilitation*, a text to be published by Raven Press this year.

Mr. Lopez is executive vice president of Medicaelectrographic Sciences, Inc., located in Sunnyvale, Calif. In this position he has developed an international marketing and research program for a diagnostic medical telecommunications network in the fields of cardiology, neurology, and radiology.

Mr. Lopez's educational experience includes work at the graduate schools of business at both the University of Chicago and Stanford University. His numerous professional affiliations include the American Association for Medical Instrumentation, the American Hospital Association, and the Independent Telecommunications Association.

NLM Regents are appointed to 4-year terms. They meet three times a year at the Library to oversee NLM policy and to review applications for grants. □

DRS Expands Animal Space

The Small Animal Section of the Veterinary Resources Branch, Division of Research Services, now has 6,300 square feet of space dedicated to housing rodents and rabbits on experiment.

Part of the new holding area is now being used by NIH scientists, and applications from other intramural investigators are being processed.

Animals are housed in Bldg. 14B North, which was recently renovated. Technical and supportive services are provided through the research support unit of the section. Per diem charges vary according to species. Space assignments are first-come, first-served.

Because cagewashing facilities are shared with the section's production colonies, all animals maintained in this building must originate from the production colonies or be purchased from a source approved by the chief, Small Animal Section.

For further information, contact Kathleen Snowden, chief, research support unit, SAS, 496-5255, or Dr. William T. Watson, chief, Small Animal Section, VRB, 496-4481. □

Spring Hayfever Sufferers Needed

The Allergenic Products Branch, Office of Biologics Research and Review, FDA, is seeking volunteers who have spring hayfever.

Volunteers will be asked to complete a daily symptom diary during the spring hayfever season.

Following completion of the diaries, volunteers will be skin tested with allergenic extracts of selected pollens and molds prevalent during the spring hayfever season to determine the association between the quantity of atmospheric allergens, severity of symptoms and degree of skin sensitivity to the allergens tested.

Interested individuals should contact Dr. Paul C. Turkeltaub, or Dr. Charles O. Roberts, 496-4204, to obtain a hayfever questionnaire and additional information. □

NHLBI Seeks Volunteers To Test Blood Pressure Drug

The NHLBI is currently recruiting men and women (ages 18 to 69) with high blood pressure to participate in the trial of a new antihypertensive medication.

Visiting Scientists

1/1—**Dr. Halaysa Ramanathan**, India. Sponsor: Dr. Louis Levy, Laboratory of Molecular Biophysics, NIEHS, Research Triangle Park, NC.

1/9—**Dr. Polavarapu Rathnagiri**, India. Sponsor: Dr. David Goldman, Laboratory of Clinical Studies, NIAAA, Bg. 10, Rm. 3C215.

1/9—**Dr. Thomas P. Thomas**, India. Sponsor: Dr. Wayne B. Anderson, Laboratory of Tumor Immunology and Biology, NCI:DCBD, Bg. 10, Rm. B1B47.

1/16—**Dr. Pierre DeMeys**, Belgium. Sponsor: Dr. Phillip Gorden, Diabetes Branch, NIADDK, Bg. 10, Rm. 8S243.

1/30—**Dr. Ryojiro Fujita**, Japan. Sponsor: Dr. Anil B. Mukherjee, Human Genetics Branch, NICHD, Bg. 6, Rm. 1A07.

1/30—**Dr. Satoshi Hasumura**, Japan. Sponsor: Dr. Sheue-yann Cheng, Laboratory of Molecular Biology, NCI/DCBD, Bg. 37, Rm. 4B09.

1/31—**Dr. Naoki Miyata**, Japan. Sponsor: Dr. Donald Jerina, Laboratory of Bioorganic Chemistry, NIADDK, Bg. 4, Rm. 216.

1/31—**Dr. Wu-Hong Tsai**, Taiwan. Sponsor: Dr. Donald G. Puro, Laboratory of Vision Research, NEI, Bg. 10, Rm. 10D13.

2/1—**Dr. Rita De Santis**, Italy. Sponsor: Dr. Ettore Appella, Laboratory of Cell Biology, NCI/DCBD, Bg. 37, Rm. 1B04.

2/1—**Dr. Virginia G. Johnson**, Canada. Sponsor: Dr. David Colcher, Laboratory of Tumor Immunology and Biology, NCI/LCMB, Bg. 37, Rm. 1A07.

2/1—**Dr. Muriel Moser**, Belgium. Sponsor: Dr. Gene M. Shearer, Immunology Branch, NCI/DCBD, Bg. 10, Rm. 4B55.

2/1—**Dr. Mihael H. Polymeropoulos**, Greece. Sponsor: Dr. Sankar Adhya, Laboratory of Molecular Biology, NCI/DCBD, Bg. 37, Rm. 4B04.

2/1—**Dr. Christopher K. H. Tseng**, Taiwan. Sponsor: Dr. David Johns, Laboratory of Medicinal Chemistry and Biology, NCI/DCT, Bg. 37, Rm. 6D30.

2/1—**Dr. Lihau Wu**, Japan. Sponsor: Dr. C. Frasch, Bacterial Polysaccharides Branch, NCDB, Bg. 29, Rm. 429.

Brain Study Volunteers Needed

Normal volunteers over 18 years of age without a history of psychiatric illness are needed for a brain metabolism study using the PET scan.

Two appointments are required for this procedure. A 1-to-2 hour appointment involves screening to evaluate suitability. The second appointment for the experimental procedure, requires 4-to-5 hours. This procedure involves an injection of radioactive 18 Fluorodeoxy glucose, periodic blood sampling, an auditory attention task and the PET scan itself.

Volunteers will be paid approximately \$100 for the two sessions.

For further information, call 496-4707. □

Volunteers will undergo a comprehensive medical examination and will be followed in a special outpatient clinic for approximately 4 months. In-depth studies of heart, kidney, and hormonal function will be performed using non-invasive techniques.

For further information, call Joan Folio, 496-3244 or Dr. Paul Levinson, 496-4042. □

NIGMS Grantees Study Bioenergy: How It Is Generated and Fuels Basic Human Functions

What enables you to read this story? How are muscles able to hold this paper? How are nerves able to send signals from eye to brain? How is food energy stored for these functions?

Bioenergetics, the study of the storage and use of energy in living tissue, focuses on these questions. It is a very active area of NIGMS-supported research.

Energy is required for every cell function, yet the mechanisms the cell uses to obtain and store energy are not well understood.

Membranes—the thin elastic coverings that completely surround cells and some structures within cells—play a major role.

Membranes are very fragile, and while the types and amounts of the substances in them can be analyzed, the structures that transport energy are easily destroyed by biochemical test methods.

Three NIGMS-supported scientists have made progress recently on questions related to bioenergetics by applying creative methods to long-standing research problems.

Artificial Membranes

Dr. Paul Loach of Northwestern University in Evanston and Dr. P. Leslie Dutton of the University of Pennsylvania in Philadelphia have created artificial membranes which allow them to control key aspects of the energy transport system of the membrane.

Both are concentrating on the globular proteins called cytochromes that exist within the membranes of mitochondria, the energy-producing structures in the cells of higher organisms.

Cytochromes, one of the main components of the energy transfer system, help electrons and protons—the particles that are energy's currency—pass through the membrane.

Protons are pumped out of the mitochondria and when they reenter are used to make a substance that stores energy, while electrons eventually are transferred to oxygen in the membrane and used to make water. These steps complete a complex energy transfer process.

Within each cytochrome is a central molecule called a heme which transfers electrons within the membrane. Electrons are transferred through a series of hemes—building up an energy store as they go—and are ultimately transferred to oxygen.

In an effort to determine precisely what steps occur in the electron transfer process, Dr. Loach has constructed artificial hemes that he can position at different depths within the membrane.

The different positions affect energy transfer to and from the hemes, and give insights as to how the position of hemes may help or hinder electron transport.

FAES Presents Film on Feb. 28

Dr. Gorm Wagner of the International Rehabilitation and Research Center for Torture Victims in Copenhagen, Denmark, will present a film entitled *Your Neighbor's Son*, on Tuesday, Feb. 28, at 1 p.m., in the ACRF auditorium, Bldg. 10. □

Dr. Dutton's artificial membrane includes a "reaction center" taken from a type of bacterium that derives its energy from light rather than food. The reaction center acts as a switch: when light shines on it, a chemical reaction begins which produces electrons for his artificial electron transfer system.

When the light is turned off, the electron-producing reaction stops. This feature allows Dr. Dutton to fine-tune the measurement of electron transport through the membrane and develop a better understanding of how the system works.

ATPase: Structure & Action

Dr. Robert Fillingame of the University of Wisconsin at Madison is using genetic technology to study the structure and action of ATPase, another important part of the membrane's energy transport system. ATPase is a complex protein structure with 22 subunits which is embedded in mitochondrial membranes near the cytochromes.

Protons, which have been pumped out, reenter the mitochondria through ATPases and are used to make adenosine triphosphate (ATP)—the high-energy substance mentioned above.

Dr. Fillingame is working with a species of common intestinal bacteria, *Escherichia coli*, because the *E. coli* genes that direct production of the ATPase subunits are known.

E. coli is also a good experimental model because its ATPase is simpler than, but still very similar to, that of higher organisms.

Dr. Fillingame systematically eliminates one gene at a time from the *E. coli* genetic material and watches to see if proton transport occurs in the resulting ATPase. If there is no proton movement, he knows that the subunit the gene represents is a necessary part of the transport system.

These genetic studies are being used to create a map of the functions of the ATPase subunits. Now that Dr. Fillingame has determined the structural components of ATPase, he is working to discover the relationship of structure to function—particularly how protons are transported through the ATPase complex and how this results in ATP synthesis.

Although their specific approaches differ, these three NIGMS-supported researchers have developed methods that are giving them new insight into the cell's energy transfer system.

These techniques and the new information they enable scientists to gather are dramatically increasing our understanding of one of life's most fundamental processes.—**Sandy Hecker.** □

'Total Image' To Hold Seminars

Mel Zalman, personal image consultant and director of Total Image, will hold seminars from noon to 1 p.m. at the following locations:

- Bldg. 38A, Feb. 28, Conf. Rm. B1N30B
- Westwood Bldg., Mar. 5, Conf. Rm. D
- Bldg. 10, Mar. 12, Ampitheatre
- Bldg. 31, Mar. 19, Conf. Rm. 4 □

Dr. Daniel Cowell Named CC Assistant Director

Dr. Daniel D. Cowell, formerly assistant director for health promotion at the National Institute on Aging, has been named the Clinical Center's associate director for medical education by CC Director John L. Decker.

A board certified psychiatrist, Dr. Cowell takes charge this month of a broad range of programs, including the Medical Staff Fellowship program and the normal volunteer program. He will act as medical supervisor of the departments of Social Work, Patient Activities, Patient Representative's Office and Spiritual Ministries.

Dr. Cowell, a native of Trenton, N.J., received his bachelor's degree from the University of Pennsylvania in 1956 and is a graduate of the charter class of the New Jersey College of Medicine.

He trained in his specialty of psychiatry at St. Elizabeths Hospital in Washington where he was chief of training and research. He is a fellow of the American Psychiatric Association and has extensive experience in clinical medicine.



Dr. Cowell

A sports fan, Dr. Cowell spends his hours away from the office with his 9-year-old son, one of the three adopted children he has reared with his wife. Mrs. Cowell is busy this spring finishing work on a master's degree in social work at Catholic University.

Dr. Cowell interrupted his intense involvement with medicine long enough to obtain a master's degree in liberal studies from Georgetown University in 1982. Already an "amateur student of history," he returned to school to learn more about Mozart, Shakespeare, world religions and Rembrandt. "It's really a neat curriculum," he said.

Dr. Cowell is currently associate clinical professor of psychiatry at the Uniformed Services University of the Health Sciences. For 4 years he was chief of professional services and deputy director of the PHS hospital and clinic system.

His honors include a PHS Commendation Medal in 1980 and the Leonard Covello Award in 1982, given by the American Italian Historical Association. He is current president of NIH's first chapter of the Order Sons of Italy in America. □

Smoking Major Factor in Mouth and Throat Cancer

Tobacco use—smoking, chewing and dipping—is the major risk factor for cancers of the mouth and throat. Depending on the amount and type of tobacco used, there is a 4- to 15-fold greater risk of developing mouth and throat cancers for tobacco users over nonusers.

Mouth and throat cancers are primarily squamous cell carcinomas. The most common sites are the tongue, lip, floor of the mouth, soft palate, tonsils, salivary glands and back of the throat.

More than 90 percent of all oral and pharyngeal cancers occur in individuals over age 45, and risk increases with age.

In certain parts of India, a large proportion of both men and women chew "pan," a quid of betel leaves, nuts, tobacco and lime. Indians have the highest rates of mouth and throat cancers in the world and about 75 percent of these mouth and throat cancers can be attributed to tobacco chewing habits.

Indian women have a death rate from mouth and throat cancers 40 times greater than do American women.

U.S. white men have an annual incidence of 16.8 cases of mouth and throat cancers per 100,000, and white women have an incidence of 6.0. Black men have an incidence of 19.3 per 100,000, while black women have a rate of 7.0.

Even though men have higher rates of mouth and throat cancers, women are also susceptible to the cancer-causing effects of tobacco use. For example, women in the rural south who "dip snuff" by holding a pinch of finely ground tobacco between the gum and cheek have a high risk of developing cancers of the mouth and throat. Snuff contains N-nitroso-nornicotine, a chemical known to cause cancer in mice.

Cigarette smoking, which is highly associated with lung cancer, also increases the risk for cancers of the mouth and throat. Risk increases with increasing cigarette consumption. Heavy smokers (smoking more than one pack of cigarettes a day) are one-and-a-half times more likely than light smokers to develop mouth and throat cancers, and they have a 6-fold increase in risk over nonsmokers.

Cancers of the mouth and throat most often develop at the site directly exposed to tobacco. Snuff-dippers develop cancers of the gum and the mucosal lining of the cheek; cigarette smokers develop more throat cancers; and pipe smokers develop more lip cancers.

Alcohol drinking has been related to an in-

crease in risk of mouth and throat cancers. Heavy drinkers often smoke, however, and the effects of the two factors cannot always be separated. It is estimated, though, that heavy drinkers (drinking more than seven drinks a week) have a doubled risk of mouth and throat cancers.

Smoking and drinking have a synergistic effect; in most studies, the risk of mouth and throat cancer is greater for the combined factors of smoking and drinking than for the simple addition of the two. Among those who drink at least 1.5 ounces of alcohol and smoke 40 or more cigarettes a day, there is a 15-fold increase in risk of mouth and throat cancers.

Poor nutrition, possibly related to a lack of vitamins A and B, has also been linked to an increase in mouth and throat cancers. The role of poor nutrition and its relation with drinking in affecting mouth and throat cancer risk requires further clarification.

Some early studies have linked certain occupations with the development of mouth and throat cancers. In an Australian study, bartenders, waiters and waitresses, presumed to be exposed to tobacco smoke and alcohol on their jobs, were found to have an increased risk of mouth and throat cancers. Printers, leather workers, paper manufacturers, electronics workers, farmers, sailors, and outdoor workers are prone to lip cancer from sun exposure. There has also been some suggestion that metal, textile, and steel workers, and workers exposed to asbestos and polyvinyl chloride may have an increased risk of mouth and throat cancers. However, an understanding of the links between mouth and throat cancer and occupation needs further study.

Ill-fitting false teeth and bridges and sharp or broken teeth that can cause irritation or infection are also associated with an increased risk of mouth cancers. But again, the risk seems to be higher among those who also smoke and drink. Some slight evidence links the daily, long-term use of mouthwash among those who neither smoke or drink with mouth and throat cancers.

Quitting cigarettes, pipes, and snuff would drastically reduce the incidence of cancers of the mouth and throat. Yet, evidence shows that tobacco use—snuff dipping and tobacco chewing among teenagers, as well as cigarette smoking among women—is increasing.

For further information, contact the NCI's Office of Cancer Communications, (301) 496-6641. □

Hair Designer To Conduct Seminars

Discover the hair design lines and the special hair-coloring techniques used to create the illusion of the perfect face shape. Learn what your facial shape is and what styles and color technique is best suited for you.

Cyndi, current manager of the Hair Loft in Rockville, will conduct 2 days of seminars, at 11 a.m., noon, and 1 p.m., at the following locations:

Thursday, Mar. 8, Conf. Rm. 2, Bldg. 31; and Thursday, Mar. 15, Conf. Rm. 3, Bldg. 31. □

NINCDS Pamphlet Explains Hope for Stroke Victims

Stroke: Hope Through Research, the latest in a series of pamphlets distributed by the National Institute of Neurological and Communicative Disorders and Stroke, is now available through the Institute's Office of Scientific and Health Reports.

The 32-page booklet describes all aspects of this serious neurological disorder that strikes an estimated 400,000 Americans each year. The causes, types, and warning signs of stroke are explained, as well as diagnostic procedures and treatment now in use and therapies that are being investigated. Prevention of stroke is also discussed.

With advances in research, more and more victims are surviving stroke. But perhaps two-thirds of these survivors are left handicapped. As a result, stroke not only remains third among all causes of death in the U.S. but also is a major cause of long-term disability.

The role that the patient's family and friends can play in the care of stroke patients is explored in the booklet, and rehabilitative therapy is also described.

Copies of *Stroke* may be obtained from the Office of Scientific and Health Reports, NINCDS, Bldg. 31, Rm. 8A06, Bethesda, MD 20205; telephone: (301) 496-5751. □

RUBELLA

(Continued from Page 1)

This meeting is a part of the Fogarty International Center's continuing series of conferences on improved control and potential regional eradication of selected infectious diseases.

Rubella is usually a mild illness; however, when acquired early in pregnancy, it can have a devastating impact on the fetus. Major abnormalities include cardiovascular lesions, deafness, cataracts, mental retardation, generalized growth retardation, central nervous system abnormalities, etc.

Topics to be discussed include immunological characterization of the rubella virus; persistence of rubella antibodies following vaccination and detection of viraemia following experimental challenge; delayed manifestations of congenital rubella.

Also molecular and antigenic structure and gene expression of the rubella virus; structure and function of the rubella virus proteins; and diabetes and autoimmunity in congenital rubella.

This symposium will also examine the epidemiology of rubella and congenital rubella infection worldwide. The method of choice for prevention of congenital rubella infection is active immunization. However, the most effective of alternative strategies for a given country or a given region will be discussed.

Preregistration is recommended. For additional information write to International Studies Branch, Fogarty International Center, Bldg. 16A, Rm. 205, National Institutes of Health, Bethesda, MD 20205, or call (301) 496-2517. □

If you think before you speak the other fellow gets his joke in first.—E.W. Howe □

Register to Vote During March

Join the R&W Association and the League of Women Voters and register to vote! Registration for residents of Montgomery and Prince George's Counties will take place from 11 a.m. to 2 p.m., on the following dates:

Monday, Mar. 5, Bldg. 31, B1 level (hallway opposite the R&W Activities Desk); Tuesday, Mar. 6, Bldg. 10, Masur Auditorium, Lobby area; Thursday, Mar. 8, Bldg. 38A, B1 level Main Lobby; and Friday, Mar. 9, Westwood Bldg. Conf. Rm. D.

Take this opportunity to register and vote! □



Dr. Wyngaarden goes over the settlement statement with Mother Mary Gabriel Muth (sitting) and Sister Margaret Mary Fox (standing).

NIH Purchases Former Convent and 11 Acres

Can you imagine having an office or attending a conference in a 60-year-old stately nunnery with an interesting background? Perhaps you may be one of the lucky ones.

Recently, NIH purchased the Convent of the Sisters of the Visitation of Washington along with approximately 11 acres of land on Old Georgetown Road in Bethesda. The property was the only remaining underdeveloped land almost entirely engulfed by the NIH and will provide for future growth of the NIH clinical and laboratory research programs. The property was bought for \$4.5 million in December 1983.

The Convent was built in 1923 to house the cloistered order of nuns. Because a cloistered order is secluded from the distractions of the world, they had to be self-sufficient in all aspects of their lives.

The Sisters maintained two gardens, harvested, preserved, and stored their food using a root cellar to store some of the vegetables. They raised cattle and poultry for meat, eggs, and dairy products, and did their own cooking, laundry, and sewing.

An infirmary was established to care for their routine medical needs as well as dental care. They even had an X-ray machine.

General maintenance of the Convent was provided by volunteer caretakers, one of whom helped build the Convent and, until recently, was still helping the Sisters.

The Chapel was opened to the public for Church services with a secluded area for the Sisters. To assist the cloistered nuns with the day-to-day activities of receiving visitors, accepting deliveries, and taking care of the Chapel, there were non-cloistered nuns called "Outsisters." They were secluded from the cloistered nuns, living in separate quarters and taking their meals separately.

In 1971, 58 years later, the Catholic Church relaxed the strict rules of the cloistered order and the visual barriers of seclusion between the nuns and the outside world were removed.

When the Catholic Church decided to close the Convent in October 1982, only nine of the original cloistered Sisters remained. All of the remaining Sisters were relocated to other communities of their choice, keeping two or three together at each location.

There was also a cemetery located at the Convent and prior to the sale of the property, the bodies of 23 Sisters were exhumed and reburied in other Catholic cemeteries.

The Convent itself is a three-story brick structure containing approximately 43,000 gross square feet. The cottage on the grounds was used to house the attendant caretaker and Convent priest.

After the acquisition of the land and buildings, Dr. James B. Wyngaarden, NIH Director, appointed a Committee on Convent Utilization to consider the various space needs of the NIH as a whole and develop both short- and long-term proposals for optimum uses of the facility.

Members of the committee are Drs. Edwin D. Becker, Director, ORS, Chairman; Carl O. Douglass, Director, DRG; John C. Eberhart, Senior Advisor, OD; Joseph F. Fraumeni Jr., Division of Cancer Cause and Prevention, NCI; Jane Henney, Deputy Director, NCI; Mortimer B. Lipsett, Director, NICHD; Joram Piatigorsky, Chief, Laboratory of Sensorimotor Research, NEI; and Joseph E. Rall, Deputy Director for Intramural Research, OD.

Certain areas of the convent can be used with little or no modifications for meetings and for "turn-around" office space until longer range decisions are made along with required renovations. Beginning Mar. 1, the community room will be used as a conference room.

The first changes to be made will be to reroute the driveway. The entrance from Old Georgetown Road will be returned to lawn and the new entrance will be off Center Drive.

As part of the NIH campus, the Convent will be Bldg. 60 and the cottage, Bldg. 61. □

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