

The NIH Record

Asian-Pacific Heritage

NIH Observance on May 9; Color Posters Available

Lamentations have been many in recent years by disappointed NIH'ers who couldn't get a copy of the multicolored silk screened NIH Asian/Pacific American Heritage Week poster.

The posters have become collectors' items. NIH'ers even have offered to buy them.

This year for the first time, a limited quantity of the five-color 1986 Asian/Pacific American Heritage Week posters will be available for sale on a first-come basis.

The theme of this year's May 9th observance at NIH is Celebration of Life. The 1986 poster depicts the East Indian dancing Shiva.

In the various Indian traditions Shiva is understood in one of two contexts: Shiva is sometimes seen as the third of three aspects of God (Creator, Sustainer and Destroyer). In that context Shiva represents God's function to destroy the individual's illusion of separateness from God.

Shiva also represents God without aspects: as the all-pervasive, Supreme Creator of Everything. In this context Shiva performs the dynamic dance of creation.

This year, NIH's entire celebration of the Heritage Week will take place on Friday, May 9, with noon-hour booths and tables on the Bldg. 31A outdoor patio, and an evening program in the Clinical Center's Masur Auditorium.

From 11:30 a.m. to 1:30 p.m. there will be various demonstrations and food for sale on the patio outside Bldg. 31A.

At several tables both the hungry gourmand and the idle nibbler can purchase Chinese, Korean, Thai, Phillipino, Japanese and Indian delicacies.

The 1986 poster will be sold at one table, and NIH artist Al Laoang will be present to autograph each poster.

There will be three demonstrations beginning with the NIH Tai-Chi Club demonstration at 12-12:15 p.m., followed by the NIH Judo Club demonstration at 12:15-12:30 p.m., and ending with a Bonsai demonstration at 12:30-1 p.m.

Seating at the 7:30 to 10 p.m. evening program in the Clinical Center's Masur Auditorium will be on a first-come basis, so it will pay to arrive a bit early.

The program will consist of traditional dance and music—both instrumental and vocal—from Japan, Korea, Thailand, Vietnam, Malaysia, China, Burma and India.

(See **HERITAGE**, Page 6)

AIDS Virus Zapped by Removing Key Gene; Potential AIDS Vaccine Developed at NIH

Two potentially significant developments in the fight against AIDS, now an invariably fatal disease, have been recently reported by teams of scientists at NIH.

Two accounts of the developments—one, inactivation of the AIDS virus by removal of a key gene and the other, development of a possible AIDS vaccine—follow:

Alterations of a key gene of HTLV-III, the virus that causes AIDS, render the virus harmless, according to two independent research teams, one at the National Cancer Institute and the other at Harvard's Dana-Farber Cancer Institute. The gene is called the transactivator (tat). The finding is expected to speed development of new types of anti-AIDS drugs.

HTLV-III, unlike most other retroviruses, has the ability to tremendously accelerate its own production. The speed-up is accomplished by the transactivator. This gene acts not only to speed up its own production, but also speeds up the reproduction of other virus components.

Researchers used gene-splicing techniques to remove genetic information that encodes the tat protein. The result, which surprised the researchers, is a virus incapable of growth.

There are several potential clinical consequences of this finding. Since the transactivator gene is necessary for virus growth, drugs that prevent the transactivator gene from working should also prevent the virus from growing. Drugs that block either the transactivator itself, or prevent interaction of the transactivator within the virus, should stop its spread.

Such drugs might have a selective action against the virus, and therefore may not be toxic. The transactivator of HTLV-III is not present in normal cells, and therefore drugs that act against the transactivator should not affect normal cell growth.

These experiments could also provide an avenue for vaccine development. The virus lacking the transactivator gene, produced by cells which contain the transactivator gene, looks exactly like the real virus. However, the virus without the transactivator gene is dead. This dead virus contains all the viral proteins in all the correct conformations. However, the virus can't grow because it can't make its own transactivator gene. Such an intact—but dead—virus might be useful for a vaccine as it should appear to the immune system as if it were the deadly virus itself.

The National Cancer Institute research team is directed by Dr. Flossie Wong-Staal, and Harvard's Dana-Farber Cancer Institute research team is directed by Dr. William A. Haseltine. □

A recombinant vaccinia virus engineered by NIAID and NCI scientists can be used as an important new tool in the study of acquired immune deficiency syndrome (AIDS) and may have potential as a vaccine against the disease.

Scientists anticipate that the new recombinant virus will be useful in studying how HTLV-III envelope proteins are made and what immune mechanisms might offer effective protection against the AIDS virus.

When injected into mice, the recombinant virus stimulates production of antibodies to the HTLV-III envelope proteins. Whether or not these antibodies can protect against infection with the AIDS virus is not yet known. The recombinant virus cannot cause HTLV-III infection of cells because only the envelope gene of the AIDS virus is included.

Further study is needed to learn whether antibodies to the envelope proteins can reduce the infectivity of the AIDS virus and if vaccination that stimulates these antibodies might be protective.

Vaccines in general are designed to protect uninfected persons against disease. Scientists anticipate that an AIDS vaccine probably would not benefit persons already infected with HTLV-III.

The study was reported in *Nature* (Apr. 10, 1986) by Drs. Sekhar Chakrabarti and Bernard Moss from the National Institute of Allergy and Infectious Diseases, and Drs. Marjorie Robert-Guroff, Flossie Wong-Staal and Robert C. Gallo of the National Cancer Institute.

The investigators used a technique developed in Dr. Moss's laboratory to turn the vaccinia virus originally used as a vaccine against smallpox into a vector to express genes from other microorganisms. □

Time of Dyer Lecture Changed

The 1986 R. E. Dyer Lecture will be delivered at 3 p.m., Apr. 23, not 8:15 p.m. as previously announced.

The lecture by Dr. Leroy E. Hood of the California Institute of Technology, an eminent expert on immunology, will be at the Clinical Center's Masur Auditorium. □

TRAINING TIPS

The following courses are sponsored by the Division of Personnel Management, the NIH Training Center.

Executive, Management and Supervisory 496-6371	Course	Starts	Deadline
Effective Listening		6/2	4/25
Introduction to Supervision		6/23	5/16
Performance Appraisal Counseling		6/11	6/2
Strategic Planning for Productive Results		6/18	5/9
Federal Budget Process		6/4	5/25
Office Skills Career Development Program 496-6371			
Support Staff Training 496-6211			
Time & Attendance		5/28	4/30
Travel Orders & Vouchers		5/19	4/21
Lotus 1, 2, 3,		6/1	5/22
Self Assessment & Career Options for Professionals		5/6	4/22
Self Assessment & Career Options for GS 8 and below		5/8	4/22
Introduction to Working at NIH		5/28	5/19
Training & Development Services Program Orientation			
		4/29	5/8

SHARE TRAINING: For complete NIH Training Center information sign on to WYLBUR and enter SHARE TRAINING. For first-time users enter:

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Adult Education Program ongoing, 496-6211.

STEP Forum Subject: How Bill Becomes Law

The STEP Program will present a forum entitled "How a Bill Becomes a Law: A Legislative Primer" on Tuesday, May 6 from 2 to 4 p.m. in Wilson Hall, Bldg. 1.

Speakers are Judy Schneider of the Congressional Research Service, Library of Congress, and Kathleen Holcombe of the Division of Legislative Analysis, NIH.

Ms. Schneider, an expert in the political process, will speak in general terms about how a bill becomes law. Ms. Holcombe will offer specific examples of bills pertaining to NIH, like the NIH authorization bill and the farm bill which contains animal welfare amendments.

A question-and-answer session will follow the presentations. The STEP Forum is designed for all NIH employees and related PHS agencies. No preregistration is required.

For more information, call the STEP office, 496-1493. □



CENTENNIAL

Down Memory Lane at NIH

Yes, the building in question in the last *NIH Record* was indeed T-6. (Bldg. 31, partially completed, can be seen rising in the background). Pictured above, T-6 stood alone for a number of years before the start of construction of Bldg. 31.

And did you know that many NIH employees working in T-6 used to till victory gardens at the corner of Cedar Lane and Rockville Pike? Joyce Lamb remembers, and she remembers calling T-6 the "Chicken Coop" as did many other NIHers as they fondly recalled the World War II temporary buildings. Others such as DRG's Anne Brigham called T-6 the "Monkey Barn."

T-6 was demolished shortly after Bldg. 31 was built, but no one seems to know the exact date. Do you?

Stories such as Joyce's and Anne's are surfacing as NIH employees begin searching for their old photographs of the campus. Remember we are still interested in historical photographs and, of course, stories for the Centennial celebration. So please call Susan Gerhold at 496-1776 or stop by the Visitors Information Center, Bldg. 10, Rm. B1C218. □

KUDOS for NIH

"As social inventions for human betterments go, this one [NIH] is standing proof that, at least once in awhile, Government possesses the capacity to do something unique, imaginative, useful and altogether right. It has, in short, been a success story from start to finish, although the finish is, I trust, nowhere near. The NIH laboratories are something for the Government to boast about, to dine out on, and to be immensely proud of. It is my hope that the same intelligence and good taste will be displayed for the institution's future as were used to build the magnificent instrument now at hand."
—Dr. Lewis Thomas, President Emeritus, Sloan-Kettering Institute for Cancer Research.

National Institute Relay: May 21

The NIH Health Angels Jogging Club is once again sponsoring its Annual Institute Challenge Relay scheduled this year for Wednesday, May 21. The relay will be held at noon in front of Bldg. 1. The relay consists of 2.5 miles, run in 1/2-mile segments on a course around Bldg. 1 by teams of five runners. Each team member runs a 1/2-mile leg.

As usual, there will be categories for men's teams, women's teams and mixed teams. Ribbons will be awarded to all participants. The NIH Director's Trophy will be inscribed with the names of the first place team and the first place women's team. A post-race party is scheduled the same afternoon at 4:30 p.m. at the FAES Center for all runners and their friends.

Entry forms and instruction sheets will be available at the R&W Activities Desk, Bldg. 31, Rm. B1W30 beginning Monday, Apr. 21. Completed forms must be returned to the Activities Desk by Friday, May 16. Entries will be limited to 80 teams.

A \$3 entry fee will be required from each team to help defray cost of the event. Make checks payable to: The R&W Association. The Institute Relay is intended to promote friendly competition among runners and joggers at NIH. Runners and joggers of all abilities are encouraged to participate. □

The NIH Record

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LEGISLATIVE REPORT**Congress Enacts Limits on Smokeless Tobacco; Bans Radio-TV Ads, Requires Warning Labels**

This is the first in a series of columns that will acquaint the NIH community with key legislation pending before or enacted by the Congress from time to time. These articles, prepared by the Division of Legislative Analysis of the Office of Program Planning and Evaluation, NIH, will offer a glimpse of how our laws are made, particularly those pertaining to biomedical research, health, and related concerns.

* * * *

Media attention has recently focused on smokeless tobacco products. Use of these products—chewing tobacco and snuff—has been linked to cancers of the mouth and throat.

As early as 1982, the Surgeon General reported that long-term use of snuff appears to be a factor in development of cancers of the oral cavity, particularly of the cheek and gum. In a more recent report released in January 1986, the Surgeon General indicated that increased use of these products by young people is a growing national problem, with serious current and future health consequences. Oral use of smokeless tobacco products can cause cancer and a number of noncancerous mouth conditions and can lead to nicotine addiction and dependence.

This warning was first presented to the Congress in July 1985, when Dr. Joseph F. Fraumeni, associate director for epidemiology and biostatistics, Division of Cancer Etiology, NCI, testified before the House Energy and Commerce Subcommittee on Health and the Environment. "Recent epidemiologic research has clearly linked smokeless tobacco to cancer," he said.

Last October, the National Cancer Advisory Board passed a resolution making several recommendations to the Surgeon General. Among these were reviewing evidence on the health effects of smokeless tobacco, requiring warning labels, banning advertising, and supporting further research. The board commended the NCI Office of Cancer Communications for efforts in prevention and control.

In January 1986 NCI, NIDR, OMAR, and CDC sponsored a consensus development conference. That panel concluded that there is strong evidence that use of snuff causes cancer of the mouth. The draft consensus statement went on to say that risk is particularly high for parts of the mouth where snuff is usually placed and that use of the products increases the frequency of localized gum recession and leukoplakia (opalescent patches) in these areas. Long-term use leads to nicotine dependence and its associated health risks.

As the scientific evidence mounted, several Representatives introduced bills in the 99th

Congress—to tax smokeless tobacco products, to ban electronic advertising, and to require warning labels. The bill that ultimately became law, the Comprehensive Smokeless Tobacco Health Risk Education Act, was introduced by the chairman of the House Energy and Commerce Subcommittee on Health and the Environment, Henry A. Waxman (D-Calif.), on Oct. 3, 1985. This bill combined features of earlier bills introduced by Representatives Samuel Stratton (D-N.Y.) and Mike Synar (D-Okla.) A companion Senate bill included the same provisions but did not ban advertising on the electronic media.

During the Christmas holidays, conferees reached a compromise, based on the provisions of the Waxman bill. President Reagan signed the compromise bill into law on Feb. 27, as P.L. 99-252.

The new law prohibits television and radio advertising of smokeless tobacco products, requires warning labels on packages and in advertising (except billboards), and requires the manufacturers to submit a list of ingredients to the Secretary, HHS, annually and the Secretary to report on the health effects of these ingredients as necessary.

The Secretary is also required to carry out a public information program, to provide assistance to the states in developing information programs and establishing the age of 18 as a minimum for purchasing smokeless tobacco products, and to report every 2 years with the Federal Trade Commission. □

Workshop on Reproductive Biology And NMR Spectroscopy and Imaging

Specialists in two areas of science—reproductive biology and magnetic resonance spectroscopy and imaging will exchange information at a workshop to be held at NIH on May 5–6 under the sponsorship of the Center for Population Research, NICHD.

The meeting will be held in Bldg. 31, C-Wing, Conf. Rm. 6, starting at 9 a.m. on May 5. Because of limited conference space, call 496-5133 for reservations. □

Normal Volunteers Needed

Women (ages 20–25) and men (ages 20–35) with 11–15 years of education are needed to participate in research at NIMH in Bldg. 10. Volunteers will be paid for their time. The study requires two to five 2–4 hour sessions of neuropsychological testing. No painful procedures are employed. Call Ms. Deldin or Mr. Perlstein, 496-7672. □

Whooping Cough Vaccine Scheduled for NIH Tests

A new pertussis vaccine scientists hope will overcome the well-publicized side effects of the current DPT (diphtheria, pertussis, and tetanus) vaccine is scheduled to begin NIH clinical trials within the next few weeks.

Despite its effectiveness in preventing pertussis, also called whooping cough, the currently used antipertussis component of the DPT shot is responsible for many adverse reactions. According to NICHD vaccine developer Dr. Ronald Sekura, the new vaccine is expected to have far fewer adverse reactions.

Paid Volunteers

NIH trials of the new pertussis vaccine in adult volunteers are scheduled to begin in the next several weeks. Volunteers between the ages of 18 and 45 who would like to participate in the study are invited to call Dr. John Robbins or Rachel Schneerson at 496-4524, between 1 and 4 p.m. Volunteers will be paid.

Whooping cough often results in hospitalization, and the disease can lead to permanent brain damage or death. In some countries such as Great Britain and Japan parents concerned about DPT vaccine safety have stopped having their children immunized. As a result, a serious disease once controlled by nationwide immunization has made a comeback.

Dr. John Robbins, chief of NICHD's Laboratory of Developmental and Molecular Immunology, estimates that as many as 1.5 million children could contract the disease each year if immunization against whooping cough in the United States were stopped.

No Bacteria

The current pertussis vaccine, prepared from whole, inactivated bacteria, contains substances that contribute to adverse reactions but are not essential to produce immunity to the disease. The new vaccine contains no bacteria but uses a purified protein to produce immunity.

This protein, called pertussis toxin, causes many of the disease's symptoms but also produces immunity. In the new vaccine, the toxin is chemically inactivated so it is no longer harmful.

When the inactivated pertussis toxin—called a toxoid—is injected into animals, they produce antibodies that block the toxin's ability to produce symptoms. Drs. Sekura, Robbins and their coworkers expect the vaccine to have similar effects in humans, thus preventing whooping cough.

A similar type of toxoid vaccine is already used to protect humans against diphtheria and tetanus. □

Networks of Medical Centers To Study Prenatal, Newborn Health Problems

Two new networks of medical centers throughout the country will soon start a faster and more effective system for evaluating current treatments to combat various prenatal and newborn health problems.

Many of the treatments and therapies used to remedy complications of pregnancy and the newborn infant have not been evaluated in controlled scientific studies. Medical researchers usually don't encounter enough patients at any one center to conduct a thorough study in a reasonable time.

To resolve this problem, researchers in two networks established by NICHD will analyze current and evolving treatments for safety and effectiveness. Fourteen U.S. medical centers make up the two networks.

Investigators from each center and experts from NICHD will first identify major problems in obstetrics and newborn care that are appropriate for clinical studies. Over the next 5 years, the researchers in each network will evaluate old therapies, modify existing therapies to improve their effectiveness and safety, and try new therapies in carefully controlled studies. Once the best solution to a problem is identified, the researchers expect private physicians and hospitals will quickly adopt the treatment.

14 Centers Total

Seven medical centers making up one network have agreed to collaborate with the NICHD to evaluate strategies now used to treat critically ill newborns in neonatal intensive care units (NICUs). Seven centers, including one university participating in the NICUs network, make up the second network of maternal-fetal medicine units (MFMUs). These centers will assess therapies available to prevent or treat

complications during pregnancy and birth affecting both the mother and fetus.

In the NICU, the urgency to save a sick baby's life increases the use of drugs and therapies without controlled evaluation. "Neonatal intensive care is very much like some cancer therapy," Dr. Donald McNellis, an obstetrician in NICHD, said. "These babies have a high risk of dying and there is tremendous pressure on the neonatologist to try something." Drugs or techniques that seem to improve a baby's condition rapidly set trends in NICUs. The researchers in the networks can evaluate these treatments quickly for their effectiveness and safety before their use becomes routine.

Comparing Therapies

In addition, as high-tech machines uncover new problems, the number of therapies tried to treat the problem increases. Ultrasound, for example, can now readily detect growth-retarded fetuses before birth, but in doing so, has raised questions about how to treat them. By comparing therapies in controlled clinical trials, the researchers in the networks can determine what treatment best improves the mother's and fetus's condition.

Each of the centers participating in the NICHD-supported NICU and MFMU networks provides maternal, fetal and neonatal care, and each has extensive experience in clinical research. But just as important, Dr. McNellis added, is the willingness of the centers to cooperate with each other in the research projects.

Using this type of system, he said, the most effective treatment can be applied quickly to many of the health problems in pregnancy and the newborn infant. □

Two-Drug Combination Cuts Risk of Kidney Failure in Lupus

NIADDK intramural researcher Dr. Howard A. Austin and his colleagues recently reported results of long-term studies providing important new evidence that lupus nephritis patients treated with immunosuppressive drugs show a significantly reduced risk of kidney failure.

Lupus nephritis, a serious, slowly progressive kidney disease, is a potentially fatal complication of lupus (systemic lupus erythematosus), a chronic inflammatory disease of the connective tissue that affects 500,000 Americans, primarily young women.

The scientists studied 107 patients in the longest randomized trial of the drugs to date.

According to the researchers, combination treatment with low-dose prednisone and the cytotoxic drugs azathioprine and cyclophosphamide reduces the risk of kidney failure compared to treatment with conventional high-dose prednisone alone. The investigators say that intermittent doses of cyclophosphamide are more effective and produce fewer side effects than the conventional therapy.

This research, performed by NIADDK's Arthritis and Rheumatism Branch and Kidney Disease Section, was reported in the Mar. 6 *New England Journal of Medicine*. □

VISITING SCIENTISTS

(Sponsored by Fogarty International Center)

3/1 Dr. Soren Alexandersen, Denmark. Sponsor: Dr. Marshall Bloom, Laboratory of Persistent Viral Diseases, Rocky Mountain Laboratory, Mont.

3/1 Dr. Chawki Benkelfat, France. Sponsor: Dr. Thomas Insel, Laboratory of Clinical Science, NIMH, Bg. 10, Rm. 3D41.

3/1 Dr. Alain Blanchard, France. Sponsor: Dr. Peter Steinert, Dermatology Branch, NCI, Bg. 10, Rm. 12N260.

3/1 Dr. Eero H. Castren, Finland. Sponsor: Dr. Juan M. Saavedra, Laboratory of Clinical Science, NIMH, Bg. 10, Rm. 2D43.

3/1 Dr. Marie Collado-Escobar, Spain. Sponsor: Dr. Richard C. Henneberry, Laboratory of Molecular Biology, NINCDS, Bg. 36, Rm. 3C07.

3/1 Dr. Francesco Curcio, Italy. Sponsor: Dr. Hayden Coon, Laboratory of Genetics, NCI, Bg. 36, Rm. 1D12.

3/1 Dr. Maria K. Duk, Poland. Sponsor: Dr. David Zopf, Laboratory of Pathology, NCI, Bg. 10, Rm. 2A23.

3/1 Dr. Musutaka Furue, Japan. Sponsor: Dr. Stephen I. Katz, Dermatology Branch, NCI, Bg. 10, Rm. 12N238.

3/1 Dr. Periannan Kuppusamy, India. Sponsor: Dr. Joseph M. Rifkind, Laboratory of Cellular and Molecular Biology, NIA, GRC, Baltimore, Md.

3/1 Dr. Osamu Michioka, Japan. Sponsor: Dr. Ida SeOwens, Laboratory of Developmental Pharmacology, NICHD, Bg. 10, Rm. 6C209.e

3/1 Dr. Eiji Matsunaga, Japan. Sponsor: Dr. Franke Gonzalez, Laboratory of Molecular Carcinogenesis, NCI, Bg. 37, Rm. 3E24.e

3/1 Dr. Paston Nhamburo, Zimbabwe. Sponsor: Dr. Paula Hoffman, Laboratory for the Studies of Neuroadaptive Processes, NIAAA, Rockville, Md.

3/1 Dr. Roberto Nisini, Italy. Sponsor: Dr. Hayden Coon, Laboratory of Genetics, NCI, Bg. 36, Rm. 1D12.e

3/1 Dr. Denis Snider, Canada. Sponsor: Dr. Davide Segal, Immunology Branch, NCI, Bg. 10, Rm. 3N103e

3/1 Dr. Karen Usdin, South Africa. Sponsor: Dr. Anthony Furano, Laboratory of Biochemical Pharmacology, NIADDK, Bg. 4, Rm. B107.e

3/2 Dr. Marta E. Monzon, Argentina. Sponsor: Dr. Maneth Gravell, Infectious Diseases Branch, NINCDS, Bg. 36, Rm. 5C18.e

3/2 Dr. Wieslaw Gessner, Poland. Sponsor: Dr. Arnold Brossi, Laboratory of Chemistry, NIADDK, Bg. 4, Rm. 135.e

3/2 Dr. Masayoshi Tachibana, Japan. Sponsor: Dr. Jogan Fex, Laboratory of Neuro-otology, NINCDS, Bg. 36, Rm. 5D32.e

3/3 Dr. Hitoshi Kitamura, Japan. Sponsor: Dr. Paul Nettesheim, Laboratory of Pulmonary Pathobiology, NIEHS, Research Triangle Park, N.C.

3/6 Dr. Ramakrishna Rao, India. Sponsor: Dr. Ronald Mason, Laboratory of Molecular Biophysics, NIEHS, Research Triangle Park, N.C.

3/7 Dr. Shih Yu-Liang, China. Sponsor: Dr. Harvey Pollard, Laboratory of Cell Biology and Genetics, NIADDK, Bg. 4, Rm. B1-37. □

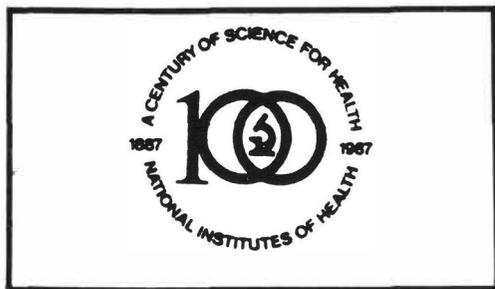
Check Your Blood Pressure

May is National High Blood Pressure Month. The Occupational Medical Service has announced that blood pressure screening will once again be available to NIH employees at the following sites:

May 1	ACRF, 2nd Flr. Cafeteria	9:30 a.m.-1:30 p.m.
May 5	Bldg. 1, Wilson Hall	9 a.m.-1 p.m.
May 7	Bldg. 12A, Rm. 3026	9 a.m.-1 p.m.
May 12	NIH Fitness Center	9 a.m.-1 p.m.
May 14	Bldg. 30, Rm. 117	9 a.m.-1 p.m.
May 21	Bldg. 10, B1-D25	9 a.m.-1 p.m.
May 23	Bldg. 36, Rm. 1B07	9 a.m.-1 p.m.
May 28	Bldg. 29, Rm. 115	9 a.m.-1 p.m.

Screening will also be available at the following sites and times:

May 1-31	Bldg. 10—ACRF Main Health Unit Rm. 6C306	Mondays: 1:15-4:15 p.m. Thursdays: 8:15-11:15 a.m.
May 1-31	Westwood Bldg., Rm. 28	8 a.m.-4:30 p.m. except Thursdays
May 1-31	Bldg. 13, Rm. G-901	8 a.m.-4:30 p.m. except Tuesday and Wednesday afternoons
May 8 & 22	Blair Bldg., Rm. 110	10 a.m.-12 p.m.
May 1, 8, 15, 22 & 29	Federal Bldg. Rm. 5C-12	9-11 a.m. 1:30-3:30 p.m.
May 1, 15, 29	Landow Bldg., Rm. 7B01	12-2 p.m.
May 6, 13, 20, 27	Bldg. 31, Rm. B2B57	1-3 p.m.
May 7, 14, 21, 28	Bldg. 38, Rm. B1N14	2-4 p.m. ■



National Conf. on Disabilities; April 30—May 2 in Washington

The NIH Handicap Program manager and the Handicapped Employees Committee will prepare and staff an exhibit at the President's Committee on Employment of the Handicapped Conference to be held Apr. 30-May 2 at the Washington Hilton Hotel.

All Institutes are being asked to supply materials which focus on research being conducted on disabling conditions for display at the conference.

For further information, contact Dr. Martha Bryan, 496-2906. □

Two NIA Employees Complete Women's Executive Training



Ms. Zimmer

Two NIA employees recently completed OPM and DHHS training programs.

Anne Wilder Zimmer, social science program analyst, completed the OPM Women's Executive Leadership Program and Alice Hines Thomas, grants management specialist, finished formal training in the DHHS Women's Management Training Initiative Program. Both programs provide developmental training



Ms. Thomas

for women with exceptional potential.

Ms. Zimmer and Ms. Thomas were the only two employees picked from the same Institute. Ms. Zimmer, nominated from among a group of NIH finalists, was one of three Department employees to participate in the OPM program.

To date, 40 percent of the participants have been promoted into positions of higher authority, attesting to the success of the programs. □

Develop Lifetime Fitness Skills at Fitness Center

Development of lifetime fitness skills and remaining fit after 50 are the themes of the Occupational Medical Service presentations in collaboration with the NIH Fitness Center in May.

Two speakers will expand on these topics:

- Dr. John Holland, the President's Council on Physical Fitness, "Lifetime Fitness Skills"; May 7, Masur Auditorium, 11:30 a.m.-12:30 p.m.
- Dr. Andrew Goldberg, National Institute on Aging, "Fitness After 50"; May 14, Wilson Hall, 11:30 a.m.-12:30 p.m.

A film on the benefits of fitness, *Run Dick, Run Jane*, and a discussion session with NIH fitness instructors will be presented at the following locations:

Bldg. 38	May 6	11:30 a.m.
Blair Bldg.	May 9	11:30 a.m.
Federal Bldg.	May 12	11:30 a.m.
Bldg. 13	May 19	11:30 a.m.
Westwood Bldg.	May 21	11:30 a.m.

Fitness demonstrations will also be presented at the Fitness Center in conjunction with the NIH Fitness Center and R&W clubs according to the following schedule:

May 8	NIH Fitness Center Annual Run/Walk	12 p.m.
May 13	NIH Jogging Club Beginner Running Clinic	1 p.m.
May 15	NIH Judo Club Judo Demonstration	1 p.m.
May 17	NIH Fitness Center Aerobic Exercise Demonstration	12 p.m.
May 20	Bicycle Commuter Club Bike Day	11:45 a.m.
May 22	NIH Tae Kwon Do Club Tae Kwon Do Demonstration	1 p.m.

For more detailed information, see the R&W Smoke Signals and NIH Calendar of Events. Registration materials for NIH Fitness Center Run/Walk are available in Bldg. 31 R&W Gift Shop and NIH Fitness Center.

Whatever your age, moderate physical activity can become a good health habit with lifelong benefits. □

Five Members Named to DRR Advisory Council

Five new members—three university professors, the director of laboratory medicine at a major research hospital, and the executive director of a private educational organization—have been named to the Division of Research Resources' National Advisory Research Resources Council.

The new members are: **Dr. Isiah Warner**, associate professor of biochemistry at Emory University in Atlanta, Ga.; **Dr. George Bekey**, professor of engineering and chairman of the computer science department at the University of Southern California in Los Angeles; **Dr. Robert Bock**, dean of the graduate school and professor of biochemistry and molecular biology at the University of Wisconsin in Madison; **Dr. Robert Rock**, director of the department of laboratory medicine at Johns Hopkins Hospital in Baltimore, Md.; and **William Goggins Jr.**, executive director of Hillcrest Education Centers in Lenox, Mass.

Second Review

Major responsibilities of the 18-member Council are to provide the second level of review of grant applications and advise the Division on matters relating to its programs, including the General Clinical Research Center, Animal Resources, Biomedical Research Technology, Biomedical Research Support, and Minority Biomedical Research Support Programs. DRR also administers NIH's new Research Centers in Minority Institutions Program.

Dr. Warner has been associated with Emory University since 1982. Prior to his appointment to Emory, Dr. Warner was for 5 years an assistant professor of chemistry at Texas A&M University, located in College Station. He has written nearly 60 scientific papers and lectured extensively in the field of analytical chemistry.

Dr. Bekey, a graduate of the University of California at Berkeley and Los Angeles, has held several positions in the University of Southern California's electrical engineering and computer science departments, obtaining the rank of full professor in 1968. He served as department head of electrical engineering from 1970 to 1972, and again from 1978 to 1982. Since 1984 he has been chairman of the computer science department and director of the Robotics Institute at USC.

As an engineer and computer scientist with a strong interest in biological processing, robotics, and artificial intelligence, he has published more than 100 papers on computer simulation, bioengineering, and robotics.

Dr. Bock, a Minnesota native and graduate of the University of Wisconsin, has been associated with his alma mater since 1952 when he was hired as an assistant professor of biochemistry.

In addition to being dean of the university's graduate school since 1967, he has been heavily involved in other professional activities, including two separate NIH committee assignments. From 1964 through 1967, he served on a National Institute of General Medical Sciences' review committee; he was a member of the DRR General Research Support Program Advisory Committee from 1971 to 1974, acting as chairman from 1973 to 1974.

Dr. Rock, who received an M.D. from the University of California at San Francisco in 1963, served as a commissioned officer in the U.S. Army Medical Corps from 1968 to 1971. Since 1977, he has been director of laboratory medicine at Johns Hopkins. For 6 years prior to that, at the Johns Hopkins University School of Medicine, he served as director of the division of clinical chemistry and associate professor of laboratory medicine.

Mr. Goggins, who began his career in public service in 1946 as a civil engineer for the Massachusetts Department of Public Works, brings to the advisory council nearly 30 years experience in the public health care field in Massachusetts. Prior to assuming his present position at the Hillcrest Education Centers, he was superintendent of Northhampton (Mass.) State Hospital, and assistant superintendent for 5 years prior to that. □

BEIB Will Sponsor Instruments Demonstrations

The Biomedical Engineering and Instrumentation Branch (BEIB), DRS, will begin sponsoring a series of instrumentation demonstrations for NIH scientists in April.

A variety of scientific equipment manufacturers will present state-of-the-art instrumentation for review. Times and places will be announced in the "NIH Calendar of Events."

NIH investigators are invited to recommend equipment they would like to see at these demonstrations. BEIB will make every effort to have suggested equipment manufacturers take part.

To submit recommendations, contact the series coordinator, Nelson Smith, deputy assistant branch chief, or Nancy Jenkins, at 496-4131. □



Don Newman, Acting Under Secretary of the Department of Health and Human Services (c), and Dr. James B. Wyngaarden, Director of NIH (l), examine a DNA sequence being shown them by Dr. Daniel W. Nebert, chief of the Laboratory of Developmental Pharmacology. Mr. Newman's recent visit to NIH was his first since his appointment.

Fun-and-Fantasy Magic Show Scheduled for CC Patients

A fun-and-fantasy magic show will be presented for patients of the Clinical Center, Bldg. 10, on May 7 at 7 p.m. in the 14th floor auditorium.

Provided free by the Technical Sales Club of the Baltimore/Washington area, the show will feature "Christian the Magician."

Dick Christian is a retired naval commander who saw combat service in Vietnam. He took up magic as a second profession after retiring from the Navy several years ago.

He has performed at hundreds of hospitals and schools and has been featured in *Washingtonian* magazine. He has also taught magic to kids in special classes at the Smithsonian.

Alex Natale, representative of the nonprofit sponsoring group, says the show "has plenty of comedy, many amazing magical effects and illusions, plus lots of audience participation."

As a special attraction, Mr. Christian and his lovely assistant will present the world's fastest illusion, *Metamorphosis*, which has mystified audiences around the world since it was introduced by the legendary magician, Houdini.

NIH staff and their friends are also invited to view the show. □

HERITAGE

(Continued from Page 1)

Posters will be sold in the lobby outside Masur Auditorium before, during and after the evening program.

Posters will be available for sale beginning Monday, May 5 at three locations and the R&W stores. Those interested may call Fu Temple at both the Westwood Bldg. (496-7219) and at Parklawn (443-6610). They may also call Peggy Brandenburg or Dinah Bertran in Bldg. 10 (496-1776). Please do not phone before May 5.—Dinah Bertran □

Dental Scientists Duplicate Sea Mussels' 'Superglue'

Ten years of NIDR-supported research on a sticky substance produced by sea mussels is about to revolutionize dentistry, medicine, and shipping.

Working in a laboratory at the University of Connecticut Health Center with grants from the National Institute of Dental Research, Dr. J. Herbert Waite, biochemist, has been studying mussels to learn more about the extraordinary glue they produce that enables them to adhere to structures underwater. Now that he has identified the main ingredient in the mussel glue—and can reproduce it—dentists, surgeons, and even the U.S. Navy are expressing a keen interest in its potential uses.

The ability to reproduce the mussel's rapid-acting adhesive is a major breakthrough because even the most powerful man-made glue cannot be applied in water to create a strong bond. Most adhesives need dry surfaces to be effective.

The mussel's glue works in a wet, salty environment as well as a dry one. It has the advantage of being a completely natural inert substance. Add to this the ability of mussel glue to stick to any type of surface—rock, metal, glass, wood, or even another shellfish—and the result is a superglue with a multitude of possible applications.

Dentists foresee using the glue as a sealant, as a material for filling cavities, and as an adhesive for bonding teeth. The mussel adhesive also may be useful in periodontal surgery, to aid the healing process by creating a strong bond between gum tissue and teeth.

Surgeons are interested because the glue could be used in operations to coat sutured tissues to prevent infection. The adhesive also could hold together small broken bones or tendons which exist in a saline solution chemically similar to the mussel's natural salt water surroundings.

The Navy hopes to use the substance to coat the hulls of ships to prevent fouling by marine growth and corrosion. Repairs could be performed on ships underwater, thus sparing the expense of drydocking. And because the glue appears to conduct electricity well, it could eventually replace high-temperature soldering.

"We are learning about adhesion from the mussel," Dr. Waite says, "but man's ingenuity should enable him to profit doubly from this knowledge. Not only can we mimic mussel glue synthetically, we can tinker about with its composition to conform with specific applications that never occurred to a mussel in its wildest dreams." □



Dr. Irving Fox (r) program director of the General Clinical Research Center (GCRC), supported by the Division of Research Resources at the University of Michigan, and Dr. David Martin (c) vice president of research for Genentech Inc., watch as a diet meal is brought to a patient in a GCRC obesity study. Dr. Martin lectured on "Tumor Necrosis Factors: Their Molecular Biology and Potential Clinical Uses" at the recent 25th anniversary of the GCRC and opening of the new center in University Hospital, Ann Arbor. Dr. Betty H. Pickett, DRR Director at NIH, spoke and presented a commemorative plaque at the event.

NICHD Sets Conference on Embryonic Development

Developing from a single egg cell into a three-dimensional organism with specialized tissues and functions seems almost miraculous. It's a small wonder the process of development has generated some of the most intriguing and important questions in modern biology.

Errors in development not only produce birth defects—such as spina bifida and congenital heart disease—they also set the stage for diseases in later life such as cancer, premature aging, and immune disorders.

The biological rules governing embryonic development are a major focus of intramural research at the National Institute of Child Health and Human Development. To encourage rapid and candid exchange of new information during a time of extraordinary developments in the field, the NICHD has invited the world's leading developmental biologists to participate in a conference entitled "Molecular Genetics of Development" to be held on the NIH campus, Apr. 28-30 in the Clinical Center's Masur Auditorium.

Speakers will focus on how genes in three animal models—frogs, flies and mice—control the timing and site of tissue specialization and how they formulate and execute "the body plan." New recombinant DNA and monoclonal

antibody techniques, combined with gene transfer, now make it possible to follow gene activity in every tissue during every stage of development.

Drs. Ralph Brinster of the University of Pennsylvania, Rudolph Jaenisch of the Whitehead Institute, Francois Jacob of the Pasteur Institute, and NICHD's Heiner Westphal will discuss how injecting foreign genes into mouse eggs is helping them learn where, when and how genes are first turned on during development. Other speakers will report on using gene transfer and related methods to develop animal models for human diseases as well as models for human "gene therapy."

The recent discovery of homeotic genes in the fruit fly (and in nearly every other animal, including humans) has breathed new life into studies of mechanisms that coordinate the pathways by which complex body parts—a limb or the brain—are assembled. Drs. David Hogness, Michael Levine and Frank Ruddle will present results from laboratories at Stanford, Columbia and Yale that show how signals from homeotic genes control the step-wise, orchestrated development of the various body components.

At the NICHD, Igor Dawid's recent work in

the frog has shed new light on gene activity priorities in the very early embryo. These findings, along with those of Drs. Eric Ackerman of the National Institute of Diabetes and Digestive and Kidney Disease, Douglas Melton of Harvard, and Kent Vrana of the Carnegie Institution, have given scientists a new and surprising view of which genes an embryo needs most during its earliest stages of development, how these genes guide later development, and how they are turned on.

Development biology is a rapidly evolving basic science with potential applications to many areas of biomedicine. The results discussed by these and other speakers will be increasingly important as they evolve from the laboratory bench to the clinic in the coming years.

For further information phone Leslie Fink, 496-5133. □

Daylight Saving Time's Coming

Remember to set your clocks and watches forward 1 hour before going to bed Saturday, Apr. 26. Daylight saving time takes effect at one minutes after midnight bringing in the last Sunday in April, the 27th. □

NINCDS Scientists Detect Possible Link Between Measles Virus and Multiple Sclerosis

NINCDS scientists have discovered that cells programmed to kill measles virus behave differently in people who have multiple sclerosis than in healthy individuals or people with other disorders.

Cells from multiple sclerosis patients kill fewer than normal numbers of cells infected with measles virus, report Drs. Steven Jacobson and Henry McFarland of the NINCDS Neuroimmunology Branch.

"This irregularity gives us an important clue regarding the cause of multiple sclerosis," says Dr. McFarland. "We now have a specific immune abnormality that may be at the root of the disease. And that abnormality is related to the measles virus."

Multiple sclerosis is a debilitating neurological disease characterized by the destruction of the insulating myelin sheath surrounding many nerve cells. As many as 10,000 people in the United States are newly diagnosed with the disease each year.

Drs. Jacobson and McFarland are among a growing number of scientists who believe that both immunological and infectious mechanisms may be at work in multiple sclerosis. They suggest that immune cells responding to the measles virus go awry and attack the myelin nerve sheath or trigger its destruction.

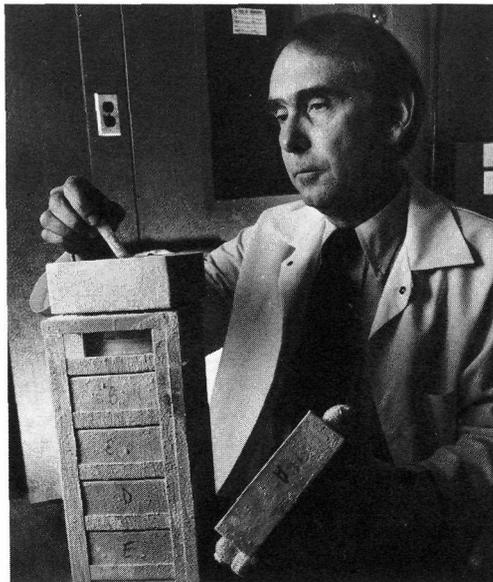
Decade-Long Search

Discovery of the abnormal measles killer cell response culminates a decade-long search by Dr. McFarland to find these cells and measure their activity in multiple sclerosis patients.

"We still don't know how multiple sclerosis occurs," says Dr. McFarland, "but now we have some interesting roads to travel in our search for the cause of the disorder."

The scientists propose several reasons why measles killer cells appear to be less lethal in people with multiple sclerosis.

"Multiple sclerosis patients could have fewer of these cells in their bloodstream," says Dr.



Dr. Henry McFarland retrieves frozen blood sample for measles killer cell testing.

Jacobson, describing his pet theory. "Perhaps the cells are missing from the blood because they're sequestered somewhere else—in the brain and spinal cord, for instance." It may be these hidden cells that destroy myelin, he suggests.

Dr. Jacobson says support for this explanation comes from another group of investigators who 3 years ago showed that immune cells were present in multiple sclerosis patients at demyelinated sites. These scientists, although unable to identify the specific immune cells, did find the majority were from the same family as measles killer cells.

"Another explanation for the decreased killing," says Dr. McFarland, "is that measles killers themselves are abnormal in multiple sclerosis patients and this defect may somehow trigger the disease."

He proposes several possible abnormalities:

- *Immune system malfunction.* Multiple sclerosis patients' ability to maintain properly functioning measles killer cells may become defective over time.
- *Immune system deficit.* Multiple sclerosis patients may not be able to generate any measles killer cells.
- *Defective genes.* The genetic makeup of people with multiple sclerosis may result in abnormal measles killers.
- *Unusual exposure to measles.* Multiple sclerosis patients may get measles later or earlier in life than most people, and this different age of exposure may result in abnormal measles killers.

"All these are possibilities and we're checking them out," Dr. McFarland says. In the next 6 to 12 months he expects to have more answers about how measles killers may be involved in multiple sclerosis.—Lynn J. Cave □
Cave □

Lasker Prize Winner To Speak on Brain Opiates

Dr. Hans W. Kosterlitz, director of the unit for research on addictive drugs, University of Aberdeen, Scotland, will present a lecture on "History and Present State of Endogenous Opioids and Their Receptors" Wednesday, Apr. 30, in the ACRF Amphitheater at 3 p.m.

Dr. Kosterlitz received a 1978 Albert Lasker Award for his pioneering work in identifying the relation of the opiate receptors to the naturally occurring endorphins. His work since 1977 has focused on characterization of mu, delta, and kappa opiate receptor subtypes.

The lecture is sponsored by the Howard Hughes Medical Institute and is dedicated to the memory of the late Dr. Edward Evarts. Dr. Evarts served as chief of the Laboratory of Neurophysiology, NIMH, from 1970 until his death last year. □

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We lie loudest when we lie to ourselves.—Eric Hoffer

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