

# The NIH Record

U.S. Department  
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and  
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National  
Institutes  
of  
Health

## Genetic Disease Experts To Participate in Symposium For NIAMDD Anniversary

Genetic research experts, including two Nobel Laureates, will present their findings to NIH staff members and interested lay public at a symposium, DNA, the Cell Nucleus, and Genetic Disease, on Wednesday, Oct. 15, 9 a.m. to 5 p.m., in the Masur Auditorium.

Dr. J. E. Rall, director of NIAMDD's intramural research program, and Nobel Laureate Dr. Christian B. Anfinsen, chief of the Institute's Laboratory of Chemical Biology, are cosponsoring the symposium in recognition of the 30th anniversary of the Institute. (See *Special Anniversary Feature*, pages 5-8.)

### Participants Named

Other symposium participants include eight internationally known research investigators in the fields of genetic mechanisms and diseases, all of whom are current or former employees of NIAMDD.

The panel includes Nobel Laureate Dr. Marshall Nirenberg, NHLBI; Dr. Gary Felsenfeld, NIAMDD; Dr. Martin Gellert, NIAMDD; Dr. Elizabeth Neufeld, NIAMDD; Dr. Philip Leder, NICHD, and Dr. Bruce Ames, professor of biochemistry, University of California, Berkeley.

Also, Dr. Charles Epstein, professor of  
(See *ANNIVERSARY*, Page 12)

## Medicine for the Layman Lecture Scheduled Tonight

The next Medicine for the Layman lecture will be given tonight (Sept. 30).

Dr. James Balow, chief of the Clinical Nephrology Service, NIAMDD, will speak on Kidney Disease.

Dr. Balow will explore normal kidney functions and abnormalities occurring in kidney disorders, and talk about treatments for urinary tract infections.

Dr. Brian Murphy, NIAID, will speak on Oct. 7 on Influenza: Virus and Disease, and Dr. Thomas Wehr, NIMH, will discuss Biological Rhythms in Health and Disease on Oct. 14.

The lectures are held on Tuesdays at 8 p.m. in the Masur Auditorium. The series features NIH physicians speaking on a variety of health topics. □



NIAMDD Scientific Director Dr. Joseph E. Rall (r) is congratulated by HHS Secretary Patricia Roberts Harris (l) after a White House Rose Garden ceremony on Sept. 9. President Carter honored 49 career Federal managers, presenting cash bonuses to them for their outstanding work this past year. OPM Director Alan K. Campbell (c) also participated.—Photo by T. Jackson, OPM.

## Changes in NIH Director's Award Procedures: All Eligible, Any Employee May Nominate

Two major changes concerning eligibility and nominations for the 1980 NIH Director's Award have been announced by Dr. Donald S. Fredrickson, NIH Director. All NIH employees are eligible to receive the awards, and anyone may nominate another employee.

Nomination forms have been distributed desk-to-desk, and are also available in trays on the NIH Director's bulletin boards, and at all personnel offices. The deadline for all nominations is Wednesday, Oct. 15.

The award may be given to individuals, groups, or teams of NIH personnel.

### Many Are Eligible

Eligibility covers a cross section of NIH personnel including housekeepers, grounds maintenance employees, laboratory technicians, secretaries, carpenters, nurses, information specialists, scientists, and others.

Under exceptional circumstances, the award may be given to other than current NIH personnel.

As part of the Federal Incentive Awards

Program, the awards recognize exceptional performance by persons who have made substantial or exceptional contributions benefitting the programs of people at NIH.

The awards are intended to recognize superior performance or special efforts significantly beyond the requirements of regular duties.

Performance qualifying an employee for nomination includes exceptional initiative or leadership in carrying out activities to improve NIH program operations, to benefit the NIH environment, or sustained and

(See *AWARD CHANGES*, Page 4)

### Nathans Gives NIH Lecture Tomorrow

Nobelist Dr. Daniel Nathans, who is director of the microbiology department at the Johns Hopkins University School of Medicine, will deliver the NIH Lecture tomorrow (Wednesday, Oct. 1) at 8:15 p.m. in the Masur Auditorium.

He will discuss Mutational Analysis of a Viral Replicon. □

# The NIH Record

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## Evacuations, Open House Mark Fire Prevention Week in October

Fire Prevention Week will be observed Oct. 6-10. The NIH Fire Department is having open house for employees who want to visit the station house in Bldg. 12.

Other plans call for the continuation of unannounced simulated building evacuation exercises to familiarize employees with these emergencies. They will run through mid-October until all NIH buildings have been tested. □

## CC Nursing Department Holds Annual Awards Ceremony

The Clinical Center Nursing Department will hold its annual meeting and awards ceremony on Monday, Oct. 6, at 7:30 p.m. in the Masur Auditorium.

The keynote speakers, Dr. Lowell Levin of Yale University and Dolores Little from the University of Washington, will speak on Ambulatory Care and Beyond.

Nursing Department consultants Dr. Janet Meininger, University of North Carolina, and Dr. Loretta Nowakowski, director of Health Education for the Public in Washington, will respond.

The awards that will be presented are "Distinguished Nurse," "Nurse of the Year," and the "Research Award."

A buffet reception in the CC Medical Board Room will be held at the conclusion. □

## Retirement Planning Program Offered

A Retirement Planning Program for NIH employees is being offered by the Employee Relations and Recognition Branch, DPM, on Tuesday, Oct. 21, and Wednesday, Oct. 22.

A personnel bulletin giving more detailed information will be distributed desk-to-desk. □

## Combined Federal Campaign Begins Oct. 14

The 1981 NIH Combined Federal Campaign will begin on Oct. 14 with NIH Director Dr. Donald S. Fredrickson serving as chairman, and Dr. Joe R. Held, Director of the Division of Research Services, vice-chairman.

Dr. Held has appointed John O. Smart, DRS executive officer, as campaign coordinator. B/I/D coordinators and keyworkers have been appointed.

With the assistance of all employees NIH can help fulfill this year's campaign theme: "Reaching People Who Need You—That's What the CFC Is All About." □



Dr. Fredrickson (r) starts the Combined Federal Campaign with a memorandum to all B/I/D Directors, asking for their support of the campaign. He hands the memorandum to CFC coordinator John Smart (c) for distribution, as Dr. Held looks on.

## TRAINING TIPS

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

Course	Starts	Deadline
Communication Skills		
Effective Listening	Oct. 30	Oct. 10
Privacy Act Workshop	Oct. 23	Oct. 7
Office Skills		
Letterwriting for Secretaries	Oct. 15	Oct. 1

For More Information

To learn more about courses in Office Skills and Communication Skills, contact the Training Assistance Branch, 496-2146.

## Bike Club To Demonstrate Safe Lighting System

The NIH Bicycle Commuters club, sponsored by R&W, will hold its next meeting on Wednesday, Oct. 8, at noon, in Bldg. 29, Rm. 115.

A demonstration of safe bicycle lighting systems will be presented, and the results of the NIH Bicycle Survey will be discussed.

For further information, call Joanne Albano, 496-9375. □

## Proposed Pay Rates for Federal Employees

The figures below will go into effect Oct. 1 if Congress accepts President Carter's plan for "comparability pay" increases for Federal white-collar workers. The majority of workers would get a 9.1 raise; many workers in grades GS-1 and GS-2 would get a little more. Most officials in the top grades would get little or no raise because it is anticipated that the \$50,112 ceiling set by Congress will remain.

As The NIH Record went to press, Congress had not yet approved these increases. However, if the anticipated pay raise becomes effective for the first complete pay period after Oct. 1—at NIH this is from Oct. 5 through Oct. 18—NIH employees, except those in special categories, will receive the increase in their paycheck on Oct. 28.

Grade	Longevity steps									
	1	2	3	4	5	6	7	8	9	10
1	7960	8225	8490	8755	9020	9069	9189	9444	9699	9954
2	8951	9069	9242	9531	9820	10109	10398	10687	10976	11265
3	9766	10092	10418	10744	11070	11396	11722	12048	12374	12700
4	10963	11328	11693	12058	12423	12788	13153	13518	13883	14248
5	12266	12675	13084	13493	13902	14311	14720	15129	15538	15947
6	13672	14126	14584	15040	15496	15952	16408	16864	17320	17776
7	15193	15699	16205	16711	17217	17723	18229	18735	19241	19747
8	16826	17387	17948	18509	19070	19631	20192	20753	21314	21875
9	18585	19205	19825	20445	21065	21685	22305	22925	23545	24165
10	20467	21149	21831	22513	23195	23877	24559	25241	25923	26605
11	22486	23236	23986	24736	25486	26236	26986	27736	28486	29236
12	26951	27849	28747	29645	30543	31441	32339	33237	34135	35033
13	32048	33116	34184	35252	36320	37388	38456	39524	40592	41660
14	37871	39133	40395	41657	42919	44181	45443	46705	47967	49229
15	44547	46032	47517	49002	50487*	51972*	53457*	54942*	56427*	57912*
16	49198	50838*	52478*	54118*	55758*	57398*	58500*	58500*	58500*	58500*
17	53849*	55644*	57439*	58500*	58500*					
18	58500*									

\* Statutory limit applicable.

## NIH Police Officer Credited With Saving Woman's Life

NIH Police Officer Ronald Hutchinson was cited for his quick thinking and reactions in saving the life of an elderly visitor who, while having dinner at the Clinical Center cafeteria on Aug. 25, began to choke when a piece of food she was eating became lodged in her windpipe.

"I was standing in line waiting to have dinner," says Officer Hutchinson, "when the woman's niece ran up to me and said that her aunt was choking." He and Officer John West ran over to the woman who had stopped breathing, showing signs of lack of oxygen.

### Used Heimlich Maneuver

Using the Heimlich maneuver, an emergency medical technique that forces air up from victim's stomach clearing the airway and dislodging any foreign matter there, Officer Hutchinson grabbed the woman from behind, wrapped his arms around her waist, and using his fists squeezed her under the lower part of her chest.



Officer Hutchinson demonstrates the Heimlich maneuver with a volunteer, the technique used to save the life of a visitor to NIH.

He attempted the lifesaving maneuver three times before the woman revived.

Within minutes, NIH Fire Department paramedic Russell E. Graham arrived at the cafeteria, checked the woman, and transported her to Suburban Hospital, where she was treated and later released.

### Credits Red Cross Training

Officer Hutchinson credits the Red Cross training that he received at NIH 2 years ago for his success in executing the emergency technique. Since then, he and the rest of the NIH Police Department have undergone more advanced emergency medical instruction.

Last year during the Clinical Center fire, he was one of the first officers to respond, assisting in the successful evacuation of patients until he was overcome by smoke and later treated at Suburban Hospital.

During off-duty hours, Officer Hutchinson serves as a volunteer fireman with the Mount Rainier Volunteer Fire Department. □

## New Police, Fire Chiefs Named at NIH



NIH Police Chief Howard S. Davenport

NIH has two new public safety department heads—a fire chief and a police chief.

Captain Howard S. Davenport, 45, has recently taken over as NIH police chief. The 14-year NIH career police officer will be in charge of the 80-member department which includes officers from the NIH Police and the NIH Special Police. These officers are responsible for everything from traffic control to criminal security at NIH.

Prior to assuming his new position, Captain Davenport was evening relief commander. He takes over from former chief Captain Floyd D. Rush, who has been assigned as a security specialist with the Protection and Security Management Branch.

"We plan to reschedule our patrols to cover more areas in and outside of buildings," says Capt. Davenport.

He also wants to see an improved relationship between the NIH Police and employees. He would like to see a relationship develop where employees will feel free to call upon the police and in turn the police could ask employees to be more cooperative.

Stressing the importance of good relations, he notes "Employees should call us if they know about any crime; either before or after." Confidentiality will always be maintained by any member of the department, he says.

In the past, some NIH employees have blamed the NIH Police for the high costs associated with the parking tickets they issue, says the new chief. "We don't set the fines and NIH does not derive any benefit from them." The money collected is sent to the U.S. Treasury's General Fund.

Previously, many NIH employees who had complaints about motor vehicle tickets thought that they would have to take a day off from work to go to U.S. District Court in Baltimore to argue their case, says Capt. Davenport.

An NIH employee can now plead his or her case before a U.S. Magistrate in the Landow Bldg. The magistrate generally holds court on Wednesdays. For further information when the magistrate will hear NIH-related cases, call the U.S. District Court in Baltimore, (301) 962-2709.



NIH Fire Chief William F. Coleman

Over the past year, the NIH Police have received instruction in fingerprinting and fire arms instruction. In addition, the majority of the force has gone through on-the-job investigative training supervised by Wayne Harrold, acting branch chief, Protection and Security Management Branch.

NIH's new fire chief is William F. Coleman, Sr., 46, who has been at NIH since 1958 and served as deputy before becoming chief.

His duties include overseeing NIH's fire prevention and protection program, all fire fighting, first aid, and rescue operations.

"Most of our men have completed advanced medical emergency training," says Chief Coleman. His 17-member department has undergone this training over the last 3 years.

"If an employee becomes ill, we are in direct communication with the Occupational Medical Services," says the chief, adding that his staff has sufficient medical knowledge to take detailed instruction over the radio.

The NIH Fire Department has a mutual aid agreement with Montgomery County. Closest to NIH is the Bethesda Fire and Rescue Squad.

Another facet of the department's job is the biannual fire safety inspection of all NIH buildings. It also provides guidelines for the removal and disposal of hazardous and infectious materials.

Besides being NIH fire chief, he is also a member of the Rockville Volunteer Fire Department, and currently serves as its fire chief. □

### TM Club Meeting Oct. 8 Hosts Lecture on Benefits of Technique

The NIH TM Club will host a lecture on the benefits of Transcendental Meditation technique for the individual on Wednesday, Oct. 8, from noon to 1 p.m., in Bldg. 10, Rm. 4N-236.

For further information, call John Knight, 496-5361. □

## Outstanding Summer Employees Honored

One hundred sixty-eight summer employees were cited as outstanding at the Eleventh Annual Summer Awards Ceremony presentation Aug. 19.

The ceremony officially marked the end of this year's summer employment program.

Dr. Kozo Ochi, NINCDS, was named outstanding supervisor by the summer employees in that Institute.

### Dr. Malone Keynote Speaker

Keynote speaker Dr. Thomas E. Malone, NIH Deputy Director, "encouraged summer students to seek excellence in achieving their goals in the career area of their choice, so that in the future they may help an institution such as NIH in its commitment to improving health."

Student speaker Melvin L. Seard told the summer students of his experience at NIH and how it has encouraged his career in science.



**Mattie Jackson, DPM, who coordinated the program for summer employees, stands with Dr. Ochi, recipient of the Outstanding Supervisor's Award.**



**Dr. Malone (r) presented citations to NINCDS summer employees, one of the many groups who were honored for their outstanding work.**

## AWARD CHANGES

(Continued from Page 1)

excellent performance in carrying out a difficult task.

There may be an outstanding contribution to a special committee or task force dealing with NIH-wide policies, procedures, or operations.

An act of unusual competence, compassion, or heroism in an emergency situation at NIH would qualify an employee for nomination.

### Award Plaque Described

The award is in the form of a 9½-by-11-inch framed walnut plaque with a three-dimensional Public Health Service seal mounted on a dark blue felt background.

An engraved plate includes the name of the recipient, the citation, the date, and the signature of the NIH Director.

All nominations must be mailed or hand carried to the Employee Relations and Recognition Branch, DPM, Bldg. 31, Rm. B3C-03 by Oct. 15. Any questions should be directed to that office on 496-4975.

An Ad Hoc Honor Awards Review Committee, appointed by Dr. Fredrickson, will recommend to him this year's award recipients.

Dr. Frederickson will select 20 to 25 employees to receive the honor award at a ceremony scheduled for Monday, Dec. 1, in the Masur Auditorium. All employees will be invited to attend the 2 o'clock ceremony.

Official documentation of the award will be placed in each recipient's official personnel folder. □

## CORRECTION

When listing the PHS Commissioned Officers' citations for outstanding work in the previous issue of *The NIH Record* (Sept. 16, 1980), the printer omitted the Institute for which five of the scientists worked.

Performing work at the National Institute of Allergy and Infectious Diseases for which they were cited were: Drs. Bruce W. Chesebro, John I. Gallin, Michael A. Kaliner, Carl E. Miller, and Eric A. Ottesen. □

## VISITING SCIENTIST PROGRAM PARTICIPANTS

Reported by  
Fogarty International Center

9/1—**Dr. Bernhard Brenner**, Germany, Laboratory of Physical Biology. Sponsor: Dr. Richard J. Podolsky, NIAMDD, Bg. 6, Rm. 110.

9/1—**Dr. David J. Cosman**, United Kingdom, Laboratory of Molecular Virology. Sponsor: Dr. George Khoury, NCI, Bg. 41, Rm. 200.

9/1—**Dr. Larry Fisher**, United Kingdom, Laboratory of Molecular Biology. Sponsor: Dr. Martin Gellert, NIAMDD, Bg. 2, Rm. 322.

9/1—**Dr. Masafumi Iijima**, Japan, Dermatology Branch. Sponsor: Dr. Stephen I. Katz, NCI, Bg. 10, Rm. 12N238.

9/1—**Dr. Takaaki Kirino**, Japan, Laboratory of Neuropathology and Neuroanatomical Sciences. Sponsor: Dr. Igor Klatzo, NINCDS, Bg. 36, Rm. 3B28.

9/1—**Dr. Ada M. Krusbeek**, Netherlands, Immunology Branch. Sponsor: Dr. Alfred Singer, NCI, Bg. 10, Rm. 3N109.

9/1—**Dr. Emanuela Lanza**, Italy, Division of Virology. Sponsor: Dr. Julie Djeu, Bureau of Biologics, Bg. 29A, Rm. 2D24.

9/1—**Dr. Anja Norling**, Finland, Laboratory of Pharmacology. Sponsor: Dr. J. R. Fouts, NIEHS, Research Triangle Park, N.C.

9/1—**Dr. Helmut Schmidhammer**, Austria, Laboratory of Chemistry. Sponsor: Dr. Arnold Brossi, NIAMDD, Bg. 4, Rm. 138.

9/1—**Dr. Hana Wientroub**, Israel, Developmental and Metabolic Neurology Branch. Sponsor: Dr. Peter Pentchev, NINCDS, Bg. 10, Rm. 3D11.

9/1—**Dr. Shlomo Wientroub**, Israel, Laboratory of Biological Structure. Sponsor: Dr. A. H. Reddi, NIDR, Bg. 30, Rm. 207.

9/1—**Dr. Yasuhito Yuasa**, Japan, Laboratory of Cellular and Molecular Biology. Sponsor: Dr. Stuart Aaronson, NCI, Bg. 37, Rm. 1A07.

9/2—**Elaine Ron**, U.S., Field Studies and Statistics Program. Sponsor: Dr. Joseph F. Fraumeni, NCI, Landow Bg., Rm. C307.

9/2—**Dr. Tikvah Vogel**, Israel, Laboratory of Biochemistry. Sponsor: Dr. Martin Rosenberg, NCI, Bg. 37, Rm. 2D16.

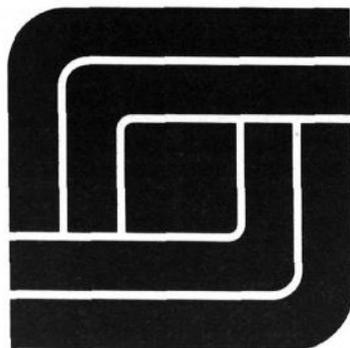
9/7—**Dr. Tokuhiro Ishihara**, Japan, Surgery Branch. Sponsor: Dr. Michael Jones, NHLBI, Bg. 10, Rm. 7N208.

9/7—**Dr. Abraham Loyter**, Israel, Laboratory of Preclinical Pharmacology. Sponsor: Dr. Erminio Costa, St. Elizabeths Hospital.

9/7—**Dr. Jens Vuust**, Denmark, Laboratory of Developmental Biology and Anomalies. Sponsor: Dr. George Martin, NIDR, Bg. 30, Rm. 416.

9/7—**Dr. James H. Whittem**, Australia, Division of Specialized Information Services. Sponsor: Dr. Martin Cummings, NLM, Bg. 38, Rm. M142.

9/12—**Dr. Maija Leinonen**, Finland, Division of Bacterial Products. Sponsor: Dr. Carl Frasch, Bureau of Biologics, Bg. 29, Rm. 429.



*Improving the health of all Americans through  
biomedical research.*

## As Institute Begins Its Fourth Decade, Studies Cover Wide Range of Diseases

In 1980 the National Institute of Arthritis, Metabolism, and Digestive Diseases begins its fourth decade of serving the American people through the conduct and support of biomedical research.

The Institute's programs deal with a wide range of diseases, including arthritis and connective tissue diseases; skin diseases, such as psoriasis; diseases of the bone and musculoskeletal system; diabetes, cystic fibrosis, and other metabolic and endocrine disorders; digestive diseases; nutritional disorders; diseases of the kidney and urinary tract; and blood diseases.

### Includes 300 Projects

The intramural research program includes over 300 research projects in 20 laboratories and branches at facilities in Bethesda, Md., and in Phoenix, Ariz.

Basic studies are conducted in endocrinology; chemistry; biochemistry; metabolism, physical, chemical and molecular biology; chemical physics; pharmacology; and pathology. NIAMDD

scientists also guide clinical research and treatment programs.

President Harry S. Truman authorized the establishment of NIAMD in 1950. The National Advisory Arthritis and Metabolic Diseases Council met and approved the Institute's first research grants.

Three intramural scientists have received the Nobel Prize for work conducted at NIAMDD. In 1959, Dr. Arthur Kornberg, former chief of the Enzyme and Metabolism Section, won the Nobel Prize for synthesizing nucleic acid.

### Genetic Code Cracked

The Nobel Prize was awarded to Dr. Marshall W. Nirenberg of the National Heart Institute in 1968. Dr. Nirenberg reported his celebrated partial cracking of the genetic code while at NIAMD (1957-62).

Dr. Christian B. Anfinsen, chief of the Laboratory of Chemical Biology, shared a Nobel Prize with two other American scientists for showing that the three-dimensional form of a native protein is determined by its amino acid sequence. □

## Dr. Whedon Cites Research Advances, Future Targets



**Dr. G. Donald Whedon, 1962 to present.**

Dr. G. Donald Whedon, Director of NIAMDD, joined the Institute in 1952 as chief of the Metabolic Diseases Branch. He was named assistant director in 1956, and

assumed his present post in 1962.

When queried about the Institute's research advances, Dr. Whedon said:

*One of the most important research advances in recent years has been a twofold development in understanding the etiology of certain diseases. First, growing evidence has shown that many chronic diseases may start with the invasion of a virus or some other foreign agent, usually undetected.*

*This invasion then sets up a series of immunologic events leading to an inappropriate reaction in various organs of the body, for example, in joints, skin, pancreas, or intestines.*

*The second aspect is that with the developing ability to identify proteins, the formation of which is genetically directed or regulated, it is beginning to be possible to use these genetic markers to identify individuals who might be susceptible to various diseases.*

*These developments suggest that in the future, appropriate preventive measures could be targeted to those individuals most likely to be at risk for certain disorders.* □

## Intramural Researchers Focus Their Efforts On Better Understanding

Skilled investigators are devoting time and effort to conducting research that will improve human well being through greater understanding of the nature of life.

### Focus on Arthritis

In the Arthritis and Rheumatism Branch, investigations focus on understanding the pathogenesis and improving the treatment of rheumatoid arthritis and systemic lupus erythematosus.

The intramural team, headed by Dr. John L. Decker, has been conducting long-term clinical studies of combinations of corticosteroids (prednisone) and cytotoxic drugs (cyclophosphamide, azathioprine).

They hope to determine the optimum therapeutic program for SLE patients with kidney involvement, the most serious complication of this connective tissue disorder.

In another study, researchers are

*(Continued on Page 6)*

## Former Directors



**Dr. William H. Sebrell,  
1947-50**



**Dr. Russell M. Wilder,  
1951-53**



**Dr. Floyd S. Dofz,  
1953-62**

## INTRAMURAL RESEARCH FOCUSES ON ARTHRITIS

(Continued from Page 5)

evaluating ways to reduce joint inflammation in rheumatoid arthritis.

By using lymphapheresis, a procedure similar to kidney dialysis, a cell separator removes white blood cells thought to play a major role in the body's immune and inflammatory response.

Another type of "pheresis," plasmapheresis, is being used to remove plasma from the blood of patients with active SLE.

In a double-blind trial, the plasma of patients in one group is replaced by albumin. Plasma from patients in a second group is returned directly to the bloodstream.

These ongoing studies may help scientists understand the role that circulating auto-antibodies and immune complexes play in SLE.

Investigators are also studying high dose intravenous injections of corticosteroids given over short periods of time.

They hope to determine the effectiveness of this process while lessening the serious side effects occurring when lower doses are administered daily over longer periods.

Dr. Alfred D. Steinberg's laboratory is studying the pathogenesis of autoimmunity in mouse models and in humans with SLE. Genetic, immune, hormonal and environmental factors have all been found to contribute to its development.

Antibodies to regulatory T cells interfere with the immune system in some patients but not in others.

The mechanism of antibody action is being studied by Dr. Henry Metzger's group, using triggering of mast cells



**In the Arthritis and Rheumatism Branch, Dr. Steinberg and chemist J. Patton Reeves conduct a radioimmunoassay for antibodies to DNA produced by patients with SLE.—All laboratory photos by Gary Best.**

mediated by IgE as a model. The membrane receptor has been isolated and is being characterized. The molecular mechanism by which this receptor stimulates secretion is under investigation.

The role and mechanism of action immune complexes play in pathological situations is being investigated by Dr. Paul Plotz's group.

The role of antibody multiplicity as well as antigen structure on sites and rates of complex localization are under study. □

a remarkably efficient process, Dr. Neufeld hypothesized, that it had to be based on recognition of the enzymes by receptors on the cells.

The interaction of "recognition markers" on lysosomal enzymes with receptors has become an active area of research. Such interaction is needed both to insert the cells' newly made enzymes into lysosomes, and to bring in foreign enzymes from the cell exterior. □

### Role of Special Receptors On Liver Cells Investigated

In the Laboratory of Biochemistry and Metabolism studies have demonstrated that special receptors on liver cells may play a major role in regulating the turnover of serum glycoproteins.

In addition, Dr. Gilbert Ashwell and other investigators have compared the number of receptors on a cell with the number of serum protein molecules that cross the cell membrane, and found that each receptor is capable of binding more than one molecule, either by a recycling or a reutilization process.

Together with Dr. Anatol Morell at the Albert Einstein University, Dr. Ashwell first identified liver cell receptors.

They noted that a specific membrane protein in the hepatocytes had properties

(See RECEPTORS, Page 7)

## Antibody Structural Data Provided

The immune system is the body's principal defense against infection and disease. Antibodies, or immunoglobulins, form the principal mediators of the immune system.

Their function is the recognition of "foreign" substances followed by effector actions that lead to the elimination of these substances.

In the Section of Molecular Structure of the Laboratory of Molecular Biology, Dr. David Davies and Drs. Gerson Cohen, Manuel Navia, Eduardo Padlar, Yoshinori Satoro, David Segal, and Enid Silverton are providing detailed structural information about the nature of the recognition of antigens by antibodies.

The structures of both intact immunoglobulins and their antigen binding fragments, or Fabs, are being studied by X-ray crystallography.

These studies provide three-dimensional models of the individual atoms of the antibody molecules, and provide a structural basis for understanding antibody diversity.

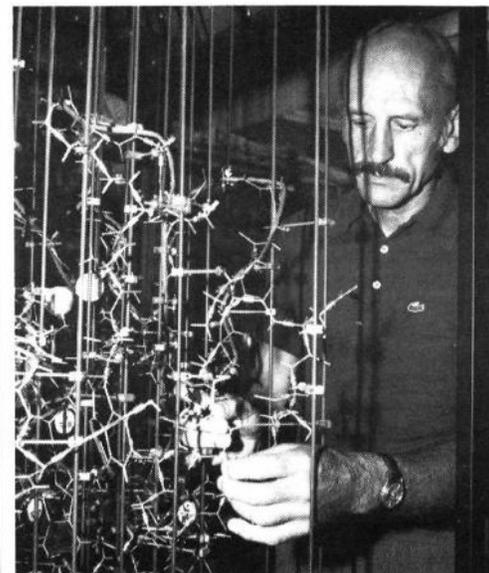
Currently, the structures of one intact immunoglobulin and one Fab structure from a second immunoglobulin have been determined.

The intact molecule, a human myeloma protein, is a cryoglobulin and crystallizes directly from the serum when cooled.

These crystals can be used in X-ray diffraction analysis. The resulting model has the form of a T with the two antigen binding arms horizontal.

Dr. Davies and his colleagues have also conducted a higher resolution study of a Fab from material obtained by Drs. Michael Porter and Stuart Rudikoff from the National Cancer Institute taken from a mouse antibody to phosphocholine.

Additional Fabs with other kinds of binding specificities are also being studied by Dr. Davies and his group. □



**Dr. Davies, in the Molecular Structure Section of the Laboratory of Molecular Biology, examines a model of an antibody molecule currently under investigation.**

### Heritable Storage Disorders Studied by Genetics And Biochemistry Branch

Dr. Elizabeth Neufeld and other researchers in the Genetics and Biochemistry Branch have provided the biochemical foundation for understanding mucopolysaccharide storage disorders.

These are heritable diseases which may cause skeletal abnormalities, mental retardation and a short life span.

In 1968, Dr. Neufeld, chief of the branch since 1979, together with Dr. Joseph Fratantoni and Clara Hall, found that cells cultured from patients with genetically distinct mucopolysaccharide storage disorders could correct each others' biochemical defect.

This interaction was shown to occur by transfer of macromolecular "factors," which act by degrading mucopolysaccharides stored in the recipient cells, lysosomes (organelles specialized in the breakdown of complex molecules).

Several such factors were purified and identified as previously unknown lysosomal enzymes. This knowledge is now routinely used to provide diagnosis, including prenatal and genetic counseling to the affected families with the disorder.

This work also provided unexpected information on lysosomal enzymes. The transfer of enzymes between cells was such

## Chemical Biology Lab Active in Research On Interferon

Dr. Christian B. Anfinsen, chief of the Laboratory of Chemical Biology, was awarded the 1972 Nobel Prize in Chemistry for demonstrating one of the most important simplifying concepts of molecular biology.

He found that the three-dimensional conformation of a native protein is determined by the chemistry of its amino acid sequence.

Dr. Anfinsen was recognized for his work on the enzyme ribonuclease. Ribonuclease catalyzes the breakdown of ribonucleic acid (RNA), an essential component of the machinery by which the living cell utilizes genetic information.

Dr. Anfinsen provided early evidence concerning the enzyme's structure by demonstrating that it is comprised of a single polypeptide chain.

He showed that the information required to fold the polypeptide chain of ribonuclease into the specific three-dimensional form of the active enzyme resides in the sequence of its amino acids.

It was later demonstrated that this protein could be synthesized in the laboratory by joining the proper amino acids in the correct order and then allowing the chain of amino acids to fold spontaneously.

The Laboratory of Chemical Biology is now a leader in the characterization of interferon, an agent potentially valuable against viral disease and possibly cancer.

Although interferon is produced naturally in human cells, it is extremely difficult to obtain in quantity.

A group in the Laboratory of Chemical Biology, including Drs. Kathryn Zoon, Mark Smith, Pamela Bridgen, and Dr. Anfinsen, are all involved in its large scale production and characterization.

Current studies on large scale cultivation and induction of human cells, here and elsewhere, together with the use of bacteria containing cloned genes for human interferon, may soon provide the amounts needed for significant clinical trials. □

## RECEPTORS

(Continued from Page 6)

similar to those found in plant lectins.

Lectins cause agglutination of red blood cells and mitogenesis of white blood cells.

Drs. Ashwell and Morell were the first to identify this mammalian form of lectin, which they showed recognizes, binds, and internalizes galactose-terminated glycoproteins.

Recent studies have demonstrated that receptors on liver cells are proteins embedded in the membrane which project both internally and externally.

Investigators are trying to determine how the internal portion of this transmembrane protein responds when glycoproteins bind to its external receptor sites and how the binding signals the processes by which these proteins cross the cell membrane. □

## Key to Certain Types of Diabetes May Lie In Special Receptors

Internationally recognized investigators in the intramural Diabetes Branch, led by Drs. Phillip Gorden, C. Ronald Kahn, and Jesse Roth, have discovered that the key to certain types of diabetes may lie in specialized receptors on the surface of cells throughout the body, rather than in a deficiency in the supply of insulin itself.

These receptors bind and hold insulin to the cells and facilitate the effect of this hormone on the cells' metabolic reactions.

The NIAMDD investigators have developed many new methods to study receptors and their relationship to human disease states, including a way to measure the number and nature of the receptors on whole cells, cell fragments, and solubilized purified receptors.

These methods have been adapted to study receptors on circulating cells and cultured cells from patients.

Also, morphological methods have been developed to localize hormones to specific regions of cells.

The investigators have identified and characterized antibodies in insulin-resistant diabetics that interact with their own receptors for insulin. They have located insulin-like substances that produce hypoglycemia in some patients with tumors.



Dr. Jesse Roth and Maxine Lesniak discuss their latest project in the Diabetes Branch.

In addition, methods have been developed to measure receptors in the intact organism *in vivo*.

These studies, which have advanced our understanding of many disorders of glucose metabolism, have also been applied by other investigators to a wide range of human diseases. □

## PTH in Calcium Metabolism Studied

Drs. Stephen Marx, Allen Spiegel, and Gerald Aurbach of the Metabolic Diseases Branch head a group of world leaders in the study of hormonal control of calcium metabolism.

This group performed the original isolation of parathyroid hormone, a regulator of calcium metabolism, leading to the elucidation of its structure and synthesis.

The group then proved that parathyroid hormone action was mediated through cyclic AMP, a chemical messenger regulating enzymatic reactions within cells.

Formation of cyclic AMP takes place when an enzyme in the cell membrane, adenylate cyclase, responds to the arrival of a hormone, such as PTH. The enzyme transforms molecules of adenosine triphosphate within the cell into cyclic AMP.

In 1968, Drs. Aurbach, Lewis Chase, and Glenn Melson of the Metabolic Diseases Branch discovered that some patients who were resistant to their own PTH failed to show the normal increase in cyclic AMP levels that follows hormone binding. This was true even when these patients were given biologically active PTH by injection.

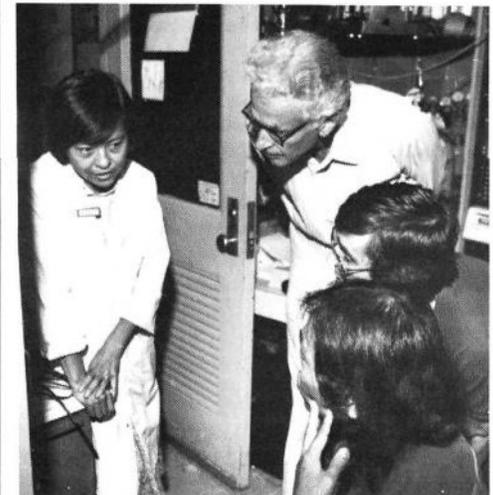
It was concluded that the defective hormone response involved a generalized disorder of cyclic AMP production, a theory later borne out.

Subsequent investigations have been based on the key observation made in 1971 by Dr. Martin Rodbell and colleagues of NIAMDD's Laboratory of Nutrition that a guanine nucleotide binding protein plays a crucial role in adenylate cyclase activation.

Metabolic Diseases Branch investigators

Drs. Spiegel and Robert Downs, Jr., have been examining the interaction of this regulatory protein with adenylate cyclase in red blood cells of turkeys and rats to see how this mechanism functions in normal cells.

As a result, Drs. Michael Levine, Morton Singer, Downs, Marx, Aurbach, and Spiegel have been able to demonstrate that red blood cells in patients resistant to their own PTH have a deficient quantity of the guanine nucleotide regulatory protein. □



Dr. Richard J. Podolsky, chief, and Dr. Leepo Yu (l) of the Laboratory of Physical Biology, with visiting scientists Drs. Bernhard Brenner of Germany and Toshiaki Arata of Japan, use a pulse height and analyzer to study the X-ray diffraction patterns of muscles.

## Organ Systems in Digestive Diseases, Nutrition Are Major Research Efforts

Digestive diseases affect more than 20 million people, and hospitalize more Americans than any other group of disorders. Their economic cost in direct medical care is estimated to be \$17 billion a year and another \$35 billion in lost work and wages.

The Digestive Diseases and Nutrition Program, headed by NIAMDD associate director Dr. Harold P. Roth, studies organ systems associated with the gastrointestinal tract, including salivary glands, esophagus, stomach, pancreas, liver, gallbladder, and small and large intestines.

### Study Gallstone Therapy

Through its 5-year National Cooperative Gallstone Study, the NIAMDD is seeking therapeutic alternatives to the surgical removal of gallstones.

Ten centers across the country participate in this project, where some 1,000 patients with gallstones have been treated with oral chenodeoxycholic acid, a bile acid that decreases cholesterol saturation of bile and induces gallstone dissolution.

Preliminary data suggests that dissolution therapy might be appropriate in many patients with cholesterol gallstones, the most common form of gallstones in the United States.

## Research on Rheumatic, Connective Tissue Disorders Receives NIAMDD Support

More than 31 million people in the United States are afflicted with one or more of the one hundred types of arthritis or other rheumatic and connective tissue diseases. These disorders cost the Nation over \$14 billion every year.

NIAMDD's Arthritis, Musculoskeletal and Skin Diseases Program, headed by associate director Dr. Lawrence E. Shulman, supports research on many of these diseases.

Lyme arthritis; connective tissue abnormalities in rheumatic diseases; joint destruction by collagenase, lysosomal enzymes, and immune complexes in rheumatoid arthritis; the immunopathology of systemic lupus erythematosus (SLE); and the ultrastructure of normal and arthritic joints are some of the many areas under investigation.

### Aids Bone Disease Research

The program also supports research in orthopedics and bone diseases, with basic and clinical studies of skeletal tissues under normal and disease conditions examined.

Osteoporosis and osteogenesis imperfecta are receiving special emphasis. The metabolism and degeneration of cartilage is being studied by grantees throughout the country.

The program supports research in several diverse areas, including the etiology of eczema and other dermatological disorders. □

The liver diseases program is supporting research on the early detection and control of alcoholic liver injury and other conditions leading to liver cirrhosis. This is the sixth leading cause of death from disease in the U.S.

Among investigations receiving support are studies clarifying the biochemical mechanisms regulating collagen formation and deposition, whose derangement can result in fibrosis, and ultimately cirrhosis.

Other research is directed toward finding surgical and technical improvements for liver transplant operations, especially improved control of graft rejection.

The NIAMDD nutrition program continues to stress the study of human nutritional requirements and factors influencing these requirements.

The use of new technologies in the study of nutrient function, requirements and metabolic roles of trace minerals, and basic research on dietary fiber are being examined.

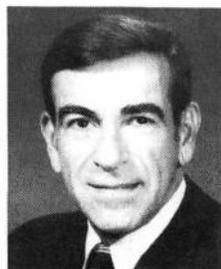
Since 1965, the malnutrition panel of the U.S.-Japan Cooperative Medical Science Program has served as the primary vehicle through which international nutrition research activities are identified for support. □

Dr. Lester B. Salans, associate director, Diabetes, Endocrine, and Metabolic Diseases Program



Dr. Harold P. Roth, associate director, Digestive Diseases and Nutrition Program

Dr. Nancy B. Cummings, associate director, Kidney, Urologic, and Blood Diseases Program



Dr. Lawrence E. Shulman, associate director, Arthritis, Musculoskeletal, and Skin Diseases Program

## Extramural Diabetes Program Clarifying Genetic Factors

The extramural Diabetes, Endocrine, and Metabolic Diseases Program is the focal point of recently intensified research efforts on diabetes, a leading health problem affecting as many as 10 million Americans.

Increased research support for the program, headed by associate director Dr. Lester B. Salans, has resulted in several scientific accomplishments and the promise of significant advances in understanding the causes, improving the treatment, and ultimately curing and preventing diabetes.

In recent studies, scientists have begun to clarify the genetic character of both the insulin-dependent and non-insulin-dependent forms of the disease, and have demonstrated the importance of immunological and viral factors in the development of the latter form of the disease.

Significant progress has been made in the treatment of diabetes. Devices have been developed that automatically deliver insulin to the body at programmed intervals, and pancreatic islet transplantation techniques have been perfected to correct diabetes in experimental animals without immunologic rejection.

Cystic fibrosis is one of the inborn errors of metabolism investigated by NIAMDD. A lethal inherited metabolic disorder, CF affects one infant in every 2,000 live births costing the Nation more than \$150 million annually in treatment alone.

The Institute directs a major effort toward increasing awareness among investigators about the needs of CF research.

Significant advances in endocrinology research have clarified the processes by which endocrine cells secrete hormones, increasing the understanding of how hormones act upon and regulate cell function. □

## Kidney, Urologic, Blood Diseases Program Supports Grantees Seeking New Methods

The Kidney, Urologic and Blood Diseases Program, under NIAMDD associate director Dr. Nancy B. Cummings, represents a significant portion of the Institute's research.

Investigators supported by NIAMDD are seeking new methods of preventive therapy, earlier diagnosis, and more effective treatment of glomerulonephritis, nephrosis, interstitial nephritis, kidney and bladder stones, polycystic kidney disease, diabetic nephropathy, analgesic-associated and other toxic nephropathies, immune disorders of the kidney, benign prostatic hyperplasia, and numerous other diseases.

Three subprograms related to the urinary tract—the Renal Physiology and Pathophysiology Program, the Urology Program (including urolithiasis), and the Chronic Renal Disease Program—have been established.

In addition to these, the Hematology Program focuses research on the fundamental structure, function, and metabolism of blood components. □

## NIH Fire Chief Mullican Retires After 28 Years

NIH Fire Chief Milton R. Mullican, who has been chief since 1974, retired in August with 28 years of Federal service.

Chief Mullican began his NIH career in 1954 when he was employed in the Carpentry Shop. Later he transferred to the NIH Fire Department. During his fire fighting career, he served as lieutenant, assistant chief, deputy chief, and fire chief.

### Stressed Fire Safety

Since 1974, he has served on the Clinical Center Safety Committee. His attention to fire safety training was noted when the CC was evacuated without any injuries to patients during last year's fire.



Former NIH Fire Chief Mullican holds a lamp made from his fire fighter's helmet that was given to him by friends at his retirement dinner on Aug. 27.

Before coming to NIH he was in the home building business with his brothers and built many houses in the area.

While serving as an NIH fire fighter, he was also a member for more than 20 years of the Rockville Volunteer Fire Department, where he held a variety of positions including that of fire chief. □

### Conflict Lecture Scheduled To Be Given on Campus

Professor Victor Turner of the University of Virginia will speak on Conflict in Social Anthropological and Psychoanalytical Theory in the Masur Auditorium on Friday, Oct. 17, at 8 p.m.

The lecture, sponsored by the Forum on Psychiatry and the Humanities of the Washington School of Psychiatry, is open to the public.

For more information, call 530-3361. □

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World-renowned psychoanalyst Erik Homburger Erikson presented NIMH's third annual Robert H. Felix Lecture at the Masur Auditorium on Sept. 16. He spoke on Human Development and The Life Cycle. At the conclusion of the lecture, Dr. Erikson (l) and his wife, Joan, were applauded by Dr. Saul Feldman, director, Staff College, NIMH, and the overflow audience.

## NOVA TV Program to Focus on Cancer in China

"The Cancer Detective of Lin Xian" will be aired on WETA-TV (Channel 26) on Tuesday, Oct. 7, at 8 p.m. on the hour-long NOVA show.

The program will focus on the unusually high incidence of esophageal cancer in Lin Xian (Lin County) in China.

One out of every six persons in this part of China develops esophageal cancer, a frequency that some scientists believe may have persisted for the last 2,000 years.

Scientists have also found that chickens in that area frequently develop cancer of the gullet.

For years, physicians at the Lin Xian Hospital have performed two operations each day to remove a cancerous esophagus.

Some scientists now believe that several elements may combine to cause esophageal cancer in Lin Xian: soil low in molybdenum, nitrates in the water supply, moldy food, and an age-old recipe for pickled vegetables.

Dr. William Terry, acting director of the NCI Division of Resources, Centers, and Community Activities; Dr. Robert W. Miller, chief of the Clinical Epidemiology Branch; and Dr. Chou-Chik Ting, senior investigator in the Laboratory of Cell Biology represented NCI in a 12-member delegation that visited China in 1977.

While there, they observed the work of Chinese cancer scientists. The delegation's report provided the impetus for BBC to film this program about cancer in China. □

## More Volunteers Needed for 'Normal Range' Blood Study

If you did not volunteer in July to participate in the "Normal Range" blood analysis study offered by the Clinical Center's Clinical Pathology Department, you may still enter—more volunteers are needed.

Approximately 1,200 NIH employees telephoned and requested the study's informational packet, however, only 800 persons completed and returned the questionnaire. The study needs 700 more volunteers.

So far, most volunteers tested were found to be in the "normal" range. Those whose analyses were outside the "normal" range were referred to the Occupational Medical Services or to their own physician for consultation.

As a result of participating in the study, several NIH employees who thought that they were healthy discovered that they

needed treatment.

Every 6 months a volunteer's blood is analyzed as part of a "sequential determination" study, a procedure that gives a researcher a much better idea of the normal range of blood.

Volunteers in the study will help in the clinical care of CC patients. To be part of the study requires only minutes for a blood sample to be drawn, blood pressure checked, and a questionnaire completed.

Employees gain important information about their blood chemistry from the study. The free blood analysis is a service open only to NIH employees.

For further information or to request the packet on the Normal Range Study, call 496-3386. If you have already received the packet and have not returned it, please do so. □

read music.

Prospective members other than sopranos are also welcome.

For further information, call Dr. Lewis M. Norton, 496-6037.

### Choral Group Needs More Sopranos

The NIH Singers, an R&W-sponsored choral group, need additional sopranos. Participants must have some ability to sight

## Three New Books Discuss Environmental Health Issues

Three new books representing some of the most up-to-date research material on environmental health are now available.

Written for the general public by the New York Academy of Sciences through a contract with the National Institute of Environmental Health Sciences, the books contain distilled information taken from proceedings of an academy conference entitled Public Control of Environmental Health Hazards.

The first book of the series, *Persistent Poisons*, by Dr. Mary-Jane Schneider, deals with halogenated aromatic hydrocarbons, odorous, toxic chemicals which are widely used in industry. They are long-lasting in the environment, and have wide-ranging health effects on humans. Some of these chemicals are known to cause cancer.

*Hazards to Your Health*, by James Gorman, considers the problems of environmental disease. He evaluates the risks, the scientific, political, and social conflicts surrounding these issues which make solving them difficult.

The third book, *The Asbestos Hazard*, by Paul Brodeur, describes the various aspects of the asbestos problem. Asbestos is a substance used in countless products and processes; it exists everywhere, and poses serious public health problems in all industrialized countries.

Although the three books are being promoted as a set, single copies are also being sold for \$4. Otherwise, the cost is \$10 for the three.

To obtain copies of these books, write the New York Academy of Sciences, 2 East 63rd St., New York, N.Y. 10020, or call (212) 838-0230. □

## Ruth Stout, Technical Assistant, FIC, Retires With 17 Yrs.' Service



Mrs. Stout's co-workers and friends honored her at a reception and presented her with a matching gold bracelet and necklace.

Ruth R. Stout of the International Research Fellowship Branch, Fogarty International Center, retired on Sept. 5 with 17 years of Government service.

Mrs. Stout began her career in 1963 with the Office of International Research, NIH, and was transferred to FIC upon its establishment in 1968.

During her employment as a fellowship

## Minority High School Research Apprentices Visit NIH To Learn More About Research



Students participating in the summer minority high school apprenticeship program at the University of Maryland College of Medicine, Baltimore, toured a Bureau of Biologics laboratory during their NIH visit.

When a dozen minority high school students who have been working this summer at the University of Maryland's medical school as Federal research apprentices climbed up on an early morning bus in Baltimore recently to travel to NIH, they were not sure what kind of day was ahead.

Their trip was part of the first federally funded summer Research Apprenticeship Program designed to interest minority high school students in scientific research. The program is administered by the Division of Research Resources.

"This summer has really opened up new fields for me," says Joel Zarzuela, who will be a senior at Baltimore Polytech Institute. He worked this summer in ophthalmology research at the school of medicine. "We've been testing for inhibitors of cataracts, and I'm getting some really broad laboratory experience that has made me a lot more interested in research."

Some students expected to be stuck in a corner washing test tubes all summer. However, they found themselves involved in research, getting actual experience, and having their questions answered by investigators.

Robby Harrell, another apprentice from Baltimore who is starting his senior year at Gilman High, worked this summer in the medical school's physiology laboratory.

"We've been looking at neonatal rabbit brains," he said. "We take a section of the immature brain, take a picture of it, and study the histology of the tissue. We're especially examining the neurons."

"I've learned darkroom techniques. It's an experience I'd never have been able to have without this summer program."

During their NIH visit, the students talked

technical assistant, Mrs. Stout became widely known for her knowledge of programs, persons, objectives, procedures, and many other aspects of the fellowship programs.

She was the recipient of two awards for

about being an emotional part of research, seeing the frustrations that can develop, "and sharing the excitement when the results turn out good and then going back and doing it all over to see if they turn out good the next time."

But they are ready to admit if the summer has come to less than they expected. Kim Hyung Ledbetter, a junior at Northern High, admitted that she's always liked mathematics but that working with statistics this summer "hasn't been as exciting as I thought it would be."

"But I've had a chance to visit hospitals, and it has renewed my interest in medicine, especially in dialysis. I'd like to be a family doctor with special emphasis in kidney problems, hypertension and related things like salt intake and exercise."

The group, accompanied by Dr. Robert Herrell, assistant dean at the University of Maryland School of Medicine, was greeted in the Visitors Center by Dr. Francis Kendrick, director of DRR's Biomedical Research Support Grant program.

From the excitement shown and the questions asked, it appeared that the day at NIH, and the summer, definitely have sprouted interest in scientific research.

The day included tours of the Clinical Center and laboratories, and visits to Lister Hill and the Bureau of Biologics.

Drs. Arthur White, of the National Institute of Neurological and Communicative Disorders and Stroke, and Charles Roberts of Bureau of Biologics, also hosted the students during their visit.

The total summer program involved 200 minority high school students in 45 institutions in 21 states. □

sustained high quality work performance and special achievement.

In retirement, Mrs. Stout looks forward to pursuing her growing interest in needlework, bowling, and real estate.

## FIC Research Fellows

Three fellows have recently arrived at NIH to begin International Research Fellowships of the Fogarty International Center:

**Dr. Jacques Chevalier**, Institute of Cellular Pathology, INSERM, in the Laboratory of Kidney and Electrolyte Metabolism, NHLBI, and Laboratory of Pathophysiology, NCI.

He is training under the preceptorship of Drs. Joseph Handler and Pedro Pinto da Silva. His research is on cell biology.

**Dr. Anne Culvenor**, Clinical Pharmacology and Therapeutics Unit, University of Melbourne, in the Hypertension-Endocrine Branch, NHLBI.

She is training under the preceptorship of Dr. Walter Lovenberg. Her research is on tetrahydrobiopterin in the central nervous system.

**Dr. Tapio Palva**, a docent from the Department of Genetics, University of Helsinki, at the Frederick Cancer Research Center.

He is training under the preceptorship of Dr. Thomas J. Silhavy. His research is on the mechanism of protein export.

## New Booklet Highlights DRR's 1979 Programs

An in-depth report highlighting 1979 research program activities of the Division of Research Resources has been published and is now available.

The booklet, *1979 Program Highlights, Division of Research Resources*, is a 32-page report containing 39 photos and charts.

During 1979, the Division's five programs made grant awards to 795 institutions amounting to nearly \$150 million.

A free copy of the booklet may be secured by writing to the Research Resources Information Center, 1776 East Jefferson Street, Rockville, Md. 20852, or to the Office of Science and Health Reports, DRR, Bethesda, Md. 20205. □

## World Health Designates NHLBI As Collaborative Center For Cardiovascular Diseases

Recently the World Health Organization designated the National Heart, Lung, and Blood Institute as its Collaborative Center for Research and Training in Cardiovascular Diseases for the Americas.

The 3-year appointment is the first step in a proposed network of similar WHO collaborating centers in the cardiovascular field that will eventually serve Europe, Africa, the Eastern Mediterranean, Southeast Asia, and the Western Pacific.

In its new role, the Institute will provide advisory services to WHO; assist in the training of suitable qualified fellows and in their placement in the designated region; and assist and advise WHO in the collection and exchange of information on activities in the cardiovascular disease field, particularly with respect to basic research, prevention, and control.

## 2 Fogarty Scholars-in-Residence Come to NIH



**Professor Lindner, whose career spans several continents, was elected a member of the Israel Academy of Science and Humanities in 1979.**

Professor Hans Rudolf Lindner, dean of the Faculty of Biology, and Adlai E. Stevenson, III Professor of endocrinology and reproductive biology at the Weizmann Institute of Science, Rehovot, Israel, has arrived at NIH, where he will spend a year as a Fogarty Scholar-in-Residence.

Professor Lindner's career has spanned several continents. Born in Germany, he received a B.V.Sc. degree at Sydney University in Australia. Five years later, he received a Ph.D. from the Cambridge University Faculty of Biology and returned to Australia, where he did research for the Commonwealth Scientific and Industrial Research Organization.

Since 1965 Professor Lindner has been at the Weizmann Institute, serving also for 1 year as visiting professor at Cornell and at Tel Aviv University.

In 1977 he received an Sc.D. degree from the Faculty of Medicine at Cambridge.

Professor Lindner's contributions to the field of reproductive endocrinology are world renowned. His initial research concerned circulating androgens and adrenal steroids in domestic animals.

Since then he has developed improved methods for steroid assay, including gas-liquid chromatography and radioimmunoassay procedures.

His work on the hormonal control of ovarian function, using the rat as a model animal, has provided unique and important insights into the regulation of the reproductive processes.

He is on the advisory and editorial boards of eight journals.

Dr. Lindner can be reached at 496-2590 or in Stone House, Rm. 309. □

To assist these efforts, WHO will make available to the Institute all information and study materials that it receives.

In a letter to Dr. Zbynek Pisa, chief of cardiovascular diseases for WHO, Dr. Robert I. Levy, NHLBI Director, expressed his pleasure with the Institute's new desig-



**Dr. Lee, who was named an honorary member of the American Society of Pharmacology and Experimental Therapeutics in 1977, also serves on the editorial boards of several journals.**

Dr. Chen-Yuan Lee, professor of pharmacology at the National Taiwan University, Taipei, Taiwan, Republic of China, has returned to NIH to complete his term as the first Fogarty Scholar-in-Residence from that country.

His wife, Dr. Shu-Yue Lee, associate professor of clinical pathology at Taiwan University, is a guest worker in the laboratory of Dr. Stephen Epstein, chief, Cardiology Branch and Clinical Physiology Section, NHLBI.

Dr. Lee is a pioneer in neurotoxin research. In 1976 he received the Redi Award, conferred triennially by the International Society of Toxinology, in recognition of his work on isolation, composition, and neuromuscular blocking actions of Elapid venoms and toxins, particularly his study of pharmacological interactions between snake venom toxins, including alpha- and beta-bungarotoxins, cardiotoxin, and phospholipase A<sub>2</sub>.

Earlier in 1976 while a Fogarty Scholar, Dr. Lee edited Volume 52 (Snake Venoms) of the *Handbook of Experimental Pharmacology*.

During his 4-month stay, he will lecture on the pharmacology of phospholipase A<sub>2</sub> from snake venoms and offer seminars on the classification of snake toxins and post-synaptic neurotoxins from Elapid snake venoms.

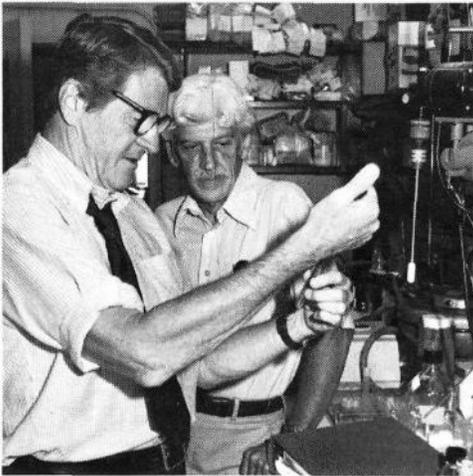
In addition, he will consult with Dr. Julius Axelrod, NIMH; Dr. Marshall Nirenberg, NHLBI; Dr. Bernhard Witkop, NIAMDD, and other intramural scientists.

Dr. Lee can be reached in Stone House, Rm. 302-B, 496-2087. □

nation and with the prospect of working with WHO. He noted that the "gathering, evaluation, and sharing of data in this hemisphere should contribute significantly toward strengthening cardiovascular research and training in this part of the world." □

# ANNIVERSARY

(Continued from Page 1)



**Cochairmen Drs. Anfinsen (l) and Rall discuss the DNA symposium to be held Oct. 15.**

pediatrics and biochemistry, University of California School of Medicine, San Francisco; and Dr. Michael S. Brown, professor, department of molecular genetics, Univer-

sity of Texas Southwestern Medical School, Dallas.

The symposium will link together advances in basic DNA research and the potential applications of this research to a host of genetic diseases for which there is no treatment at present.

### Topics Listed

Topics will include nucleosome structure, DNA supercoiling, antibody genes, environmental chemicals causing mutations and cancer, regulation of synapse formation, lysosomes and their diseases, experimental models of human chromosomal diseases, and lipoprotein receptors and their genetic defects.

The symposium is open to the public. There are no registration or fee requirements. □

### R & W Sponsors Investment Seminars

Virginia Kelly, a representative of Johnston, Lemon and Company, is giving investment seminars from noon to 1 p.m.:

- Oct. 1—Westwood Bldg., Conf. Rm. D
- Oct. 9—Federal Bldg., Conf. Rm. B1-19
- Oct. 15—Landow Bldg., Conf. Rm. A □



**Dr. Donald W. Seldin will be the guest speaker at NIAMDD's anniversary dinner at the National Naval Medical Center Officers' Club on Oct. 15. Dr. Seldin, William Buchanan Professor of internal medicine and chairman, department of internal medicine, University of Texas Southwestern Medical School, Dallas, will speak on Medicine and NIH—A Symbiotic Relationship.**



**YOUTH GOODWILL MISSION FROM TAIWAN, REPUBLIC OF CHINA (clockwise from lower left): Dr. Joseph Hwang, president of the NIH Chinese-American Association, presents a gift of NIH T-shirts to the group's director, Dr. Chao-Hsin Wei at the conclusion of their performance in the Masur Auditorium on Sept. 13. The overflow audience saw a joyous finale with dancers waving red silk scarves. Using a billowing white silk cloth, performers recreate the turbulent sea of the Straits of Taiwan, as early pioneers make their death-defying crossing, a reenactment of the Crossing of Black Water. Pounding drums and the performers' screams reproduced the atmosphere of fear and danger. The first half of the program ended with "In the Market Place," a tumultuous scene featuring "gypsies," a flower drum troupe, and expert kung-fu fighters.**

