3 FIC Scholars Arrive To Do Research

Three Fogarty International Center scholars, Drs. Meir Wilchek, Howard Schachman, and Sidney Bernhard, arrived recently to begin their studies.

Dr. Wilchek, professor of biophysics at the Weizmann Institute, Israel, will collaborate with a number of groups in different Institutes and Divisions while at NIH.

He is responsible for much of the development of affinity chromatography and related techniques that have revolutionized the art of protein purification, particularly enzyme purification.

Dr. Wilchek has used synthetic organic chemistry to open up new areas of biology for investigation. Beyond his contributions to methodology, he has applied the techniques he developed to a variety of problems such as transport phenomena, antigen-antibody reactions, and the basis of mitogenicity.

Previously, Prof. Wilchek has visited NIH and collaborated with Dr. Christian B. Anfinsen, NIAMDD, on some of the initial work on affinity chromatography.

Dr. Schachman, professor of molecular biology, University of California, Berkeley, has resumed his FIC scholarship.

During his first term in 1978, he took part in a series of seminars about evolution; a number of well-known scientists presented the latest findings about the origin of life and the role of the genetic code.

He is a physical biochemist who has made (See SCHOLARS, Page 12)

Dr. Schachman

Dr. Bernhard

Study Shows Biomedical Research Advances Also Aid Economy Via Commercial Spin-Offs

A recent pilot study, prepared for the NIH Office for Medical Applications of Research, lists 10 examples of discoveries in biomedical research adopted for commercial applications outside the medical field that have had a significant impact on the economy.

In all the selected cases, biomedical research furnished a critical element in bringing about technological advancement and industrial growth.

The pilot study, believed to be the first systematic study of the impact of biomedicine on nonmedical industry, noted that certain industries would not exist today without these key biomedical advances. Moreover, other industries have been significantly augmented or refined by them.

The pilot study suggests that biomedical research has proved to be a profitable investment for the health of the Nation as well as the general economy. Among the research advances cited in the study were:

- Development of the process of lyophilization, utilized in the preservation of blood and other biologic products, which has been adopted as a principal method of food preservation by the freeze-dried food industry.
- Elucidation of keratin biochemistry which formed the basis of the home permanent hair wave industry.
- Development of fiber optics technology, used in performing internal physical examinations, which contributed greatly to the telecommunications industry.
- Increase in knowledge of enzyme biochemistry involving the digestive process which has found broad industrial applications in the production of beer, leather, laundry detergents, wine and other products.

(Continued on Page 8)
OMS Offers Blood Pressure Exams For Employees During May

May is National High Blood Pressure Month. The only way to know you have high blood pressure is to have your pressure checked.

The Occupational Medical Service is offering a variety of services to NIH employees which includes screening; referral for followup evaluation and treatment; and monitoring/education of employees with high blood pressure.

Visit one of the following clinic locations for a free pressure checkup that can be life-saving:

- Bldg. 31, Rm. B2B-47 (Special HBP clinic, Monday, Wednesday and Friday, 2:30-4:30 p.m. in May)
- Bldg. 13, Rm. C901
- Federal Bldg., Rm. SC-12
- Westwood Bldg., Rm. 28
- Bldg. 10, East Wing Clinic (5 p.m.-12:30 a.m.) Rm. 15230.

Physical Fitness Class To Begin in May

Sheila Wooters (l), fitness program instructor, "warms up" a few candidates for her conditioning classes.

A "flexible" half-hour physical fitness program designed for NIH employees who wish to improve their awareness about exercise and improve their overall physical condition will begin in May.

This $15 minisession will teach participants the proper way to do stretching exercises so that dormant muscles will become more flexible. An individualized program of recording pulse rate will be stressed, as part of an overall cardiovascular awareness program.

Training Tips

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

Communication Course Deadline Skills

- Course Starts
- Interpersonal
- Problem Solving
  - 6/29
  - 6/12
- Office Skills
- Files Maintenance and Improvement
  - 5/28
  - 4/29
- 6/10
  - 5/13
- 6/17
  - 6/3
- 6/25
  - 5/28

To learn more about these and other courses in office and communication skills, contact the Training Assistance Branch, DPM, 496-2146.

West Drive To Be Closed—Parking Lot Users To Relocate

West Drive between Center Drive and Cedar Lane has been closed to all traffic as of Monday, Apr. 20, for alterations planned under the ACRF construction project. North Drive residents may continue to use West Drive.

Also closed is the entrance to parking lot 20-C. Users of this parking area are directed to lots 16-C, -D, -E, or -F.

Alterations will be completed in 3 to 4 weeks.

Gilbert and Sullivan Featured In NIH Singers, Madrigals Concert

The NIH Singers and the NIH Madrigal Singers, sponsored by the R&W Association, will present a concert in the Masur Auditorium on Monday, May 11, at 12:30 p.m. The 50-minute program will be in three parts. The NIH Singers, under the direction of Lewis M. Norton, will perform sacred works by Haydn, Gluck, and Franck. Glenn Ricart will lead the NIH Madrigal Singers in renditions of compositions by Josquin des Pres.

Finally, the NIH Singers will present a group of familiar choruses from various Gilbert and Sullivan operettas.

All NIH employees, patients, and guests are welcome to attend.

about fitness and exercise during and after working hours.

This self-educational program will teach the proper way to do conditioning exercises, while allowing a participant the chance to develop their own fitness schedule during leisure time.

Registration deadline is Tuesday, Apr. 30, at the R&W Activities Desk, Bldg. 31.

Classes will be limited to 20 persons.
Asian Pacific American Heritage Week Starts May 4

This year's Asian Pacific American Heritage Week is being observed with a series of cultural events that have been planned for May 4 through May 8.

The week's activities are being sponsored by the NIH Asian American Cultural Committee in collaboration with the Division of Equal Opportunity.

The purpose of the ninth annual program is to demonstrate some of the unique contributions that Asian and Pacific Americans have made to the diverse cultural life of the United States.

All activities will take place in the Masur Auditorium. During the week, events are scheduled each day from 11:30 a.m. to 1:30 p.m. There will also be an evening program on Friday, May 8, from 7 to 10 p.m.

Midday programs will include films on the archaeological, cultural, and historic traditions of some of the Asian Pacific Americans. The films are on such countries as: Thailand, Indonesia, Japan, China, Korea, the Philippines, and the Indo-Pakistan subcontinent. Some of the titles are: "Pakistan: Mound of the Dead"; "Asia: A Continental Overview"; "Cave People of the Philippines"; and "Family of the River: The River, My Home," the story of a young Thai girl's life on the Chao Phraya River.

On Friday, the noontime key speaker will be Dr. Joon Lew, director of the World Vision Special Skin Clinic and Leprosy Research Institute, Seoul, Korea. He will speak on how his group has helped handicapped leprosy patients to develop their skills to share more fully in life through their greater usefulness.

The Friday evening program will feature live performances by artists from five cultural groups: Korea, Malaysia, Japan, the Philippines, and the Pacific Islands.

Ki Whang Kim, a seventh-degree black belt in Tae Kwon Do karate, will give a short demonstration of this Korean art of self-defense. Superwoman syndrome.

Groups To Perform Friday Night

Persons from Malaysia will display native costumes, and explain their cultural significance. A 15-20 minute film of Malaysia will also be shown.

The Japanese will present classical and folk dances, as well as a performance on the Shamisen, an ancient three-stringed instrument.

The Mabuhay and Sampaguita Dance Troupe, native dancers from the Philippines, will perform a variety of dances. A narrator will explain the meaning of each of the various movements. In Asian dances, nonverbal information is communicated by simple movements.

Hawaiian, Maori, and Tahitian dances will be performed by the Maile Hula Dancers, who will be accompanied by the Aloha Serenaders Band. A continuous narrative will explain the significance and cultural aspects of the various movements.

Both lunchtime and evening activities are open to the public. Persons attending the Friday evening performance are encouraged to park on the south side of Bldg. 10.

In addition, an exhibit of Laotian traditional weaving and embroidery will be on display in the lobby next to the NIH Library. The Lao weavers do their work entirely on hand looms in northern Virginia.

Their activities are part of an HHS-funded homemaking training program designed to assist the unemployed and handicapped. This exhibit is being set up in observance of this year's United Nations-sponsored program for the International Year of Disabled Persons.
Drs. Nylen and Bowen Installed as Presidents Of Dental Associations

Dr. Marie U. Nylen, director of intramural research, NIDR, was installed as president of the International Association for Dental Research at its 59th general session in Chicago.

Dr. Nylen is the first woman president of the IADR. Her other “firsts” include: first woman president of the American Association for Dental Research; first woman director of intramural research at NIDR; and first woman laboratory chief at the Institute.

She is internationally known as an authority on the development and structure of mineralized tissues, the morphology of teeth, and the effects of tetracycline on developing bones and teeth. She has served on numerous professional advisory boards, held 11 offices in scientific organizations, authored over 40 scientific papers, and served as associate editor for several dental research journals.

The association also installed Dr. William H. Bowen of NIDR as president of the American Association for Dental Research for 1981. Dr. Bowen is chief of the Caries Prevention and Research Branch of the Institute’s National Caries Program.

During the session, Dr. Bowen also received the Dental Caries Research Award for 1981. He was honored by the IADR for his pioneering work in developing and using the primate model for the study of caries.

After establishing baseline parameters in bacterial flora, plaque and salivary chemistry and physiology in monkeys, he used these animals to investigate the microbial etiology of caries and development of antitetracycline vaccines. These studies have provided a flow of knowledge about caries causation and control that can be most directly applied to humans.

The Dental Caries Research Award—supported by Trident professional services division, Warner-Lambert Company—recognizes and stimulates innovative contributions to the basic understanding of the cause and/or prevention of dental caries.

The recipient must have conducted original caries prevention research which has been fully tested and accepted by the scientific community.

The IADR has some 5,500 members from nearly 60 countries. The American Association for Dental Research, the IADR’s largest division, holds its annual session in conjunction with the IADR general meeting. At this year’s combined session, over 1,370 scientific papers were presented. Abstracts appear in the Journal of Dental Research, a publication of the AADR.

Dr. Nylen and Bowen served as program chairmen for this year’s session. □

Research Center Directory Available From DRR

The 1981 revised directory of major clinical research activities and participants at the General Clinical Research Centers of NIH has been published and is available free.

Titled General Clinical Research Centers, A Research Resources Directory, the booklet contains 92 pages outlining in detail facilities and investigations at all Division of Research Resources-supported GCRCs throughout the country.

Seventy-five Centers Open

Today there are 75 centers where scientists study the entire spectrum of human biomedicine from genetics to organ transplants. Their research projects are funded by NIH and other agencies of the Department of Health and Human Services, by research foundations and societies, and by industry.

In addition to the current listing and location of the 75 centers, the directory identifies the names of program and associate directors, principal investigators, and specific locations of the facility within the host institution, the number of beds, and the centers’ major areas of investigation. Also included are listings of special assay services or new tests available, special instruments or devices, and guides, pamphlets, or booklets from the centers.

A geographic index is provided, indicating the General Clinical Research Centers by state, and alphabetically within each state, according to the names of the host institution.

A single free copy of the 1981 revised General Clinical Research Centers, A Research Resources Directory may be secured by writing to the Research Resources Information Center, 1776 East Jefferson St., Rockville, Md. 20852, or by request from the Office of Science and Health Reports, Division of Research Resources, NIH, Bethesda, Md. 20205. □

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For additional information, call Bobbi Bennett, 496-1766. □
Therapy Devised by Hopkins Group To Treat Disorders of Urea Cycle

Treatments promising to extend significantly the lives of infants stricken by a group of fatal hereditary diseases have been developed by physicians at the Johns Hopkins University in Baltimore.

The Hopkins clinical research team, headed by Dr. Saul W. Brusilow, has devised and successfully tested therapy to control at least two of five hereditary diseases which paralyze the urea cycle and can lead to a fatal accumulation of ammonium ion.

Approximately 1 in 2,500 newborns has a severe deficiency of a urea cycle enzyme. The children seldom live more than a year, and those who survive are often mentally retarded.

The five hereditary disorders result from different mutant genes, each of which causes a different deficiency. Children severely deficient in any one enzyme accumulate toxic quantities of ammonium, which would otherwise be transformed into urea and excreted in urine. Elevated levels of ammonium, the initial product of amino acid catabolism, may cause seizures, brain damage, and death.

To overcome this problem, Drs. Brusilow, Mark L. Batshaw, and colleagues, treat the infants by increasing the excretion of nitrogen in compounds other than urea. Normally, these metabolic pathways produce only small quantities of nitrogenous products.

However, by chemically stimulating alternative pathways, ammonium accumulating in body fluids of newborns can be excreted before toxic levels are reached.

Presently, all affected infants who have been rescued from neonatal hyperammonemic coma with this new therapy are alive. Their ages range from 4 months to 3 years.

Five children were treated at the Johns Hopkins clinical research unit, supported by NIH's Division of Research Resources. The others were treated at medical centers around the Nation in collaboration with the Hopkins group.

The best method yet found for treating patients with one type of the disorder, known as argininosuccinase deficiency, makes use of urea cycle enzymes not affected by the disease.

Before the Hopkins research began some 3 years ago, only dietary treatments for urea synthesis diseases were available. In such therapy, low-protein diets reduce the production of nitrogen waste. Amino acids essential for growth are provided to the patient because the body cannot produce them.

This conventional therapy is successful only in those patients with partial enzyme deficiencies. Because the production of nitrogen wastes cannot be avoided entirely, failure in severe cases is inevitable.

Drs. Brusilow and Batshaw are convinced that therapy to stimulate metabolic pathways for bypassing the genetic malfunction should be used as a complement to dietary regimens. In combination, the metabolic and dietary treatments may significantly extend the lives of newborns and may prevent brain damage caused by accumulation of nitrogen waste.

The National Institute of Child Health and Human Development supports the study of urea cycle disorders. For more information, contact Dr. Saul W. Brusilow, the J. H. University Hospital, 600 N. Broadway, Baltimore, Md. 21205.

NIH Director Dr. Richard M. Krause recently presented 1980 NIH Merit Awards to the following Institute personnel (I to r): Grace Ellis, head, Fiscal Management Section, "for extraordinary skill in prompt and efficient fiscal management during a period of reorganization of the NIAID extramural programs"; Mary Donovan, former Office of Research Reporting and Public Response writer and now NIH News Branch assistant chief "for superior efforts in interpreting biomedical research to the medical profession and the general public"; Dr. Krause; and Rosalie Strauss, recently retired as Data Control Section head, "for extraordinary skill in managing the automatic data processing section and implementation of a more responsive, complex, NIAID scientific reporting system." Josephine Morris, not shown, was honored "in recognition of her resourcefulness and skill as travel assistant, NIAID." At far left, Frank Fountain, NIAID EEO coordinator, stands with Institute employees who were presented EEO Special Achievement Awards (I to r): Charlotte B. Davis, microbiologist, Laboratory of Clinical Investigation; Vincent A. Thomas, Jr., management analysis officer; Martha J. Mattheis, microbiologist, Clinical Studies Branch; Dr. Krause; Dr. Kenneth W. Sell, scientific director; Eno Camargo, biologist, Laboratory of Infectious Diseases; and Dr. Louis Bourgeois, health sciences administrator, Extramural Activities Program.
Dr. R. Dubner Receives Dental Research Medal

Dr. Ronald Dubner, NIDR, received the 1981 Frederick Birnberg Research Medal at Columbia University's annual Alumni Day celebration Apr. 3. The award, sponsored by the University's School of Dental and Oral Surgery Alumni Association, was established to encourage outstanding dental research and to help arouse public interest for its support.

This year, Dr. Dubner, chief of the Institute's Neurobiology and Anesthesiology Branch, was honored for his outstanding contributions to dental research. He is internationally acclaimed for his leadership in pain and pain control research, and for his contributions to the understanding of the neurophysiological mechanisms of pain in the oral-facial region.

He has been affiliated with the Dental Institute since 1959. He has a D.D.S. degree from Columbia University and a Ph.D. degree in neurophysiology from the University of Michigan.

Dr. Dubner

Fluorescent Lights Have Their Side Effects

NIEHS Researchers Find in Study

Artificial light sources, particularly fluorescent, produce a unique light spectrum and can stimulate certain effects in living creatures. Fluorescent lights have a markedly different energy spectra from natural sunlight, and have been identified by various investigators as producing a number of unwanted side effects.

Researchers in the Laboratory of Environmental Biophysics at the National Institute of Environmental Health Sciences have explored in mice the effects of three distinct colors of fluorescent light: daylight simulating, cool white, and pink. In the study, mice were exposed to fluorescent lights 12 hours per day for 19 months in temperature and humidity controlled cages.

The researchers made several observations. The first litter was significantly delayed in both the cool white and pink groups compared to those exposed to daylight simulating light. Females housed under the cool white light produced litters containing fewer pups than daylight simulating exposed females, while females in the pink light group had more litters than the daylight simulated group.

"Mice exposed to the cool white light gave birth to a smaller total number of pups than those kept under the daylight simulating fluorescent lights," Dr. Colin Chignell said. "We do not mean to imply by this work that the human effects might be the same as for mice," said Dr. Chignell, chief of NIEHS's Laboratory of Biophysics. "But our results in controlled experiments with mice enable us to learn more about the subtle relationships between certain light conditions and biological processes."

The light experiment was conducted using C3H mice, a strain in which the females naturally develop mammary tumors after a certain age. The researchers found that females kept under the daylight simulating light developed tumors 5.5 weeks later than those kept under the cool white lights, and 3 weeks later than those under pink lights.

The differences observed in both the time of tumor development and the differences in reproduction are attributable to the differences in light spectral energy distributed by the three lighting systems, according to the NIEHS scientists.

Dr. Chignell says he would like to conduct another series of experiments using the same light sources but a different strain of mice to examine whether the different light spectra might produce changes in development or behavior.

2 New Appointees To Serve On Dental Advisory Council

Two appointments to the National Advisory Dental Research Council were announced recently for 4-year terms.

Dr. James E. Mulvihill, recognized periodontist and educator, is vice president for health affairs and executive director of the University of Connecticut Health Center at Farmington. He received his D.M.D. degree from Harvard University School of Dentistry in 1966 and is the author of several papers on periodontal disease and careers in dentistry.

Associate dean of the School of Dentistry, Meharry Medical College, Dr. Elisha R. Richardson received his D.D.S. degree from Meharry and his M.S. degree from the University of Chicago Medical Center.

He has published numerous articles on periodontal disease and orthodontics, several focusing on the black population. Dr. Richardson is a fellow of the American College of Dentists and diplomate of the American Board of Orthodontics.

Teams Forming for Relay Run

There is still time to enter 5-member teams in the NIH Institute Relay that is to be held at noon on Wednesday, May 20, in front of Bldg. 1.

All persons interested in forming teams must sign up before May 15 at the R&W Association's Activities Desk in Bldg. 31.

The event will be videotaped this year, and will be shown later at a runners' party to be held at the FAES house on Old Georgetown Road from 4:30 to 7:30 p.m.

For further information, call Al Lewis, 443-1780.
Gasoline Prices, Physical Fitness Encourage More NIH’ers To Ride to Work by Bike

"I’m the type who likes to find an alternative. I also hate to be ripped off!" are the strong sentiments expressed by Louis Mocca, 30, a recently converted cycling neophyte. He sees the 3,000 to 4,000 miles that he has pedalled while commuting from his home to NIH for the past year and a half as his personal statement against the high cost of gasoline and for better overall physical conditioning.

"It was during the last energy crisis that I decided I did not want to wait in line," Mr. Mocca said about his decision to resurrect his Columbia 5-speed bike that he has had since he was a child in Bethesda.

Commutes 20 Miles Daily

Regardless of the weather, Mr. Mocca makes his daily 20-mile round trip from his Colesville area home, to his office at the Bureau of Biologics.

"My exercise brings me to work" is his philosophy about the 30-minute bike trip he takes each way. Previously, Mr. Mocca rode to work in an older model car that got 19 miles per gallon and reduced his commuting time by only 10 minutes. "I used to be a car rider like everyone else."

Prior to rediscovering the bicycle, Mr. Mocca exercised daily by running 5 miles. He finds his new activity as an alternate way to mentally relax," he said.

He says that the bike will be worth approximately $1,000 when he is finished. "Fixing a bike in the evening is a great way to mentally relax," he said.

Regardless of weather, Mr. Mocca (l) and Dr. Pedersen pedal to work each day.

Mr. Mocca sees many "benefits" in bicycle riding.

He finds his new activity as an alternate way of "getting exercise while not investing much time."

He said his running regimen left him with sore knees and other aches. "Bicycling is an excellent, painless form of exercise, particularly for the cardiovascular system."

$1,000 ‘Benefit’

Since he has been cycling to work, Mr. Mocca said he has probably saved $1,000, a figure that includes costs of gas and oil, insurance, and maintenance but excludes money he would have paid for parking at NIH each month.

His new-found interest has led Mr. Mocca to begin restoring 10-speed bicycles that he has bought at local auction sales. He then sells the repaired bikes and uses that money to restore a damaged Raleigh Inter-

national touring/racing bike.

He has even raced restored bicycles in competition. Although he considers himself a "novice" racer, he has taken a first and a second in two races.

In May, he is looking forward to the beginning of Thursday night bike races at a mile-long oval near Walter Johnson High School. These races are sanctioned by the National Capital Velo Club, a local organization that promotes competitive cycling.

Since becoming active in racing, Mr. Mocca has gotten to know Dr. Frank A. Pedersen, a psychologist with NICHD, who also has become an avid cycling enthusiast over the last 3 years. Dr. Pedersen is just one of 150 NIH Commuter Club members.

Dr. Pedersen, 48, is a master bicyclist, an age-grouping for competitors between 45 and 54 years, and is licensed by the U.S. Cycling Federation. Like Mr. Mocca he commutes by bike every day to NIH, and it is not uncommon for him after work to meet his son, David, for a joint 25-mile "training" ride to Potomac and back in the evening.

Referring to the May 27th "novice" bike race at NIH, Mr. Mocca said that it is being held "not to set any records or for prizes, but to encourage people to start using their bicycles again, to see the benefit in it."

Cyclists Needed To Compete In Noontime Race, May 27

May is American Bike Month. In observance, the NIH Bicycle Commuter Club will feature a spring bike race at NIH on Wednesday, May 27.

The event is open to all "novice" racers who bring a bicycle to the starting line in front of Bldg. 1 for the beginning of the race at 12:05 p.m.

The event will cover the same route as the annual NIH Institute Relay, in ½-mile laps over a 4-mile course. It is suggested that all participants wear bicycle safety helmets.

Prizes To Be Given

Prizes such as continental bicycle racing caps will be awarded to the first five men and women finalists. Entry forms are available at the NIH National Touring Committee Activities Desk, Bldg. 31, Rm. 1A-18. Applications must be submitted by May 22.

For four consecutive Tuesday evenings beginning May 12, the NIH Commuter Club in conjunction with Georgetown Cycle Shop will hold a basic bicycle repair clinic. The cost is $20. No location has been determined yet for the course.

Further information about the race, club, repair clinic, or upcoming events can be obtained from Louis Mocca, 496-1920.

Telephone Books for Sale Through Gov’t Printing Office

At the suggestion of an employee in the Telecommunications Branch, DAS, and approved and adopted by the appropriate mechanisms, the NIH Telephone and Service Directory is now for sale to interested parties for $6.

Because of increased production costs and postal fees, the publication has become too costly for additional free distribution to non-NIH offices. Currently, the phonebook is printed three times a year for approximately $40,000.
Members of the Drew family attended the opening of the exhibit: (l to r) Charlene Drew Jarvis, Bebe Drew Price, Mrs. Minnie Drew. They were joined by Dr. Fredrickson and Dr. White.

(Continued from Page 1)

thing for science if we were deprived of "our pool of creative, original, innovative people." Dr. Jack White, director of the Howard University Cancer Research Center, reminisced about being a student and colleague of Dr. Drew. He said that Dr. Drew was patient, understanding, unselfish and the "finest, most moral man I've ever known." Dr. Drew's role as an educator is often overlooked, Dr. White said. As professor of surgery at Howard University Medical School and medical director of Freedmen's Hospital (now Howard University Hospital), Dr. Drew took the initiative in training black surgeons and instilled in them a sense of mission.

"If you travel across this country and visit those who trained under Dr. Drew, you'll find them active participants, constructive in their endeavors, sincere surgeons; all with some evidence of Dr. Drew's personality in their work," Dr. White said. "I was tremendously influenced by Dr. Drew and hardly a day goes by that I don't think about him."

Referring to a favorite picture of Dr. Drew, which he has had for 33 years, and which now hangs in the Howard Cancer Research Center's conference room, Dr. White described Dr. Drew as "an imposing figure" over 6 feet tall and weighing about 220 pounds. "He had very tiny eyes which seemed to change depending on what his reaction would be to something we had done."

The Drew exhibit is in the hall, outside the cafeteria in Bldg. 31. It will be placed in the Clinical Center, the NIH research hospital, when construction is completed on the new Ambulatory Care Research Facility addition.

A portrait of Dr. Drew, unveiled at NIH 5 years ago, hangs in the Clinical Center's Blood Bank.

In recognition of Dr. Drew's birthday on June 3, the U.S. Postal Service will issue a commemorative stamp on that date. □
More Research Indicates Smoking Risk During Pregnancy May Affect Fertility

By James Hadley

Evidence continues to accumulate indicating that "cigarette smoking during pregnancy is a major threat to the outcome of pregnancy and the well-being of the newborn baby." In addition, several studies suggest that cigarette smoking "appears to exert an adverse effect on fertility."

These are among the findings described in a recent report by Surgeon General Julius B. Richmond, entitled The Health Consequences of Smoking for Women.

The 400-plus page document contains a chapter on the effects of smoking on pregnancy, infant and child health, and reproduction. It summarizes current knowledge about the effects of smoking on the health of women, offers a comprehensive bibliography, and recommends areas for further research.

Risk Relationship Confirmed

Through clinical, pathological, and epidemiological studies, scientists have found a definite relationship between maternal smoking and an increased risk of fetal, perinatal, and neonatal death, sudden infant death syndrome, spontaneous abortion, low birth weight, and retarded fetal growth in all dimensions.

Smoking, according to the report, also renders pregnant women more susceptible to complications of pregnancy, such as placental abruptions, placenta previa, early or late bleeding, premature and prolonged rupture of membranes, and preterm delivery. Up to 14 percent of prematurity can be attributed to excess risk caused by smoking.

Researchers point out that there is a dose-response relationship. For example, the more a woman smokes during pregnancy, the greater the reduction of birth weight. By the same token, if a woman stops smoking by the fourth month of gestation, the risk of delivering a low birth weight baby is similar to that of a nonsmoker.

Reduction is independent of all other factors that influence birth weight, such as race, parity, maternal size, socioeconomic status, sex of the child, and other factors that have been studied.

Several long-term studies provide evidence that children of smoking mothers have slight but measurable deficiencies in physical growth, intellectual and emotional development, and behavior.

Children whose mothers smoked 10 or more cigarettes a day during pregnancy were on the average 1 centimeter shorter and between 3 to 5 months retarded in reading, mathematics, and general ability, as compared with the offspring of nonsmokers. After allowing for social and biological factors, all of these differences were highly significant.

Hospitalization Rates Higher

According to the report, several studies have found that hospitalization rates for pneumonia and bronchitis were higher during the first year of life for infants of smoking mothers. If the smoking parents also had cough and phlegm, the rates were even higher.

One study found that the risk of contracting pneumonia or bronchitis in the first year of life more than doubled if the parents smoked more than 24 cigarettes a day.

Investigators also note an association between maternal smoking and neurological abnormalities, such as minimal cerebral dysfunction and abnormal or borderline electroencephalograms in the infants.

Heavy smoking (more than a pack a day) during pregnancy may cause hyperkinetic syndrome in children, the report said.

Smoking may also have an adverse effect on reproduction. Several epidemiologic studies have suggested that smoking decreases fertility in women. In one study, 21 percent of the women who regularly smoked cigarettes were infertile, compared to only 14 percent of the nonsmokers.

Smoking Alters Sperm

Spermatogenesis, sperm morphology, sperm motility, and androgen secretion appear to be altered in men smokers. One study demonstrated decreased sperm density, a cigarette-dose-dependent decrease in sperm motility, and a cigarette-dose-dependent increased abnormal sperm morphology among smokers.

The report cites the woman's physician as "one of the most knowledgeable figures pregnant women will encounter as a source of information." Yet several national surveys found that less than half (37 percent in one study) of the physicians queried reported that they advised all or almost all (95 to 100 percent) of their pregnant patients to quit or reduce smoking.

Obstetricians were more likely to deliver such advice to pregnant patients (49 percent) than were physicians in general practice (38 percent).

April 28, 1981

The NIH Record
Dr. David Scott Honored by Two Dental Awards

Dr. David B. Scott, NIDR Director, was recently awarded the docteur honoris causa degree by l'Université Louis Pasteur, Strasbourg, France. A leader in ultrastructural research, he has introduced new methods for studying calcified biological tissues. His work in this area has led to a better understanding of osseous and dental tissues.

Dr. Scott also received special recognition for his pioneering work in modern forensic dentistry at the 1981 annual meeting of the American Academy of Forensic Sciences, and is the first member of the academy nominated for an award by the section on odontology.

He was the first dental member of the academy and has been a fellow since 1956. In 1953, he presented the first dental paper at the academy's second annual meeting.

Dr. Scott's interests and research in forensic dentistry include determination of personal identity and estimating age from dental evidence, and developing laboratory techniques to study dental evidence.

Virology Research Described In New NIAID Brochure

At the Edge of Life: An Introduction to Viruses has recently been published by the National Institute of Allergy and Infectious Diseases. This 75-page illustrated booklet contains a variety of information about viruses—what they are, the diseases they cause, and their uses as research tools.

The publication was prepared to convey to the general public some of the excitement of virology research and to describe the present “state of the art” in the conquest of viral diseases. The report includes some material contained in the comprehensive six-volume Virology Task Force Report published by NIAID in 1979.

Single copies of At the Edge of Life are available from the Office of Research Reporting and Public Response, NIAID, Rm. 7A-32, Bldg. 31; telephone 496-5717.

Copies may also be purchased from the Superintendent of Documents, Government Printing Office, at $4 each (order #017-044-00037-1).

‘Loan-a-Home’ Directory Lists Worldwide Residences

Muriel Hurwitz and her husband, FIC Scholar Dr. Jerard Hurwitz, have returned to the Washington area, where they lived for 2 years in the 1950’s. Mrs. Hurwitz thinks it’s a little like coming home again—but only a little. “Washington and I have both changed since then,” she said.

Mrs. Hurwitz operates “Loan-a-Home”—a directory of housing available all over the world for academic families going on sabbatical. The project got started in 1968, when they went on sabbatical to Paris and had to find a place to live.

The directory has grown to almost 500 listings (living here has enabled her to expand the Washington, D.C., area listings) recommended by university housing offices and foreign embassies, and written up in magazines and newspapers.

For additional information, contact Mrs. Hurwitz, 18 Darwood Place, Mt. Vernon, N.Y. 10553.
Dr. Moss Shares Award From Passano Foundation

Dr. Joel Moss, head of the section on Molecular Mechanisms of NHLBI's Laboratory of Cellular Metabolism, has received the Passano Foundation Young Scientist Award. Dr. Moss was cited for his "contribution to an understanding of the action of bacterial toxins and an exemplary combination of clinical and scientific skills."

He shares the award with Dr. William A. Catterall of the University of Washington—a staff member of the NHLBI Laboratory of Biochemical Genetics from 1974 to 1977.

A native of Brooklyn, Dr. Moss received his M.D. and Ph.D. from New York University School of Medicine and subsequently served on the medical house staff at the Johns Hopkins Hospital. He joined the Institute in 1974 as a research associate with Dr. Martha Vaughan.

Following work that demonstrated the enzymatic activities of cholera and Escherichia coli toxins which are responsible for their ability to activate adenylate cyclase, he has shown that similar ADP-riboseylation reactions may play a regulatory role in animal cells.

The Passano Award was established in 1945, to be given to a person or persons "who made an outstanding contribution to the advancement of medical science and whose associated work was done in the United States." The Young Scientist Award was inaugurated in 1975.

Lillian W. Myers Retires; CC's Medical First Secretary

Lillian W. Myers, the first medical secretary at NIH's Clinical Center, recently retired after 33 years of government service.

Mrs. Myers was administrative assistant to the director of extramural programs with the National Institute of Allergy and Infectious Diseases.

She transferred to the National Institute of General Medical Sciences in 1967 as a grants technical assistant, and joined NIAID in 1970.

Mrs. Myers has only "semi" retired. She is currently working part-time as a library assistant.

4 New Members Appointed To NIEHS Advisory Council

Four appointments to the National Advisory Environmental Health Sciences Council were announced recently.

Dr. Gareth M. Green, professor and chairman of the department of environmental health sciences at Johns Hopkins University School of Hygiene and Public Health, is an internationally recognized researcher in pulmonary defense mechanisms.

Director of the Native American Science Resource Center and associate adjunct professor at Dartmouth College, Dr. Rayna Green is a widely published author on Native American tradition, education, and folklore, as well as science administration.

Others Noted

Dr. Edwin W. Monroe, vice chancellor for health affairs and professor of medicine at East Carolina University at Greenville, N.C., is a member of the North Carolina joint conference committee on medical care.

The fourth appointment, Dr. Charles D. Proctor, is presently professor and chairman of pharmacology at Meharry Medical College in Nashville, Tenn. Dr. Proctor is a widely recognized researcher in the biochemistry of schizophrenia, tranquilizer drug actions, and actions of addiction and abused drugs.

During the last fiscal year, more than half the Institute's $83 million budget was administered through its extramural program for support of research and research training at universities, colleges, and other non-profit laboratories throughout the U.S.
Cyclosporin A Found Effective Against Uveitis; Eye Institute Begins Testing in Humans

By Mary Lynn Hendrix

An experimental drug called cyclosporin A may be a powerful weapon against uveitis, an eye disease responsible for about 10 percent of all cases of visual impairment in the United States.

Recent studies by Dr. Robert Nussenblatt and his co-workers in the Clinical Branch, National Eye Institute, have shown that cyclosporin A is effective against autoimmune uveitis in rats. The investigators are now testing the drug in humans who have this eye disease.

In uveitis, tissues of the inner eye become inflamed. Severe or repeated inflammation may damage the retina, the light-sensing tissue at the back of the eye, and cause blindness.

Many cases of uveitis are now suspected to be autoimmune in origin. That is, they occur because the body’s immune defense system somehow mistakes the tissues of the eye for invading microbes and tries to destroy them.

For years doctors have been treating uveitis with steroids and other drugs which relieve inflammation or dampen the action of the immune system. A drawback of these medications is that they are not always effective, often cause undesirable side effects, and interfere with the patient’s ability to fight off infections.

Cyclosporin A attracted the NEI investigators’ attention as a possible new treatment for uveitis when research reports indicated the drug could prevent immune destruction of tissue grafts. To test the drug’s value in autoimmune uveitis, the scientists first created a model of the disease in rats.

In this model, an injection sets in motion a process by which the rat’s immune system is primed to attack the animal’s own eye tissue. Even though the injection is given at a point far from the eye, severe inflammation of the eye generally occurs within 2 weeks—unless the animal is treated with cyclosporin A. The drug seems to prevent the immune system from mounting an effective attack against the eye.

To determine whether the human eye can be protected from uveitis in the same way, the NEI investigators are now conducting a clinical test of cyclosporin A. Only uveitis patients whose disease appears to have an autoimmune basis will receive the drug.

If cyclosporin A is found to be helpful for these patients, it may be used to save the vision of many people who suffer from particularly stubborn cases of uveitis that have not yielded to conventional treatment.

Also, cyclosporin A may not leave patients as vulnerable to outside infection as do other drugs used in the treatment of uveitis. Most of these drugs dampen the activity of the entire immune system.

But cyclosporin A is much more specific in its effects: It acts on only one component of the system, a class of white blood cells called “T cells” that orchestrate other blood cells’ response to foreign tissue.

In the laboratory model of uveitis, rats treated with cyclosporin A lose only those parts of the immune response that are controlled by T cells. They do not lose the ability to form antibodies (infection-fighting proteins).

Participating in this research project along with Dr. Nussenblatt were Drs. Igael Levy, Merlyn Rodrigues, and Mario Salinas-Carmona. Stanley Cervario of NEI and Dr. Waldon Wacker of the University of Louisville in Kentucky also collaborated in the study.

The investigators’ findings are published in the April 1981 issue of the Journal of Clinical Investigation.

Scholars

(Continued from Page 1)

major contributions to science at both the technical and the theoretical levels. His early work concerned characterization of macromolecules by physical techniques including ultracentrifugation.

Dr. Schachman participated in development of the artificial boundary cell that, for the first time, made it possible to observe sedimentation of small molecules such as cyclic-AMP.

This year he will again participate in the FIC seminars and lectures program, until he returns to Berkeley at the end of May. In 1982, he will come back to NIH for his last term as a Fogarty Scholar.

Dr. Bernhard has returned for the final term of his scholarship. He is well-known for his work on mechanisms of enzyme action and has made major contributions at the experimental and theoretical levels.

He has also written one of the most popular textbooks in biochemistry, The Structure and Function of Enzymes.

During his first Fogarty Scholar term, Dr. Bernhard helped organize a weekly seminar on ATPases and Energy Transduction. In addition, he arranged a series of evening discussions about Evolution From the Prebiotic to the Present.

A future NIH Record will announce the seminars that Prof. Bernhard will conduct before he leaves NIH in mid-July.

Dr. Bruce Chabner Named NCI Clinical Assoc. Director

Dr. Bruce A. Chabner has been named associate director of the Clinical Oncology Program, National Cancer Institute, and will continue to serve as deputy clinical director.

Dr. Chabner joined NCI in 1971, where he has worked extensively on the biochemistry of anti-metabolites used in cancer chemotherapy.

He received a B.A. from Yale University in 1961 and an M.D. from Harvard Medical School in 1965. Following an internship and junior residency at the Peter Bent Brigham Hospital in Boston, Dr. Chabner served as a clinical associate in the NCI Laboratory of Chemical Pharmacology.

He returned to Yale in 1969 as senior resident at the Yale-New Haven Medical Center and research associate at the Yale University School of Medicine. In 1971, he became a senior staff fellow in the Division of Cancer Treatment and the next year, became a senior investigator in the Medicine Branch.

In 1973, Dr. Chabner was appointed head of the NCI biochemical pharmacology section, Laboratory of Chemical Pharmacology, and chief of the Clinical Pharmacology Branch in the Clinical Oncology Program in 1976.

Fulbright Program Seeks Scientists and Lecturers

More than 500 Fulbright awards in over 100 countries are now open to application for university teaching and postdoctoral research in 1982-83. Most awards are for 4-9 months, with an increasing number of research openings.

Applications are due June 1 for the American republics, Australia and New Zealand; and July 1, for Africa, Asia, Europe and the Middle East.

Several countries requesting Fulbright scholars in medical sciences and services are: Australia, orthopedic surgery; Belgium, oncology; Colombia, health sciences, dentistry, administration and preventive medicine; Ecuador, medical technology; Jordan, clinical medicine or pharmacy.

Also Netherlands, study of U.S. and Dutch health and welfare structures; Nigeria, medical science; Norway, internal medicine or physiology; Portugal, biomembranes; Sudan, human physiology; and Uruguay, hematologic or renal physiology.

An applicant must be a U.S. citizen and have appropriate academic and experience credentials. Registration forms may be obtained from the Council for International Exchange of Scholars, Dept. N, Eleven DuPont Circle, N.W., Suite 300, Washington, D.C. 20035.