DR. ZUBROD NAMED TO CANCER POST

Dr. Charles G. Zubrod, of St. Louis, Mo., reported for duty October 4 as Chief of General Medicine, NCI. It is expected that he will be named Clinical Research Director as soon as this position is established.

Born in New York City, Dr. Zubrod received his M.D. from Columbia University College of Physicians and Surgeons. As a medical officer in the U. S. Army during World War II, he took part in the research program that developed drugs for the successful treatment of malaria.

After military service, Dr. Zubrod joined the staff of the Johns Hopkins University Medical School as a research fellow in the Department of Pharmacology, and several years later was made assistant professor of medicine and pharmacology. He left this position last year to become associate professor of medicine and director of research in the Department of Medicine at St. Louis University.

AWARDS PRESENTED TO 4 NMI EMPLOYEES

Cash awards for more efficient methods of work performance were presented recently to four NMI employees. Messrs. Ned Martin Etherington and Rodney DuVall, Section on Helminthic Diseases, LTD, received $10 each for developing a device to secure animal jar lids. Mr. Willis L. Goodman, Section on Epidemiology, Memphis, Tenn., was awarded $185 for skill in converting machinery; and Miss Carolyn E. Horne, Section on Epidemiology, Milledgeville, Ga., received $10 for an improved method of slide preparation.

DR. MEADORS TO JOIN COUNTY HEALTH DEPT.

Dr. Gilcin F. Meadors, Chief of Technical Services, NCI, has accepted an appointment as Montgomery County Health Officer, effective November 1. He will also serve as a deputy health officer of the State Health Department.

An epidemiologist, Dr. Meadors has been at NIH over four years and has been with the Public Health Service for 12 years. His most recent project at NCI has been a study of leukemia.

Born in Clarksdale, Miss., Dr. Meadors graduated from Millsaps College, Jackson, Miss. He received his M.D. in 1940 from Tulane University School of Medicine, and completed his internship at Charity Hospital of Louisiana, New Orleans. In 1947 he received his master's degree in public health at Johns Hopkins University.

OVER 300 REGISTER FOR GRADUATE SCHOOL

Over 300 people signed up for the fall term of the new Graduate School, co-sponsored by the Department of Agriculture and NIH. The new students are mainly professional and technical personnel, both from NIH and from other Government research organizations.

Chemistry led all other fields in number of enrollments. Introductory Biochemistry proved the most popular course in this field, with 36 students, while the other courses followed close behind. In the field of mathematics and physics, Survey of Biomathematics and Introduction to Experimental Statistics shared first place, with 22 enrollments each. Twenty-one people signed up for Introductory and General Bacteriology, making it the most popular course in the biology and medicine field.

(See p. 4 for schedule of classes.)
Studies of Hexobarbital

No. 126 in a Series

Mr. Julius Axelrod takes blood samples from the tail of a rat, in studies of drug metabolism.

Most drugs are developed as a result of animal experiments. There is considerable difficulty in carrying over results directly to man, since the response is usually different. The reasons for differences in reactions to drugs by various species, and even between the sexes of the same species, are being studied in NHI's Laboratory of Chemical Pharmacology by Dr. Bernard B. Brodie, Julius Axelrod, and Miss Gertrude Quinn.

After giving hexobarbital (known commercially as Evipal) to man and mouse in proportion to weight, it was found that the mouse sleeps only 10 minutes, while man sleeps for several hours. Species differences in the response to Evipal were also noted in the rat, dog, guinea pig, and rabbit.

Blood levels of the drug show that Evipal metabolizes at a much slower rate in the species that sleep the longest. The enzyme system that inactivates Evipal is localized in the small granules (microsomes) of the liver cell, and requires oxygen and reduced triphosphopyridine nucleotide. This enzyme system converts Evipal to ketoevipal. Ketoevipal is inactive as a hypnotic.

Studies on isolated microsomes showed that the animals which sleep the shortest time and inactivate the barbiturate most rapidly have the highest enzyme activity. These results are important because they explain species differences in terms of the concentration of an enzyme in microsomes.

When Evipal is given to male and female rats, the females sleep five times as long as the males. It is interesting that the rat is the only species which shows a sex difference in response to Evipal. Sex differences in rats were also observed with other barbiturates, such as Surital, Pentothal, and Nembutal.

Sex difference in sleeping time after the administration of Evipal led to an investigation of the role of sex hormones in influencing drug action. When female rats were given testosterone, they slept as long as males, while male rats given estradiol slept as long as females. Female rats given testosterone metabolized Evipal as rapidly as males, and the activity of the Evipal metabolizing enzyme was increased correspondingly. Male rats given estradiol metabolized the drug like females, and correspondingly, the enzyme activity in their liver microsomes was reduced.

Not only are there species differences in response to drugs, but also strain differences. In working with inbred strains of mice, Dr. George E. Jay, Jr., LAB, found that Evipal given in the same dose to the same members of a particular strain resulted in a remarkable uniformity in the time they slept. Mice of one strain, however, slept only 12 minutes, while those of other strains slept as long as 50 minutes.

Here and There

Community Chest

Congratulations on the fine start in this year's Community Chest campaign. As compared to last year at this time, we're running ahead, but we're still a long way from our goal of $24,600. Don't forget that you can make payments on the installment plan. If you haven't yet contributed, contact your keyman today.

Top Archer

Gilbert J. Frey, DRG, won the Maryland State Archery Championship Tournament held September 26th in Baltimore. This is the second year he has won; the first was 1951. Last year he placed second.

Bloodmobile

The date for the Bloodmobile visit has been changed from October 18 to October 21. If you wish to donate blood and haven't yet notified the Employee Relations Section, please call ext. 2454.

Lecture

Almost 500 NIH employees and guests attended the annual NIH Lecture September 30th in the CC Auditorium. Dr. Alan Gregg, Vice President of the Rockefeller Foundation, spoke on "The Natural History of Changing One's Job."

Visitors

Over 300 delegates attended the International Cardiovascular Nursing Conference, which met October 6th in the CC.

Hospitalization

Those wishing to join the Hospital Service and Surgical Service Plans must do so by Wednesday, October 13. Applications are being accepted in Room 21, Building 1. Another hospitalization membership drive will not be held for at least a year.
FRINGE BILL CHANGES
ANNUAL LEAVE RULES

The fringe benefits bill has made several changes in annual leave regulations.

Employees who had more than 30 days of accumulated annual leave at the beginning of 1954 will not have to reduce this leave gradually to a 30-day maximum, as was ordered by Congress last year. They can retain the amount of leave they had at the start of the year, but they cannot accumulate additional leave during this year to carry over into next year. On the other hand, should they use more leave during the year than they earn, their leave balance at the beginning of the next leave year is then reduced proportionately, and this becomes the new maximum.

For example, a person who has 60 days of accumulated annual leave at the beginning of 1954 and who earns 26 days during the year must use the 26 days or lose them. If he uses 35 days, his accumulated annual leave balance at the beginning of 1955 will then be 51 days.

Employees with less than 30 days of accumulated annual leave at the beginning of 1954 can build up their leave balance to 30 days. This means that a person who has 15 days of accumulated annual leave at the beginning of 1954 and who earns 20 days during the year can use five days and carry 30 days over to the next leave year.

The provision on payment for unused leave to survivors of deceased employees has also been changed. Survivors may now receive a lump-sum payment for all leave accumulated and accrued by the deceased.

In a few weeks, NIH employees will be given a statement of their leave balance as of the beginning of the 1954 leave year. All questions concerning leave should be directed to the employee in each section who is responsible for time and leave records.

Annual leave for each biweekly pay period is accumulated as follows: employees with 15 or more years of total Federal civilian and military service earn 8 hours; employees with 3 years and less than 15 years of service earn 6 hours, and employees with less than 3 years earn 4 hours.

All employees earn 4 hours of sick leave each pay period, or a total of 13 days per year. There is no limit on sick leave accumulation.

NIH Spotlight

Anyone who saw the Hamsters' 1954 production of "Life at NIH" is sure to remember George Ann Johnson's hilarious performance in the Health Unit skit, as the woman scientist who is a victim of mistaken identity. Following a parade of "Institute Beauties" in another skit, George Ann made an unforgettable entrance as "Miss Naval Medical," complete with pince-nez, shower cap, life preserver, and oar. Few people in the last-night audience suspected that the large bandage on her hand covered a deep cut she received only two hours before curtain time.

Off the Hamster boards, George Ann is secretary to Dr. Cosimo Ajmone-Marsan, Chief of the NINDB Electroencephalography Branch. She is responsible for a variety of secretarial duties, including the scheduling of EEG appointments, and taking notes on conferences. She came to NIH in 1952 as a secretary in the NINDB Extramural Program Branch and took her present job a year ago.

A native Washingtonian, George Ann attended the Holy Cross Academy from first grade through high school. She took a two-year course at Temple Business School, and following her graduation, moved to Baltimore with her family. There she worked for three years in a broker's office. After a short stay in California, she moved back to Washington and was married. Before coming to NIH, she served as a medical secretary to a Washington neurosurgeon and to the head of the Suburban Hospital X-ray department.

DR. DeWITT STETTEN WINS ALVARENGA PRIZE

Dr. DeWitt Stetten, Jr., NIAMD Associate Director in Charge of Research, has been awarded the Alvarenga Prize for his outstanding contributions to science in the metabolic diseases. The award was presented October 6 by the College of Physicians of Philadelphia.

The Alvarenga Prize, awarded annually in recognition of scientific achievement, was established by the will of Pedro Francis Da Costa Alvarenga of Lisbon, Portugal, an Associate Fellow of the College of Physicians of Philadelphia.

DR. GERT LAQUEUR AIDS IN HIROSHIMA STUDY

Reports were recently received from Dr. Gert L. Laqueur, NIAMD Pathologist currently assigned as Chief of Pathology of the Atomic Bomb Casualty Commission, in Hiroshima, Japan.

Dr. Laqueur's work is concerned with follow-up studies of the survivors of the atomic bomb, whose participation is voluntary. In addition, physicians from Hiroshima and surrounding communities often send diagnostic problems to ABCC laboratories even though the patients were not atomic bomb casualties.

Dr. Laqueur reports that these services, given freely, are helping to overcome some of the anti-American and anti-ABCC feeling.

Much of his time is spent in visiting patients of Japanese doctors, both to aid them and convince them of the value of ABCC's work.

Dr. and Mrs. Laqueur and their three daughters have been in Hiroshima since last May and are expected to return to the U. S. in 1956.

George Ann and her husband, who is the assistant disbursing officer for the D. C. government, make their home in Chevy Chase. Their 16-year-old daughter, Teddy, is a budding equestrienne, and George Ann reports a full schedule of "chauffeuring" her to and from the riding stables and horse shows. In her leisure hours, George Ann loves to dance and to listen to music. She and her husband recently bought a canoe equipped with an outboard motor and joined the Sycamore Island Canoe Club. They spent several weekends last summer on fishing trips and outings with other club members.
CABINET SHOP AIDS NIH RESEARCH

The Hamsters announce that the production scheduled for December 2 and 3 in the CC Auditorium will be "Oklahoma!"

The NIH Softball Team finished its 1954 season with another fine record. With a total of 40 wins and 7 losses, the team placed second in the Montgomery County League and third in the D. C. League. The team's first place trophy from the D. C. Rock Creek League will soon be on display in the lobby of Bldg. 1.

Several of the activities for the winter season are scheduled to begin this week. The modern dance class (to be held Monday evenings from 5:15 to 6:15 in the CC Gymnasium) will begin October 11. The exercise winter season are scheduled to begin October 13. Anyone wishing to join should contact Marty Bacon on ext. 2894.

The bridge clinic will start its Monday night session October 11, and the intermediate classes will begin Thursday, October 14. The duplicate games will continue on Wednesday nights. All bridge activities will be held in the Bldg. 1 Cafeteria at 7:30 p.m. Anyone interested in joining is invited to attend these first sessions.

The advanced dance classes will begin October 13 at 8 p.m. in Wilson Hall. Watch the mails for announcements of the kick-off dates for the basketball, choral group, fencing, hiking, horseback riding, rifle and pistol, and textile painting activities.

A stroll past the north end of Building 13 will, in most cases, lead one to bend a curious ear towards the source of loud, varied, and continuous sounds. These are caused by the high-speed machines in BMB's Cabinet Shop.

Under the supervision of Mr. N. J. Van Houten, the Cabinet Shop is responsible for most of the carpentry and masonry work on the reservation. The electric press, planer, woodworking molding machine, cutoff saws, rip saws, and small combination saws all work together to fabricate the items needed.

The Cabinet Shop builds and installs research laboratory benches, cabinets, and other auxiliary items common to research laboratories. It constructs special tables and cabinets for research equipment, peg boards, bulletin boards, and specially constructed wooden gadgets for research laboratories and the patient area of the Clinical Center. The Shop also builds exhibits for the Medical Arts Section.

The staff includes carpenters, plasterers, bricklayers, locksmiths, and general laborers. Of the 37 employees, eight are located in the CC, mostly for maintenance work. Approximately 400 projects are completed by the section each month.

Special articles that cannot be purchased outside are made in the Cabinet Shop. If a blueprint or rough sketch of the desired item is provided, and if it is structurally possible, construction is begun. A finger and shoulder ladder for therapeutic purposes, a sound absorption cabinet for an electron microscope, and a balance case are only a few of the special items that have been made.

Maintenance and repair work are major responsibilities of this section. When necessary, wall partitions are installed or removed in laboratories and offices, door closures and furniture repaired, and jammed locks removed and replaced.

A few major projects undertaken by the Cabinet Shop were the building and installing of some $140,000 worth of laboratory benches and equipment in Buildings 4 and 5, and the construction of the altitude chamber annex to Building 2. During the war the Shop was faced with many problems when lumber was scarce and commercial companies could not provide needed items. In one instance, large packing cases for tanks that were declared surplus were obtained by the Shop, knocked down, and made into bench tops and other equipment for laboratories.

R & W NOTES

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GRADUATE SCHOOL SCHEDULE OF CLASSES

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Time</th>
<th>Room</th>
</tr>
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<tbody>
<tr>
<td>Introduction to General &amp; Analytical Chemistry</td>
<td>5:30-7:20</td>
<td>101, Bg. 1</td>
</tr>
<tr>
<td>Introductory Biochemistry</td>
<td>5:40-7:30</td>
<td>107, Bg. 10</td>
</tr>
<tr>
<td>Thermodynamics</td>
<td>5:30-7:30</td>
<td>2023, T-6</td>
</tr>
<tr>
<td>Enzyme Chemistry</td>
<td>7:30-8:50</td>
<td>1057, T-6</td>
</tr>
<tr>
<td>Biophysical Instrumentation</td>
<td>8:00-9:50</td>
<td>50-20, Bg. 10</td>
</tr>
<tr>
<td>Chromatography</td>
<td>6:00-7:00</td>
<td>1057, T-6</td>
</tr>
<tr>
<td>History of Medicine</td>
<td>7:00-8:50</td>
<td>1057, T-6</td>
</tr>
<tr>
<td>Survey of Biomatematics</td>
<td>5:30-7:20</td>
<td>2023, T-6</td>
</tr>
<tr>
<td>Selected Topics in Invertebrate Physiology</td>
<td>7:00-8:00</td>
<td>314, Bg. 1</td>
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<tr>
<td>Pathology</td>
<td>5:30-7:20</td>
<td>1057, T-6</td>
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<tr>
<td>Reactivity &amp; Constitution in Organic Chemistry</td>
<td>5:45-7:35</td>
<td>2023, T-6</td>
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<tr>
<td>Microbial Biochemistry</td>
<td>8:15-10:05</td>
<td>2023, T-6</td>
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<tr>
<td>Protein Chemistry</td>
<td>7:00-9:30</td>
<td>101, Bg. 1</td>
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<tr>
<td>Introductory &amp; General Microbiology</td>
<td>7:30-9:20</td>
<td>18-255, Bg. 10</td>
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<tr>
<td>Introduction to Experimental Statistics</td>
<td>6:00-7:50</td>
<td>1057, T-6</td>
</tr>
<tr>
<td>Introduction &amp; Applications of Nuclear Physics</td>
<td>8:00-9:50</td>
<td>1057, T-6</td>
</tr>
<tr>
<td>Cellular Physiology</td>
<td>7:30-9:20</td>
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