GRADUATE SCHOOL
SPRING SEMESTER
BEGINS FEB. 14

A broadened curriculum will be offered by the Graduate School at NIH during the spring semester beginning February 14. Registration will be held from February 7 to 11, between 11 a.m. and 4:30 p.m., in Room 1-N-242, Building 10. The Graduate School is co-sponsored by the Department of Agriculture and NIH, and is available to all Federal employees.

Expansion of the program was made to meet the educational needs of employees with a wide variety of professional and job interests. Non-scientific courses to be offered this term will be limited to one semester, due to the impracticability of beginning two-semester courses in the spring, and the fact that the instructors will not be available.


Eleven courses offered last semester will be continued into the spring term. They are Introductory and General Bacteriology, Reactivity and Constitution in Organic Chemistry, Introduction to Experimental Statistics, Introduction to and Application of Nuclear Physics, since it services the Memorial Laboratory (Building 7), which was named in honor of the 27 PHS workers who died in line of duty.

Under the new plan, the occupants of the Apartment Building have been given a new post office address. Since the so-called Road "A" was not an official designation, the residents were given an address on nearby West Drive. The new apartment house address is 120 Center Drive.

All road entrances have been designated with appropriate gate numbers. The above site plan shows their location and all road names.
The Agglutination Activating Factor in Tests for Rheumatoid Arthritis

No. 133 in a Series

Attempts to isolate and purify the agglutination activating factor in the diagnostic test for rheumatoid arthritis are being made in NIAMD's Laboratory of Physical Biology.

The agglutination activating factor is found in the euglobulin fraction of patient serum, after mixing the serum of rheumatoid patients with a saline suspension of sensitized red cells of sheep. Laboratory studies are being conducted by Dr. Robert R. Williams, Dr. Harry A. Saroff, Stanley S. Stone, Jack Jenkins, Roy L. Evans, and Mylous S. O'Dell.

After obtaining blood from a special group of sheep in which the titration has been consistent, the red cells are sensitized with specific antibodies. The amount of antibodies used is insufficient to cause agglutination by itself, but when the serum of rheumatoid patients is added, agglutination takes place. This property is not shown when the serum of normal people is added.

In clinical studies the modification of the sheep cell agglutination test, introduced by Dr. Morris Ziff of Bellevue Hospital, New York, has been tested as a diagnostic method. Using only a euglobulin fraction of serum to eliminate inhibitory substances sometimes present, he found that 92 percent of 100 rheumatoid patients gave a titer greater than 1:16, and that only 2 percent of those people with no clinical evidence of arthritis gave a significant titer.

In tests conducted by Dr. Joseph J. Bunin, NIAMD Chief, Clinical Investigations, on Clinical Center patients, it was confirmed that the test gave an equally high incidence of positive tests in rheumatoid patients and a similar low incidence in nonarthritics.

This test is of significant diagnostic value, in that it is one of the few which can differentiate rheumatoid arthritis from other types of arthritis. What role it plays in the pathogenesis of the disease has yet to be learned. The agglutination activating factor has been purified about 50-fold. These partially purified factors contain about 80 percent gamma globulin and 20 percent beta globulin.

It has been found that a normal person has an inhibitor to the agglutination activating factor which prevents it from acting, whereas the rheumatoid patient lacks this inhibitor. NIAMD investigators discovered that the inhibitor can be extracted from gamma globulin, and it appears to be a peptide substance containing glycine. The fact that this is not a protein makes it possible for the chemical nature to be determined and the compound synthesized.

So far, none of the drugs used in suppressing arthritis, such as cortisone, methyldopa, or phenylbutazone, has any effect on sheep-cell agglutination. Tests reveal that the administration of very large amounts of gamma globulin will make the sheep-cell agglutinating property disappear, but when the administration of gamma globulin ceases, the agglutination activating factor is again found.

N. I. H. RECORD

Published by
Scientific Reports Branch
National Institutes of Health
Room 116, Building 1
Bethesda 14, Maryland
OLiver 6-4000 Ext. 2125

Photo from Pfizer SPECTRUM appearing in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Publication Preview

With a view toward facilitating communication between NIH scientists, the Record will publish in each issue a list of scientific papers approved for publication. The articles listed below were received by the SRB Editorial Section between January 1 and 14:


This list is subject to change and should not be considered as a complete listing of all papers approved for publication in this issue.

With a view toward facilitating communication between NIH scientists, the Record will publish in each issue a list of scientific papers approved for publication. The articles listed below were received by the SRB Editorial Section between January 1 and 14:


This list is subject to change and should not be considered as a complete listing of all papers approved for publication in this issue.
CREDIT UNION VOTES
FOUR PERCENT DIVIDEND

Credit Union members voted a four percent dividend on 1954 savings at the annual meeting on January 12. Robert Grant, out-going President, reported that Credit Union membership had grown from 1,712 in 1953 to 2,219 in 1954.

New members were elected to the three committees that guide the Credit Union. Members elected to the Board of Directors are Dr. Heinz Specht, Mildred Gettings, John Beglin, and John Fitzgerald. Elected to the Credit Committee are Donald Cushing, Catherine Porter, Betty Thompson, and Mary Bertha. New members of the Supervisory Committee are Lester Sebastian, John Hannan, and Robert Michellitch.

ACCIDENTS CAUSED BY
IMPROPER OPERATION OF
LABORATORY EQUIPMENT

An NIH biologist was spraying plants with a nutrient solution which he forced from a 10-gallon carboy by means of the house air line. The carboy was directly in front of the air valve, requiring him to stand next to the bottle in order to adjust the airflow. When he increased the air pressure, the carboy exploded. Fortunately, he escaped with only a minor scratch.

If you must use positive pressure on a closed glass bottle, be sure that it is completely protected with a solid metal shield. Pressure should be reduced to 10 psig., and a pressure release should be installed. Make sure that the air valve and container are some distance apart.

As an NIH chemist was closing an oxygen cylinder valve, flame shot out from around the valve-packing nut and burned his hand. Investigation revealed that the gas was being drawn through a partially opened valve. This situation allowed high-pressure oxygen to impinge upon the valve-packing material with sufficient force to heat the packing material to its ignition temperature. To minimize this hazard, and to save wear and tear on the regulators, open all high-pressure gas cylinders slowly and completely. Valves controlling low-pressure gases should be opened only partially to help prevent corrosion and/or to facilitate emergency shut-offs.

Invention of a bone-drilling and injection device used on monkeys in the polio vaccine testing program netted William H. Berkeley, NMI, a $110 suggestion award last month.

A Research Technician (Virus and Rickettsia) in the Section on Virus Vaccines and Basic Studies, Bill recognized the need for an easier and quicker method of penetrating bone structures for intracerebral inoculations. He devised a system incorporating the use of a stainless steel cup held firmly in place by two needle-sharp stainless steel pins. A hole in the center of the cup permits insertion of an electric drill bit. After the hole is drilled through the skull bone, the drill bit is removed, and inoculation into the brain is made through the same hole.

This method can be adapted for use with any species of animal. Since the description of the instrument appeared in Science in September, Bill has received countless requests for reprints from research laboratories in the U. S. and Europe.

Bill joined NIH as a Laboratory Attendant in 1939, with the Division of Biologics Control, 25th and E, N W., Washington, and in 1940 moved to Bethesda. Until a year ago, he was performing laboratory work on rashes and allergic encephalitis. Besides his current job on polio vaccine testing, Bill does work on the control of influenza virus vaccines. Prior to NIH he worked as a carpenter for the Maryland National Park and Planning Commission.

After his father's death, Bill, then five months old, moved with his mother from their native Lowell, Mass., home, to Washington. He attended Takoma-Silver Spring High School (now Blair). He lives in his own home in Silver Spring with his wife, Louise, and their five children: William, 16; James, 13; Timothy, 11; Margaret Louise, 7; and Mary Patricia, 3.

A firm believer in a healthy family life, Bill spends as much time as possible in family activities. Trips are planned to include all the children. Bill coaches the Bethel Baptist Church basketball team, which includes his two oldest sons, and the other family members make it a point to attend every game.

An amateur carpenter in his leisure time, Bill has a workshop in his basement, and has built benches, chairs, and tables, and has designed several pieces of furniture for his home and yard.
FRINGE BILL DOES NOT ALTER PROMOTION RULE

Civil Service regulations governing promotions of Federal employees were not changed by the fringe benefits bill enacted by the 83d Congress, nor did the bill amend or modify the Veterans Preference Act of 1944. In addition, the rights of employees to transfer to defense activities with reemployment rights to their former agencies are still in effect.

Generally, an employee in a position below Grade GS-5 may not be advanced more than two grades above the lowest grade he has held within the past 12 months. An employee in Grade GS-5 or above may not be advanced more than one grade above the lowest grade he has held within the past 12 months, unless he is in a line of work properly classified at two-grade intervals (chemist, biologist, nurse, etc.).

An exception may be made to these restrictions when an employee is within reach on a civil service register for competitive appointment to the position to be filled. Also, an employee may be advanced to any grade level that he has held in his present agency, or in a former agency, provided he meets the qualification requirements for the position.

NEW SHORTHAND CLASSES

Approximately 40 employees who passed the pre-test for the Shorthand Refresher Courses will begin classes January 24 and 25. Those who successfully complete the courses will be awarded certificates, a copy of which will be included in their personnel files.

SCHOOL Cont’d


Classes are held on the NIH reservation after work hours. Tuition is $10 per credit hour and textbooks will be ordered through instructors. Courses are offered on four levels: noncredit, undergraduate, advanced undergraduate, and graduate. The Graduate School does not grant degrees, but a student may, in most cases, transfer his credits to a degree-conferring institution by special arrangement.

Courses were selected by the NIH Advisory Committees, and instructors have been chosen by them from the NIH staff and outside. The Graduate School program is administered by the NIH Office of Clinical and Professional Education.

Registrations for the NIH Graduate School program can also be made in the patio of the U.S. Department of Agriculture Administration Building from January 25 through February 5. The USDA regular spring program of more than 300 courses will begin February 7.

An attractive meeting place for booklovers among the patient population is the new Patient Library, located on the fifth floor of the Clinical Center. At present, the Library is stocked with approximately 700 volumes and a wide selection of recent periodicals. Shown above are (l. to r.) Miss Margaret Hannigan, Patient Librarian; Mrs. Ursula Myers, library assistant; Mrs. John Ewing, Gray Lady Library Chairman; and Mr. Edwin Kouba, a patient.

COUNCIL CITfS EMPLQYEE HEALTH PROGRAM AT NIH

Presentation of the Occupational Health Institute’s Certificate of Health Maintenance to Dr. W. H. Sebrell, Jr., will highlight the scientific session of the AMA’s Council on Industrial Health, which meets January 23 at the Shoreham Hotel, Washington, and January 24 in the CC auditorium. NIH is the first government establishment to receive this honor. The Certificate indicates that NIH’s employee health program has achieved distinction for constructive health maintenance service.

EXECUTIVE HOUSEKEEPER FOR CC IS APPOINTED

Mrs. Emma A. Karch was recently appointed as the Executive Housekeeper for the Clinical Center, filling the position formerly held by Mrs. Patricia Boyer.

Mrs. Karch, a native of New Jersey, brings a wealth of hospital housekeeping experience to her new job. For seven years she served as Executive Housekeeper at the Baltimore Public Health Service Hospital. Before coming to NIH, she was housekeeping consultant at Rex Hospital in Raleigh, N. C., and special lecturer at Duke University’s Nursing Education Department.