

On Andrey Abraham Potter, acting president and dean of engineering at Purdue University, "for leadership in adjusting engineering education to the needs of war training as chairman of the Engineering Science and Management War Training Program of the U. S. Office of Education."

LETTERS FROM SCIENTIFIC MEN ABROAD

PROFESSOR D. WORONZOW, director of the Physiological Institute of the State University of Kiev, writes to Dr. A. J. Carlson, University of Chicago, as follows:

The university buildings, including my laboratory and library, were wrecked and burned. The libraries of the Medical Institute were also destroyed. . . . I am turning for aid to my colleagues in countries friendly to us, asking them to help us in rehabilitating physiology in Kiev. We shall be extremely grateful should you find it possible to contribute to our institute duplicate copies of books and journals from your personal library, as well as reprints of your own papers (and those of your colleagues) that you may have on hand.

Dr. M. Demerec, of the Carnegie Institution, Cold Spring Harbor, New York, states that in a letter mailed on July 14 Professor Ernst Hadorn, Zoologisches Institut der Universität, Zürich, Switzerland, writes: "Since I have not seen any American publication since 1941-42 I would appreciate it very much if my colleagues would send me reprints of their papers as soon as this is possible. We live here in isolation and are anxious to know what is going on in the scientific world."

Professor Marston Taylor Bogert, of Columbia University, has received a letter from Professor W. P. Jorissen, of Leiden (Hooge Rijndyk 15), which reads as follows:

We are very happy to be free again in Holland after five terrible years of oppression, and we hope that the deliverance of our India will follow soon. I am recovering from edema caused by insufficient food, but hope to be able in a few weeks to visit our laboratory again (that for physical and inorganic chemistry) which the Germans robbed of its best instruments and part of its books and journals.

I am longing to know how you are and what the Union

Internationale de Chimie has been able to do in these years of war. Did you see already our Report on the Nomenclature of Inorganic Compounds? Till now I did not receive a copy of Professor Bassett's English version. Nor did I see the Italian version.

You can imagine how much we are in arrears with American chemical literature, but I hope our colleagues in the States will send us reprints of their work. As you know, I am especially interested in oxidation processes and their inhibition and in explosive reactions. Perhaps you have still available reprints of your research on the oxidation of aldehydes.

THE RETIREMENT OF PROFESSOR GUYER OF THE UNIVERSITY OF WISCONSIN

PROFESSOR M. F. GUYER, since 1911 chairman of the department of zoology of the University of Wisconsin, retired on July 1.

Before going to Wisconsin he received his Ph.D. degree at the University of Chicago in 1900 and spent eleven years at the University of Cincinnati.

Under his chairmanship the staff of the department of zoology at Wisconsin has increased about sixfold. In addition to the many hundreds of undergraduate students who have had contact with him as a teacher, one hundred and twenty-five men and women have received Ph.D. degrees in zoology during this time. These men and women are scattered in nearly every state of the union, in Washington, D. C., Hawaii, South America, Canada, China, England, Italy and the islands of the Pacific. Many are teaching in colleges and universities, others are doing research or practicing medicine, and still others are serving in the armed forces.

In appreciation of Professor Guyer's long and constant service to the university, seventy-eight former and present members of the department honored him by attending a banquet in Madison on April 21. At the dinner he was presented with a portfolio of letters from most of his former graduate students who were unable to attend. A talent unsuspected by many was discovered when songs of Professor Guyer's own composition were sung as a part of the program.

Being relieved of administrative and teaching duties, Professor Guyer now plans to devote his time to writing and research.

SCIENTIFIC NOTES AND NEWS

THE medal of the American Iron and Steel Institute for 1944, awarded annually for "the outstanding technical paper of the year on steel," has been awarded to Dr. Wendell E. Hess, professor of metallurgical engineering at the Rensselaer Polytechnic Institute.

At a dinner given on July 25 in Washington by the

Variety Clubs of America in honor of Sir Alexander Fleming, the Humanitarian Award was presented to him "as the man in 1944 whose humanitarian efforts had contributed the most to the welfare of mankind." The award consists of a silver plaque and an honorarium of \$1,000. A research fund of \$80,000 for Sir Alexander has been established by American manu-

facturers of penicillin. It will be administered by the University of Pennsylvania. Sir Alexander will conduct the research at St. Mary's Hospital Medical School, University of London.

THE Philadelphia College of Pharmacy and Science at its one hundred and twenty-fourth annual commencement on July 24 conferred the degree of doctor of science, *honoris causa*, on Dr. Robert P. Fischelis, secretary of the American Pharmaceutical Association, with the following citation: "Outstanding exponent and champion of the fundamental good which the profession of pharmacy, quietly but insistently and consistently, brings to the public in its diversified services. In your important work in the War Production Board, you gave your untiring zeal and your wealth of experience so that this nation might earn its day of victory and gain the peace to which democracy is dedicated. Now, as leader of the thinking and the action of the American Pharmaceutical Association, you are exploring and charting new ways to use the coming days of peace for the greatest good to humanity."

W. D. COLLINS was honored on June 20 by a group of friends at the Cosmos Club in Washington in recognition of twenty-five years of service as chief of the Quality of Water Division of the U. S. Geological Survey. He was presented with a petrified-wood desk set and a volume of congratulatory letters from friends and business associates in the Survey and the chemical profession.

THE award of the Alumni Association of Oberlin College for notable service to the college has been presented on the occasion of his retirement to Dr. Harry N. Holmes, since 1914 professor of chemistry and head of the department.

DR. EDWIN C. MILLER, professor of plant physiology at the Kansas State College and plant physiologist of the Kansas Agricultural Experiment Station, will retire on August 31 after thirty-five years of service at that institution. On the evening of May 28 a department dinner was held honoring Dr. and Mrs. Miller at which time administrative officers of the college and experiment station reviewed Dr. Miller's work. President M. S. Eisenhower, of the college, announced that Dr. Miller has been made professor emeritus of plant physiology. A book of more than two hundred letters from former students, colleagues (past and present), contemporary plant physiologists and other friends was presented to Dr. Miller, and a department gift was presented to Dr. and Mrs. Miller. The Edwin C. Miller Scholarship in Plant Physiology was announced. This scholarship of \$200 was provided by his son, Jordan Y. Miller, and daughter, Mrs. Josephine Miller Henderson, and her husband.

Dr. Miller's address after August 1 will be R.F.D. No. 1, Baltimore, Ohio, where he will retire to the farm on which he was born. Dr. John C. Frazier, who has been associated with him since 1936, will succeed him at the Kansas State College and the Kansas Agricultural Experiment Station.

LIEUTENANT HAROLD T. COOK, head of the department of plant pathology of the Virginia Truck Experiment Station at Norfolk, has been on military leave since September 29, 1942. He was stationed in the South Pacific until February 18 of this year. Since then he has been in the United States for a month's furlough, after which he has been on overseas duty in the Mariannas. He received on July 8 the letter of commendation that is given below, signed by Vice-Admiral J. H. Newton, U. S. Navy. "The Commander South Pacific Area and Force takes pleasure in commending Lieutenant Harold Thurston Cook, U. S. Naval Reserve, for service as set forth in the following: For meritorious and efficient performance of duty while serving on the staff of the United States Joint Purchasing Board, South Pacific Area from December 18, 1942, to January 17, 1945. During this period, Lieutenant Cook displayed exceptional ability in handling the many detailed problems incident to the procurement of maximum quantities of food from New Zealand for our forces afloat and ashore. Through his initiative and efficient coordination of the production and procurement programs, he contributed materially to the maintenance of a continuous flow of supplies necessary for the subsistence of our forces during the critical period of operations in the South Pacific. His conduct throughout was in keeping with the highest traditions of the United States Naval Service."

DR. WILLIAM E. WICKENDEN, president of the Case School of Applied Science, was elected president of the American Institute of Electrical Engineers at the annual meeting held in New York on June 27.

WESLEY WINANS HORNER, consulting civil engineer, of St. Louis, has been nominated for president of the American Society of Civil Engineers.

THE retirement on July 1 is announced of Professor Edwin Brett Hart, of the department of agricultural chemistry of the University of Wisconsin.

DR. ISIDOR I. RABI, professor of physics at Columbia University, has been made executive officer of the department.

DR. EARL T. APFEL, professor of geology, has been appointed chairman of the department at Syracuse University, to succeed Dr. George B. Cressey, who resigned recently.

DR. J. MARVIN WELLER, head of the Division of

Stratigraphy and Paleontology of the Illinois Geological Survey, has accepted a professorship in paleontologic geology at the University of Chicago, to fill the position made vacant when Dr. Carey Croneis became president of Beloit College. Dr. Weller will assume his new duties at the beginning of the autumn quarter.

DR. ELWYN L. PERRY has been appointed Edward Brust professor of geology and mineralogy at Williams College, and Dr. Elbert C. Cole has been appointed Samuel Fessenden Clarke professor of biology.

DR. LEWIS CLINE has been appointed associate professor of geology at the University of Wisconsin.

DR. HUDSON JOST, research associate in psychophysiology at the Mooseheart (Illinois) Laboratory for Child Research, of which Dr. Martin L. Reymert is director, has been appointed assistant professor in the department of neurology and psychiatry and director of the psychophysiological laboratory of the Medical School of the University of Tennessee at Memphis.

DR. JOHN C. KRANTZ, JR., professor of pharmacology in the School of Medicine of the University of Maryland, has received the sum of \$4,000 from the Ohio Chemical and Manufacturing Company to continue his studies in anesthesia.

DR. J. A. HALL, who has served as principal biochemist for the past three years for the U. S. Forest Service, Washington, D. C., has become director of the Pacific Northwest Forest Experiment Station at Portland, Ore.

DR. HAMILTON B. G. ROBINSON, of the Dental College of the Ohio State University, has been elected a member of the board of the American Cancer Society.

DR. HERBERT L. MASON, associate professor of botany of the University of California at Berkeley, has undertaken a five-year survey of the marsh flora of California. Under the auspices of the Fish and Game Commission, the project is financed by the Pittman-Robertson Act of Congress, whereby funds are given to the States by the Federal Government for certain types of research.

DR. L. B. ARNOLD, JR., recently assistant director of the division of chemistry of the Metallurgical Laboratory of the University of Chicago, has joined the staff of Arthur D. Little, Inc., Cambridge, Mass.

DR. E. C. WILLIAMS has resigned as vice-president and director of research of the General Aniline and Film Corporation, but will remain as consultant to the president in technical and development matters. Dr. William E. Hanford, manager of the central research

laboratory at Easton, Pa., has been named director of research of the company.

MRS. YVETTE HARDMAN EDMONSON, instructor in the biological sciences at Bennington College, has leave of absence to assist in a research program of the Woods Hole Oceanographic Institution on the chemistry and ecology of salt water ponds.

DR. WARREN ANDREW, associate professor of histology at Southwestern Medical College, has been invited to teach and carry on research for four months at the University of Montevideo, Uruguay. The Division of Cultural Cooperation of the U. S. Department of State has offered to finance the trip, which has been authorized by the Uruguayan Minister of Public Health.

DR. C. G. PHILLIPS, who is now serving with the rank of captain in the R.A.M.C., has been elected to an official fellowship as lecturer in physiology at Trinity College, Oxford.

A REUTERS dispatch reports that Charles H. Powell, president of the American Institute of Electrical Engineers and an official of the Westinghouse Electric and Manufacturing Company, will be chief of the electrical and radio branch of the United States group control council for Germany. He will establish controls under which the German industries will be permitted to resume or be converted to the manufacture of civilian goods. It will also be his task to see that the German electrical and radio producers do not manufacture war material or contribute to the production of armaments.

THE annual meeting of the Society for the Study of Development and Growth, which lasted for four days, was held under the presidency of Dr. B. H. Willier, professor of embryology at the Johns Hopkins University, at North Truro, Mass., beginning on July 24. The Lankenau Hospital Research Institute of Philadelphia and North Truro and the Marine Experimental Station for Cancer Research, of which Dr. Frederick S. Hammett is director and Dr. Theodore S. Hauschka associate director, were hosts at the meeting.

THE President and Fellows of Harvard University have received a bequest of \$50,000 to be held as a separate fund, the income from which is to be used for the upkeep of a chemical laboratory and for research and the study of chemistry.

THE Alcoa Mining Company has recently established a fellowship in the department of geology of Columbia University to be available for a graduate student in geology from Venezuela. It is the purpose of the fellowship to encourage young Venezuelan students in the study of lateritization.

A CONTRACT has been made between Union College and the American Locomotive Company, in which it is agreed that the company will enlarge the physics laboratories of the college in exchange for the use of a laboratory and other facilities and help on specific technical problems by members of the college faculty. The company has agreed to provide and supervise the building of ten or twelve new laboratories, and the facilities and faculty at the college are to be available to the company for five years. Faculty and research personnel will be available for at least four meetings a year. It has been arranged that representatives of the college and company will make shop inspection trips, followed by discussion of any company problems submitted.

A PROPOSAL is now before Governor Frank J. Lausche of the State of Ohio and members of the legislature for the erection of a State Health Center at the Ohio State University. An appropriation of five million dollars is requested to cover the cost of the center as the result of two years of planning and study by members of the medical and dental faculties and by representatives of these professions. The proposed center has been approved by official representatives of the medical colleges of Western Reserve University and the University of Cincinnati. It has also been approved by the Inter-University Council, which includes representatives of the six state universities—Bowling Green, Kent, Miami, Ohio, Ohio State and Wilberforce. Joining also in active support of the project are medical, dental and nursing

alumni of the Ohio State University, under the chairmanship of Dr. Russel G. Means, Columbus.

It is reported in the daily press that the will of Vincent Bendix, inventor and founder of the Bendix Aviation Corporation, who died on March 29, provides that 78 per cent. of the residue of his estate be left in trust for the establishment of the Bendix Foundation to assist in the teaching of science.

DR. JAMES GREENWOOD, JR., has given a fund to the Medical Branch at Galveston of the University of Texas for the establishment of the James Greenwood lectureship in neurology and neuro-surgery, in honor of his father. The lectureship will provide for meetings both at the Baylor Medical College in Houston and at the Medical Branch at Galveston of the university.

THROUGH an error, it was stated in SCIENCE that the *Biometrics Bulletin* was issued monthly. It appears bi-monthly. The first issue appeared in February of this year. It is the official organ of the Biometrics Section. The American Statistical Association has long published a journal and a bulletin which are concerned with the more general aspects of statistics. The new *Biometrics Bulletin* attempts to meet the specific needs of biologists who use statistical method in their work and of statisticians who work with biological data. Inquiries concerning the Bulletin should be addressed to the American Statistical Association, 1603 K Street, N.W., Washington 6, D. C.

SPECIAL ARTICLES

CONCERTED ANTIBIOTIC EFFECT OF PENICILLIN, METHIONINE, THREONINE AND METHIONINE SULFOXIDE UPON BRUCELLA, EBERTHELLA, SALMONELLA, AND SHIGELLA^{1,2,3}

PREVIOUSLY published^{4,5} and more recent unpublished observations demonstrated that broth, casein digest and blood serum antagonized the effect of penicillin upon certain Gram-negative microorganisms. The antagonism was at least in part due to the amino-acid contents, inasmuch as it could be also obtained with monoaminodicarboxylic acids, and pos-

sibly, histidine and arginine. No antagonistic effect was shown by hydroxyamino and diaminomono-carboxylic acids and methionine sulfoxide. Methionine was capable of reversing fully the antipenicillin effect of the monoaminodicarboxylic acids and only incompletely that of casein hydrolysate, broth and blood serum. However, upon addition of methionine in combination with threonine and methionine sulfoxide⁶ there appeared a marked enhancement of penicillin activity against highly refractory Gram-negative microorganisms in the presence of the antipenicillin factors as illustrated by the following experiments which were all carried out in meat inferior broth:

The measurements of the effect of penicillin were carried out in the manner previously described. The amount of bacterial growth was expressed in optical

¹ From the Division of Bacteriology, Laboratories of the Mount Sinai Hospital, New York, N. Y.

² The author wishes to acknowledge thankfully the accurate and capable assistance of Miss Alice Fisher.

³ The penicillin was provided by the Office of Scientific Research and Development from supplies assigned by the Committee on Medical Research for clinical investigations recommended by the Committee on Chemotherapeutics and Other Agents of the National Research Council.

⁴ Gregory Schwartzman, SCIENCE, 100: 477, 1944.

⁵ *Idem*, SCIENCE, 101: 276, 1945.

⁶ The methionine sulfoxide was generously supplied by Dr. Alfred Barol, director of the Department of Pharmacology of Wyeth Institute of Applied Biochemistry, at the recommendation of Dr. Paul György. SMACO dl-methionine and dl-threonine were used in these studies.