

SCIENTIFIC NOTES AND NEWS

A DINNER in honor of the eighty-fifth birthday of Dr. William F. Durand, emeritus professor of mechanical engineering at Stanford University, was given by his friends on March 4 in Washington. He was presented with the "W. F. Durand Anniversary Volume" which contains papers selected from those he had already presented before societies in the fields of aeronautics, mechanical engineering, naval architecture and marine engineering.

GLEN DAVID BAGLEY, head of the research division of experimental engineering of the Union Carbide and Carbon Corporation, has been awarded the Jacob F. Schoellkopf Medal for 1944 by the Western New York Section of the American Chemical Society, in recognition of "outstanding and highly significant work, particularly in the fields of the commercialization of very active metals." He is the fourteenth recipient of the medal.

PRESENTATION of the William H. Nichols Medal of the New York Section of the American Chemical Society for 1944 was made on March 10 to Dr. Carl S. Marvel, professor of organic chemistry at the University of Illinois, president-elect of the society. The medal was awarded in recognition of "outstanding organic chemical contributions to the structure of polymers."

THE three hundred and twenty-fifth meeting on March 16 of the Washington Academy of Sciences was devoted to the presentation of its awards for scientific achievement for 1943 as follows: For the *Engineering Sciences*, to Lloyd V. Berkner, physicist of the Department of Terrestrial Magnetism of the Carnegie Institution, Commander, U.S.N.R., in recognition of his distinguished service in research on the ionosphere and wave propagation; for the *Biological Sciences*, to Jason R. Swallen, associate botanist of the Bureau of Plant Industry, Office of the Coordinator of Inter-American Affairs, in recognition of his distinguished service in agrostology, and for the *Physical Sciences* to Dr. Lawrence A. Wood, chief of the rubber section of the National Bureau of Standards, in recognition of his distinguished service in the investigation of rubber and other high polymers.

LIEUTENANT COLONEL NORMAN I. ADAMS, associate professor of physics at Yale University, received on March 9 from the War Department the award of the Legion of Merit. The presentation was made at a ceremony which took place at the university. The citation reads: "Colonel Adams displayed initiative, imagination and high technical proficiency in solving diverse and difficult problems under his jurisdiction, and in a very superior manner conducted research and

development in the broad field of physics which resulted in the rapid completion of equipment for the Field Artillery, Army Air Forces and Signal Corps."

DR. HATTIE ALEXANDER, associate professor of pediatrics at Columbia University, is the recipient of the \$500 prize given annually under the auspices of the American Academy of Pediatrics by Mead Johnson and Company for "outstanding scientific contributions to pediatrics in the United States." The award was made "in recognition of her work on the treatment of hemophilus influenzae meningitis."

THE Council of the British Institution of Naval Architects has awarded the premium of the institution for the year 1943 to Dr. J. F. C. Conn for his paper entitled "Marine Propeller Blade Deflection."

DR. HARRY R. RICARDO, consulting engineer, has been elected president of the British Institution of Mechanical Engineers.

THE officers of the American Microscopical Society elected for the year 1944 are: *President*, C. E. Allen, University of Wisconsin; *First Vice-president*, W. A. Hilton, Pomona College; *Second Vice-president*, A. H. Wiebe, Tennessee Valley Authority; *Secretary*, J. E. Ackert, Kansas State College; *Treasurer*, A. M. Chickering, Albion College; *Elective Member of Executive Committee*, L. L. Woodruff, Yale University; *Members on the Council of the American Association for the Advancement of Science*, J. E. Ackert and A. M. Chickering.

DR. RAYMOND C. OSBURN, from 1917 to 1942 professor of zoology and entomology and head of the department at the Ohio State University, and Dr. W. W. Charters, professor of education and director of educational research, have retired with the title emeritus.

DR. J. ALLEN SCOTT, senior statistician in the division of vital statistics of the U. S. Bureau of the Census, previously associated with the Rockefeller Foundation in Egypt, has been appointed associate professor of preventive medicine in the field of statistics and epidemiology at the School of Medicine at Galveston of the University of Texas.

DR. DUANE ROLLER, formerly professor of physics at Hunter College, New York, and since 1941 a chief technical aid to the Armor and Ordnance Division of the National Defense Research Committee, has joined the faculty of Wabash College as head of the department of physics. Associate Professor Joseph D. Elder, of the department of physics of Lynchburg College, Virginia, also has become a member of the department.

THE American Public Health Association announces the appointment of Professor C.-E. A. Winslow, Anna M. R. Lauder professor of public health at Yale University, as editor of *The American Journal of Public Health* to succeed Dr. Harry Stoll Mustard, professor of public health practice at the College of Physicians and Surgeons of Columbia University and director of the DeLamar Institute of Public Health.

DR. WILLARD C. RAPPLEYE, dean of the College of Physicians and Surgeons of Columbia University, has been reelected chairman of the Research Council of the Department of Health, New York City. Other officers reelected are Dr. Edward M. Bernecker, commissioner of hospitals, *vice-chairman*; Dr. Alfred E. Cohn, of the Rockefeller Institute for Medical Research, *treasurer*, and Dr. Walter G. Lough, president of the medical board of Goldwater Hospital, *secretary*.

CLYDE E. WILLIAMS, director of the Battelle Memorial Institute at Columbus, Ohio, has been engaged as a technical consultant by the Association of American Railroads. His headquarters will be in Chicago.

DR. MARVIN R. THOMPSON, director of the Warner Institute for Therapeutic Research, vice-president of William R. Warner and Company, Inc., of New York and St. Louis, manufacturers of pharmaceutical products, has been appointed president of the company. Previously he had been pharmacologist and later consultant pharmacologist of the U. S. Food and Drug Administration, associate professor of pharmacology at George Washington University and professor of pharmacology at the University of Maryland.

OWING to a misplacement of lines, under "Scientific Events," on page 139, in the issue of *SCIENCE* for February 18, it was not made clear that H. C. Diehl, principal chemist and chief of the commodity processing division of the Western Regional Research Laboratory of the U. S. Department of Agriculture, and not Dr. Samuel C. Prescott, had been appointed director of the Refrigeration Research Foundation with headquarters at Berkeley, Calif. In addition to his post as director Mr. Diehl will also serve as secretary for general and scientific business.

It is reported in *Nature* that Dr. E. F. Armstrong has been appointed chairman of a commission appointed by the Conference of Allied Ministers of Education to report on the problems involved in the supply of scientific equipment to the occupied countries when they have been freed.

THE British Medical Research Council has established a unit for research in human nutrition as part of its staff organization, and has appointed Dr. B. S. Platt as director. Temporary accommodation has been provided at the National Hospital for Nervous

Diseases, London. Some part of the investigations undertaken by the unit will be directed towards nutrition problems in the tropics. Dr. Platt will continue the work, for which he joined the staff of the council in 1938, of coordinating a program of nutritional investigations in the colonies.

DR. WILLIAM J. ROBBINS, director of the New York Botanical Garden, addressed the Alpha Lambda Chapter of Beta Beta Beta at Hofstra College on March 3. His address was entitled "What Plants Mean to the World."

HAROLD A. SWANSON, manager of the Patent Department of the National Oil Products Company, Harrison, N. J., spoke on "Patents and the Chemist" at a dinner meeting on March 17 of the New York Chapter of the American Institute of Chemists.

THE American Museum of Natural History has completed reorganization of its exhibition hall of Mexican and Central American Archeology and the new and modernized exhibits were opened to the public on February 26. A private preview of the hall was held on the evening of February 25. It was attended by representatives of Mexico and Central American countries and by trustees and friends of the museum. His Excellency, Dr. Francisco Castillo Najera, the Mexican Ambassador, Dr. Archibald MacLeish, Librarian of Congress, and Dr. Harry L. Shapiro, chairman of the department of anthropology, were the principal speakers on the program. A. Perry Osborn, acting president of the museum, presided, and the address of welcome was made by Dr. Albert E. Parr, director of the museum. Cooperating with the museum on this occasion was the coordinator of Inter-American Affairs and the Pan American Society of the United States.

A BUILDING for the new Medical College of the University of Alabama will be erected at Birmingham. A million dollars for land, buildings and equipment have been appropriated and in addition the sum of \$366,750 for the fiscal years ending on September 30, 1944, and on September 30, 1945.

THE School of Medicine of Louisiana State University has received a special appropriation of \$36,000 from the Board of Supervisors for the expansion of its library. These funds will be used for purchasing sets of periodicals.

THE Rockefeller Foundation has made an appropriation of \$7,500 as a contribution to be used under the direction of Professor F. F. Nord in connection with his researches in enzyme chemistry at Fordham University.

A GRANT of \$4,000 from Wallace and Tiernan Company, New York City, to pay for the cost of research

on the sterilization of swimming pools, has been made to the Michigan State College at East Lansing.

PLANS have now been completed whereby the American Society for Metals will provide an annual fund of \$1,000 for the support of research in the field of corrosion. The American Coordinating Committee on Corrosion has been designated to receive and approve applications for grants from this fund. A subcommittee on research has been appointed under the chairmanship of Dr. R. M. Burns, assistant chemical director of the Bell Telephone Laboratories, New York, N. Y. Other members are T. S. Fuller, of the General Electric Company; Dr. F. W. Adams, of the Pittsburgh Plate Glass Company, and Dr. H. L. Maxwell, of the E. I. du Pont de Nemours Experiment Station. The committee will select such research projects as appear worthy of support, will approve the qualifications of applicants for grants-in-aid from the research fund, and will certify to the American Society for Metals the names of successful applicants. The grants-in-aid will vary from \$250 to \$1,000.

THE Williams and Wilkins Company has announced the establishment of the Passano Foundation "for

scientific and educational purposes, particularly to provide for scientific research and to publish the results of scientific research and to make awards for meritorious achievements in scientific research." By the terms of the charter the board of directors may inaugurate the establishment of "an annual award not to exceed \$5,000 for an outstanding contribution by an American citizen to the advancement of medical science made within the year." The directors include Dr. Emil Novak, associate in gynecology at the Johns Hopkins University Medical School, and Dr. George Corner, director of the Embryological Laboratory of the Carnegie Institution of Washington. E. B. Passano is chairman of the board and Robert S. Gill is president.

It is planned to establish at the University of Oxford a center for research and postgraduate study for the prevention of blindness and the better treatment of diseases of the eye. The Ophthalmological Research Endowment Committee, of which Sir William Goodenough is chairman, plans to raise £250,000 for the purpose. So far about £26,000 towards the founding of a department of ophthalmology has been collected.

DISCUSSION

PURIFICATION AND ANTIBACTERIAL ACTIVITY OF FUMIGACIN AND CLAVACIN

THE rapid progress that is being made at the present time in the study of antibiotic substances produced by microorganisms can best be illustrated by an examination of the results of recent investigations of two mold products, fumigacin and clavacin. In the eighteen months that have elapsed since the first announcement¹ of the production of these two substances by two groups of fungi, *Aspergillus fumigatus* and *Aspergillus clavatus*, respectively, they have been crystallized and their chemical nature determined. Moreover, each has been described under different names, and one has been found to be produced by several different groups of fungi. In order to avoid further confusion in the characterization of these two chemical compounds, a brief summary of the results thus far obtained is justified.

Fumigacin was originally described² as a substance produced by a number of strains of *A. fumigatus*, as containing a small amount of nitrogen, as active largely against gram-positive bacteria and as characterized by appreciable toxicity to animals. Menzel,

Wintersteiner and Hoogerheide³ demonstrated that fumigacin prepared from *A. fumigatus* by the method of Waksman, Horning and Spencer² contained 20 per cent. gliotoxin, a substance high in nitrogen and in sulfur⁴ and appreciably toxic to animals; when the gliotoxin fraction was removed, the purified fumigacin was found^{3,5} to retain its original antibacterial activity, was free from nitrogen, and possessed only a limited toxicity to animals. Unaware of these findings, a group of British workers⁶ isolated the same substance from a strain of *A. fumigatus* and described it as helvolic acid. This preparation proved to be identical with the purified fumigacin in chemical composition, in antibacterial activity and *in vivo* activity. Helvolic acid must, therefore, be considered as identical with fumigacin.

Clavacin was originally prepared² only in crude form. It was reported to be active against a variety of bacteria found among both the gram-positive and the gram-negative groups, and was highly toxic when

³ A. E. O. Menzel, O. Wintersteiner and J. C. Hoogerheide, *Jour. Biol. Chem.* In press.

⁴ J. R. Johnson, W. F. Bruce and J. D. Dutcher, *Jour. Amer. Chem. Soc.*, 65: 2005-2009, 1943.

⁵ S. A. Waksman and W. B. Geiger, *Jour. Bact.* In press.

⁶ E. Chain, H. W. Florey, M. A. Jennings and T. I. Williams, *Brit. Jour. Exp. Path.*, 24: 108-119, 1943.

¹ S. A. Waksman, E. Horning and E. L. Spencer, *SCIENCE*, 96: 202-203, 1942.

² S. A. Waksman, E. Horning and E. L. Spencer, *Jour. Bact.*, 45: 233-248.