

SCIENTIFIC NOTES AND NEWS

PRESIDENT ROOSEVELT has designated four members of a medical research committee to specialize on the defense program. The appointees are: Dr. A. R. Dochez, professor of medicine at the College of Physicians and Surgeons, Columbia University; Dr. A. Baird Hastings, Hamilton Kuhn professor of biochemistry at Harvard University; Dr. Alfred N. Richards, professor of pharmacology at the University of Pennsylvania, and Dr. Lewis Hill Weed, professor of anatomy and director of the School of Medicine of the Johns Hopkins University.

THE Trudeau Medal of the National Tuberculosis Association has been awarded to Dr. John Alexander, professor of surgery at the Medical School of the University of Michigan and surgeon in charge of the division of thoracic surgery of the university hospital.

THE Adams Prize of the University of Cambridge has been awarded to Dr. H. Davenport, lecturer in mathematics in the University of Manchester.

DR. J. ENRIQUE ZANETTI, professor of chemistry at Columbia University, has reported for active duty in Washington as colonel in the Chemical Warfare Service.

DR. WILLIAM CHURCH OSBORN, a trustee of the Metropolitan Museum of Art, New York City, since 1904, has been elected president of the museum to succeed George Blumenthal, who died on June 27.

DR. G. WALTER STEWART, professor and head of the department of physics at the State University of Iowa, was advanced on June 20 from the vice-presidency to the presidency of the American Physical Society at its meeting at Providence, R. I. Dr. George B. Pegram, of Columbia University, who had been president since the first of the year, resigned on account of other duties. Dr. P. W. Bridgman, professor of physics at Harvard University, was elected vice-president. Dr. Pegram continues as treasurer of the society.

NEWLY elected officers of the American Society of Plant Physiologists for the year 1941-42 are: *President*, Professor E. C. Miller, of Kansas State College; *Vice-president*, Dr. W. E. Loomis, of Iowa State College; *Secretary-treasurer*, Dr. P. J. Kramer, of Duke University; *Member of the Executive Committee*, Professor W. F. Loehwing, of the State University of Iowa; *Member of the Editorial Board*, Professor O. F. Curtis, of Cornell University.

At the last meeting of the Sigma Xi Club of the Colorado State College the following officers were elected for the coming year: *President*, Dr. Lloyd E. Washburn, department of animal husbandry; *Vice-*

president, Dr. Ruth Sumner, department of physiology; *Secretary-treasurer*, Professor Wesley E. Pyke, High Altitude Laboratory.

DR. BYRON L. ROBINSON, professor of anatomy in the School of Medicine of the University of Arkansas, has been appointed dean of the school. He succeeds Dr. Stuart B. Cromer.

DR. RALPH I. DORFMAN, research assistant with rank of assistant professor in the laboratory of physiological chemistry at Yale University, has been appointed assistant professor of biochemistry in the School of Medicine of Western Reserve University. Dr. Dorfman will be associated also with the Brush Foundation and with the Department of Medicine of Lakeside Hospital.

DR. C. CANBY BALDERSTON has been made dean of the Wharton School of Finance and Commerce of the University of Pennsylvania. Dr. Balderston, who has been professor of industry at the Wharton School since 1931, succeeds Dr. Alfred H. Williams, who resigned on July 1 to become president of the Federal Reserve Bank of Philadelphia.

DR. ALBERT B. NEWMAN, who has been acting dean of the School of Technology of the College of the City of New York, has been appointed dean of the school.

DR. GEORGE C. VAILLANT, associate curator of Mexican archeology at the American Museum of Natural History, New York City, has been appointed director of the university museum of the University of Pennsylvania. He will take office early in September, succeeding Horace H. F. Jayne, who recently resigned to become assistant director of the Metropolitan Museum of Art, New York.

DR. A. J. GROUT, since 1930 a member of the research staff of the Biological Laboratory at Cold Spring Harbor, has been appointed honorary curator of mosses at the New York Botanical Garden. He is now working on mosses for the *North American Flora* with Dr. William C. Steere, of the University of Michigan.

DONALD COLLIER, of the Washington State Teachers College, Pullman, has been appointed curator of South American ethnology and archeology at the Field Museum of Natural History. In September he will undertake an expedition to Ecuador under the joint sponsorship of the Andean Institute and the Field Museum.

DR. FLOYD M. FELDMAN, director of rural health, District Number 3, of the Minnesota State Department of Health, has been appointed health officer of

Rochester. He succeeds Dr. Thomas B. Magath, professor of pathology and parasitology at the University of Minnesota and consulting physician of the Mayo Clinic.

DR. JOHN R. MCGIBONY has been appointed director of health of the U. S. Indian Service. He takes the place of Dr. James G. Townsend, now director of industrial hygiene for the National Institute of Health, who has directed the health division of the service since 1933.

SIR ARTHUR SMITH WOODWARD and Professor Matthew J. Stewart have been elected trustees of the Hunterian Collection of the Royal College of Surgeons, London.

It is reported in *Nature* that Sir Henry Tizard, rector of the Imperial College of Science and Technology, has been appointed an additional member of the Air Council of Great Britain. In this capacity, and as a member of the Aircraft Supply Council, he will have special responsibility for studying and advising on scientific and technical policy.

ACCORDING to the *News Edition* of the American Chemical Society additions to the staff of the Chemical Engineering Division of the Armour Research Foundation, Chicago, include Dr. Charles A. Coffey, formerly engaged in research for the meat packing industry, who will conduct investigations in oils and fats; Richard Belkengren, Rockefeller Foundation fellow at the University of Minnesota, assigned to further development of a process for rot prevention in shipment and storage of produce; Walter J. Armstrong, who has been engaged in graduate research at the State University of Iowa, to work on engineering process problems; Dr. Raymond G. Spencer and Carl C. Gamertsfelder to conduct x-ray diffraction and spectroscopic research, in the division of light and optics of the University of Minnesota. Dr. Spencer is on leave of absence from Albion College, where he is head of the department of physics.

DR. M. C. WHITAKER, vice-president of the American Cyanamid Company, is again chairman of the advisory committee for the eighteenth Exposition of Chemical Industries. The exposition will be held in the Grand Central Palace, New York, from December 1 to 6. Advance reservations already account for practically all the available exhibit space. Members of the committee include Dr. Raymond F. Bacon, chemical engineer of New York City; Dr. L. H. Baekeland, honorary professor of chemistry at Columbia University; Dr. W. S. Landis, of the American Cyanamid Company, president of the Chemists' Club; Raymond R. Ridgway, president of the Electrochemical Society; John V. N. Dorr, president of the

Dorr Company; Walter J. Murphy, editor, *Chemical Industries*; Dr. H. E. Howe, editor, *Industrial and Engineering Chemistry*; Dr. William L. Evans, president of the American Chemical Society; Dr. W. T. Read, dean of chemistry, Rutgers University; Charles F. Roth, manager of the exposition; H. J. Schnell, general manager, *Oil, Paint and Drug Reporter*; E. K. Stevens, associate manager of the exposition; W. D. Merrill, president, Salesmen's Association of American Chemical Industry; R. Gordon Walker, vice-president, Oliver United Filters, Inc., and Dr. E. R. Weidlein, director of the Mellon Institute.

THE National Advisory Cancer Council has recommended the following grants-in-aid: the University of California (Robert S. Stone and E. O. Lawrence), \$9,750 in aid of research on the effect of fast neutrons on human cancer; Memorial Hospital, New York City (C. P. Rhoads, George T. Pack), \$5,000 in aid of metabolic studies on patients with gastric cancer; the Society of the New York Hospital (George J. Heuer), \$5,000 for clinical researches in the early diagnosis of gastric cancer and the comparative value of clinical methods, with special reference to cancer control, and the University of Rochester (John J. Morton), \$5,000 for the study of the relation of diet and eating to human gastric cancer, to be carried out as part of a cooperative endeavor in several centers.

COLIN C. SANBORN, curator of mammals for the Field Museum of Natural History, sailed from New York on July 18 on a six months' expedition to southern Peru. The main part of his work will be concerned with research on native bats, in continuation of work begun in 1938 under a fellowship of the John Simon Guggenheim Foundation. The part of Mr. Sanborn's explorations sponsored directly by the Field Museum will be for the purpose of the continuation of the collection of specimens and data begun in 1939-40 when he went to Peru as a member of the Magellanic Expedition. At Arequipa he will be joined by an advanced student from a Peruvian university. Collecting will be carried on in southern Peru in localities ranging from sea level to an altitude of more than 15,000 feet on the plateau above Lake Titicaca. He will work also along the west coast, and in three river valleys in the eastern interior of the country, and returning, in the central and northern sections of Peru.

THE New York City Aquarium in the Battery will be closed on October 4. According to a statement made by Park Commissioner Moses, most of the fish will be moved to an aquarium to be built in the New York Zoological Park, the Bronx. It is questionable, however, whether they will be kept there or removed later to a new aquarium. The New York Zoological

Society, which administers the Aquarium at the Battery and the Bronx Zoological Park, is making a survey to determine the best site for a new aquarium.

THE third summer conference of the New England Association of Chemistry Teachers will be held at the University of Connecticut, Storrs, from August 12 to 15. A symposium is planned on the afternoon of each day on modern concepts of electrolytes. George B. Savage, Loomis School, Windsor, Conn., is chairman of the conference committee.

THE eleventh annual meeting of the American Malacological Union will be held at Thomaston and Rockland, Maine, from August 26 to 29.

THE second American Congress on General Semantics will be held on August 1 and 2 at the University of Denver.

THE summer meeting of the Pennsylvania Academy of Science will be held in Bedford, Pa., over the

week-end of August 8-9. Field trips to study the local natural history will be taken. For further information write to Dr. V. Earl Light, Lebanon Valley College, Annville, Pa.

THE Society of American Bacteriologists, the American Association of Immunologists and the American Society for Experimental Pathology would like to receive nominations for the Eli Lilly and Company Research Award in Bacteriology and Immunology. This award is to be made to the young man or woman working in a college or university, who in the opinion of the Award Committee, has done "the most outstanding work in the field of bacteriology or immunology." To be eligible for the award, the individual must not have passed his or her thirty-fifth birthday on April 30, 1941. Information concerning the award may be secured from I. L. Baldwin, University of Wisconsin, Madison. Nominations must be in his hands before September 15.

DISCUSSION

INDUCED BIOTIN DEFICIENCY AS A POSSIBLE EXPLANATION OF OBSERVED SPONTANEOUS RECESSIONS IN MALIGNANCY

MORE than 300 authenticated cases of spontaneous recession of malignant tumors in man have been reported in the literature by a number of authorities between 1890 and 1917. Rohdenburg, who compiled a comprehensive summary of these cases,¹ records that about a hundred of these recessions have been observed to take place "subsequent to, or during, an acute infection." Recessions had been observed to occur after smallpox, pneumonia, malaria and acute tuberculosis. However, "the greater number of cases in this group," Rohdenburg found, "have occurred after an attack of erysipelas, an observation which led to the use of toxins of the causative organisms as a therapeutic measure" (Coley's Fluid).

Recently, West and Woglom, in studies on the biotin content of tumors and other tissues,² found it "significant that in every case studied the biotin level of the tumor deviated sharply from the normal adult values in the same direction as that of the corresponding embryo tissues." For example, they found a four-fold increase in the biotin content of the embryo lung as compared with the normal adult lung of the rat, while the biotin content of cancerous tissues from the human lung was found to be about three times the biotin content of the normal tissues of the human

adult lung. "Other tumors of epithelial origin, obtained from human sources," they reported, "have also been found directly richer in the growth substance (*i.e.*, biotin) than adjacent normal tissues."

It is by now well established that biotin, found last year to be identical with coenzyme R and vitamin H, the anti-egg-white-injury factor,³ is essential for the vital functions of many organisms^{4, 5, 6, 7, 8} and higher animals.^{9, 10} No form of bacteria has so far been found that does not require it, though some have been found to possess the ability to synthesize it from available materials. Eakin, McKinley and Williams have shown that the tissues of chicks on a diet causing egg-white injury were deficient in biotin despite the abundance of this vitamin in the diet.¹¹ Later, Eakin, Snell and Williams¹² presented experimental evidence to show that commercial or fresh egg white is capable of inactivating biotin *in vitro*, "owing probably to the

³ P. György, D. B. Melville, D. Burk and V. du Vigneaud, *SCIENCE*, 91: 243, 1940; V. du Vigneaud *et al.*, *SCIENCE*, 92: 62, 1940; P. György *et al.*, *SCIENCE*, 92: 609, 1940.

⁴ F. Kögl and B. Tönnis, *Zs. phys. Chem.*, 242: 43, 1936.

⁵ P. M. West and P. W. Wilson, *Enzymologia*, 8: 152, 1940.

⁶ R. Nilsson *et al.*, *Ann. Landw. Hochschule Schwedens*, 7: 301, 1939.

⁷ E. E. Snell and R. J. Williams, *Jour. Am. Chem. Soc.*, 61: 3594, 1939.

⁸ J. R. Porter and M. J. Pelczar, *Jour. Bact.*, 41: 173, 1941.

⁹ P. György, *Jour. Biol. Chem.*, 131: 733, 1939.

¹⁰ P. György *et al.*, *SCIENCE*, 91: 243, 1940.

¹¹ R. E. Eakin, W. A. McKinley and R. J. Williams, *SCIENCE*, 92: 224, 1940.

¹² R. E. Eakin, E. E. Snell and R. J. Williams, *Jour. Biol. Chem.*, 136: 801, 1940.

¹ G. L. Rohdenburg, *Jour. Cancer Research*, 3: 193, 1918.

² P. M. West and W. H. Woglom, *SCIENCE*, 93: 525, 1941.