

The Sylvester Medal to Earl Russell for his distinguished work on the foundations of mathematics.

The Hughes Medal to Professor K. M. G. Siegbahn in recognition of his work as a physicist and technician on long-wave x-rays.

The following names have been proposed for election as officers and council for the ensuing year: *President*, Sir Frederick Gowland Hopkins; *Treasurer*, Sir Henry Lyons; *Secretaries*, Sir Henry Dale and

Sir Frank Smith; *Foreign Secretary*, Professor A. C. Seward. Other *Members of Council*, Professor E. D. Adrian, Dr. E. J. Butler, Dr. W. T. Calman, Mr. D. L. Chapman, Professor A. W. Conway, Professor W. H. Eccles, Professor T. R. Elliott, P. P. Laidlaw, Sir Gerald Lennox-Conyngham, Professor J. C. McLennan, Dr. F. H. A. Marshall, Sir Charles Martin, Professor G. T. Morgan, Professor R. Robison, Dr. Herbert H. Thomas and Professor E. T. Whittaker.

SCIENTIFIC NOTES AND NEWS

THE Mary Clark Thompson Medal, awarded for important services to geology and paleontology, was presented to Dr. Charles Schuchert, of Yale University, at the dinner of the National Academy of Sciences at Cleveland. The presentation address by Dr. David White, chairman of the committee of award, was read by Dr. Fred E. Wright, home secretary of the academy.

A BRONZE plaque, the annual award for meritorious service in the fields of medicine and science given by the New Jersey Health and Sanitary Association, was presented *in absentia* on November 16 to Dr. Theobald Smith, emeritus member of the Rockefeller Institute for Medical Research, who was from 1915 to 1929 director of the department of plant and animal pathology at Princeton.

DR. ARTHUR H. COMPTON, professor of physics at the University of Chicago, was awarded the honorary degree of master of arts on the occasion of the opening of his lectures as George Eastman visiting professor at the University of Oxford.

SIX Townsend Harris Medals were awarded to alumni of the College of the City of New York "for achievement and for their service to the college" at the fifty-fourth annual dinner of the Associate Alumni. One of these was presented to Dr. Frank Schlesinger, director of the Yale Observatory. The citation was as follows: "Frank Schlesinger, '90, worthy successor of Copernicus and of Galileo, leading scholar in the great University of Yale, you have helped men to understand the expanse and the mystery of the universe. What your own eyes have seen and what, through the medium of great telescopes from New Haven to Johannesburg, you have enabled other men to see has vastly enriched the world's knowledge of the most ancient of the sciences. In you *alma mater* finds particular reason to rejoice."

At a meeting of the Institute of Fuels, London, on November 10, the Melchett Medal was presented to Dr. Friedrich Bergius, the German chemist, who was the pioneer in the extraction of oil from coal and is

now experimenting in the production of sugar from wood.

DR. F. L. McVey, president of the University of Kentucky, was elected president of the Association of Land Grant Colleges and Universities at the recent Washington meeting. Dean J. G. Lipman, of the College of Agriculture at Rutgers University, was elected vice-president; Dean Thomas P. Cooper, of the University of Kentucky College of Agriculture, was re-elected secretary, and Dean F. B. Mumford, of the University of Missouri College of Agriculture, was reelected for a five-year term on the executive committee.

LORD D'ABERNON, chairman since 1929 of the British Medical Research Council, has been elected a fellow of the Royal Society under Rule 12, which provides that the council may recommend for election in any calendar year not more than two persons who "have rendered conspicuous service to the cause of science, or are such that their election would be of signal benefit to the society."

THE Marchese Marconi was elected rector by a majority of a hundred votes over the other candidate, Sir James Jeans, as the result of the St. Andrews University rectorial election.

DR. A. E. JOLLIFFE, professor of mathematics in the University of London and formerly mathematical lecturer of Jesus College, University of Oxford, has been elected an honorary fellow of the college.

ACCORDING to the *Journal* of the American Medical Association, the All Russian Executive Committee has given the title "honorary workers of medicine" to the following Russian professors: Professor Serge N. Davidenkov, of Leningrad, for research in neuropathology, biology and genetics; Professor Leo A. Orbeli, who occupies the chair of physiology in the Military Medical Academy and in the All-Union Institute of Experimental Medicine; Professor Andreas, surgeon; L. Polenov, who in 1926 established the first chair of neurologic surgery in the Soviet Union; Professor Ludwig I. Svergeevsky, specialist in ear and

throat diseases; Professor Serge U. Spasocucotzky and Professor George N. Speransky, pediatrician, one of the founders of the Institute for Studying Motherhood and Childhood.

At the autumn meeting of the Board of Trustees of the American Museum of Natural History it was voted to award distinguished memberships to several men for service to the museum. William K. Vanderbilt and Edmund B. Rogers were made associate benefactors; Harry Snyder, a patron; E. L. Bell, a fellow, and Raymond Guest and Kerr Rainsford, life members. Dr. A. B. Klots was elected honorary life member for his work in entomology, and Frederick H. Osborn was appointed research associate in anthropology.

OFFICERS of the American Pharmaceutical Association have been elected as follows: *President-elect*, Patrick H. Costello, Cooperstown, N. Dak.; *First vice-president elect*, Frank A. Delgado, Washington, D. C.; *Second vice-president elect*, J. Lester Hayman, Morgantown, W. Va.; *Members-elect of the Council*, James H. Beal, Fort Walton, Fla.; C. H. LaWall, Philadelphia, Pa.; R. L. Swain, Baltimore, Md. These officers will be installed at the next annual meeting of the association, which will be held in Portland, Oregon, at a time to be announced later.

L. E. NOLLAU, professor of mechanical drawing in the University of Kentucky College of Engineering, has been elected president of the Kentucky section of the Society for the Promotion of Engineering Education.

At the close of the ninth Pan American Sanitary Conference on November 22 officers were elected as follows: Surgeon-General Hugh S. Cumming, of the United States Public Health Service, was reelected director-general of the Pan American Sanitary Office, Dr. Gregorio Araoz Alfaro, of Argentina, honorary president. Other officers are Dr. Carlos Enrique Paz Soldan, of Peru, *vice-president*; Dr. Carlos J. Mongo, of Peru, *alternate vice-president*; Dr. Justo F. Gonzalez, of Uruguay, *secretary*; Dr. Rafael Schiaffino, of Uruguay, *alternate secretary*. Dr. Jorge Bejarano, of Colombia, was elected organizing president for the next conference, which will be held at Bogota.

DR. WILLIAM CLIFFORD MORSE, for sixteen years professor of geology at Mississippi State College, has been called to the University of Mississippi to be head of the department of geology and director of the Mississippi Geological Survey.

DR. ELMER PETER KOHLER, who since 1914 has been Abbott and James Lawrence professor of chemistry at Harvard University, has been elected Sheldon Emery professor of organic chemistry. Dr. Lawrence Joseph Henderson, who has been professor of bio-

logical chemistry, has been elected to succeed Professor Kohler as Abbott and James Lawrence professor of chemistry.

DR. THEOPHIL H. HILDEBRANDT has been appointed chairman of the department of mathematics at the University of Michigan. He succeeds Professor James W. Glover, who resigned in order to devote more of his time to research problems and investigations dealing with the federal government plans for economic security for the individual. Professor Glover has not left the university faculty, but remains as "James Olney distinguished professor."

DR. THOMAS PARRAN, JR., New York State Commissioner of Health, resigned on November 20 from the public health committee of the National Advisory Council on Radio in Education. He is said to have taken this action because at the last minute he was barred by the Columbia Broadcasting System from any mention of "syphilis control." He was expected to speak in New York City on November 26 on "Public Health Needs," giving a brief non-technical reference to life-saving possibilities through scientific action to control the disease.

At the annual meeting on November 21 of the trustees of the Carnegie Foundation for the Advancement of Teaching, Dr. Walter C. Murray, president of the University of Saskatchewan, Canada, was elected *chairman*; Thomas W. Lamont was elected *vice-chairman*, and Dr. Frederick C. Ferry, president of Hamilton College, *secretary*. New trustees elected were Dr. E. H. Lindley, chancellor of the University of Kansas; Dr. Edward C. Elliott, president of Purdue University, and Dr. James Bryant Conant, president of Harvard University.

THE American Academy of Arts and Sciences has extended for the third year a grant-in-aid to Dr. Bret Ratner in the pediatrics and immunology departments of New York University and Bellevue Medical College, furthering his studies on experimental asthma in the guinea pig.

GRANTS from the Alexander Dallas Bache Fund of the National Academy of Sciences were made by its Board of Directors, consisting of W. J. V. Osterhout, E. B. Wilson and Heber D. Curtis, *chairman*, at the Cleveland meeting of the Academy as follows: to Dr. Frank C. Jordan, Allegheny Observatory, Pittsburgh, for assistance in measuring and reducing plates for stellar parallax; to Dr. T. T. Chen, Osborn Zoological Laboratory, New Haven, for studies on Opalinid ciliate protozoa; to Dr. Dean B. McLaughlin, the Observatory of the University of Michigan, for researches on peculiar and variable stellar spectra; to Dr. Harold Heath, Hopkins Marine Station, Pacific Grove, California, for an investigation of termite castes.

DR. K. T. WATANABE, of Osaka, and Dr. Masao Muto, of Sendai, Japan, were guests of the Wistar Institute on November 11. Dr. Muto is an associate of Dr. Shinkishi Hatai, formerly a member of the institute, now director of the Biological Institute of the Tohoku Imperial University in Sendai.

DR. P. A. VAN DER BIJL, professor of plant pathology and mycology at the University of Stellenbosch, South Africa, has been visiting laboratories of phytopathology and mycology in the United States.

A JOINT expedition, arranged by Washington University and the Missouri Botanical Garden to seek plant specimens in the jungles of Panama, has sailed from New Orleans. Members of the party are Dr. Carroll W. Dodge, mycologist at the garden and a member of the Washington University faculty; Dr. Julian Steyermark, formerly graduate student in botany at Washington University, and Paul Allen, student at the garden. The expedition is being partly financed from the Science Research Fund of Washington University, given by the Rockefeller Foundation.

DR. THOMAS H. JOHNSON, of the Bartol Research Foundation, has returned from a three months' trip to Colorado and Mexico which was undertaken for the purpose of measuring the east-west asymmetry of the cosmic radiation at various elevations and latitudes. Extensive observations were made at Mt. Evans and Echo Lake in Colorado and at Nevado de Toluca, Villa Obregon, Vera Cruz and Parral in Mexico. The survey was a continuation of that begun last year as a part of the program authorized by the Cosmic Ray Committee of the Carnegie Institution of

Washington and it was financed by a grant from that institution. Dr. Johnson was assisted by Lewis Fustell, Jr.

DR. GLEB V. ANREP, professor of physiology at the Egyptian University, Cairo, will deliver the 1935 series of Lane Lectures at Stanford University School of Medicine in April. The five lectures will cover different phases of "Regulation of the Cardio-Vascular System."

DR. H. E. EWING, entomologist in the Bureau of Entomology and Plant Quarantine, has accepted an invitation to deliver ten lectures to the class in medical entomology at the Johns Hopkins University School of Hygiene and Public Health.

THE third Harvey Lecture of the New York Academy of Medicine will be given by Dr. Wilbur A. Sawyer, associate director of the International Health Division of the Rockefeller Foundation, on Thursday evening, December 20, at eight-thirty, on "The Present Geographical Distribution of Yellow Fever and its Significance." The fourth lecture will be given on January 17, by Professor Alfred N. Richards, professor of pharmacology, University of Pennsylvania, on "Processes of Urine Formation in the Amphibian Kidney."

THE first Friday evening discourse of the new session at the Royal Institution was delivered on November 2 by Dr. F. W. Aston, who took as his subject "Elements and Isotopes."

THE annual meeting and dinner of the New York Academy of Sciences will be held on Monday, December 17.

DISCUSSION

THE SEQUENCE OF INFECTION, ALLERGY AND RESISTANCE AS REPRESENTED BY X-RAYS IN HUMAN PULMONARY TUBERCULOSIS

BROADLY speaking, the course of tuberculosis represents an immunologic conflict between the host tissues on the one hand and invading tubercle bacilli on the other. This note is founded on a "case" in which the organic and symptomatic manifestations of the disease were correlated with certain theoretical tenets generalized from animal experimentation; it emphasizes the opinion that, interpreted through a code such as follows, an obscure pathologic history may sometimes be resolved into an intelligible story:

(1) Introduction of living tubercle bacilli into a healthy living body leads to functional changes

through which the tissues become thereafter *hyper-sensitive* to contact with tubercle-protein ("antigen")—an admitted fact. (2) The hypersensitive tissue has undergone a physico-chemical change which has two functional aspects: (a) Specific resistance is opposed to the passage of tubercle bacilli over it; (b) the hypersensitive tissue becomes the seat of biologic reaction, directed either to the immediate destruction of tubercle bacilli, probably by lysis, or to their incarceration and fixation *in situ* in tubercles. The intensity of both these functional changes probably decreases with the distance from the infective foci. (3) In an acutely tuberculous subject even slight physical exercise causes inflammatory congestion about tubercles and *pari passu* vascular engorgement in their vicinity. The same reaction may be