OBITUARIES

Dr. C. M. Wenyon, F.R.S.

By the death of Dr. C. M. Wenyon, in London on October 24, at the age of seventy, the scientific world in general and tropical medicine in particular lost one of the foremost exponents of medical protozoology.

Charles Morley Wenyon, son of Dr. Chas. Wenyon, was born at Liverpool on March 24, 1878. He passed his childhood in China, where his father was a pioneer medical missionary, but returned to England for his education. He studied science at University College and medicine at Guy's Hospital, London, graduating B.Sc. (1901) and M.B., B.S. (1904). The dual training in zoology and medicine provided the right background to Wenyon's subsequent activities, and is a clue to the quality of his contributions to medical protozoology, a subject to which he devoted himself from the very beginning of his scientific career. During the first ten years (1904–14), he held with distinction the post of lecturer in protozoology at the London School of Tropical Medicine, where he worked under Patrick Manson. During this period he also continued his studies in Paris, under F. Mesnil, and in Munich, under Richard Hertwig (1906–7), and undertook an expedition for the study of protozoal diseases in the Sudan, where he spent a year (1907–8) working in a floating laboratory on the Nile. He was later (1910–13) sent by the School on missions to Mesopotamia, Syria and Malta, returning with abundant material which formed the subject-matter of important publications on oriental sore and kala-azar in these regions.

In 1914 Wenyon joined the staff of the Wellcome Bureau of Scientific Research as director of research in the tropics. Shortly after the outbreak of the First World War he was seconded—with the rank of lieutenant-colonel, R.A.M.C.—for work under the War Office and proceeded abroad. He carried out important researches on the intestinal protozoal infections, published in Wenyon and O'Connor's "Human Intestinal Protozoa in the Near East" (1917), and on malaria in Greece, the results of which appeared in a series of papers (*J. R.A.M.C.*, 1921–22). In 1924 Wenyon succeeded Sir Andrew Balfour as director-in-chief of the Wellcome Bureau of Scientific Research (now Wellcome Laboratories of Tropical Medicine) and director of research to the Wellcome Foundation, retiring in 1944, but continuing to act in a consulting capacity. Under Wenyon's direction the Bureau developed into a first-class scientific institute enjoying an international reputation among workers in tropical medicine and parasitology.

The variety and volume of Wenyon's contributions to protozoology render their assessment a difficult task. Though by no means restricted to purely medical questions, his work was chiefly concerned with protozoological problems having a direct bearing on tropical diseases. Much of our knowledge regarding the relative medical importance of the intestinal Protozoa and of the epidemiology of amœbiasis is due to Wenyon's pioneer work. He was particularly interested in the transmission of the leishmaniases. Though the credit of solving this problem belongs to others, his own researches and critical reviews of the existing data did much to clear the path for his successors in this field. The most outstanding work published by Wenyon, his *magnum opus*, is the well-known "Protozoology" (1926). This treatise, now generally recognized as a classic, gave a synthesis of our knowledge of the parasitic Protozoa and, though now in places out of date, it remains an indispensable reference book for all serious students of protozoology.

Apart from research work, for many years Wenyon contributed authoritative reviews of the world literature on protozoal diseases to the *Tropical Diseases Bulletin*. The present position of the Royal Society of Tropical Medicine and Hygiene in the medical world and the high quality of its *Transactions* are due largely to Wenyon's untiring efforts during a quarter of a century, first as its honorary secretary and ultimately as its president.

In 1927 Wenyon was elected a fellow of the Royal Society; he received many other honours and awards both at home and abroad.

As a man, Wenyon was universally liked and respected for his friendliness and cheerful disposition. His knowledge and experience were at everybody's disposal, and workers from all over the world, when visiting London, never failed to call on him for advice and help. In his relations with immediate associates there prevailed a happy comradeship, in which 'C. M. W.' was *primus inter pares*. His colleagues will remember with gratitude and affection his constant interest and encouragement in their work and welfare.

C. A. Hoare

C. A. Hill

Charles Alexander Hill, founder of the British Drug Houses, Ltd., was born in London on August 18, 1874. He was educated at Winchester, King's College, London, and the Pharmaceutical Society's School of Pharmacy. His death occurred on October 23.

C. A. Hill will be long remembered among men of science for the work he did in developing the manufacture of chemicals of high purity for use in research and analysis which began in the 1914 crisis, when it became clear that Great Britain must no longer remain dependent upon importing supplies of these chemicals from Germany or elsewhere.

Hill's natural abilities were well suited to this task; he took a keen interest in science, passionately insisted on accuracy in all matters, particularly in the written or spoken word, and was at all times disposed to devote meticulous attention to matters of detail.

Five years before the First World War broke out, the amalgamation of six companies concerned with pharmaceutical manufacture had taken place under Hill's leadership. Of the resultant company, the British Drug Houses, he had become chairman and managing director. At the outbreak of war, scientific workers throughout Great Britain were made acutely conscious of their dependence upon imported laboratory chemicals, including organic chemicals for use in synthesis, and microscopical stains for use in bacteriology. This challenge made a profound appeal to Hill and he applied his marked organising ability to making good this defect. In the course of the next ten years he achieved a great measure of success in so doing.

Important studies were made in determining the highest obtainable standards of purity for chemicals in this category. New standards were in due course formulated and submitted for acceptance to an independent committee set up for the purpose. The analytical and research laboratories under his direction undertook much work in devising delicate

methods of analytical control; this led ultimately to numerous scientific publications by various members of his scientific staff.

It was a natural corollary to his achievement in setting up the manufacture of laboratory chemicals that Hill worked assiduously in the advocacy of the Safeguarding of Industries Bill, and later for having laboratory chemicals included in the list of goods scheduled under the Act.

Hill's family had long been connected with the Salters' Company; it was during his grandfather's mastership that the Salters' Company set an early example in founding research scholarships. Hill, who became master of the Salters' Company at an early age, was largely instrumental in the formation of the Salters' Institute of Industrial Chemistry, which has as one of its main objects the provision of funds for the training of men entering industrial chemistry.

Hill filled many public offices in connexion with pharmacy and pure and applied chemistry. His published addresses bear witness to his clear thinking and the high standards at which he always aimed. He became chairman of the Association of British Chemical Manufacturers and of the Wholesale Drug Trade Association, president of the British Pharmaceutical Conference, vice-president of the Institute of Chemistry and of the Society of Public Analysts.

The fine-chemical industry of Great Britain, which has undergone great growth during his life, has benefited by his notable contribution to its development.

FRANCIS H. CARR

WE regret to announce the following deaths:

Dr. L. Doljanski, head of the Department of Experimental Pathology, The Hebrew University, Jerusalem, on April 13.

Mr. R. Murdin Drake, O.B.E., joint manager of the Association of British Chemical Manufacturers, on November 21, aged forty-five.

Sir John Fryer, K.B.E., F.R.S., secretary of the Agricultural Research Council, on November 22, aged sixty-two.

Mr. J. E. Kingsbury, a founder of Standard Telephones and Cables, Ltd., and an active member of the Society of Telegraph Engineers and later of the Institution of Electrical Engineers, on November 4, aged ninety-three.

NEWS and VIEWS

Nobel Prize for Physics: Prof. P. M. S. Blackett, F.R.S.

THE Nobel Prize for Physics, for the year 1948, has been awarded to Prof. P. M. S. Blackett, of the University of Manchester. The most important of Blackett's contributions to experimental physics have been made with the Wilson expansion chamber. After the discovery of the artificial transmutation of some of the light elements by Rutherford in 1919, it became important to make a detailed study of individual disintegrations, and this could only be done with the Wilson chamber. In order to observe the transmutation of a nitrogen nucleus, it was necessary, however, to consider making many thousands of photographs. For this purpose, Blackett developed the automatic expansion chamber. The successful design and operation of this elaborate instrument, in which the many operations involved in taking a single photograph were made mechanically, in an ordered sequence many times repeated, represented a technical achievement of the highest order. With this instrument, Blackett secured the classical photographs, now familiar to many generations of physics students, showing the disintegration of nitrogen by fast α-particles; and many other examples of nuclear processes.

The experience in design and operation gained with the automatic expansion chamber formed the basis for the next technical advance, the development of the counter-controlled Wilson chamber. If an ordinary chamber is expanded at random, the chance of observing the tracks of particles of the cosmic radiation is very small—in the case of apparatus of conventional design operated at sea-level. In collaboration with G. P. S. Occhialini, Blackett therefore arranged that the expansion should take place only when one or more particles had passed through the chamber. This was secured by a 'trigger' device which operated only if a particle passed through both of two Geiger counters, placed one above and one below the chamber. In this way the beautiful photographs of showers of positive and negative electrons—the 'soft' component of the cosmic rays—were obtained. The principle thus introduced, of combining the particular features of the Wilson chamber with those of the Geiger counter in a single apparatus, continues to be one of the most fruitful methods in the physics of the cosmic radiation. Blackett was also a pioneer in the development of apparatus for studying the deflexion of cosmic ray particles in Wilson chambers operated in strong magnetic fields—a method of great importance for the development of our knowledge of the momenta of cosmic ray particles. This present recognition of his distinctive and original contributions to physics will be welcomed everywhere.

Centenary of H. A. Rowland

NOVEMBER 27 marks the centenary of the birth of Henry Augustus Rowland, one of the most distinguished men of science that the United States has produced. Born at Honesdale, Pennsylvania, on November 27, 1848, Rowland was the son of a clergyman, and at the age of sixteen, after being allowed to abandon his classical studies, he devoted himself to science. He studied to be a civil engineer at the Rensselaer Polytechnic Institute at Troy and graduated in 1870. During the next few years he successively served as a railway engineer, taught in the Wooster College and lectured as assistant professor at the Rensselaer Institute. On April 3, 1876, he became the first professor of physics at the newly created Johns Hopkins University at Baltimore, having the previous year visited Europe and worked for a time under the great Helmholtz. Rowland retained the professorship until his death, adding lustre to the University by his own brilliant researches and by the band of devoted workers he gathered around him.

Rowland's greatest researches were those on the determination of the mechanical equivalent of heat, the determination of the ohm and the study of the solar spectrum. In 1882 he described to the Physical Society his celebrated diffraction grating which placed in the hands of the spectroscopist a new and