OBITUARIES

Sir Neil Hamilton Fairley

THROUGH the death of Sir Neil Hamilton Fairley, who died at the age of seventy-five on April 19, tropical medicine lost one of its greatest scientists and physicians. He carried out a series of brilliant pieces of research on a wide variety of subjects, was responsible for establishing the academic Department of Tropical Medicine in the University of London, played a large part in re-establishing the Hospital for Tropical Diseases, London, after the Second World War, and was president of the Royal Society of Tropical Medicine and Hygiene from 1951 until 1953. He was a valuable member of committees and sat on many connected with tropical medicine, where he was the undoubted leader of his field for many years.

Fairley was born in 1891 in Australia, and graduated with first-class honours from the University of Melbourne in 1915, when he joined the Army and immediately made his mark as a research worker by investigating cerebro-spinal meningitis, which was then creating a great problem among Australian troops. In 1916 he was posted to Egypt and there appreciated the enormous problem which schistosomiasis caused and the difficulties which it presents in diagnosis. He set to work to devise immunological methods of detecting it, and the complement-fixation test and skin-testing antigens which he brought into being are still extensively used and have provided the basis for much further work on the subject. Tests based on his work are used in epidemiological surveys, and much of modern schistosomal control work results from his findings. At this time he also carried out a series of classical investigations on the evolution of schistosomal lesions in animals.

After the First World War, Fairley studied tropical medicine at the London School of Hygiene and Tropical Medicine and worked at the Lister Institute before returning in 1920 to Australia as first assistant at the Walter and Eliza Hall Institute, Melbourne. In 1921 he went as Tata professor of tropical medicine to Bombay and there pioneered investigations on tropical sprue. He carried out detailed clinical and pathological studies of this disease and reached the then novel conclusion that high protein and low fat diets should be used for its therapy. Their introduction enormously improved the prognosis of the disease which until that time had been serious and not uncommonly fatal. Illness interrupted his work, and after a period of convalescence in Britain he returned to the Walter and Eliza Hall Institute. Fairley undertook research on the important problem of snake bite, for which treatment was then largely empirical and very unsatisfactory. He measured venom yields of Australian snakes and carried out detailed studies in animals of the effects of venom. His work enabled anti-venines to Australian snakes to be produced and their use standardized and rationalized.

In 1928 he became physician to the Hospital for Tropical Diseases, London. The pathogenesis of black-water fever was poorly understood at that time and his work on it was of outstanding importance, He demonstrated that when erythrocytes haemolysed, a hitherto unknown pigment, methaemalbumin, was produced. He carried out other investigations of haemolytic anaemia associated with malaria and malnutrition in Macedonia, and this phase of his research culminated in his election to fellowship of the Royal Society in 1942.

At the outbreak of the Second World War, Fairley was invited to become consultant to the Australian Forces. In the Middle East he was responsible for the introduction of sulphaguanidine for the treatment of bacillary dysentery and thus ushered in a new era in the management of this disease. At this time malaria was causing enormous casualties in the Far East and as much as anything else had defeated operations in Burma and New Guinea. The Land Headquarters Medical Research Unit, Cairns, Queensland, was set up to investigate it, its control and prevention, and Fairley was appointed director. He built up a very strong research team and again carried out classical work, perfecting the use of sub-inoculation techniques and not only demonstrating that malaria could be effectively controlled with mepacrine but also pointing the way to a later demonstration of the pre-erythrocytic phase of the malaria parasite—a discovery in which he participated. These investigations were detailed and complex; throughout Fairley was meticulous in carrying them out and brilliant in his use of deductive reasoning. Without his findings, it seems certain, the war in the Far East could not have been won. This work crowned his career and together with earlier achievements won for him international acclaim, a knighthood and many honours. Among the latter were the award of the Buchanan Medal of the Royal Society, the Manson Medal of the Royal Society of Tropical Medicine and Hygiene and the Moxon Medal of the Royal College of Physicians of London.

Few have done more in the field of scientific medicine than Fairley and certainly none has been kinder or more considerate than he was. His generosity and gentleness of nature were almost as internationally known as was his scientific work. Through his research, teaching and his association with large numbers of young men in his investigations and hospital work he had a tremendous influence for good on tropical medicine, an influence which will long continue. A. W. WOODRUFF

NEWS AND VIEWS

Dragon Resurgent

AFTER many ups and downs, the *Dragon* project to develop a high-temperature gas-cooled reactor is within sight of success. Hopes are high that the construction of a commercially viable reactor could begin within two or three years. At a recent symposium, Mr. C. A. Rennie, executive of the *Dragon* project, raised the prospect of competition between the *Dragon* and two other reactor systems now being developed in Britain—the advanced gas-cooled reactor and the fast breeder reactor— by saying that high-temperature reactors could generate electricity economically and could use only slightly enriched fuel as well. The first 20 MW (thermal) high-temperature reactor is now operating at Winfrith Heath, Dorset, and the development programme is financed jointly by Britain and eleven other countries.

When it was first planned in 1958, the *Dragon* reactor was intended to work with low fuel enrichment, but further work suggested that a highly enriched mixture of uranium and thorium would be necessary. But now the pendulum has swung back again and low enrichment is thought feasible. This has the attraction that the output of European thermal diffusion plants for enriching