

## OBITUARY NOTICE

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### ALFRED JOSEPH CLARK, 1885–1941

ALFRED JOSEPH CLARK, a member of the Editorial Board of this Journal and a foremost leader in pharmacology, died on 30th July 1941, after an acute illness necessitating surgical operation. His death at the height of his intellectual powers was a great shock to all his friends and colleagues, and it has left those who are concerned with this Journal, in whose affairs he took a vital and intimate part, with an abiding sense of loss. He had been a member of the Editorial Board since Sharpey-Schafer relinquished the editorship and he gave himself unsparingly to the editing of papers, a task for which his fundamental and wide knowledge of biological problems so well fitted him. He was an excellent yet sympathetic critic, and contributors have been quick to recognise the value of his comments on their papers.

Clark was born at Northover, Glastonbury, on 19th August 1885. From Bootham School, York, he went up to King's College, Cambridge, where he took honours in both parts of the Natural Science Tripos. At Cambridge he came under the influence of the late W. E. Dixon and also made contact with the late G. R. Mines with whom he was later to collaborate in an investigation on the action of strophanthin on the excised heart of the frog. He obtained his clinical training at St. Bartholomew's Hospital, and, having qualified M.R.C.S., L.R.C.P., in 1909, and taken the M.B. Cambridge in 1910, he held the posts of house-surgeon at Addenbrooke's and house-physician at Bart's. He took the M.R.C.P. and D.P.H. in 1912 and became successively Demonstrator of Pharmacology at King's College, London, Assistant Pharmacologist at University College, and in 1913 Lecturer on Pharmacology at Guy's Hospital. He took his Cambridge M.D. in 1914, was elected F.R.C.P. in 1921 and F.R.S. in 1931.

On the outbreak of the 1914–18 war Clark took a commission in the R.A.M.C.; he served throughout the war and was awarded the M.C. for gallantry and devotion to duty. In the present war he occupied an important advisory post at G.H.Q. in France, and during the last days of the Battle of Flanders he rendered signal help in the evacuation of the wounded when acting as medical officer in Hazebrouck during the retirement to Dunkirk. He was reticent about his activities

during those strenuous days, but from the little he let drop it was not difficult to realise that many of the wounded owed their ultimate safety to his efforts.

At the close of the 1914–18 war Clark was appointed to the Chair of Pharmacology in Cape Town, but after a year he returned to London to become Professor of Pharmacology at University College, where he succeeded his former chief, the late A. R. Cushny, who had transferred to Edinburgh. Clark's return to University College came at an opportune moment. The pre-war staffs of the Departments of Physiology, Biochemistry, and Pharmacology had dispersed, so that his experience and energy were an invaluable aid to Professor Starling and Sir William Bayliss in their plans for putting the medical sciences once more on a peace-time footing.

In 1926 Clark again succeeded his former chief when he accepted the Chair of Materia Medica in Edinburgh, where he quickly made his personality felt. Students soon realised how much he had their interests at heart and they found in him a staunch friend and adviser to whom they could take their academic problems with the sure knowledge that they would always receive of his best. His *Applied Pharmacology*, now in its seventh edition, illustrates his understanding of the difficulties of the student, for in this book he successfully achieved the integration of pharmacology and therapeutics. In addition, Clark not only interested himself in the athletic activities of the students by sitting on some of their Sports Committees, but found time himself to play Fives or Badminton with the energy and zeal of a man twenty years his junior.

Amidst all his University activities Clark devoted a great deal of time to the development and organisation of the Central Medical Library. The wealth of periodicals and monographs found there at the present time is largely due to the energy he displayed as Convener of the C.M.L. Committee. Research workers in the Faculty of Medicine owe him a great debt for the facilities which this Library affords. It stands as a permanent memorial to Clark's wide outlook and unselfish devotion to the interests of his colleagues, and we are glad to know that this will be recognised and recorded by the placing of a tablet in the Library itself.

It is fortunate that the fruits of Clark's ripe experience in the field of experimental pharmacology have been epitomised and reviewed by his own hand. *The Mode of Action of Drugs on Cells* and *The Comparative Physiology of the Heart*, published in 1923 and 1927 respectively, as well as the volume on general pharmacology in Heffter's *Handbuch der experimentellen Pharmakologie* (1927), reflect the critical nature of his mind, the broad paths he trod, and his extraordinary knowledge of the literature from the earliest times up to the present day. His early training in the fundamentals of the medical sciences was largely

responsible for the successful achievement of such tasks. In all his scientific publications there can be detected the urge to obtain exact and quantitative data on the action of drugs, and it was the natural outcome of his earlier work on the frog's heart that he should use it again to study the metabolism of cardiac muscle. This investigation, in which four of his Edinburgh colleagues collaborated, formed the subject of a monograph, *The Metabolism of the Frog's Heart*, which was published in 1938.

The perfused heart of the frog played an important rôle in Clark's experimental work. In later years he was wont to refer to it as the most valuable biological test-tube at the disposal of physiologists and pharmacologists, and it was indeed remarkable the amount of information he obtained from it in the course of his thirty years' experience. With this small "preparation" he demonstrated how valuable contributions to knowledge can be made by the careful planning of experiments and the use of the simplest apparatus. Those who have worked with him will always remember his dexterity in preparing the heart for closed-circuit perfusion. His hands were not small; yet, after a few deft movements during which the heart was entirely obscured, it finally emerged into view to beat strongly, and continued to do so for hours or even days.

Clark was extremely well read in many subjects and would frequently astonish his colleagues by knowledge which they assumed would be outside the ken of a scientist. He had a playful sense of humour and in the course of friendly discussions would suddenly ask a particularly pertinent question with a charming smile which, to those who knew him well, indicated that he knew the answer better than most. His philosophy was a mixture of realism and idealism which gave him a kindly tolerance towards the shortcomings of his fellow-creatures. He rarely expressed himself strongly on any matter except perhaps on the danger of the uncontrolled trade in secret remedies, ably and courageously exposed in his small monograph on *Patent Medicines* in the "Fact" series.

Clark's services and advice were in great demand by colleagues and institutions alike, and to all he gave freely and willingly. As a member of the Medical Research Council from 1934 to 1938 he did work of great national importance, which was recognised by his re-election, after an interval of one year, to a second term of office. Since his return from France in May 1940 he had worked unceasingly on war problems in his own special field of research. His death in the midst of these labours has not only brought personal grief to many, but is indeed a national loss.