

Munro Fox, the Head of her Department at Bedford College, and the appointment was as significant for the unit as it was for her. Her wide knowledge of biology was an important factor in a unit where other members had almost all been trained in the physical sciences, and her personal qualities—her energy, her integrity and her helpfulness to others—contributed greatly to the successful development of the unit. The investigations on muscle, which later became one of the chief interests of the unit, were centred on her from the beginning. For the first few years she was the only member of the unit working on muscle, but under her inspiration this side of the unit's activity expanded so that, when the unit was divided after Randall's retirement in 1970, one part became the Muscle Biophysics Unit, and she was appointed as its Director.

Although she held a full-time research appointment, she devoted a large part of her energy to undergraduate teaching at King's College. Not only did she develop courses in Biophysics, both within King's and as part of the inter-collegiate teaching of London University, but she played a key part in the development of the School of Biological Sciences at King's. She often acted as an external examiner, both for undergraduate examinations and for doctoral theses, and made a reputation for sympathetic and conscientious work in this capacity. In 1966, the University of London conferred on her the title of Professor of Biology.

From the time when she first joined Randall's Biophysics Research Unit, almost all of her research was concerned with the structural basis of muscular contraction, and it is for this that she will chiefly be remembered. Her first

attempts at elucidating the changes in the striation pattern during contraction, published in 1952, showed the formation of contraction bands but threw no light on the earlier stages of shortening. Her method, however—observing separated myofibrils under a phase-contrast microscope was used again by her with great success in a period of highly fruitful collaboration with Dr H. E. Huxley. This began in 1953–54, when both of them spent the year in the laboratory of Professor F. O. Schmitt at the Massachusetts Institute of Technology, she as a Fellow of the Rockefeller Foundation. They first established the localisation of myosin and actin in the striation pattern (also done independently at the same time by W. Hasselbach in H. H. Weber's laboratory) and soon afterwards showed the constancy of the distances in the striation pattern corresponding to the lengths of the thick and thin filaments. This was paralleled in part by A. F. Huxley and R. Niedergerke's measurements on living fibres. Together with H. E. Huxley's evidence from electron microscopy and X-ray diffraction, these results formed the chief basis of the sliding filament theory, now universally accepted.

Her later work, much of it in collaboration with Professor J. Lowy, was almost all carried out with the electron microscope. Most of it was related to two problems: the structure of muscles of molluscs and other invertebrates, and the structure of the thin filaments. Hanson and Lowy were the first to obtain isolated thin filaments, and these showed clearly the helical arrangement of the actin monomers. Later work, on which she was still engaged at the time of her death, was concerned with the position of other components of the thin fila-

ments, tropomyosin and troponin.

Aside from her own investigations, she played a very great part by inspiring the muscle team that she gradually built up. Her name appeared on papers only when she had actually taken a major part in the experimental work, but all the other work from the unit, whether electron microscopy, X-ray diffraction or protein chemistry, owed a tremendous amount to her interest, encouragement and criticism, and to her wide knowledge both of the muscle field and of biology in general. Under the influence of her personality, the unit became an exceptionally happy place, where there was excellent cooperation between the members, and where visitors were made welcome.

She was elected to the Royal Society in 1967. She was outstandingly friendly and helpful towards everyone she had to do with, and will be deeply missed by a wide circle of scientific colleagues and other friends. She was unmarried.

Announcements

University News

Professor C. Michael has been appointed to the chair of theoretical physics, **University of Liverpool**.

Dr J. T. Owen has been appointed to the chair of anatomy, **University of Newcastle upon Tyne**. **Professor A. Mitchell** has been appointed to the William Cochrane Chair of Metallurgy and Engineering Materials, **University of Newcastle upon Tyne**.

Professor W. Williams has been appointed Professor of Agricultural Botany, **University of Reading**.

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