Michael William Blackburn Bradbury

1930–2013

Mike Bradbury was born in Capetown, South Africa and educated at Sherborne School, Dorset. In 1949 he was awarded an Open Scholarship to Christ Church, Oxford. He obtained an honours degree in Physiology in 1952 having been awarded inter alia, a Theodore Williams Scholarship in Human Anatomy. Mike completed his clinical training at St. Bartholomew's Hospital in the East End of London and graduated BM, BCh from the University of Oxford in 1956.

Mike returned to Oxford in the laboratory of RV Coxon presenting a thesis in 1962 entitled “Transfer and Distribution of Urea in the Body”. Mike published widely on the blood–brain barrier and the transport phenomena across the cerebral microvasculature and also the control of the composition of the brain extracellular fluid and cerebrospinal fluid. A major opus was the publication of his monograph volume “The Concept of the Blood–Brain Barrier” in 1979 which reviewed and updated the entire rapidly-expanding field. Known as ‘the blue book’, on account of its striking blue dust jacket and binding, its presence was a must on the bookshelves of colleagues and research students.

After Oxford Mike returned to London to a post of Research Assistant, supported by the Medical Research Council, where he worked with and was highly influenced by Hugh Davson who was a towering figure in blood–brain barrier and cerebrospinal fluid research. In 1965 he became Assistant Professor of Physiology at the University of California and Research Physiologist Cedars-Sinai Medical Center and worked with Bill Oldendorf, a pioneer in the quantification of transport phenomena at the blood–brain barrier.

Returning to the UK in 1968 he was appointed Senior Lecturer in Physiology, St Thomas Hospital Medical School, then Reader in Physiology, King's College London, in 1972, being made full Professor in 1977. During this period he made a vigorous contribution to Departmental and College life serving as Chairman of the Integration and Steering Committee and developing a new undergraduate medical curriculum. He was active at the London University level serving both as Secretary and Chairman of the Board of Studies in Physiology, and also the Academic Advisory Boards of Science and Medicine. He became a Member of The Physiological Society in 1964 and served on the Editorial Board of The Journal of Physiology from 1981–1988.

During a visit by Cliff Patlak and Ron Blasberg, from the National Institutes of Health, Bethesda, Maryland, Mike provided the intellectual concept of whether it was possible to mathematically compensate for a falling concentration of solute in blood in order to more accurately calculate its rate of brain penetration. In turn, Cliff presented the solution in Copenhagen which led to Albert Gjedde first applying the analytical technique to postisron emission tomography studies in animals and man. Thus the method of multi–time–point regression analysis was born. This approach remains the basis of the most accurate and sensitive methods for measuring solute uptake by the brain and is acknowledged as being the ‘Gold Standard’ for comparative studies of brain solute uptake (still called the Patlak plot).

When Mike retired a Festschrift was held in his honour at Kings, attended by over 100 of his colleagues and former students, a mark of his significant international reputation. The collected conference proceedings were published in a volume “New Concepts of a Blood–Brain Barrier”. Mike had a sharp, open and enquiring mind. At one point, in spite of some scepticism, he was advising the Physics Department on whether it was possible for practitioners like Uri Geller to generate electromagnetic potentials which made his apparent feats possible and whether these could be measured, and was also investigating the possible mechanisms of acupuncture.

In retirement Mike used his Professor Emeritus status to the full, he was a regular visitor to the labs of colleagues for lively discussion and was an invaluable mentor and critic to a host of research students. Mike’s characteristic and penetrating laugh always announced his presence. A retirement project was writing a volume on the colonization of North America. Sadly this project was not finished.

Privately Mike was a wonderful host to his friends and colleagues and also an enthusiastic yachtsman. His wife, Anne, survives him together with a daughter, Joanna, and two sons, Nicholas and Timothy. Mike died peacefully on the 9 February 2013 in Blandford, Dorset. Mike's undergraduate lectures were always lively, informative and entertaining; he will be remembered fondly by generations of medical and science students.

David Begley