John Richard Pappenheimer
1915–2007

John Richard Pappenheimer, George Higginson Professor of Physiology, Emeritus, at Harvard Medical School died on 9 December at the age of 92.

John Pappenheimer’s work in capillary permeability and molecular sieving are classics in physiological literature. He contributed valuable research to a wide range of disciplines within physiology: capillary permeability, respiratory physiology, blood-brain CSF transport, the neurochemical aspects of sleep, and most recently to the understanding of the absorption of sugars and amino acids in the intestine.

Born in NYC, Pappenheimer attended the Lincoln and Loomis schools. He received a BS from Harvard College and a PhD from Clare College, Cambridge, England. In 1953 he was awarded the lifetime Career Investigator position from the American Heart Association for his work on capillary permeability and in respiratory physiology. He was appointed the George Higginson Professor at Harvard Medical School in 1969. He was a member of the American Physiological Society (President 1964–1965), the Academy of Arts and Sciences, the National Academy of Sciences and Honorary Member of The Physiological Society. He published numerous articles of original work over a span of 70 years.

He collaborated with colleagues from around the world, including Frank Winton, Glen Millikan, Bjorn Folkow, Manfred Karnofsky, JM Krueger, J Madara and Charles Michel.

An avid mountain climber, skier, gardener, tennis player, woodsmen, and ‘cellist, John Pappenheimer embodied the Renaissance man. In 1949 he married the violinist Helena F Palmer, with whom he shared a passion for quartets. Together they raised four children, three golden retrievers and numerous goats. He leaves behind his wife of 58 years, Helena Palmer, Cambridge MA, three children (Will Pappenheimer, NYC/Tyringham MA, Rosamond Zimmermann, Lexington MA and Rick Plant, Melbourne, Australia), five grand children (Leo and Martha Zimmermann, Rudy Ott, Ramsay and Freya Plant).

Rosamond Zimmermann

Charles Michel writes:
John Pappenheimer was unique among 20th century physiologists in the wide range of topics that he influenced, attacking different questions with imaginatively designed experiments and bold reasoning. During his period as a research student of Frank Winton in the 1930s ’Cambridge he learnt the methods of classical mammalian physiology and he went on to combine these skills with a rigorous quantitative approach and remarkable grasp of physical principles. These qualities are most conspicuous in his two classic papers on capillary permeability in 1948 and 1951. The first reveals a close attention to experimental detail and describes highly reproducible results leading to clear conclusions. The much longer 1951 paper uses the same experimental methods in an imaginative experimental design to make the first estimates of microvascular permeability and then develops a new theory of restricted diffusion through membrane pores to interpret the data. The latter is itself a tour de force.

This work on microvascular permeability was carried out with two visiting post-doctoral fellows (Soto-Rivera and Borrero) and a research student (EM Renkin) when John Pappenheimer was in his mid 30s. By the time he was 40, his other investigations had had a major impact on studies of muscle blood flow, haemodynamics, on measurements of respiratory dead space and on the autoregulation of renal blood flow. In addition, he had published papers with Winton on the effects of diuretics in the isolated perfused kidney and spent the period 1940–1945 monitoring hypoxia in USAF pilots and developing onboard oxygen generators for aircrew. In the second half of his life he would go on to make the first quantitative measurements of CSF secretion and drainage in conscious animals, make major contributions to the central chemical control of breathing, pioneer the investigation of the neurochemical basis of sleep and then – after retiring when he was well into his 70s – publish three sequential papers in The Journal of Membrane Biology on intestinal absorption. In all these investigations he carried out experiments himself and sometimes with a research student or a post-doctoral fellow. He continued to work on intestinal absorption seeing his last full paper published in The Journal of Physiology when he was 88.

Some of his conclusions led to controversy and his theory for the autoregulation of renal blood flow was shown to be incorrect. He had no regrets about this, pointing out that at the time he put forward his ‘plasma skimming’ theory, it was clearer than any other idea of autoregulation, and that it had provoked others to carry out experiments to disprove it.

This attitude is stated at the end of his Bayliss-Starling lecture (on sleep) at UCL in 1982, when he quoted Bayliss ‘... it is better to hold to a well-understood and intelligent opinion even when it is wrong, than to be content with a (muddle-headed) mixture of conflicting views ...’
From his experiences as a research student, John Pappenheimer retained a deep affection for this country and particularly for Cambridge and for The Physiological Society. He greatly valued his Honorary membership of The Society and took a continuing interest in the Society’s development. Apart from numerous brief visits and the occasional holiday in the UK he spent the academic year 1971/72 as a visiting fellow at Churchill College Cambridge and 1975/76 as George Eastmann Visiting Professor at Oxford. An internationalist, he was critical of the inward looking attitudes of some of his American colleagues and devoted much time to the IUPSt, serving for 9 years on its Council.

I first met him nearly 40 years ago and, while initially being in awe of his legendary reputation, was delighted by his friendliness and encouragement, particularly as I soon saw how devastatingly critical he could be in discussions at scientific meetings. As I came to know him informally, casual conversations revealed his astonishing breadth of knowledge of English and American literature, of world history and current affairs, quite apart from music, which was probably equal to science in his priorities. It was immensely stimulating to talk to him and even when he was in his late 80s he was full of challenging questions and gentle humour. It was a great privilege to have known him and worked with him for undoubtedly he was one of the greatest physiologists of the 20th century and a very remarkable and delightful person.

The Society also notes with regret the deaths of Margaret Stanier and Peter Lewis.

Margaret became a Society Member in 1964. Based at Babraham, she was a Fellow of Newnham College, Cambridge where she was well known to many medical students.

Peter, a pioneer in the cholinesterase field, became a Member in 1954.

John Ramsey Bronk
1929–2007

Ramsey Bronk, first Professor of Biochemistry at the University of York, died at the age of 78 in Oxford.

Ramsey grew up in Pennsylvania and was exposed to the company of scientists at an early age. His father, Detlev Bronk, was President of the then Rockefeller Institute (now Rockefeller University) and later of the US National Academy of Sciences. After graduation from Princeton University, Ramsey came as a Rhodes Scholar to Oxford in 1952. There he studied for his doctoral degree in the laboratory of the great intestinal physiologists Fisher and Parsons, where he met his wife Sylvia. They returned to Washington in 1956, where they both worked in the National Institutes of Health. Two years later, Ramsey was appointed as Associate Professor of Zoology at Columbia University, where he became full Professor shortly before coming to York. Ramsey was appointed as Professor of Biochemistry by York’s first Vice-Chancellor, Lord James, to the Department of Biology headed by Mark Williamson; Ramsey arrived in October 1966 and remained until his retirement in 1997.

Ramsey was instrumental in setting up and developing the very successful biochemistry degree course run jointly by the Departments of Biology and Chemistry. He oversaw the provision of equipment essential to the successful launch of biochemistry teaching and research at the University. Many staff had cause to be grateful to Ramsey for he was very supportive of staff at all levels. In particular, Ramsey took a special interest in the technical staff and matters affecting their welfare and career development long before the more formal systems of today. He also played a key role in setting up cancer research in the Biology Department with laboratories funded by Yorkshire Cancer Research.

Ramsey had a deep understanding of metabolism, which formed a large part of his teaching. He wrote two major successful textbooks; one, Chemical biology, which reflected the nature of the York degree course, and the other, Human metabolism, which I subsequently used as a textbook for the course we had taught in together. His tutorials, in particular, were very much appreciated by the students. In research, Ramsey was one of the first to appreciate the importance of mitochondria and he produced ground-breaking papers on the regulation of oxidative phosphorylation by thyroid hormones. Subsequently he worked extensively on metabolic aspects of chemotherapeutic drug delivery by peptide transport across the small intestine. His long-standing collaboration with Richard Boyd (Oxford) and Pat Bailey ( Keele) contributed strong evidence for the now accepted view that peptide transport is proton-dependent, as opposed to the sodium-dependent transport of many other nutrients. Their work also contributed much to the structural understanding of the delivery of peptide-linked drugs. Always happy to suggest new ideas, Ramsey transformed me in mid-career from a structural biologist to an intestinal physiologist simply by asking me, in the course of one of our many chats, if I would supervise a final year undergraduate project on intestine.

Brought up in America, but a lover of all things English, Ramsey became essentially a mid-Atlantic figure and was also a strong supporter of European Science. He was a founding member of, and regular contributor to, the European Intestinal Transport Group and Chairman of the European Editorial Committee of Physiological Reviews, as well as a Distributing Editor for The Journal of Physiology.

Ramsey was an expert yachtsman, an accomplished carpenter and an able cook. A great family man, he leaves behind his wife of 52 years, Sylvia, their sons, Richard and Christopher, who are both in academic life, and four grandchildren, Justin, Philip, Edmund and Eleanor.

George Kellett