Alan Chipperfield

Alan Chipperfield died in October 2011 at the age of 73. Alan retired in the 1990s from the Department of Physiology in Dundee where he had been, respectively, senior Lecturer and Reader since his appointment in 1974. Prior to that he had worked in Ron Whittam’s laboratory in Leicester as a senior post-doc. His interests and expertise were in the areas of membrane transport physiology and he was distinguished for his work on sodium ion fluxes both through the sodium pump and through co-transporters (he was a pioneer in the area of sodium–potassium–chloride co-transport). In later years he had become particularly interested in factors affecting intracellular chloride concentrations and membrane transport processes involved in setting these in smooth muscle cells; this more recent work was carried out in collaboration with a colleague in the same department, Dr Sandy Harper. However, during his career Alan carried out most of his published research by himself or with a relatively small number of graduate students.

Before he ‘became a Physiologist’ Alan had trained as a research chemist as an undergraduate in Oxford, subsequently undertaking a PhD in Janet Vaughan’s MRC unit with a distinguished group of colleagues working on the chemistry of plutonium; he then moved as a post-doc to laboratories in London where he worked on histone biochemistry before subsequently joining the Whittam Lab in Leicester. During this highly productive period he published six papers in collaboration with Ron Whittam FRS, one in Nature and one important review on the reaction mechanism of the sodium pump in which a transition state complex between internal Na+ external K+ and ATP-Mg2+ was featured.

As a teacher Alan was a somewhat cynical figure who always tried to make the physic–chemical basis of biology clear, something that not all medical or dental students particularly relished. However, he was thoughtful and kindly in small group discussion even if the students were exposed to copious tobacco smoke. Following retirement Alan kept an interest in the scientific fields in which he had worked but he stayed a rather solitary figure in his personal life. He brought distinction to a physiology department in Dundee that was revitalised by the appointment of Ole Peterson as a young Professor in the mid-1970s. Curiously, despite his broad chemistry-based background, he did not embrace the opportunity to include genetic approaches in his own studies, which thus remain rather separate, as did much of UK physiology through the 70s and 80s. By the time cell and molecular physiology became a very lively area in the UK Alan has really passed the peak of his career as an experimentalist; however, his ability to work with electrophysiological colleagues and his realisation of the importance of ion activity measurements made his later work including investigation of pathophysiological mechanisms in hypertension both interesting yet topically ‘translational’.

Alan was elected a Member of The Society in 1978.