

A passionate believer in the systems approach to physiology, Rob was concerned at the loss of the skills needed for integrative physiology. He led the Society's involvement in a collaborative initiative with the British Pharmacological Society to start vacation courses for undergraduate training in *in vivo* techniques. Now in their third year, these courses are running at three locations, the feedback is excellent and they are undoubtedly a positive move towards redressing a diminishing skills base.

Rob Clarke obtained a BSc in physiology at the University of Manchester in 1978 before moving to University College London to work for his PhD with Jim Pascoe. After a post doctoral fellowship in Bruce Matthews' lab in Bristol, he accepted a lectureship in the Department of Physiology and Environmental Sciences (now Animal Sciences) at the University of Nottingham and was promoted to Senior Lecturer in 1995.

Rob was fascinated by nociceptive reflexes and how spinal processing of nociceptive information could be tempered by other nociceptive inputs that might be activated during surgical trauma or other extreme circumstances. He leaves a legacy of more than 50 papers, many published in *The Journal of Physiology*. Rob was a hands-on research scientist, never happier than in his 'lab-in-a-field' in the rural setting of the Sutton Bonington campus at Nottingham University. He was particularly excited at the prospect of taking his work forward by leaving behind the constraints of working in anaesthetised preparations and moving into the world of instrumented freely moving animals.

As well as a committed research worker, Rob was an innovative teacher who taught physiology across the board at undergraduate level. The latest edition of his textbook *Physiology at a glance*, co-authored with Jeremy Ward and Roger Linden, is due to be published in 2004 by Blackwell Publishing

Rob Clarke died in August after a lengthy battle with cancer. It is typical

of Rob that he endured his ill health with stoicism and good humour and continued to work and to actively support the Society until earlier this year. Remarkably, he was even able to see a constructive side to his misfortune, once remarking how much better he felt that his lectures on pain had become as a result of personal experience. He is survived by his wife Susan and two sons.

Thelma A Lovick
Department of Physiology, University of Birmingham, Birmingham, UK

In recognition of his contribution to in vivo physiology and to the training of young physiologists, Pfizer Ltd are sponsoring a Rob Clarke Memorial Symposium to be held in conjunction with a Physiological Society meeting in 2005. Further details will be posted on the website: www.physoc.org.

Oliver Holmes

1933 – 2004



Oliver Holmes, Honorary Research Fellow in the Faculty of Biomedical and Life Sciences in the University of Glasgow since retiring as Senior Lecturer in 1998, died at home on 13 June after a short illness with rapidly progressive cancer. He had been a Member of the Physiological Society since 1961, and from 1972–76 a Committee member and Convenor of the Sub-Committee on Education and Information.

As an intercalating BSc student at University College in the 1950s, followed by an MSc as a Bayliss-Starling Scholar with GL Brown, Oliver was inspired by neurophysiology. But first he completed his medical degree and pre-registration posts. Returning to physiology, he spent a year in Liege

(teaching in French!). Back in London, as an MRC Fellow with GD Dawson at the Institute of Psychiatry, he began the study of experimental epilepsy that became his life's work. He went next to Leicester as a Senior Lecturer, then as a Special Wellcome Research Fellow to the Royal Postgraduate Medical School with Professor Sir Gordon Robson and finally, in 1975, to the Institute of Physiology in Glasgow.

His investigations into the neural circuitry responsible for epilepsy involved sophisticated analysis of electrical activity in the different layers of the cerebral cortex, using anaesthetised rats with chemically induced epileptiform foci. At an early stage, he realised the need to educate himself further in mathematics, and took courses in this and in computer programming, to enable the complex cross-correlations that were required. Much later, in his 50s, he further advanced his analytical skills by taking an Open University Hons BA in mathematics.

Research-wise, Oliver was a loner among staff colleagues in Glasgow, but was rarely sole author of his many publications. A succession of PhD and Hons BSc students presented papers to the Society and published with him. Erstwhile postgraduate students testify to his inspirational influence and also to his unfailing kindness and generosity.

He also collaborated widely with clinical and academic pharmacologists, psychologists, chemists and anatomists, attracting regular grant support. He and these co-workers contributed significantly to basic epileptology. Latterly, again with grant support and in characteristically innovative fashion, he had turned to research on gastric secretion.

Oliver's teaching commitment in Glasgow was well above average not only in man-hours, but also in willingness and diligence, including organisation of courses and examinations as well as direct class contact. Modest in some contexts to the point of diffidence, Oliver could be outspoken particularly where students and teaching were concerned. An

advocate of a structured approach, he produced many series of class exercises and problem sets (long before 'PBL!'), 'to give the students opportunities to use their physiological knowledge rather than merely to regurgitate it.' Thanks in part to his own medical education he was well able to assist understanding of any aspect of human physiology, as witness his student texts not only on human neurophysiology but also on human acid-base physiology, and publication of MCQs, spanning the whole field. He was continuing to enjoy contact with students as a 'facilitator'.

Interwoven with all this rigorous application to his work, Oliver was a devoted family man, and an accomplished 'cellist. At a summer music school in Moravia he met the Czech 'cellist, Marie, who became his wife in 1971. Of their three sons and one daughter, two now work in computing and two are medical students. Family music and pupils' concerts were a feature in the friendly family home. Oliver played with the Glasgow Chamber Orchestra. A perennial student, he enthusiastically took up musical composition in his retirement.

Oliver had no time for small talk or for socialising for its own sake, but always contributed significantly to focused discussion. Gently courteous in everyday encounters, he was a valued friend and a staunch colleague. His contribution as a physiologist and educator had by no means ended. Those of us familiar with the healthy hardy image - about town on his bicycle - and aware of his activities in 'retirement', were dismayed and deeply saddened by his rapid decline and untimely death. In Otto Hutter's words, quoted by Oliver's son at the funeral, '...in him were combined an exceptionally fine intellect, integrity of the highest order, human warmth and kindness...'

Sheila Jennett
Glasgow, UK

The Society also reports, with regret, the deaths of Michael H Harrison and Harry Berrington Stoner since the last issue of *Physiology News*.

Quantitative methods in neuroscience: a neuroanatomical approach

Edited by SM Evans, AM Janson and JR Nyengaard.
2004, Oxford University Press. 327pp, £65.00
ISBN 0-19-850528-0

Stereological techniques may yield data about the three dimensional parameters of an object, including the likely number of cells, the volume of a particular object, or its surface area and length, but sampling must be randomized to give every item of a population the same chance of being sampled. This book outlines this complex area in relation to neuroscience.

As the editors say in their General Introduction, this is 'a cookbook of stereological methods for neuroscientists', rather than a reference source for stereologists. That being said, there is a great deal of detail in each of the chapters, which may occasionally obscure the biological messages derived from the techniques, but the authors have made great efforts to keep such details to a minimum. There is an introductory chapter followed by a case study to determine neuron numbers in subpopulations of a trisomic mouse (Ts65Dn) model for Down's syndrome, using both stereology and multivariate analysis. The book then divides into five sections of unequal length (Sections 1 to 3 each have an introductory chapter to set them into context):

- section 1 – Number (5 chapters)
- section 2 – Volume (3 chapters)
- section 3 – Length and surface (3 chapters)
- section 4 – Second order stereology (1 chapter)
- section 5 – Cell culture (1 chapter).

The forms of analysis cover many areas from counting *in situ* hybridized neurons, through estimating the number and volume of immunohistochemically stained neurons in a complex brain

region to estimating the length of nerve fibres and their orientation. Spatial distribution is also covered as are methods for quantifying neuron numbers and volumes in primary dissociation cultures of the hippocampus.

The book is a practical tool for the increasingly large number of neuroscientists who require specific stereological techniques. It is both informative and valuable, in that it suggests appropriate methods and statistical treatments for resolving particular types of stereological problems.

Bill Winlow

MCQs and EMQs in human physiology

6th Edition. By IC Roddie & WFM Wallace
2004, Hodder Arnold. 352 pp, £16.99
ISBN 0-340-811919

The 6th edition of this well established question and answer book provides over 3,500 opportunities for you to check that you have read the question properly and have some idea of the answer. Standard true-false MCQs form the bulk of the book, but there is also a substantial selection of extended matching answer questions (EMQs), as well as a good section of interpretative questions including graphs, tracings and tables.

In their preface the authors state that they have tried to avoid excessive detail concerning facts and figures, including some which are of value in clinical practice, but generally concentrating on conceptual aspects of physiology. They also comment that the questions are intended to cover both basic and applied aspects of the subject, but with the latter designed so that answers can be deduced by using basic physiological knowledge. Overall, the book succeeds admirably in these aims, reflecting the experience and the interest of the authors in setting clear, concise questions with valuable