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PREFACE

A symposium on "Recent Advances in Steroid Endocrinology" was held at the Royal Society of Medicine in London on 1 November 1990 to mark the retirement of Professor V. H. T. James from the Department of Chemical Pathology at St Mary's Hospital Medical School, London.

The proceedings of this symposium are published in this issue of *The Journal of Steroid Biochemistry and Molecular Biology* in recognition of the contribution that Professor James has made to steroid endocrinology both nationally and internationally.

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A TRIBUTE TO PROFESSOR VIVIAN H. T. JAMES

Professor James has had a distinguished career in research, predominantly in the field of steroid endocrinology and particularly endocrine control mechanisms and their application in the diagnostic investigation of disease. His first post was with the Medical Research Council as a member of the scientific staff. Here he was assigned to a joint team, MRC—Glaxo Laboratories, which was given the task of developing a commercial method for the production of cortisol. At that time, only extremely small amounts of this steroid were available for therapeutic purposes, and we were dependent upon supplies from the U.S.A. It was therefore considered essential to have a U.K. source of supply. The starting material was a plant sapogenin and the work required the development of a complex synthetic route to the corticosteroids. This project required three years to bring to a successful conclusion and produced the commercial method for corticosteroid synthesis, which was then used for the next few decades. During this time he obtained his Ph.D. from the research which he did on the plant sapogenins, which led to the determination of their structure and the discovery of some new plant steroids.

This work stimulated a long-term interest in steroid endocrinology and when he left the MRC to join the new Department of Chemical Pathology at St Mary's Hospital Medical School headed by Albert Neuberger, he set out to develop methods which would be of sufficient sensitivity to be able to reliably measure steroid hormones in blood. His intention was to apply these techniques to the investigation of endocrine physiology and endocrine disorders.

Investigation of the fluorescent properties of steroids led to a suitably sensitive automated assay for plasma cortisol and this was applied to the exploration of novel techniques for the investigation of hypothalamic–pituitary–adrenal (HPA) function in man. Using the observation that hypoglycaemia caused an increase in plasma cortisol levels, together with Professors V. Wynn and J. Landon, he investigated in detail the mechanism of this phenomenon and used the results to produce a protocol which, for the first time, enabled HPA function to be evaluated quickly and quantitatively in patients with suspected endocrine disease. Taking advantage of the newly available synthetic ACTH, a rapid and simple test of adrenocortical function was developed, which made it possible to investigate patients quickly, safely, and on an out-patient basis. These two tests, developed in the mid 1960s, are still regarded as the most definitive tests available for investigating HPA function and are used routinely in endocrine departments worldwide.

Using these investigative methods, he then went on with other clinical colleagues to explore the pathophysiology of various endocrine disorders and, in particular, to examine the clinically important problem of pituitary adrenal suppression caused by the administration of corticosteroids. This work defined the speed of onset, the effect of dosage, and the time taken for endocrine function to be restored to normal after steroid administration ceased. The beneficial effect of alternate day steroid therapy on endocrine function was also established.

Further assay development work produced the first isotopic method capable of measuring aldosterone in human plasma, and with colleagues of the Medical Unit, he was able to investigate and define control mechanisms for this steroid hormone and examine various aspects of its pathophysiology.

Another major interest is in the endocrine aspects of breast cancer. Using infusions of radiolabelled steroid, together with Dr H. Braunsberg and Professor W. T. Irvine, he showed that there was accumulation of oestrogens in human breast tumours and demonstrated the presence of specific binding components. This work was the first demonstration of steroid receptors in breast tumours. Further work showed that oestradiol was accumulated selectively and led to the postulate, which is now widely accepted, that both normal and malignant tissues can modulate their own endocrine environment by mechanisms involving local regulatory factors. Work at St Mary's has demonstrated that oestrogen synthesis in tissues is an important source of the hormone, and that this process is under the local control of paracrine and autocrine factors, which operate by modulating appropriate enzyme systems. These factors are also growth factors and it has been demonstrated that both growth inhibitory and growth stimulatory factors are produced by endocrine tumours.

Research papers bearing the name of V. H. T. James now number in excess of three hundred and he has been editor and co-editor of several books on endocrinology. As well as serving on a number of editorial boards for several years, he was founder-editor of the British journal *Clinical Endocrinology*.

In addition to his research activities, Professor James has played a major role in promoting and developing the science of endocrinology in the U.K. and internationally. He served for many years as the Scientific Secretary to the Medical Research Council's Clinical Endocrinology Committee, which through its sub-committees covered all aspects of endocrinology, basic and clinical. He subsequently became Chairman of the Council's Human Pituitary Hormone Committee, a post he held from 1976 to 1982. This had responsibility for the preparation of clinical growth hormone and its distribution to growth retarded children. Other work for the MRC has included sitting on MRC grant committees, the MRC Systems Board and the Scientific Committee of the Arthritis and Rheumatism Council.

Professor James recognized early in his career that successful clinical endocrinology would require endocrine assays of high quality to be widely available and was involved with the Supra-Regional Assay Service from its inception in 1974. This service provides a range of rarely requested or difficult assays for Health Service Laboratories in the U.K. He has been Chairman of the Supra-Regional Assay Service Directors Committee and the Executive Committee. Having always demanded high standards of analytical work in his own laboratory, Professor James has been concerned for some time with the problem of achieving high standards of laboratory practise in National Health Service laboratories throughout the U.K. and is the Chairman of the National External Quality Assessment Scheme for Hormones. This committee is responsible for monitoring and controlling analytical standards in Health Service clinical chemistry laboratories.

Professor James has served on a number of professional committees, including the Society for Endocrinology of which he is now Treasurer, having previously held the offices of Programme Secretary and General Secretary; for the Endocrine Section of the Royal Society of Medicine he has been Senior Secretary and President. He was a member of the group which founded the British Endocrine Societies and in 1982 organized their inaugural joint meeting in London, the first of a series of annual meetings which has proved extremely successful. He is currently Treasurer of the British Endocrine Societies.

In promoting British endocrinology internationally, Professor James is the Deputy Secretary General of the International Society of Endocrinology and has served on two occasions as the U.K. representative on the programme organizing committee for the Society's international congresses. He has been at various times Secretary, Treasurer and Chairman of the International Organizing Committee for the International Congress of Hormonal Steroids. More recently he has been particularly concerned with bringing together the European Endocrine Societies to advance research, training and collaboration in Europe. He chaired the working group which eventually founded the European Federation of Endocrinology in 1982 and was elected the first Secretary General of the Federation, a post which he still holds.

Several endocrinologists from abroad have been trained in Professor James' department and for his assistance in promoting endocrinology in Italy he was awarded the honour of Fiorino d'Oro by the City of Florence, an honour normally reserved exclusively for Italians.

As Professor of Chemical Pathology at St Mary's Hospital he has been active in promoting clinical chemistry in the U.K. He has examined regularly for London and other universities for higher degrees and is currently the Senior Examiner in Chemical Pathology for the University of London. He has been Chief Examiner for the M.Sc. in Clinical Biochemistry in London for several years and has also served as the external examiner for the M.Sc. in Clinical Biochemistry for the Universities of Surrey, Leeds and Newcastle. He is also Chairman of the University Specialist Sub-Committee on Chemical Pathology and Consultant in Clinical Chemistry to the University of Kuwait. He has been senior examiner for the Mastership in Clinical Biochemistry and is examiner for the Membership of the Royal College of Pathologists.

Always in demand as a chairman on account of his outstanding ability to summarize succinctly the most convoluted argument and to politely bring even the most long winded speaker to a timely conclusion, he has also contributed to local organizations. The North West Thames Regional Clinical Chemistry Sub-Committee, the Division of Pathology at St Mary's Hospital and the Safety Committee at St Mary's Hospital have all benefited from periods of his chairmanship.

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