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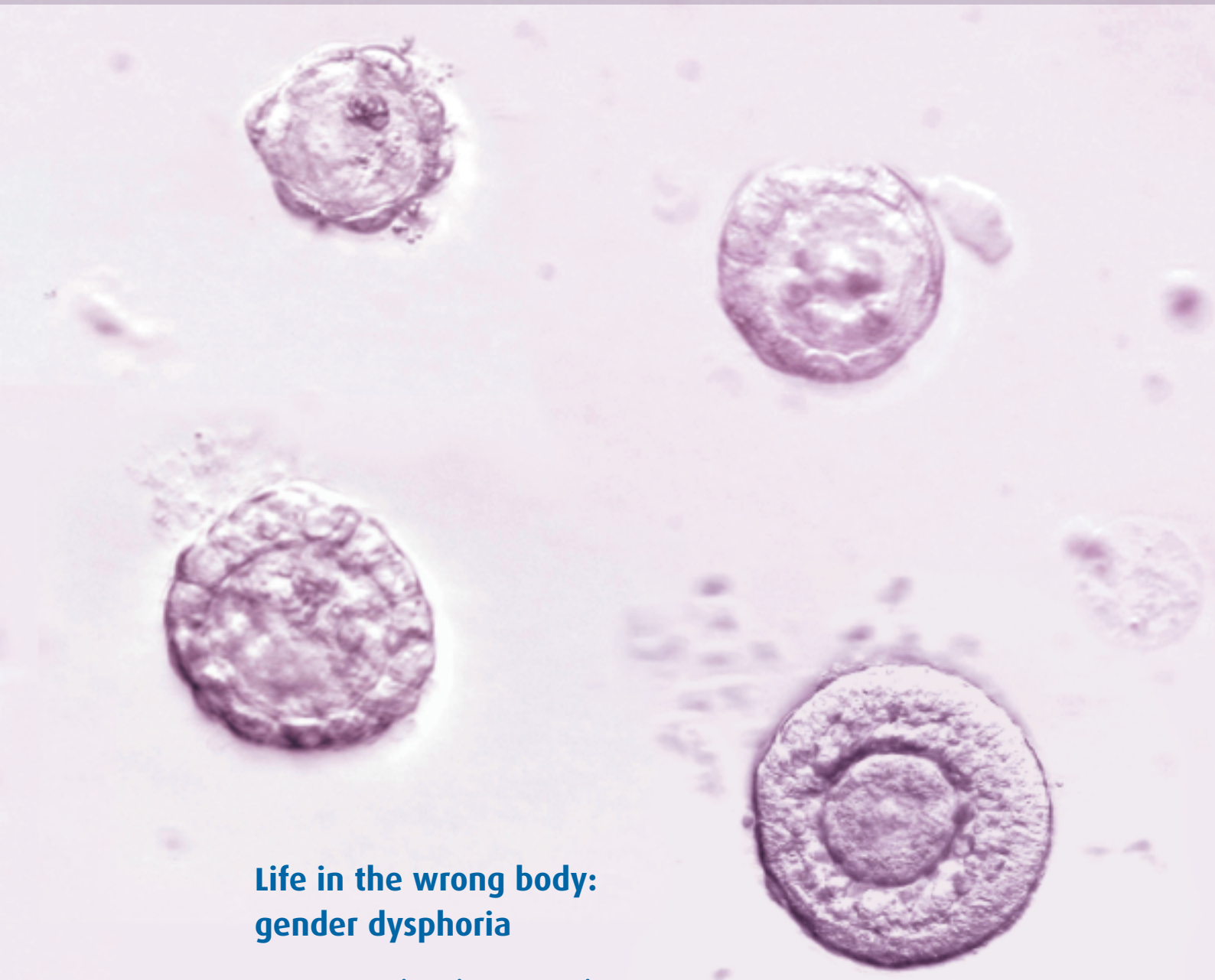
The Endocrinologist

THE NEWSLETTER OF THE SOCIETY FOR ENDOCRINOLOGY • **ISSUE 76** SUMMER 2005



Life in the wrong body: gender dysphoria

Proteomics in practice

A web of confusion: patients and the internet

Thanks a million, BioScientifica!

A lab rat speaks out...

100 YEARS 1905 2005 OF HORMONES

EDITORIAL

Cover shows preantral follicles isolated from the human ovary. Photograph kindly supplied Suman Rice (St George's Hospital Medical School, London).

If members have any images that they think would make good covers for The Endocrinologist, *the editorial office would be delighted to see them.*

► Money makes the world go round! This issue of *The Endocrinologist* has a monetary flavour, as we take an inside look at two important sources of Society income. On page 14, Sue Thorn marks the million pounds so far passed to the Society by trading company BioScientifica. Meanwhile Paul Stewart, the retiring Editor of *Clinical Endocrinology*, explains how that journal also greatly boosts Society funds (page 4). So, if you have ever wondered exactly what BioScientifica does, how it differs from the Society and how it provides us with considerable income, then Sue's article will enlighten you. Paul, reflecting on his 4 years as Editor, describes *Clinical Endocrinology's* increasing success, its rising impact factor and how around £125 000 of its profits benefit Society members each year through the Clinical Endocrinology Trust. Your ideas for further uses of the Trust's money are welcome (see page 7).

Keep up with the Society's activities by reading the Committee News on page 5. Basic scientists may be particularly interested to learn of a new Science Committee Strategy Group which will examine how the Society can best support their needs (see also page 7). The Society wants to address the concern of some members that basic endocrinology is relatively poorly represented compared with clinical endocrinology.

On page 8, the Gender Trust, a UK registered charity for transsexuals, explains the difficulties faced by people who have a brain and body mismatch, and how this gender dysphoria is diagnosed and treated. The Trust provides information, education and support regarding transsexuality.

We can't escape the growing technology of '-omics'. Page 15 of this issue has an extremely lucid explanation of proteomics, courtesy of Paul Fowler and Susan Liddell. They explain why the proteome is so large, and describe the range of methodologies in proteomics and how to focus a proteomic experiment. And whilst Paul and Susan talk of trawling, Howard Jacobs talks about surfing - specifically about his patients' surfing, their internet searches and the erroneous and contradictory information they obtain from the web (page 13). Howard gives us pointers to what he considers to be excellent web sites.

'R Rattus' gives us a day in the life of a lab rat (page 16). It's not actually lab-based, but a typical day for an academic juggling teaching, tutoring, supervision, administration and bureaucracy and merely sniffing the lab. It sounds so familiar!

Last, but not least, on page 17 'Hotspur' describes the circumstances when a hot salt-beef sandwich, a solicitor and a wrist watch shattered his beliefs about the circulation of blood and lowered his estimation of William Harvey. A blood letting tale to put a smile on one's face.

SAFFRON WHITEHEAD

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Deadline for news items for the Summer 2005 issue: **19 August 2005**. Please send contributions to the above address.

Basic Science Review Lecture: call for abstracts

► Basic scientists who are no more than 6 years post-PhD should apply now to present a 30-minute review lecture during this year's annual Society meeting. The lecture can be on any endocrine subject (probably a recent or current area of personal research). Applications will be judged by the Awards Committee of the Society using the standard criteria of originality, scientific quality and general relevance/impact. The Society is offering a £500 honorarium for this prestigious award.

Applicants must be members of the Society for Endocrinology. They should be under 35, although older applicants may be considered in extenuating circumstances (please give details if relevant). Abstracts should be submitted on a single A4 sheet, accompanied by a mini-CV on a second A4 sheet. This should include your date of birth and up to five publications of relevance to the lecture topic. Please also supply the name, address and telephone number/email address of your head of department to assist in the selection process. Applications should be sent to Julie Cragg in the Bristol office no later than 27 June 2005.

Clinical scientists are encouraged to apply for the Young Endocrinologists Clinical Review Lecture, held at the Clinical Cases Meeting each year in February. Details will be sent out in the August mailing.

Clinical Excellence Awards

► For the first time, the Society is able to become a nominating body for Clinical Excellence Awards and we plan to support those Society members seeking awards at level 9 and above.

We are keen to have input into this scheme and would like to set up a small group of existing A and A+ award holders (under the old scheme) who will be asked to make or support nominations.

We would particularly like to hear from any A or A+ members based in London, Manchester and Scotland.

If you would like to join this group, please contact Rachel Evans or Julie Cragg in the Society office (rachel.evans@endocrinology.org or julie.cragg@endocrinology.org) as soon as possible.

Senior Membership

► If you are retired and have been a member of the Society for more than 15 years, you are entitled to be a Senior Member, free of charge. Please contact Julie Cragg in the Society office (julie.cragg@endocrinology.org) for further details.

Diamond Jubilee

► The Society is 60 years old in 2006. We plan to celebrate with a series of anniversary lectures during the annual November meeting - watch this space for further details! All Society journals and literature will bear a Jubilee mark throughout the year.

SOCIETY CALENDAR

5 July 2005
Society for Endocrinology Molecular Endocrinology Workshop at Summer School
St Aidan's College, Durham, UK

6-7 July 2005
Society for Endocrinology Advanced Endocrine Course at Summer School
St Aidan's College, Durham, UK

8 July 2005
Society for Endocrinology Clinical Practice Day at Summer School
St Aidan's College, Durham, UK

30 August-1 September 2005
Society for Endocrinology Endocrine Nurse Training Course
John Macintyre Centre, Edinburgh, UK

7-9 November 2005
196th Meeting of the Society for Endocrinology
Royal College of Physicians, London, UK

2005 SUMMER SCHOOL

CALL FOR MEDAL NOMINATIONS

► Nominations are now requested for recipients of the following medals, which are awarded annually by the Society, in recognition of outstanding contributions to endocrinology. Nominations should be sent to Julie Cragg in the Bristol office by 8 July 2005. Nomination forms and a full list of previous medallists can be found under 'About the Society' at www.endocrinology.org, or from the Bristol office.

2006 Society Medal (previously J M C Connell, R Eastell, P J Lowry, I C A F Robinson, P M Stewart, S O'Rahilly, S Franks and J R Seckl)

2006 European Medal (previously A Maggi, K Oberg, E Ghigo, I Huhtaneimi, B Vennström, J-Å Gustafsson, B Groner and E R de Kloet)

2006 Asia & Oceania Medal (previously K Kangawa, P Leedman, M J Waters, E R Simpson, I J Clarke, R Smith, J K Findlay and P D Gluckman)

2007 Dale Medal (previously R Kahn, W Vale, S R Bloom, D Baird, B McEwen, J Folkman, S Moncada and R P Ekins)

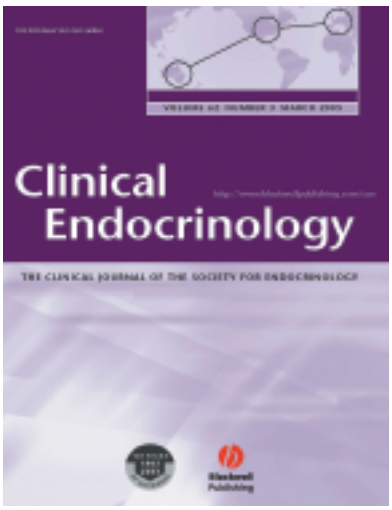
2007 Transatlantic Medal (previously K Korach, J S Flier, K Parker, J R G Challis, B O'Malley, J M Friedman, D M Stocco and J F Strauss III)

Clinical Endocrinology: the Society's clinical journal

Paul Stewart looks back at his 4 years as Editor of Clinical Endocrinology, a unique and thriving journal.

▶ Why be editor of a journal? That's sometimes hard to answer. Aside from personal gain and professional satisfaction, it might appear that one's efforts simply support publishers and their shareholders.

Nothing could be further from the truth for *Clinical Endocrinology*. Its ownership and management are probably unique, an arrangement which arguably contributes to its ongoing success. Whilst published by Blackwell Publishing, the journal became an official Society journal some years ago, through a partnership agreed between the publishers, the Society and the Clinical Endocrinology Trust. The partnership not only ensured a comprehensive portfolio of published material for Society members. The partnership importantly also gives the Society significant financial benefits, through a percentage of journal profits. These have increased by 25% during my editorship, currently providing about £90 000 per annum, which approximates to the collective income from the three other Society journals.



Additionally, *Clinical Endocrinology*'s profits fund the Clinical Endocrinology Trust (some £124 000 in 2003). The Trust finances many activities of benefit to the Society and its membership. These include travel grants, clinical and non-clinical fellowships and prizes, monies for clinical audits, and sponsorship of lectures at our annual meetings (see the article on page 7).

So, unlike many specialist journals, a large percentage of *Clinical Endocrinology*'s success feeds back into UK endocrinology and our national professional body. The process is symbiotic, with Society members playing a large part in the editorial management of the journal.

But *Clinical Endocrinology*'s role is not just to generate income. Our editorial policy has been to improve content, performance and international standing, which we are confident will increase the journal's impact factor. Previous editors and vibrant editorial boards have ensured that the journal has a reputation as a top clinical endocrine journal, in the UK and internationally. Dedicated editorial offices in mainland Europe, Oceania and North America have increased submissions from over 60 countries. An innovative online submission and refereeing system has improved performance, with good manuscripts reaching final acceptance within 90 days of submission, and those that aren't so good rejected within 25 days. Further time-savings in typesetting and printing have also reduced the period from acceptance to publication. Electronic publication happens within days of acceptance, at www.blackwell-synergy.com. Quality remains our hallmark, with average acceptance rates around 30%.

We have worked hard on the journal's content. Annual citation analyses have helped the editorial board make several changes, with a more aggressive approach to publishing state-of-the-art reviews and chatty commentaries that address issues of clinical practice or debate. Case reports were poorly cited but, fully appreciative of their novelty and interest, we have moved these to an expanded correspondence section. Finally, following a strategic review, the journal has undergone its first 'image' overhaul for 10 years, now boasting a new cover design and more user-friendly layout.

The impact factor has increased year-on-year for the last 4 years, and we eagerly await the 2005 data. Competition remains intense, with other journals in the field (notably *Journal of Clinical Endocrinology and Metabolism, European Journal of Endocrinology* and *Molecular and Cellular Endocrinology*) becoming more clinical. It is vital that *Clinical Endocrinology* continues to evolve to meet these challenges, but most important that it caters for you, its readership. We are always open to suggestions for improvements to any aspect of the journal; feel free to contact us at any time.

So as my editorship comes to an end, I can reflect upon 4 very happy years of involvement in an excellent venture and a real jewel in the crown for our Society. I have had the pleasure to work with numerous excellent editorial board members and I thank them for their industry. Particular thanks are also due to editors past and present (Ashley Grossman, Pat Kendall-Taylor, James Fagin, Peter Fuller, Jayne Franklyn, Stephen Judd, William Young), associate editors (John Bevan, John Newell-Price and Jonathan Webster) and special thanks to Elizabeth Whelan and her administrative team at Blackwell Publishing and to Sue Thorn and her team at the Society. John Connell will join Jayne Franklyn as Senior Editor from July 2005.

PAUL M STEWART

Members on the move...

A Chattopadhyay to Al Sabah Hospital, Kuwait; **Y Demssie** to Royal Lancaster Infirmary; **F L Geoghegan** to Ealing Hospital NHS Trust; **M Langdown** to Quest Diagnostics Nichols Institute, San Juan, CA, USA; **P O'Shea** to National Institutes of Health, Bethesda, MD, USA; **S H Ralston** to Western General Hospital, Edinburgh; **Shashana Shalet** to Salford Royal Hospital Trust; **T Skerry** to University of Sheffield Medical School; **A P Weetman** to University of Sheffield Medical School.

Congratulations... to Pierre Bouloux and Martin Hewison, who have been awarded Chairs.

Committee News

The latest from each of the Society's committees.

Council of Management

Council recently approved:

- Straken Ltd becoming an Ordinary level Corporate Member
- four applications for Senior membership
- the Society's Diamond Jubilee celebrations
- the Society audit projects policy
- a position statement on the use of animals in medical research
- the election of a Vice Chair for the Nurse Committee

Nominations are now invited to replace those Council members who are due to retire at the 2005 AGM (details in column on right).

Clinical

Summer School 2005 is to be held in Durham, with the Clinical Practice Day themes 'Controversies in the management of gut neuroendocrine tumours' and 'Controversies in the diagnosis and management of differentiated thyroid cancer'. The Moller Centre in Cambridge is the provisional venue for Summer School 2006.

The Committee have agreed that the Society should become a nominating body for the Clinical Excellence Awards for levels 9-12 (see article on page 3). The Society has contributed to the NICE appraisal on prevention of secondary osteoporotic fractures in post-menopausal women, and final guidance was issued in February. Comments have also been submitted to NICE on the appraisal of strontium ranelate; a decision is due in January 2006. A Committee representative attended a meeting on standardisation of growth hormone assay reporting, where a switch to mass units was agreed in principle. Professional organisations and medical journals will receive details soon.

Peter Trainer is the new Chairman of the Acromegaly Database Steering Group. The interdepartmental peer review system is progressing, with two visits completed and another three being planned. Steven Hunter, Karen Mullan, Andy Toogood and David Woods have been newly elected to the Committee, and John Bevan has been re-elected. Steve Ball (Newcastle upon Tyne) will be Programme Advisor from Spring 2006, and will shadow Pierre Bouloux until then.

Nurses

The Committee have agreed the format for the November 2005 Nurses session on bone-breaking diseases. The programme is complete for the 2005 training course in Edinburgh on 'Reproduction - from birth to the menopause'. Southampton is likely to be the course's venue in 2006. Keele University has confirmed that the level 3 module for adult endocrine nurses is progressing, based on an existing paediatric module. The Faculty of Health is offering a BSc in endocrine nursing this year with a masters degree course in 2007. Nurses interested in obtaining a PhD should contact Keele or their own local university direct. Nominations have been received to fill the two vacancies on the Committee.

Programme

The timetable, speakers and titles for the November meeting have been finalised, as well as abstract categories and markers. The preliminary programme is now available at www.endocrinology.org.

Publications

A hybrid open access model for *Endocrine-Related Cancer* will begin as soon as possible, now that the journal's free trial on HighWire has ended. This will mean authors have a choice of either paying a charge and the paper being free on-line immediately or not paying the fee and it being available only to the journal's subscribers. The Committee have also agreed that authors should pre-register clinical trials before submitting their results to Society journals. Discussions are to continue with an advertising agency, in order to increase the journals' advertising revenue.

Science

A new Science Committee Strategy Group will review the Committee's current activities and find out how the Society can best support the professional needs of basic scientists (see page 7). Scientific sessions for November 2006 and BES 2007 are in development. Eleanor Davies and Rob Fowkes are now Committee members, and Joy Hinson will also sit on the Committee as Council representative for education. Jenny Pell and Peter Jones have become full (rather than co-opted) members, to conform to the Committee's new remit.

A replacement is sought for Luke Noon, who has stepped down as Young Endocrinologist representative. Robert Abayasekara and Ian Henderson have retired from the Education Working Party (which oversees the Postgraduate Diploma in Endocrinology). Jenny Pell and Mary Forsling have been invited to join; Joy Hinson (Chair) and Tony Michael remain in post.

Call for Treasurer

Professor A White's 5-year term as Treasurer will finish in late 2006. Ordinary Members are invited to submit nominations for this post. The new Treasurer will be elected at the 2005 AGM and take office from the 2006 AGM. This post carries a lot of responsibility. Candidates must have substantial experience of the Society's management, of operating a large budget, and have a sound knowledge of investments and management accounts. Interested parties should contact Pat Barter, Finance and Administration Director (pat.barter@endocrinology.org). Nominations (on the enclosed form) should be sent to the General Secretary in the Bristol office by 29 July 2005.

Re-election of Officers

Note that all Society officers except Treasurer are changing this year, so the Treasurer is the only post that must be offered for re-election for the year 2005-2006. Should any Ordinary Member wish to put forward an alternative name for Treasurer, please contact Pat Barter (pat.barter@endocrinology.org) by 29 July 2005.

Call for Council members

Dr D R E Abayasekara, Dr J P Hinson and Professor P J Lowry will retire from the Society's Council in November 2005. Ordinary Members are invited to submit nominations to fill these vacancies. We particularly welcome nominations for basic scientists to maintain the balance on Council. A form isincluded with this mailing and should be returned to the General Secretary at the Bristol office by 29 July 2005. A ballot will be conducted amongst the membership if necessary, and the results will be announced at the 2005 AGM during the Society's annual meeting in London on 7-9 November.

Sir John Vane

► Sir John Vane, FRS and Nobel Laureate, was one of the pre-eminent pharmacologists of the 20th century. The value he placed on biological assays in a pre-molecular era was shared by many endocrinologists. He was awarded the Society's Dale Medal in 1981, and became an Honorary Member in 1991.

John Robert Vane obtained a BSc in Chemistry at the University of Birmingham in 1946 before training as a pharmacologist under Professor J Harold Burn at Oxford. After obtaining his PhD in 1953, he spent 2 years in the Department of Pharmacology at Yale University, returning to the UK in 1955 to work with Professor W D M Paton at the University of London's Institute of Basic Medical Sciences in the Royal College of Surgeons of England.

The next 18 years were scientifically some of Vane's most productive. Key experiments to elucidate the actions of aspirin in 1971 led to a clear understanding of its pain-relieving and anti-inflammatory actions, as well as an explanation for its prevention of blood clots. Other work in the early 1970s led to the discovery of captopril, the first angiotensin-converting enzyme inhibitor. Vane progressed from Senior Lecturer in 1955, to Reader in 1961, and then Professor of Experimental Pharmacology in 1966.

In 1973, Vane and his group moved to the Wellcome Foundation when he became Director of Research and Development worldwide. His highly successful work on prostaglandins continued, soon leading to the discovery of prostacyclin, a vasodilator with powerful antithrombotic properties. In 1982 Vane shared the Nobel Prize in Physiology or Medicine for his work on prostaglandins.

In 1986 he moved to St Bartholomew's Hospital Medical College, where he founded the William Harvey Research Institute (WHRI). He focused on selective inhibitors of COX-2, and the interplay between nitric oxide and endothelin in the regulation of vascular function.

Vane put great store on the training of his PhD students, emphasising the way scientists should think. He partly attributed his approach to working with Burn who taught that 'the essence of experimentation was to never ignore the unusual'. Vane preferred to study clear-cut responses and not to rely on statistics to prove a point. Whether through this training or their innate ability, several of his PhD students are notable successes, such as John Hughes, Priscilla Piper, Rod Flower and Salvador Moncada from his time at the Royal College of Surgeons. More recently, Chris Thiemermann and Tim Warner have kept up the standard. PhD students in the early days of the WHRI, they are now amongst the top 100 most cited pharmacologists worldwide.

I joined the WHRI in 1991 during one of the most exciting times in vascular biology. Huge efforts were placed on understanding the roles of endothelin-1 and nitric oxide. Vane, of course, was an international driving force behind these efforts. I, like many others, am truly grateful to have worked with such a dynamic and insightful scientist. His passing is a very significant loss to vascular biologists and inflammation pharmacologists throughout the world.

ROGER CORDER

William Pearlman

► William H Pearlman obtained his BS degree from Brooklyn College, New York, in 1934 and a PhD in Biochemistry from Columbia University in 1940. Professor Oskar Wintersteiner was mentor for his thesis, which described the partial synthesis of oestrogens with oxygen in ring B.

After his PhD, Pearlman worked for Gregory Pincus at Clark University, studying steps in the intermediary metabolism of steroid sex hormones. In 1945 he accepted a faculty position at Jefferson Medical College. During this fruitful time in his career, Pearlman made significant contributions to our understanding of the endocrine role of the human placenta, particularly the secretion of progesterone as a hormone essential for maintenance of pregnancy. He isolated progesterone in crystalline form from human placenta, and showed that this organ was its major source during gestation. At Jefferson, Pearlman continued metabolic studies including the use of deuterium-labelled oestrogen and tritium-labelled progesterone, which proved powerful in estimating the hormones' secretion rates. Collaborations developed at Jefferson contributed significantly to understanding the liver's role in excretion and metabolism of sex steroids.

During the McCarthy era in the 1950s, Pearlman could not obtain a position in the USA. He was fortunate to be invited to Guy's Hospital, London, and from 1954 continued his work with the support of the MRC. He prepared, for the first time, tritium-labelled progesterone with very high specific activity. This led to collaboration with J F Tait where they developed labelled aldosterone of sufficiently high specific activity to permit measurement of its secretion rate. Pearlman also successfully labelled other steroids with tritium of very high specific activity. These were useful in studying uptake and localisation of sex steroids in target tissues like the mammary glands, uterus and ventral prostate.

Soon after returning to the USA, Pearlman took a position at Harvard Medical School to tackle human breast cancer, his earlier studies having identified the breast as one of the target tissues for sex steroids. Studies here and later at the University of North Carolina examined the target tissues of aldosterone, progesterone and oestrogen in women with advanced breast cancer, as well as oestrogen uptake by normal mammary tissue in pregnant rats. High hormone uptake was observed in all these studies. To explain these findings, Pearlman studied steroid hormone binding by tissue proteins, which led to the discovery of a high affinity testosterone-binding protein in human serum. His results suggested that physiologically effective levels of circulating free testosterone, and to some extent circulating 17β-oestradiol, were regulated by the testosterone-binding protein. With Huang he elucidated the role of the corpus luteum in steroid hormone formation, so making another major contribution to the field of steroids.

Pearlman always recognised the contributions of his many collaborators and those who trained him. He is survived by his wife of 61 years who was one of his collaborators, Mary Ruth Jones Pearlman.

PHILIP F HIRSCH

BES hits Harrogate

▶ The Yorkshire town of Harrogate provided an elegant backdrop to this year's British Endocrine Societies meeting. About 700 delegates attended over the 3 days, with 25 companies manning the stands in the exhibition. Highlights included Peter Barnes' insightful talk on glucocorticoid action in asthma and COPD, and the thought-provoking moral maze session on ethics and animal experimentation, chaired by Colin Blakemore.

The medal lecturers were stimulating and informative. Two visitors from the USA, Dale Medal Lecturer Ronald Kahn and Transatlantic Medal recipient Kenneth Korach, respectively discussed gene expression in diabetes and loss of oestrogen receptor activity. Meanwhile Denmark's Jens Sandahl Christiansen, this year's Clinical Endocrinology Trust Visiting Professor, enlightened delegates about the importance of growth hormone. Cellular entry of thyroid hormones was the subject of the Pitt-Rivers Lecture, delivered by Theo Visser from The Netherlands. The thyroid theme also featured in the Clinical Endocrinology Trust Lecture, as Jayne Franklyn examined the causes and effects of thyroid disease.

Maciej Tomaszewski from Glasgow won the 2005 BES Award and collected a £10 000 research grant. Travel grants of £500 were won by Kim Soo-Hyun (London), Mark Lewis and Jack Ham (Cardiff) and Ana Maria Gonzalez and Kristien Boelaert (Birmingham). Many thanks are due to Pfizer Ltd for sponsoring these awards for the eleventh year.

The BES Programme Organising Committee selected two abstracts for the 2005 Novartis Awards, and the recipients were GA Berwick (London) and LM Rice (Manchester). Meanwhile, the British Thyroid Association Awards were won by TC Sandeep (Edinburgh) and JA Gilbert (London).

It wasn't all work, however, with Steve Franks and Maggie Carson triumphing over Jack Ham and Ali Manuchehri after a hard fought, four-set final in the tennis tournament, and victory in the five-a-side football for Pfizer. Rather suspiciously, the local organiser of the BES golf tournament, Stephen Gilbey, narrowly won that competition after beating Jamie Smith - despite his claim never to have played the Pannal Golf Course before.

Thanks to all who participated in the meeting, and congratulations to the winners of awards and sporting events alike. We hope you all enjoyed BES 2005.

Strategic review

▶ The Society undertook a strategic review in 1998-1999. This was reviewed by Council in 2003 in order to rationalise the objectives in light of current requirements and constraints, to formulate new objectives where needed, and to develop a 5-year business plan to balance the objectives with financial limitations.

However, the 2003 review took place at a time of financial constraint, due to a fall in share values and the purchase of new premises. A new review in late 2005 is now considered timely. Members will be consulted on key issues before the review meeting. Please contact Rachel Evans (rachel.evans@endocrinology.org) with any queries or suggestions for the Society Strategy Group.

SCIENCE COMMITTEE STRATEGY GROUP

▶ This new group, made up of Science Committee members, will review that Committee's activities and determine how the Society can best support basic scientists over the next 5 years. At its inaugural meeting during BES 2005, the group discussed:

- ▷ pump-priming grants and more Society awards and prizes; these were identified as tangible means of furthering careers in basic science
- ▷ a mentoring scheme, to increase scientists' collaborative network nationally and internationally
- ▷ a skills training scheme, to increase availability of information to younger researchers
- ▷ lobbying Government and other bodies

The meeting's outcome will be discussed by the Science Committee, these discussions will inform the Society's strategic review. Contact Rachel Evans (rachel.evans@endocrinology.org) with your ideas for this group.

Clinical Endocrinology Trust

▶ The Clinical Endocrinology Trust is a charitable trust, deriving its income from the profits of *Clinical Endocrinology* (see Paul Stewart's article on page 4). The Trustees are Professor Dame Lesley Rees (Chair), John Wass (Secretary, soon to be replaced by John Bevan), Elizabeth Whelan (Blackwell representative), Michael Sheppard, Steve Bloom and Peter Baylis.

The Trustees manage the Trust's income of about £125 000 a year. This currently supports conference grants for all Society members, including attendance of the annual BES meeting and Summer School. These are available to basic scientists and clinical scientists alike. The fund also supports a fellowship (which alternates between clinical studies and basic science), awarded by the Society's Awards Committee. The allocation of peer review visits is arranged jointly with the Society for Endocrinology.

The Trust has set up two young lecturer awards of £2500, one for each of basic and clinical science, to be presented during BES 2007. Support also extends to nursing prizes, and the Trust is in discussions with the Royal College of Pathologists on ways of supporting professions in endocrinology allied to medicine.

If you can think of other ways in which the Trust can usefully allocate its funds, please send suggestions to the Trust's secretary. Contact John Wass, and subsequently John Bevan, via the Society web site.

Spotlight on...

THE GENDER TRUST

▶ You don't have to be an expert to know men are the ones with male hormones and women are the ones with female hormones. Right? Well ... nothing in life is ever that simple.

To begin with, quite a sizeable percentage of the population (which no-one has ever counted, so there are no statistics) suffers from hormone imbalances, ranging from slight deviations from the norm which can be easily corrected to major imbalances that profoundly affect general health.

Then there is gender dysphoria: the way people identify themselves. When they think about the real inner person, do they see this as male or female? Does a quick check when they jump in the shower confirm their gender identity? Or are they among the 1 in 10 000 (as current estimates stand) who can't tally their body and mind identities?

Medical thinking generally supports the view that transsexual people are born with this condition. There are many processes that contribute to gender identity, including 'nurture', where, from the moment of birth, boys and girls tend to be treated differently in obvious and subtle ways. But, even before birth, excessive or abnormal hormone exposure and other more complex influences on developing body/brain wiring are thought to be crucial, particularly in the critical first 3 months of fetal development.

Most transsexual people will say they were aware of being 'different' from an early age, even if they did not fully realise it was connected to their gender identity until much later on, typically during the hormonal horrors of puberty. But most remember 'knowing' they were a girl even though the world treated them as a boy, or vice versa, along with a certainty that they had to keep this a closely guarded secret. Today, as social awareness suddenly wakes up to the reality of gender identity issues, many people in mid- and later life are finally opening a scary box of secrets and reversing a lifetime of living in the wrong body.

If you are struggling with this concept of brain and body mismatch, try and imagine how you would feel if you woke up tomorrow and discovered you had the 'wrong' body. Would you have the courage to get out of bed, much less leave your room, meet up with your peers and carry on with everyday life? Would you try and hide this strange body that did not seem to belong to you? Would you deny it out of the dread that people would mock or pull back in disgust?

Gender dysphoria is a recognised medical condition, for which treatment is available both privately and through the NHS. The Harry Benjamin International Gender Dysphoria Association produces its Standards of Care for Gender Identity Disorders, which set out guidelines for diagnosis and treatment.

The condition is diagnosed and managed by a specialist psychiatrist who will also be responsible for prescribing hormone treatment. Male-to-female patients receive oestrogen to promote breast development and changes to skin texture and body shape, and in some cases anti-androgens to reduce the effects of naturally produced testosterone. Female-to-male are prescribed testosterone to promote male characteristics such as deepening of the voice and hair growth on the face and body.

The largest NHS gender identity clinic is at Charing Cross Hospital in London. Their policy requires patients to undergo a minimum of 2 years real life experience before referral to a gender surgeon. This requires the person to legally change their name and all documents to reflect their new identity, and to live, work and socialise fully in this new role.

Until summer 2004, even those who had completed hormone therapy and surgery, and had lived totally in their new role for many years, did not have full legal recognition. Stress arose from having to keep a deep secret or face regular revelations and explanations. Areas such as marriage, pensions and insurance were particularly difficult.

The passing of the Gender Recognition Act has done much to improve the quality of life for many, though not all, transsexual people. The first gender recognition certificates, issued in April 2005, will enable transsexual people to acquire a new birth certificate and hold legal status in their acquired gender.

The Gender Trust is the UK registered charity that provides information, education and support on transsexuality. Established in 1990, the Trust is run by a board of volunteers and employs an administrator to run the office in Brighton. A membership organisation provides contact for transsexual people, and a corporate membership scheme offers support to employers and other professionals who encounter transsexual people in the course of their work.

THE GENDER TRUST

For further information about transsexual issues contact The Gender Trust, PO Box 3192, Brighton BN1 3WR, UK (Tel: 01273-234024 (administration); 07000-790347 (information line); Email: info@gendertrust.org.uk; Web: www.gendertrust.org.uk).

For female-to-male gender identity issues contact F to M Network, BM Network, London WC1N 3XX, UK (Tel: 0161-4321915 (Wednesday evenings); Web: www.ftm.org.uk).

To learn more about The Gender Recognition Act see www.grp.gov.uk, and for the Harry Benjamin Standards of Care visit www.hbigda.org.

We are pleased to highlight the activities of some or our corporate members in this special section. Companies wishing to join the Society should contact Tom Parkhill in the Bristol office (tom.parkhill@endocrinology.org)

ABBOTT DIAGNOSTICS LTD

Abbott Diagnostics Ltd, Abbott House, Norden Road, Maidenhead SL6 4XE, UK (Tel: 01628-773355; Fax: 01628-644305; Web: www.abbottuk.com)

ARDANA BIOSCIENCE LTD

Ardana focuses on discovering, developing and marketing innovative products that promote better reproductive health and general well-being. Ardana focuses on specialist and secondary care markets like reproductive endocrinology, urology, and obstetrics and gynaecology.

Particular therapeutic interests include:

- *androgen replacement therapy*
- *reproductive endocrinology*
- *urology (e.g. prostate cancer, benign prostatic hyperplasia)*
- *gynaecology (e.g. menstrual disorders, endometriosis, infertility)*
- *sexual dysfunction*
- *obstetrics (e.g. cervical ripening, pre-eclampsia)*
- *contraception*

Ardana has exclusive rights to commercialise research developed by the MRC Human Reproductive Sciences Unit (HRSU) in Edinburgh, UK. The HRSU is recognised by the WHO as one of the world's leading academic centres of excellence in reproductive biology.

Alongside its in-house R&D, Ardana has made research collaborations, licensing agreements, and strategic product and company acquisitions to rapidly establish a broad product portfolio, currently including:

- *Striant™ SR, a testosterone replacement therapy for male hypogonadism (confirmed by clinical features and biochemical tests)*
- *Invicorp ®, an intracavernosal injectable drug combination for male erectile dysfunction*
- *three products in four Phase II studies in prostate cancer, benign prostatic hyperplasia and infertility related to endometriosis*
- *three products in Phase I development with the potential to treat endometriosis and uterine fibroids, prevent premature ovulation in ovulation induction, and promote GH stimulation in short stature.*

Ardana Bioscience Ltd, 58 Queen Street, Edinburgh EH2 3NS, UK (Tel: 0131-226 8550; Fax: 0131-226 8551; Web: www.ardana.co.uk)

ASTRAZENECA

AstraZeneca is a major international healthcare business engaged in the research, development, manufacture and marketing of ethical (prescription) pharmaceuticals and the supply of healthcare services. It is one of the top five pharmaceutical companies in the world and has leading positions in sales of gastrointestinal, oncology, anaesthesia (including pain management), cardiovascular, central nervous system and respiratory products. AstraZeneca is listed in the Dow Jones Sustainability Index (Global) as well as the FTSE400 Index.

With approximately 60 000 employees, AstraZeneca's headquarters are in London while management of R&D is based in Sweden. Worldwide, AstraZeneca has six major R&D sites, four discovery facilities and a clinical research site. In total, AstraZeneca's R&D organisation employs approximately 12 000 people located in Canada, France, India, Japan, Sweden, the UK and the USA. AstraZeneca has manufacturing activities in more than 20 countries.

Scientists at AstraZeneca have discovered and developed many of today's leading prescription medicines. AstraZeneca, a global leader in the development of cancer therapies, is committed to continuing the fight against cancer, through early detection and awareness programmes and through fundamental medical advances.

AstraZeneca's scientists are focused on developing a broad portfolio of anti-cancer products to extend and improve the quality of patients' lives. Over the past 30 years, AstraZeneca has developed effective cancer medicines for patients with breast and prostate cancer. AstraZeneca produces Casodex (bicalutamide), the world's leading anti-androgen; Zoladex (goserelin acetate), the second largest selling LHRH agonist in the world; Nolvadex, the first anti-oestrogen used in breast cancer; and the pure anti-oestrogen, Faslodex. Recently, we have also introduced a highly effective and well tolerated third generation aromatase inhibitor, Arimidex.

Current R&D focus on developing treatment options across the prostate and breast cancer continuum, and specifically on novel biologically targeted approaches such as EGFR-TK inhibition, VEGFR-TK inhibition and vascular targeting.

AstraZeneca, Mereside, Alderley Park, Macclesfield SK10 4TG, UK (Web: www.astrazeneca.com)

ELI LILLY AND COMPANY

Lilly is a leading innovation-driven corporation. It is developing a growing portfolio of first-in-class and best-in-class pharmaceutical products by applying the latest research from its own worldwide laboratories and from collaborations with eminent scientific organisations. With headquarters in Indianapolis, USA, Lilly provides answers - through medicines and information - for some of the world's most urgent medical needs.

Eli Lilly and Company Ltd, Lilly House, Priestley Road, Basingstoke RG24 9NL, UK (Tel: 01256-315000; Web: www.lilly.co.uk)

FERRING PHARMACEUTICALS

Founded in 1950 by Dr Frederik Paulsen, Ferring Pharmaceuticals is a world leader in the research and commercial development of peptides - natural compounds that play a role in virtually all of the body's systems. Ferring produces pharmaceuticals in specific therapeutic areas to help clinicians to treat patients on the body's own terms.

A speciality, research-driven biopharmaceutical company, Ferring identifies, develops and markets innovative products in the fields of fertility, obstetrics, endocrinology, urology and gastroenterology.

Ferring continues to invest in R&D to enable the introduction of new and enhanced medicines. At present, there are a number of major projects in the Ferring R&D pipeline, which complement the existing portfolio and offer innovative development of successful brands. They also fit neatly into the core expertise areas of peptide chemistry, pharmacology and drug delivery systems.

Ferring's developmental activities are on a global scale and are conducted in collaboration with leading academic centres and teaching hospitals worldwide. Coordination of development is maintained from the Ferring International Centre in Copenhagen, Denmark.

The accumulated knowledge and experience of Ferring are paving the way for novel compounds that will become tomorrow's pharmaceuticals.

Ferring Pharmaceuticals Ltd, The Courtyard, Waterside Drive, Langley, Berkshire, SL3 6EZ (Tel: 01753-214800; Web: www.ferring.co.uk)

GENZYME THERAPEUTICS

Founded in 1981, Genzyme is now one of the world's largest and most established biotechnology companies. With more than 25 major products and services marketed in over 60 countries, Genzyme is a global leader in the effort to develop and apply the most advanced capabilities in biotechnology, in order to address a range of unmet medical needs.

With corporate headquarters in Cambridge, USA, Genzyme has approximately 4600 employees working in 40 countries throughout the world. The European headquarters are in Naarden, The Netherlands, and the UK headquarters covering the whole of the British Isles are based in Oxford.

Genzyme-sponsored R&D have led to the introduction of new treatments for many serious health problems, from rare and debilitating genetic diseases to renal disease, orthopaedic injuries and thyroid cancer.

One of Genzyme's most significant successes is Thyrogen (thyrotropin alfa), which contains a highly purified recombinant form of human thyroid-stimulating hormone. It can be used to eliminate the devastating and painful symptoms of thyroid hormone withdrawal that patients may experience when they are tested for a recurrence of thyroid cancer. Thyrogen will also lead to more accurate thyroglobulin measurements on thyroid hormone suppression. Genzyme has a commitment to improving the lives of patients and supporting the work of doctors and other healthcare providers.

Genzyme Therapeutics, c/o Kellie Higgins, 17 Hollands Road, Haverhill CB9 8PU, UK (Tel: 01440-716443; Fax: 01440-710985; Email: kellie.higgins@genzyme.com; Web: www.genzyme.com)

GLAXOSMITHKLINE

GlaxoSmithKline, Stockley Park West, Uxbridge UB11 1BT, UK (Tel: 020-89909000; Fax: 020-89904321; Web: uk.gsk.com)

IPSEN LTD

Ipsen Ltd is the UK subsidiary of a European pharmaceutical group, founded in 1929 by Dr Henri Beaufour. Present in over 110 countries, with a total staff of nearly 4000, the group currently markets over 20 medicinal products throughout the world, mainly in Europe. The company focuses its activity on the discovery and development of innovative products in specifically targeted disease areas, with the aim of addressing unmet medical needs.

The product portfolio includes medicines marketed to specialists working in its targeted disease areas of endocrinology, oncology and neuromuscular disorders, as well as products in therapeutic areas related to the group's history (which are principally used in general practice, mainly in France). In 2003, 18.5% of Ipsen's turnover was invested in R&D, carried out through an international network of 615 individuals in four centres: Paris, Boston, Barcelona and London.

A major factor contributing to the group's growth and success in recent years has been the ability to combine the therapeutic potential of peptides with sophisticated controlled-release delivery systems. Ipsen is the only company in the world to supply prolonged release formulations of more than one peptide: Decepeptyl® SR (triptorelin), Somatuline® LA and Somatuline® Autogel® (lanreotide). In the past year, our committment to endocrinology has been further strengthened by our partnerships with Genentech for NutropinAqTM (somatropin) and Auxilium for Testim® 50mg Gel (testosterone).

Ipsen Ltd, 190 Bath Road, Slough SL1 3XE, UK (Tel: 01753-627777; Fax: 01753-627778; Web: www.ipsen.ltd.uk)

NOVARTIS PHARMACEUTICALS UK LTD

Novartis AG is a world leader in healthcare, with core businesses in pharmaceuticals, consumer health, generics, eye care and animal health. The group has invested approximately $2.4 billion in R&D, employs about 70 000 people, and operates in over 140 countries around the world.

In the UK, Novartis has large research and production facilities, as well as a dedicated sales and marketing company. Novartis UK is organised into integrated business units, covering all aspects of customer relations from clinical development to sales and marketing.

Our endocrine/oncology business team has the leading UK product in the somatostatin analogue market, in the form of Sandostatin® LAR®. Radiolabelled sandostatin analogues and universal somatostatin receptor blockers are both in development. Other products that we currently market include Zometa®, a highly potent bisphosphonate; Aredia®; Femara®, an aromatase inhibitor; and Glivec®, the first signal transduction inhibitor to reach the market, representing a significant milestone in targeted anti-tumour therapy.

The Novartis endocrinology team is proud of its links with the Society for Endocrinology and is pleased to offer support where it can. The team can be contacted on 01276-698561.

Novartis Pharmaceuticals UK Ltd, Frimley Business Park, Frimley, Camberley GU16 7SR, UK (Tel: 01276-692255; Fax: 01276-698605; Web: www.novartis.com)

NOVO NORDISK LTD

Novo Nordisk is a focused healthcare company with a leading position in areas such as diabetes, GH therapy, haemostasis management and hormone replacement therapy.

With the broadest diabetes product portfolio in the industry, including very advanced products within the area of insulin delivery systems, Novo Nordisk is the world leader in diabetes care.

Novo Nordisk has always been at the forefront of research into the use of human GH. Since the first extraction and development of human GH nearly 40 years ago, Novo Nordisk has made a series of significant breakthroughs in the development of indications and convenient delivery systems for this hormone.

In 1999, Novo Nordisk launched the first ready-to-use liquid GH, Norditropin® SimpleXx®. This is supplied in a pen system that was developed utilising existing experience in diabetes research, to ensure that people who use GH can simply, comfortably and accurately administer their dose. Novo Nordisk also provides patients with the support of a homecare service and the convenience of home delivery.

Novo Nordisk manufactures and markets pharmaceutical products and services that make a significant difference to patients, the medical profession and society.

With headquarters in Denmark, Novo Nordisk employs approximately 18 700 people in 68 countries and markets its products in 179 countries.

Novo Nordisk Ltd, Broadfield Park, Brighton Road, Crawley RH11 9RT, UK (Web: www.novonordisk.co.uk)

PFIZER LTD

Pfizer, with its UK business headquarters in Surrey and global headquarters in New York, is a research-based global pharmaceutical company. Pfizer discovers, develops, manufactures and markets leading prescription medicines for humans and animals, and many of the world's best-known consumer products.

Since 1998 Pfizer has made a capital investment of more than £1 billion in the UK and, following its acquisition of

Pharmacia in April 2003, is the largest supplier of medicines to the NHS. It is estimated that on any given day, 40 million people around the world are treated with a Pfizer medicine.

Pfizer is excited to add the Pharmacia endocrine care portfolio of Genotropin® (somatropin recombinant) and Somavert® (pegvisomant powder and solvent for solution for injection) to the organisation. Pfizer is highly committed to these important products and to continued investment in this key therapeutic category.

Pfizer wishes to continue to help enhance patient care today while refining therapy for future generations. Pfizer will be using its resources and capabilities to help provide the greatest value to patients.

Pfizer Ltd, Walton Oaks, Dorking Road, Tadworth KT20 7NS, UK (Tel: 01304-616161; Web: www.pfizer.co.uk)

PROSTRAKAN

Strakan Ltd is the commercial arm of ProStrakan Group Ltd. The sales and marketing team currently sells a range of products throughout Europe. Sales of the group's marketed products are growing strongly, and total group sales in 2004 were 90% above 2003 figures.

ProStrakan is an international specialty pharmaceutical company with leading edge R&D capabilities, coupled to an expanding European commercial operation which is generating significant and growing revenues. The company's therapeutic focus is primarily on steroid chemistry, hormonal disorders and bone biology, areas which represent significant unmet needs and high growth potential.

ProStrakan was established in 2004 through the merger of ProSkelia BV and Strakan Group Ltd. Employing around 275 people, the company has headquarters in Scotland with commercial operations throughout the rest of the UK and Europe. The company's principal R&D site is in Romainville near Paris.

Recent announcements from ProStrakan have included the acquisition, in September 2004, of Madrid-based sales and marketing company Devon Farmacéutica SLU, giving ProStrakan a commercial operation in Spain (the European Union's fifth largest market) for the first time. This was followed in November 2004 by the acquisition of Elfar SA (also based in Madrid), a company with a portfolio of marketed products in Spain and its own established sales and marketing infrastructure.

In December 2004, ProStrakan announced that it had entered into an exclusive licensing agreement with San Francisco-based Cellegy for the commercialisation in Europe of Rectogesic® (branded Cellegesic™ in the USA). Rectogesic is a topical nitroglycerin ointment indicated for the treatment of the pain associated with chronic anal fissures. This deal followed the exclusive European licensing agreement with Cellegy in July 2004 for Tostrex®, a transdermal testosterone gel indicated for male hypogonadism.

ProStrakan Group plc, Buckholm Mill, Galashiels TD1 2HB, UK (Tel: 01896-668060; Web: www.prostrakan.com)

RANDOX LABORATORIES LTD

Randox Laboratories has over 20 years' experience in the development, manufacturing and marketing of high quality diagnostic reagents and equipment for laboratory medicine. All Randox reagents are manufactured under rigorous quality control procedures to achieve the high quality standards expected in clinical science. Commitment to quality is emphasised by ISO 13485 accreditation for the development and manufacturing of diagnostic test kits.

Randox offers numerous diagnostic tests for the monitoring and diagnosis of conditions related to the endocrine glands. Two biochip array technology systems have been developed, namely evidence and evidence investigator. The biochip systems are based on the use of a biochip as a platform for immunoassay measurement.

The portfolio of biochip arrays includes those for thyroid, fertility, tumour monitoring, tumour PSA, cell adhesion molecule, cytokines and growth factors, cardiac, polymorphisms and drugs of abuse. The Free thyroid array allows the simultaneous detection of TSH, FT3 and FT4 and the Total thyroid array allows the simultaneous detection of TSH, TT3 and TT4. The fertility array allows the simultaneous detection of FSH, prolactin, LH, oestradiol, progesterone and testosterone.

Conventional immunoassay techniques are utilised for the measurement of protein analytes on the surface of a biochip, which results in the specific and simultaneous profiling of protein markers. Rather than having to divide and separately test a patient sample to obtain each test result, biochip array technology offers a means for simultaneous testing of a sample, and thus provides a more complete diagnostic profile for each patient.

Randox Laboratories Ltd, 55 Diamond Road, Crumlin BT29 4QY, UK (Tel: 028-94422413; Fax: 028-94452912; Email: marketing@randox.com; Web: www.randox.com)

SANDOZ BIOPHARMACEUTICALS

Sandoz, a Novartis company, is one of the leading manufacturers of biotechnological products. Long-standing experience and know-how make Sandoz a renowned partner in the three business franchises: pharmaceuticals, biopharmaceuticals and industrial products. With headquarters in Vienna, Sandoz employs around 13 000 people and posted sales of $2.9 billion in 2003.

Based on extensive expertise in the field of recombinant products, Sandoz has cutting-edge experience in the production and processing of biopharmaceuticals, and as such constitutes the competence centre in the biopharmaceutical production field within Novartis. Drawing on the company's rich experience in biotechnology, Sandoz Biopharmaceuticals is expanding to meet growing demand.

Within Sandoz, the pharmaceuticals business produces high quality generic pharmaceuticals that are sold to pharmacies and hospitals. The industrial products business manufactures active pharmaceutical ingredients for industrial partners.

In 2003, numerous different company brands were rebranded under the single name Sandoz. Over the last few years, the company had grown dynamically and undertaken various strategic acquisitions. The establishment of a uniform brand has strengthened and harmonised its global position and identity.

Sandoz GmbH, Wagramer Str. 19, 1220 Vienna, Austria (Tel: +43-1-26068; Web: www.sandoz.com)

SCHERING HEALTH CARE LTD

Schering Health Care Ltd is the UK subsidiary of Schering AG, a research-based pharmaceutical company based in Berlin. Its activities are focused on four business areas: gynaecology and andrology, diagnostics imaging, oncology, and specialised therapeutics in the field of the central nervous system.

Established for many years as a world leader in the field of hormonal contraceptives, Schering has built upon its expertise in this area by developing innovative new andrology products.

In 2003, Schering launched Testogel® (testosterone), the first daily transdermal testosterone gel for the treatment of hypogonadism. Testogel® is easy and convenient to use, is well tolerated, and provides high levels of efficacy, maintaining constant plasma testosterone levels leading to good symptom control and patient compliance.

The launch of Testogel® was followed in 2005 by the introduction of Nebido® (testosterone undecanoate), the first and only quarterly injection licensed to replace testosterone in hypogonadism. Nebido® is injected into the gluteal muscle by a healthcare professional four times a year. It has been shown to maintain testosterone levels within the normal therapeutic range, minimising peaks and troughs that can be associated with intramuscular administration of testosterone, and avoiding accumulation.

Our commitment to andrology and, in particular, hypogonadism is illustrated by our continuing research activities and our educational programme, which this year in the UK includes support for symposia, clinical excellence meetings and peer-reviewed publications.

Schering Health Care Ltd, The Brow, Burgess Hill RH15 9NE, UK (Tel: 01444-232323; Fax: 01444-246613; Web: www.schering.co.uk)

SERONO LTD

Serono Ltd is the UK subsidiary of Serono SA, the largest biotechnology company in Europe and the third largest in the world. Serono's portfolio of endocrine products includes the recombinant human GH Saizen.

Serono's UK Growth Hormone Team is committed to the highest level of support for clinicians, nurses and ultimately patients using Saizen. Through our products and services, we aim to make a real difference to the quality of life of both paediatric and adult patients on Saizen.

Serono Homecare is a nationally available network which offers patient training and family support delivered by specialist nurses, and is designed to ensure the best possible start for Saizen patients.

We offer a home delivery service where required, enabling patients to receive their Saizen and consumables when and where it is convenient for them. To augment this service, patients can now elect to receive their Saizen in a ready-to-use cartridge so that they no longer need to spend time reconstituting their medication.

In 2004, with support from Serono Symposia International, we launched MeGHa, a comprehensive and user friendly research database offering flexible monitoring of patients with GH disorders, on and off treatment, giving users the ability to easily conduct collaborative observational research projects. Subsequently a new improved version of MeGHa (1.4) was launched in January this year, creating great excitement among the GH community.

The Saizen device family provides patients with a real choice of Saizen administration devices including One.Click, the only multidose autoinjector for GH, and Cool.Click, a new generation needle-free device for GH. Both devices use the Saizen 8mg Clickeasy multidose formulation of GH. Serono is committed to continual improvement in drug administration and, as such, is actively developing new ideas which will ultimately make patient injections much more convenient.

Serono Ltd, Bedfont Cross, Stanwell Road, Feltham TW14 8NX, UK (Tel: 020-88187200; Fax: 020-88187222; Email: serono_uk@serono.com; Web: www.serono.com)

SERVIER LABORATORIES LTD

Servier is France's leading independent pharmaceutical company, with a tradition of ground-breaking research. In 2002 Servier was awarded the Prix Galien in recognition of the 'quantity, quality and dynamism' of research in major fields of medicine, such as cardiovascular disease, psychiatric and CNS disorders, cancer treatment, diabetes, gynaecology and rheumatology.

Servier has turned its attention to osteoporosis research in the firm belief that real progress in this field depends on a new understanding of the process of bone physiology. We believe that our research today will help reduce the fractures of tomorrow.

Servier Laboratories Ltd, Wexham Springs, Framewood Rd, Wexham, Slough, Berkshire, SL3 6RJ (Tel: 01753 662744; Fax: 01753 663456; Email: info@uk.netgrs.com; Web: www.servier.co.uk

MY PATIENTS, THEIR INTERNET

Most patients I see come to their consultation very well prepared. Not necessarily by their GP, though that does still sometimes happen, but through surfing the web.

Straight away, the very word 'surfing' tells you that this method of information retrieval is more like recreation than research. Consequently the sources to which my patients direct me - and to which I have to respond if our consultation is to go anywhere - are often rather marginal. But it doesn't have to be that way. There are some wonderful medical web sites.

First, a look at some problem areas. There is a lot about complementary and alternative medicine (CAM) out there, and it seems to provide people inclined that way with a genuine sense of coherence that they do find empowering. I think doctors need to be very clear about their attitude to CAM. My view - that to espouse both CAM and evidence-based medicine is to try to maintain two diametrically opposed ideas at the very same time - is, I fear, in danger of becoming a minority attitude. I therefore cannot recommend too warmly Dr Stephen Barrett's web site (www.quackwatch.org).

Dr Barrett provides the most scholarly and comprehensive account of alternative and complementary healthcare I have come across in any medium. He also provides a portal to 16 daughter sites, a typical example of which is Homeowatch (www.homeowatch.org). For a flavour of Dr Barrett's views, let me quote directly: "Homeopathic 'remedies' are usually harmless, but their associated misbeliefs are not. When people are healthy, it may not matter what they believe. But when serious illness strikes, false beliefs can lead to disaster. This web site provides information about homeopathy that is difficult or impossible to find elsewhere. The bottom line is that it is senseless and does not work."

The second, frequently encountered, area of difficulty is when patients ask me to explain divergent opinions they have read on the web. For example, I think most of us accept that, as a result of the publication of a number of impressive randomised controlled trials (RCTs), the advice given to postmenopausal women about hormone treatment has undergone some important changes in the last few years. The British Menopause Society (BMS) has a consensus statement on postmenopausal hormone replacement treatment on its web site (www.the-bms.org). This, *inter alia*, states "Eighteen regulatory authorities (December 2003) have advised that HRT should *not* be used as a first line treatment for osteoporosis prevention as the risks outweigh the benefits" (my emphasis). It then proceeds to advise that "oestrogen may still remain the best option particularly in younger [than those in the recent RCTs] and/or symptomatic women". The reasoning is so opaque that one is constrained to ask whether the BMS knows something the 18 regulatory agencies don't know. Frankly I doubt it. But what is one to say to a patient who has picked up on this contradiction?

But for a really worrying bit of web medicine, have a look at the web pages of the Andropause Society (www.andropause.org.uk). Plenty of my patients have - after all the andropause is a construct enthusiastically promoted at present. The Andropause Society says: "When HRT for women was first cautiously introduced over 30 years ago, doctors feared it might contribute to diseases of the blood vessels. Much to their surprise, actual experience has shown the reverse to be true. Women on HRT suffered half the number of heart attacks compared to women who were not. *So, with some reluctance, doctors have begun to change their views and now generally say the treatment is positively indicated in women prone to heart disease*" (my emphasis).

The situation is the same with testosterone.

I wrote an email to the Andropause Society a couple of months ago, quoting the extensive literature that shows this statement to be in error. My letter was acknowledged but no change has been made. What I and the patients with whom I consult cannot understand is why this organisation asserts in such a public place what it must know to be flawed. Strange.

So now to the good news. There's a first rate textbook of endocrinology available to everyone free at www.endotext.org. The editors and contributors are household names in endocrinology. The text can be searched, printed and copied to your own computer. The diagrams can be copied as gif files. The book is regularly updated. It is interesting to contrast the book's views on testosterone treatment of elderly men with the quote from the Andropause Society's web page: "The effects of testosterone replacement on cardiovascular risk have never been directly examined and are particularly important because even small changes in incidence rates could have significant public health impact" *(Age-Related Changes in the Male Reproductive Axis,* chapter 11, Shalender Bhasin and Karen Herbst).

THE VERY WORD 'SURFING' TELLS YOU THAT THIS METHOD OF INFORMATION RETRIEVAL IS MORE LIKE RECREATION THAN RESEARCH

A major text on thyroidology is available at www.thyroidmanager.org, and is also free to everyone. These texts are a credit to their authors and their sponsors. We are all in their debt because they provide a version of healthcare that is reliable, reputable and accessible to all.

HOWARD JACOBS

Thanks a million, **Bio**Scientifica!

▶ At the end of every financial year, BioScientifica sends the Society a nice fat cheque representing its annual profits. In 2004 that sum was £165 000, bringing the total since the company was established to over £1 million. And that's not taking into account savings the Society makes by sharing overheads and some staff costs with BioSci.

Some members know a lot about BioSci (some are on its board!), but others tell us they'd like to know more, so here are some answers to common questions.

What does BioSci do and how is it different from the Society?

BioSci does all the same types of activity as the Bristol staff do for the Society:

- publishing journals, books and newsletters
- running membership and committees for societies
- developing and maintaining web sites
- running conferences, training courses and other events
- providing consultancy on governance and other issues

But whilst anything carried out under the Society's name has its content controlled by the Society, BioSci acts on behalf of other organisations. That's the demarcation between the two.

Who does BioSci work for?

BioSci has two main client groups: other medical/scientific societies, and the pharmaceutical industry. In both cases, we only work on academic projects where we are confident of the scientific integrity of the academic organisers. Our current clients include:

- Society for Reproduction and Fertility (publishing their journal, *Reproduction*)
- European Federation of Endocrine Societies (providing secretariat services, newsletter and web site, and publishing their journal, *European Journal of Endocrinology*)
- European Society for Paediatric Endocrinology (secretariat services, newsletter and web site)
- British Fertility Society (secretariat services, conferences and courses, newsletter and web site)
- British Society for Paediatric Endocrinology and Diabetes (membership, web site and conference)
- Bone and Tooth Society (membership)
- Ferring Pharmaceuticals (publishing the proceedings of their paediatric endocrinology symposium)
- Novartis Pharmaceuticals (organising their BES satellite)
- Pfizer (publishing the KIMS annual report)
- Eli Lilly and Company (publishing the HypoCCS book series)

What can BioSci do for Society members?

If you are on the editorial board of a society-owned academic journal that is seeking a new publisher, contact us. This is particularly relevant if the society is keen on the idea of open access journals, but the current publisher is not. Our unique perspective means we can see the issue equally from the points of view of the academic and the publisher. We are happy to give presentations to society committees or editorial boards if required.

If you are involved in a major academic conference, particularly in bringing an international conference to the UK or elsewhere in Europe, we would be very pleased to work with you.

If you are on the committee of a society that wants to revamp its web site, set up a newsletter, organise its membership database, etc, then contact us.

If you are interested in collaborative projects between several societies, then BioSci can act as an intermediary to undertake the projects on behalf of all the groups. This is the model for the annual BioSci SpR training course on osteoporosis and other metabolic bone diseases, which is run in liaison with the National Osteoporosis Society, the British Society for Rheumatology, the Bone and Tooth Society, the British Geriatrics Society, and the Society for Endocrinology.

And in all cases, any profit made by BioSci will fund projects in endocrinology.

Where can I see more?

Have a look at some of our web sites:
BioSci Events - www.bioscievents.com
BioScientifica - www.bioscientifica.com
BFS - www.fertility.org.uk
BSPED - www.bsped.org.uk
EFES - www.euro-endo.org
European Journal of Endocrinology - www.eje-online.org
Reproduction - www.reproduction-online.org
or contact Tom Parkhill on 01454-642206, tom.parkhill@endocrinology.org

SUE THORN

Proteomics: trawling for ideas or netting results?

▶ The use of gene arrays in endocrine research is increasingly common, with the concept of hypothesis generation gaining recognition from funding councils. The estimated total number of functional genes in the human genome is 20 000-25 000, and gene arrays contain anything from hundreds to tens of thousands of genes. In marked contrast, the human proteome, essentially the proteins coded by the genome, potentially contains a million proteins.

The proteome is vast because each gene can code for many proteins, partly due to post-transcriptional modification and alternative splicing of mRNA. There are more than 200 recognised post-translational modifications of amino acids. Furthermore, proteins exhibit a range of precursor and mature forms and isoforms, as well as undergoing alterations such as truncation, proteolytic cleavage and covalent modifications, including phosphorylation and glycosylation. Apparently trivial differences in protein structure and conformation are involved in critical aspects of endocrine function, including half-life and biological activity. Therefore, the endocrinologist embarking on a proteomic study must carefully consider the biochemical background to the research.

The range of methodologies in proteomics ranges from chromatography to 2-D gel electrophoresis, image analysis, mass spectroscopic techniques and bioinformatics. 2-D gel electrophoresis is just one of the possible protein profiling technologies. However, there are key elements in a proteomic investigation (Fig. 1), starting with vitally important issues of sample preparation. The subsequent and critical step is the separation of complex protein mixtures. This is followed by computer analysis of protein profiles, typically to compare profiles between sets of samples. The final step is to identify the proteins that are different between samples, often using mass spectroscopic peptide mass mapping or sequencing. For the endocrinologist the technology is, in many ways, secondary. Discussion with experts in the field should maximise the specificity, accuracy and relevance of the data at the end of the experiment.

So, what can proteomics do for the endocrinologist? Before using proteomics, it is important to decide whether your question can be rigorously addressed using what is essentially a 'trawling' approach (Fig. 2). Proteomic techniques are fundamentally comparative, and involve a systematic hunt for differences in protein expression, for instance between a disease state and a control state. Yet, proteomic analyses can pick out both novel insights and completely unrelated differences in expression simultaneously. Proteomics has identified apparently non-specific changes common to diverse diseases. For instance, many cancer-related proteins reported to date are associated with systemic pathological changes rather than being specific to one cancer type. Once a dataset of changing proteins has been acquired, a validation strategy is essential. This might be as simple as checking the observations using RT-PCR or Western blot. Ideally, however, there should then be hypothesis testing, for instance observing what happens when a protein demonstrating altered expression is returned to control levels in gene silencing, protein administration or immunisation experiments.

Given the size of the proteome, drilling down to essential components gives a great advantage (Fig. 3). For instance, the endocrinologist characterising circulating proteins could employ the simple step of removing serum albumin and IgGs from the equation, typically by immunoaffinity depletion. Other strategies include fractionating the proteome into cellular compartments, e.g. cytoplasmic vs nuclear components. Isolation of endocrine cells from other cell types in a gland of interest would enable a specific proteome to be investigated. The more sophisticated approaches utilise laser capture, or Fluorescence Activated Cell Sorting, which isolates specific cell populations. Considering the timing of sample collection might enable causative, rather than solely downstream, protein changes to be identified.

Typically, in studies of disease or development, tissues may alter in a complex manner and the researcher may be left struggling to decide which, if any, changes in the proteome are relevant to questions being asked. Organs with complex cell mixtures may throw up statistically significant changes in protein expression merely as a result of alterations in the proportions of different cell populations. In such circumstances, proteomics will not necessarily provide any novel or useful insight into biological or pathological processes.

Is it really worth thinking about using proteomic techniques? Yes! Whilst at first glance the size and complexity of the proteome may seem a drawback, the literature increasingly reflects the benefits derived from investigation of the proteome in the cancer and cardiac fields in particular. However, proteomics is a multi-faceted tool and the question 'Is this method the most appropriate option for my study?' is crucial. Proteomics is most likely to provide novel insights where the question posed is simple, the study design is careful and the sample availability for optimisation steps is suitable. Critically, the studies which can be focused and have realistic and clear options for validation and hypothesis testing will make the best use of the power of proteomics.

PAUL FOWLER AND SUSAN LIDDELL

Sample preparation
▼
Separation of proteins
▼
Comparison of protein profiles
▼
Identification of proteins

Figure 1. Key steps in proteomic analysis

Will screening for protein differences be scientifically/clinically justified?
▼
Will it be possible to distinguish between causal and incidental proteome differences?
▼
Will validation and hypothesis testing be possible?

Figure 2. Critical questions prior to proteomic analysis

Separating the proteome

Cellular compartments	Narrow pH range gels	Cell types	Protein fractions	Temporal stages

Figure 3. Typical strategies for focusing the proteomic experiment

A DAY IN THE LIFE OF A Lab Rat

08:30 Arrive at work and check my emails. Oh thrills. It seems I have won a lottery I have never even heard of, let alone entered. And a 'dear friend', also unknown to me, promises vast sums in return for a money laundering scam. Ooh, and today there's a choice of cheap botox injections or a new wonder drug to make my penis grow. If I had one.

Amongst these, an email from the faculty head 'reminds' us to think about the next RAE and publish four papers in journals with an impact factor above 6 (I'd swear it was only 5 last week). Then there's the reminder to complete the survey of time spent on each college activity. Funny how there's never a category for 'completing pointless surveys'.

Spend a happy 10 minutes daydreaming about how I would spend $5m if I really had won the Botswana State Lottery.

09:28 Phone rings. Steve, my PhD student, wants to finish his thesis before starting teacher training in September. I promise to read his latest draft this week. But the problem is that I lose the will to live after two pages. When I told him to be more descriptive about his results I didn't expect 'stimulation was in a dose-dependent manor' on every other page. If I ever get that lottery win I'll buy a country house and call it 'Dose-Dependent Manor'...

09:40 Have a quick check through the problem for today's tutorial. It's about type 1 diabetes - the usual cautionary tale of non-compliance with medication. Head off to find the tutorial room.

10:10 Only one student appears for the tutorial. She tells me that two students have contracted mumps and the others are 'on their way'. Apparently there are problems with transport today. More likely to be the deadline for handing in their essay today. Clearly this student drew the short straw and got the job of turning up on time.

10:25 Just as I'm about to abandon the tutorial, five more students appear. No apology for lateness is forthcoming. 'Why are you so late?' I demand. They look surprised. 'Transport problems,' one of them offers, with no further details. Amazingly all the essays are handed in on time.

12:00 That tutorial was like a trip to the dentist without the little treat afterwards. The students admitted to having heard of glucose and insulin. But beyond that it was pretty much all a blank, although they did provide an impressive list of long-term consequences of poor glycaemic control. Afterwards, one student asks for 'a quick word'. He blurts out that he has just been diagnosed with type 1 diabetes and is, not surprisingly, terrified of getting all the complications we discussed. We chat until he seems calmer and heads off to his next lecture, promising to let me know how he gets on.

12:10 Back in the lab Safiah intercepts my path to the coffee room to talk about the method that has suddenly stopped working. It's nearly 1 o'clock by the time we work out what to change first. I decide to skip the lunchtime seminar, thus foregoing the delights of college catering, potato curry sandwiches and all.

13:15 Returning from the sandwich shop I run into my head of department who 'reminds' me that we must get four papers in journals with an impact factor above 7 to be returnable in the next RAE. When I mention this morning's email, he replies that it all changed at the 'strategy planning meeting' he has just attended.

Back at my desk, I'm just taking a bite of lunch when the phone rings: it's the mother of a student with mumps. She's driven 50 miles to deliver her son's essay, and can't find my office. I direct her and gulp my lunch before she arrives, bearing both essay and medical certificate. I reassure her that her child will not be thrown out of college for having contracted mumps.

14:30 Send my third year students the marks and feedback for their dissertations (which I spent all Sunday grading). At last, time to work on that manuscript I've been meaning to finish!

14:35 Phone call from the admin office. There has been a timetable change and the lecture I was giving at the end of next week is now tomorrow morning. 'Sorry, meant to tell you sooner, no flexibility, so hard with room bookings, you do understand?' Scrabble around in filing cabinet to find old lecture that I've been going to update and put on Powerpoint for at least 2 years. Recall the bits that didn't work and reshuffle to try and improve. Oh well, less than 24 hours' notice is as good an excuse as any.

15:30 You should never look at emails while you're doing something else. Two of the third year have complained that my marking scheme is unfair and want me to regrade their dissertations because they didn't read the instructions properly. Respond grumpily about academic standards and suggest they rewrite their dissertations if they want them remarked. Get one sheepish apology by return.

Stomp off to coffee room to find somebody to moan to. Get token gesture of sympathy from Nick, but his grant application has just been turned down. Being on a fixed-term contract that's pretty bad news and is obviously far more deserving of sympathy than a couple of pushy students. Drink coffee while grumbling about (a) the complete lottery that is UK science funding, (b) the state of the university system and (c) the RAE exercise. Discuss possible career alternatives. Nick mentions his last PhD student who turned down a postdoctoral fellowship to join the Home Office, with an enhanced pension plan, job security and flexitime.

16:00 Manage to do a good half hour of work on the manuscript. Collect papers to read at home tonight: the latest version of Steve's thesis and lecture notes for tomorrow.

16:30 Go to weekly department meeting. News about the RAE exercise is not good. To be absolutely sure of inclusion as 'research active' in the RAE we need four papers in journals with an impact factor above 10. That clearly rules out all the endocrine journals, and very nearly everything else. Only two members of the department currently qualify.

17:30 Head home, wondering what happens to everybody else. Think I'll buy a lottery ticket.

R RATTUS

More than just a timepiece

► It was a hot summer's day. I was in the queue for a hot salt beef sandwich at the local delicatessen, when an elderly man at the counter suddenly fell to the floor. I was a senior medical student at the time and felt compelled to offer my limited skills and attend to him. However, before I could take action, another man stepped out of the queue, raised his arms to hold other potential helpers back and stated to all present, 'Stand aside, I'm a solicitor.'

I reeled backwards. I had medical finals coming up, and the role of a lawyer in the recovery of a collapsed patient had never been mentioned. The man who had fainted was clearly not in need of the law, at least not yet!

'Loosen his wristwatch.' With that second command, the solicitor shattered my beliefs about the circulation of blood. William Harvey, one of my medical heroes, took a dip in my estimation. When did he ever write about the critical significance of blood draining back from the left hand and wrist?

I peered forwards to check that the man was not wearing his wristwatch around his throat, and then suggested that we lie him flat and take off some layers of clothing. In a couple of minutes he had recovered completely, so much so that he could complain that his plate of food had been removed by restaurant staff during his faint. I sensed a re-emergence of interest from the solicitor as discussons intensified regarding its replacement.

Irrespective of its irrelevance, I have never forgotten that unorthodox advice. Even now, when I feel stressed and uncomfortable, I tend to fiddle with my wristwatch.

Clearly a collapse's outcome primarily depends on the cause. But the company present and the location are also very important. My own personal nightmare is collapsing in a meeting of paediatricians, who assiduously check for clicking hips and undescended testicles, whilst I quietly croak from a heart attack. Ideally you should arrange for your cardiac arrest to take place in hospital with the 'crash team' around the corner to enhance your chances. For this reason, I was very distressed when Sidney collapsed at 'the Rooms'.

The Rooms exist in a large old townhouse, staffed by part-time administrators, with no nurses and no resuscitation equipment: definitely not the place to be seriously ill in any acute sense. At the time I was taking blood from Sidney's wife, Cissie, and he had sat in on the consultation. With the needle in Cissie's arm, I turned in horror at the sound of Sidney's body hitting the floor: was it a faint, heart attack, stroke? Sidney lay motionless on the carpet, his pork-pie hat over his face, its forward curve resting on his lower lip, silently taunting me about the possibility of mouth-to-mouth resuscitation. It took a while to disengage the needle as Cissie tried to wave her arms about, while hurling insults at Sidney: 'Get up, you're embarrassing me!' 'Wait till I get you home, I'll kill you!'

I resisted the temptation of informing her that her last threat might be unnecessary! Fortunately, the usual common sense measures were enough to revive Sidney within minutes.

'I always do that when they take blood from a member of my family,' he said proudly.

I pointed out politely that it might be sensible if he stayed out of the room during bloodletting in future. But I could not bring myself to be more severe with him, given what he had to face when he got home. Once the door was closed and my hands had stopped shaking, it was then that I put my wristwatch back on.

'HOTSPUR'

HOT TOPICS

Jolene Guy, Gawain Lagnado, Andrew Lowe and Mona Munonyara highlight the latest in cutting edge research from the Society's journals.

GH activation of telomerase

▶ Telomerase is thought to play a role in a number of cellular processes besides telomere synthesis, including cell proliferation, survival and apoptosis. Growth factors have previously been shown to induce telomerase activity in hepatocytes. In this study, Gomez-Garcia and co-workers assess the effects of GH on the telomerase activity in a Chinese hamster ovary culture.

This work reports, for the first time, that telomerase is a target for GH, and that GH can trigger telomerase activity. This confirms that telomerase is regulated by different growth factors, but that the response to GH may be dependent on the cell type. The results also show that GH-induced telomerase activity was specifically blocked by phosphatidylinositol 3'-kinase (PI3k) inhibitor, but not by mitogen activated protein kinase inhibitor. This indicates that GH can activate telomerase activity through a variety of pathways.

This novel research reveals that regulation of the telomerase enzyme is critical for cell growth and survival, but that further studies are necessary to identify the specific GH-induced signal transduction pathways affecting telomerase activity and, ultimately, the cellular processes. **JG**
(See the full article in Journal of Endocrinology ***185(3)****, June 2005)*

Gene therapy for pituitary disease

▶ Gene therapy is a powerful treatment, employing genetic material to alter the pathology of a wide range of illnesses, from cancer to inherited genetic disease. It is now being applied to endocrine disorders. Lee and Jameson continue the Starling review series with an expert summary of the strategies and techniques employed in the gene therapy of pituitary diseases.

Pituitary cells are highly specialised and, as such, provide an opportunity to develop targeted expression of therapeutic genes using cell type-specific approaches. This review offers an interesting and important insight into recent developments in the viral vectors employed, the strategies for targeting their expression to the pituitary gland, and the therapeutic toxic genes that are effective in treating cancer.

The authors also explore the long-term applications of gene therapy for the treatment of hormonal insufficiency. The use of viral vectors to deliver long-lasting GH or vasopressin replacement is an exciting and challenging prospect, which requires further consideration of gene delivery and expression regulation. **GL**
(See the full article in Journal of Endocrinology ***185(3)****, June 2005)*

Ubiquitin-proteasome pathway

▶ In this well characterised eukaryotic protein degradation pathway, cellular proteins ear-marked for degradation have multiple copies of a small protein, ubiquitin, covalently attached to the substrate protein. The 26S proteasomal complex then degrades these polyubiquitinated proteins. The ubiquitin-proteasome pathway forms the primary degradation pathway for many regulatory proteins; as such the pathway is implicated in many cellular processes, including cell surface receptor and ion channel regulation.

Recent research indicates that the ubiquitin-proteasome pathway may have further roles. For gene transcription to occur, chromatin has to undergo a number of structural changes, regulated by the histone protein octamer about which the DNA of the chromatin is wrapped. Recent studies have highlighted the importance of the modification of histones by ubiquitin. Here, Kinyamu and colleagues provide a brief overview of the ubiquitin-proteasome pathway. They then detail the growing body of evidence that this pathway is involved in chromatin structure and transcriptional regulation, with particular reference to nuclear hormone receptor-mediated transcriptional regulation. **AL**
(See the full article in Journal of Molecular Endocrinology ***34(2)****, April 2005)*

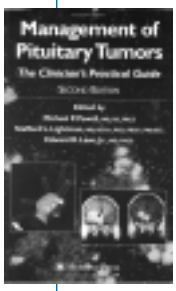
Low weight proteome identifies metastatic phaeochromocytoma

▶ Currently no reliable gene or marker can predict or detect metastatic phaeochromocytomas. Patients diagnosed with benign phaeochromocytomas may develop metastases up to 20 years after the occurrence of the primary tumour, so all patients require life-long follow-up.

In this paper, Brouwers and colleagues evaluate the hypothesis that the low molecular weight (LMW) region of the serum proteome consists of peptides and protein fragments that contain important diagnostic information. Mass spectrometry was used to analyse and identify LMW profiles of patients with known diagnoses. The results were validated using an entirely blind testing set, and could be used to distinguish metastatic from benign phaeochromocytoma with high specificity. If confirmed in larger validation studies, efforts to identify the underlying diagnostic molecules by sequencing would be warranted, and measurement of these biomarkers could be used to improve the ability to identify patients with metastatic disease.

The authors conclude that the LMW region is an untapped source of biomarkers that could have the potential to identify patients with metastatic phaeochromocytoma at an early stage, so enabling the appropriate follow-up. **MM**
(See the full article in Endocrine-Related Cancer ***12(2)****, June 2005)*

Management of Pituitary Tumours: the Clinician's Practical Guide



Eds MP Powell, SL Lightman & ER Laws Jr, Humana Press, 2003, edn 2, 300pp, £78.50, ISBN 1588290530

► Chapters in major textbooks concerning the types and presentations of pituitary tumours often do not provide specific practical guidance to their management. It is here that this book really scores for the trainee in endocrinology, and the specialist working in this field. This text's authorship also reflects the increasing trend for endocrinologists and neurosurgeons to work together.

The excellent overview of the pathogenesis of pituitary adenomas illustrates just how little we know about the biology of these fascinating tumours. Indeed, the philosophical discussions re-emphasise the need to challenge widely held dogma, and fuel the desire for further research in this area.

Chapters follow on the major subtypes of pituitary tumour, including prolactinoma, acromegaly, Cushing's disease and non-functioning tumours. Each is clearly laid out and up-to-date, although readers in the UK will notice minor differences of approach in the chapters from across the Atlantic. This is advantageous, emphasising that different methods may still result in excellent management. The medical management of prolactinomas and increasingly for acromegaly is highlighted, whilst the section on the effectiveness of pituitary surgery for Cushing's disease is optimistic. Nevertheless, discussion is comprehensive and highly informative.

The neurosurgical effects and management of the tumours are discussed in five chapters. These provide fascinating reading for endocrinologists, and educate in areas that we may think are familiar. They give important insights into the advantages and limitations of neurosurgical techniques. One notable omission is a chapter specifically dedicated to pituitary imaging. There are many examples of abnormalities, but more detail on the interpretation of pituitary MRI would be useful.

The next two chapters cover the early and longer term post-operative management of pituitary tumours. Whilst local policies may vary, the guidelines provided are helpful. The detailed chapter on post-operative assessment and follow-up, together with the protocols they include, is a useful guide.

Two further chapters examine the increasingly controversial issue of pituitary radiotherapy. The first covers conventional radiotherapy, whilst the second addresses gamma-knife radiosurgery. The advantages of each are discussed, although long-term follow-up data for the latter are only just available. No doubt discussion of these issues will continue, but the text provides a good framework from which to inform the debate.

The penultimate chapter is a tour de force that considers all parasellar lesions other than pituitary adenomas. This is extremely useful and detailed, importantly reminding the reader that mass lesions can have aetiologies other than pituitary tumours. It is extensively illustrated and discussed.

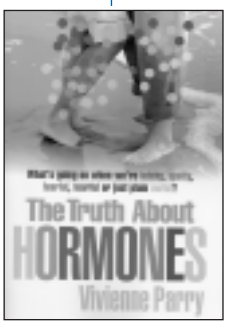
The book concludes with a chapter that should appear in all textbooks on management of medical conditions, namely the patient's perspective. This forces one to reflect on personal practice and to assess how closely it matches the needs of patients. This important part of this book extends the role of The Pituitary Foundation.

Overall, this is an excellent book, which would be a useful addition to the shelf of any endocrinologist, pituitary neurosurgeon or medical school library.

JOHN NEWELL-PRICE

The Truth about Hormones

Vivienne Parry, Atlantic Books, 2005, 224pp, £9.99, ISBN 1 84354 428 8



► This is an eclectic selection including basic, clinical and media-evoking endocrinology, historical anecdotes, and outlines of some research studies to validate arguments. The author is a science commentator for *The Guardian* and science editor of *Good Housekeeping*. She has presented 'Tomorrow's World', written for *The News of the World* and reported for 'Panorama'. The 'journalistic' style of writing avoids the turgidness of academic script, but at times it compromises scientific accuracy and historical perspective.

Parry explains that this is '...an introduction to a secret empire of stunning complexity and elegance, and will attempt to set out the truth about hormones'. Assisted by numerous scientists and clinicians, including many stalwarts of the Society for Endocrinology, the book mainly focuses on aspects of endocrinology that attract media attention. Thus, aside from the first chapter, 'A bluffers guide to hormones,' the text covers attraction, sex and babies, puberty and adolescence, the menstrual cycle and its problems, endocrine-disrupting chemicals, the menopause/andropause, hormones and fatness, hormones as clocks, and hormones and aging. There is a distinct bias towards female endocrinology!

There is certainly some interesting reading in this book, and Parry has obviously undertaken a lot of serious research. The problem is the difficulty in pinpointing her target audience. Would a lay-reader really be interested in the number of amino acids that determine whether a particular hormone is a peptide or a protein, whether hormones are water or lipid soluble, and whether their receptors are on the cell surface or intracellular? Some concepts may also prove tricky for a non-scientist, such as the influence of the major histocompatability complex on odours and body odour preferences, and the significance of progesterone binding to GABA receptors. Such information sits alongside the emotional experience of the author at Princess Diana's funeral in relation to stress hormones.

That said, Parry writes lucidly, and uses excellent analogies to explain the scientific concepts. Apart from a few blunders such as the pancreas being controlled by the pituitary gland and cortisol being synthesised from aldosterone, this book provides a fascinating insight of interest to both experts and non-experts. Furthermore, students and teachers alike will benefit from the style of popular science writing.

SAFFRON WHITEHEAD

CHANGING THE FACE OF FEMALE HIRSUTISM

New

VANIQA®

EFLORNITHINE 11.5% CREAM

THE ONLY TOPICAL PRESCRIPTION MEDICINE TO SLOW THE GROWTH OF EXCESSIVE FACIAL HAIR IN WOMEN

Vaniqa 11.5% Cream Prescribing Information
Presentation: Cream containing 11.5% w/w eflornithine (as monohydrate chloride). Also contains cetostearyl alcohol, macrogol 20 cetostearyl ether, dimeticone, glyceryl stearate, macrogol 100 stearate, methyl parahydroxybenzoate (E218), mineral oil, phenoxyethanol, propyl parahydroxybenzoate (E216), purified water and stearyl alcohol. **Indication:** Treatment of facial hirsutism in women. **Dosage and Administration:** Apply a thin layer of the cream to clean and dry affected areas of face and under chin twice daily, at least eight hours apart. Rub in thoroughly. For maximal efficacy, the treated area should not be cleansed within four hours of application. Cosmetics (including sunscreens) can be applied over the treated areas, but no sooner than five minutes after application. Improvement in the condition may be noticed within eight weeks of starting treatment. Continued treatment may result in further improvement and is necessary to maintain beneficial effects. The condition may return to pre-treatment levels within eight weeks following discontinuation of treatment. Use should be discontinued if no beneficial effects are noticed within four months of commencing therapy. Patients may need to continue to use a hair removal method (e.g. shaving or plucking) in conjunction with Vaniqa. In that case, the cream should be applied no sooner than five minutes after shaving or use of other hair removal methods, as increased stinging or burning may otherwise occur. *Elderly:* (> 65 years) no dosage adjustment is necessary. *Children and Adolescents:* (< 12 years) safety and efficacy of Vaniqa have not been established. *Hepatic/renal impairment:* the safety and efficacy of Vaniqa in women with hepatic or renal impairment have not been established. *Pregnancy and Lactation:* Pregnant or breast-feeding women should not use Vaniqa. **Contra-indications:** Hypersensitivity to eflornithine or to any of the excipients. **Special Warnings and Precautions:** Excessive hair growth may be as a result of serious underlying disorders (e.g. polycystic ovary syndrome, androgen secreting neoplasm) or certain medications (e.g. cyclosporin, glucocorticoids, minoxidil, phenobarbitone, phenytoin, combined oestrogen-androgen hormone replacement therapy). These factors should be considered in the overall medical treatment of patients who might be prescribed Vaniqa. Contact with eyes or mucous membranes (e.g. nose or mouth) should be avoided. Transient stinging or burning may occur when the cream is applied to abraded or broken skin. If skin irritation or intolerance develops, the frequency of application should be reduced temporarily to once a day. If irritation continues, treatment should be discontinued and the physician consulted. It is recommended that hands are washed following use. **Undesirable Effects:** The mostly skin related adverse reactions reported were primarily mild in intensity and resolved without discontinuation of Vaniqa or initiation of medical treatment. Most events were reported at similar rates between Vaniqa and vehicle. * denotes when higher levels in Vaniqa treated patients were reported: Very common (> 10%): acne. Common (> 1% to < 10%): pseudofolliculitis barbae, alopecia, stinging skin*, burning skin*, dry skin, pruritus, erythema*, tingling skin*, irritated skin, rash*, folliculitis. Uncommon (> 0.1% to < 1%): ingrown hair, oedema face, dermatitis, oedema mouth, papular rash, bleeding skin, herpes simplex, eczema, cheilitis, furunculosis, contact dermatitis, hair disorder, hypopigmentation, flushing skin, lip numbness, skin soreness. Rare (> 0.01% to < 0.1%): rosacea, seborrhoeic dermatitis, skin neoplasm, maculopapular rash, skin cysts, vesiculobullous rash, skin disorder, hirsutism, skin tightness. **Legal Category:** POM. **Price:** 1 x 30g tube £26.04. **Marketing Authorisation Holder:** Shire Pharmaceutical Contracts Ltd., Hampshire International Business Park, Chineham, Basingstoke, Hampshire RG24 8EP, UK. **Marketing Authorisation Number:** EU/1/01/173/002. **Date of Preparation:** July 2004. **Further Information is Available from:** Shire Pharmaceuticals Ltd., Hampshire International Business Park, Chineham, Basingstoke, Hampshire RG24 8EP. Code: 039/0086 Date of item: November 2004

Shire