Silencing the scaremongers

PLUS...

Miracle cure - a risk worth taking?
Addison’s Disease Self-Help Group
Aldosterone - 50 years on
This issue of The Endocrinologist has a focus on integrity. If you'd like to start by checking on your own probity, take a look at one of the web sites recommended by 'Melissa the Webspinner' on page 7. It's never to soon to know what dirt has been uncovered in your past!

One man with something on his conscience is our Chairman, Steve Bloom. In a remarkably frank article (page 10), Steve tells of his concerns about the new obesity drug that they are developing at Imperial. He asks, 'Is this power desirable? We are identifying the brain's most private secrets, but also how to control them. Will we end up with a 'character in a bottle' scenario in which people can choose their personalities? Even if our society uses it responsibly, what's to stop dictators or rogue cults from exploiting chemical alteration of human drives for their own ends, offering growth, sex or happiness benefits to loyal supporters and withholding them from others?'

Maybe Steve should read the article by Tracey Brown about the SAS (page 8). No, not the guys in uniform, but 'Sense About Science', a trust that promotes evidence-based public debate about science and risk. If you're faced with an endocrine 'hot potato', take this opportunity to find out who can help you - not least of all your very own Society.

For honesty, I particularly like the short conference reviews on page 12, where Charlotte Waters concludes 'for me, the content of the conference turned out to be just like the weather - moments of brilliance but predominantly slightly dull.'

Clearly she wasn't talking about the BES, where we had such spectacular weather!

Of course, apart from veracity, the other major attribute a journal should boast is a high impact factor. The Society's journals have scaled to even giddier heights and we should congratulate Endocrine-Related Cancer whose rating now exceeds 6.

See page 3 to learn the good news about our other journals.

Editorial boards spend many hours debating how to improve their citation index, but Hotspur knows the answer. Like the tabloids, he can't get away without mentioning his brush with celebrity. 'It was extraordinary! There I was, just about to pay for my goods, when he walked into the store - the golden boy, Becks himself. Immediately I detected four women with exophthalmos and three women with unilateral neck spasm.' Turn to page 11 to read possibly the only article ever published on both David Beckham and John Wass.

If you really want the truth about a rare condition, then there is no substitute than to talk to the people who have experienced it at first hand. Patient support groups play an increasingly important role in informing both patients and carers about rare and common diseases. On page 9, you will find an excellent article on the Addison's Disease Self-Help Group. If you know of any other patient groups who would like to be featured in The Endocrinologist please let us know.

RICHARD ROSS

Applications are invited for

Editors-in-Chief

For Journal of Endocrinology

and Endocrine-Related Cancer

Journal of Endocrinology is a world-class forum for research papers and reviews in all areas of the discipline, and continues to develop as an international journal of choice for publishing the 'new' endocrinology.

Endocrine-Related Cancer is the global form for reviews on all tumours influenced by endocrine agents and drugs. It also considers original research papers of exceptional quality. Candidates for both roles should have broad-ranging internationally recognized expertise relevant to the scope of the journal, and creative ideas about how the subject coverage should be developed to reflect the changing priorities of current research.

There is a small honorarium and strong administrative support from the Society for Endocrinology's Bristol office. Please send your CV and a covering letter to: The Officers, c/o S Byford, Society For Endocrinology, 22 Apex Court, Woodlands, Bristol BS32 4NG, UK (Fax: +44 (0)1454 642222; Email: editorial@endocrinology.org).

The deadline is Wednesday 31 December 2003.
Impact factors jump again!

Two Society journals, Endocrine-Related Cancer (ERC) and Journal of Molecular Endocrinology (JME), have shown huge leaps in their impact factors for 2002. The new values, released recently by ISI, are a measure of how many times papers published in 2000 and 2001 were cited in 2002. Our other journals also showed healthy increases, so the new values clearly illustrate the continued and growing importance of all the Society's journals amongst the highest ranks of global endocrine publications.

ERC’s impact factor of 6.087 means it ranks 9th in the list of 88 international endocrinology and metabolism journals. JME weighs in at a hefty 4.359, its highest ever value, a huge increase over last year’s very strong score of 3.649. Both journals are owned and published by the Society.

Young Endocrinologists Clinical Review Lecture - £500 honorarium available

Clinical young endocrinologists should apply now for this chance to present a 30-minute review lecture on an endocrine subject of their choice. The lecture will be presented at the Society’s Clinical Cases Meeting, which will be held at the Royal Society in London on 25 February 2004.

The lecture topic is likely to relate to an area of personal research, either in progress or recently completed. Applicants must be members of the Society for Endocrinology who are under 35 and less than 6 years post-MD/MRCP (usually in the SpR grade). Older applicants may be considered if there are extenuating circumstances (please provide details).

See the enclosed ‘Call for Abstracts’ flyer, or visit the Society’s web site (www.endocrinology.org/sfe/train.htm), for further information. The deadline for receipt of abstracts is 20 October 2003.

Nominations for Clinical Committee

Nominations are requested from members to fill three vacancies on the Clinical Committee. Forms are available from the Society’s web site (www.endocrinology.org/sfe/commit.htm) or from Julie Cragg in the Bristol office. The deadline for their receipt is 21 November 2003.

Members on the move...

B S Aditya to Halton General Hospital, Cheshire; S Ahmed to Great Western Hospital, Swindon; A Baig to National Institute for Medical Research, London; M Carson to Royal Infirmary of Edinburgh; K E Cosgrove to University of Manchester; R D’Costa to Queen’s Medical Centre, Nottingham; K H Darzy to Barts and the London NHS Trust; T A Elhadd to King Faisal Specialist Hospital and Research Centre. Jeddah; S Langham to Great Ormond Street Hospital, London; S Rice to St. George’s Hospital Medical School, London; A Robertson to University of Surrey; R Shepherd to University of Manchester; A M Solomon to Royal Free Hospital, London; B Vaidya to Royal Devon and Exeter Hospital, Exeter; D F Wood to Addenbrooke’s Hospital, Cambridge.

Congratulations...

to John Laycock who has been awarded a Chair in Physiology at Imperial College London, and to Ilpo Huhtaniemi who has been made a fellow of the Academy of Medical Sciences.

Basic Science Review Lecturer

Congratulations to Dr Fadi Charchar from the Gardiner Institute, University of Glasgow for winning this award for 2003 with his abstract ‘Y are men the weaker sex?’. He will present his lecture during the Young Endocrinologists session at the Society’s meeting in London in November.

Sad news from Bristol

In April this year Gerry Thorn, Sue Thorn's husband, died from a heart attack while racing his MG at Silverstone. Gerry’s generosity, support and, especially, his straight-faced humour were well-known to all who work at the Bristol office. Many will fondly remember his jokes with the office's visiting hairdresser about the enormous length of time it was likely to take to trim his scant head of hair.

From the moment Sue joined the Society in 1991, there could be no doubt about Gerry's staunch support for Sue's role and the Society's aims. From holding Christmas and garden parties for the Bristol office staff, to carrying out electrical DIY at the office and helping with extensive research for new premises, Gerry made sure his talents were put to good use on the Society's behalf.

Sue has displayed extraordinary courage and fortitude since Gerry died, and our deepest sympathies go out to her. Everyone who knew Gerry will miss him very much.
New US Editor

Dr Doug Stocco is the new US Editor of Journal of Endocrinology. Doug has been on the journal’s editorial board for over 3 years, and we’re very pleased that he has agreed to take on this important role.

Doug is based at Texas Tech University Health Science Center. As many of you will know, his research focuses on the acute regulation of steroid hormone synthesis; it was his laboratory that identified the novel StAR protein.

Doug replaces Frank Talamantes, who is retiring from the editorial board after serving as US Editor since 1998. We will be very sorry to see him go, and thank him very much for his contribution to the journal’s development over the past 5 years.

Free PDFs for authors

Authors of articles in the Society’s journals will soon receive a free PDF of their papers, in their final published format, in place of a complimentary set of offprints. From the October 2003 issues, a PDF of each article will be emailed to the corresponding author. Authors will still be able to buy offprints of articles if they so wish.

The copyright assignment forms have also been revised (see www.endocrinology.org/sfe/copyrte.htm for an example). These now state explicitly the rights that authors retain over their published work, the service and advantages they can expect from publishing in the Society’s journals, and the use to which they can put their free PDF files.

Touting for a tune!

Following comments that the music on the Bristol office phone system is ‘bland and boring’, we challenge you to find something that will get you grooving and lift your spirits while you’re waiting to be connected! It’s the perfect opportunity for all you multi-talented musical endocrinologists to flaunt your skills. Compositions of all kinds and styles are welcome: how about the Endo waltz, the BES march or the JOE blues? Send your suggestions to Ailsa Bailey, at the Bristol office.
Sylvia A S Tait

Biochemist who, with her husband, identified aldosterone.

Sylvia Agnes Sophia Wardropper, biochemist: born Tumen, Russia, 8 January 1917; Research Assistant, Courtauld Institute of Biochemistry, Middlesex Hospital Medical School 1944-55, External Scientific Staff, MRC 1955-58, Research Associate and Co-Director, Biophysical Endocrinology Unit, Department of Physics as Applied to Medicine 1970-82; Senior Scientist, Worcester Foundation for Experimental Geology 1958-70; FRS 1959; married 1940 Flt Lt Anthony Simpson (died 1941), 1956 James F Tait; died Lymington, Hampshire, 28 February 2003.

Sylvia A S Tait died only 2 months before a symposium to be held at the Royal Society on 27-30 April to celebrate the 50th anniversary of the isolation of aldosterone that she achieved with her husband, James F Tait.

Aldosterone was the last of a series of biologically potent naturally occurring steroid hormones to be isolated and identified during the period from the 1920s to the 1950s, and followed the earlier characterisation of the androgens, oestrogens, and the glucocorticoid hormone, cortisol (hydrocortisone). Like these, the identification of aldosterone, with its ‘mineralocorticoid’ activity, aroused great excitement, and stimulated a new period of research into the regulation of salt and water balance, blood pressure, and cardiovascular disease.

It was first shown to be the hormone secreted by the outermost part of the adrenal gland, the zona glomerulosa of the adrenal cortex, and in recent years the study of this hormone has received a new impetus with the finding that it may also be produced within the vasculature itself. This carries implications for the management of cardiovascular disease, and recent trials of the new aldosterone antagonists show great promise in this regard.

The Taits, as they were fondly and universally known, were one of the great husband-and-wife teams of biological science who, although having been in retirement for 20 years, still maintained a keen interest in the field of aldosterone research and continued to publish, after a total period of 57 years working together.

Sylvia Agnes Sophia Wardropper was born in Tumen, Siberia, in 1917, and returned to England with her family in 1920, not, it can be imagined, without difficulty at that point in history. Her mother was a Russian mathematician, a graduate of Moscow University, rare for a woman in those days, especially in Tsarist Russia. Her father was a Scottish agronomist.

Sylvia Wardropper had a conventional British upbringing and education with an emphasis on languages at a higher school level rather than on science, but in the end she graduated with an honours degree in Zoology from University College London in 1939. In 1940 she married Flt Lt Anthony Simpson, a fellow student from University College, who later flew in RAF Coastal Command and was killed in action near Bergen in 1941.

Professionally Sylvia kept the surname Simpson until she married James Tait in 1956.

As a postgraduate Sylvia Simpson first worked on nerve regeneration with the great J Z Young in Oxford but, in 1944, she took up a more permanent position at the Courtauld Institute of Biochemistry, as an assistant to P C Williams, who was head of the biological laboratories. Simpson was a remarkably skilled biologist who had considerable experience with bioassays for oestrogen at the Courtauld and in the 1950s was conversant with the appropriate statistical methods.

In 1947, the pioneering study of Ralph Dorfman and his colleagues in Cleveland, OH, USA, which described a microassay for mineralocorticoid activity, was particularly noteworthy, and the Taits acknowledged that it initiated their own work. A senior clinician at the Middlesex Hospital, B Lewis, drew attention to the Dorfman study, and in 1952 Sylvia Simpson and James Tait, together with Helen Grundy, devised another bioassay that measured the effects of steroids on the excretion of isotopically labelled sodium and potassium.

In the 1950s a major competition had developed between Sylvia Simpson and Jim Tait at the Middlesex Hospital and two American groups, in the race to find the mineralocorticoid still missing from the known portfolio of adrenal steroid hormones. The Taits’ advantages were considerable: not only were they able to use the recently available radioisotopes of sodium and potassium...
SOCIETY NEWS

possibility of aldosterone production occurring in extra-adrenal tissues like the heart or the brain, means that there is still much to be done. With the clinical significance of mineralocorticoid receptor blockade now well established by the RALES trial, and the latest data from the receptor antagonist eplerenone presented at this conference, the value of this work is clear, and may yet yield quite unexpected benefits.

Two decades ago, these conferences were almost discontinued because it was thought there was little left to learn! The combination of new research and impressive young investigators leaves little doubt that they will be here for some time yet.

SCOTT MACKENZIE

Aldosterone - 50 years on

The 29th International Aldosterone Conference, held in Philadelphia last June, could have been forgiven for looking backwards just this once. It marked the 50 years that have passed since aldosterone was isolated and characterised by the team of scientists led by James and Sylvia Tait.

At this anniversary, it was interesting to note not only the huge number of people who now work on this hormone, and the fact that more than 25 000 papers have been written on the topic over the years, but also how broad the subject of aldosterone research has become.

Although aldosterone's role in sodium balance was still represented, and much remains to be learned in this field, novel subjects occupied much of the conference. For example, the 11β-hydroxysteroid dehydrogenase enzymes that are critical in the action of aldosterone on its receptors formed the subject of a session in their own right. This was also the case for the hormone's action on cardiac tissue and its role in the development of cardiac fibrosis.

The complexity of the regulation of the aldosterone synthase gene, or the possibility of aldosterone production occurring in extra-adrenal tissues like the heart or the brain, means that there is still much to be done. With the clinical significance of mineralocorticoid receptor blockade now well established by the RALES trial, and the latest data from the receptor antagonist eplerenone presented at this conference, the value of this work is clear, and may yet yield quite unexpected benefits.

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Grants for BES 2004

• Are you a Young Endocrinologist?
• Planning on going to BES 2004 in Brighton next March?
• Apply for a Clinical Endocrinology Trust travel grant now!

For an application form contact christine.davis@endocrinology.org, or visit www.endocrinology.org/sfe/grants.htm

JOHN P COGHLAN
GAVIN P VINSON

Sylvia A S Tait - continued from page 5
to develop the most sensitive bioassay for mineralocorticoid activity, but also the
Bush chromatographic methods, which enabled them to isolate a fairly pure sample of the hormone.

Then, with their colleagues, crucially including Tadeus Reichstein, the Nobel Laureate chemist at CIBA, the structure of aldosterone was determined, and the race was won. This was an outstanding achievement in international terms for the Taits and for British science - the direct result of the coming together of a team whose combined technical skills were necessary for success. The collaboration between Jim and Sylvia Tait became a lifelong association that generated outstanding research on steroids, especially in the aldosterone field that they dominated for over 35 years. Both the Taits were elected Fellows of the Royal Society in 1959.

A little later, Sylvia and Jim Tait were head-hunted by Gregory Pincus, of contraceptive-pill fame, and in 1960/61 they joined the staff of the Worcester Foundation of Experimental Biology and Medicine in Shrewsbury, MA, USA, as senior scientists. The attraction of working in an institution where a critical mass of the staff were interested in steroids, and which at that time was at the height of its international scientific impact, was clearly irresistible.

The achievements of the 10 years at the Worcester were considerable, and it was there that the husband-and-wife team developed new methods for studying hormone dynamics, secretion rates and rates of metabolism, again using newly available radioisotopically labelled products, which by this time included the steroids themselves. They also developed an isotopic method for the estimation of aldosterone concentrations in peripheral blood, which, falling as they do within the picomolar range, was again a considerable technical achievement, before the development of the immunoassays that now make such measurement routine.

Sylvia and Jim Tait returned to the UK in 1970, as co-directors of the Biophysical Endocrine Unit at the Middlesex Hospital Medical School, London University, where Jim was appointed Professor of Physics as Applied to Medicine. There they continued research on the cellular functions of the adrenal cortex, with particular emphasis on the mechanisms of regulation of secretion of the different hormone types.

In 1982 Sylvia and Jim retired to the New Forest in Hampshire, where together they greatly enjoyed every aspect of living in the country. In a way, their domestic roles mirrored their laboratory division of labour: he was the great knowledgeable wine master and she the accomplished chef.

However, Sylvia retained her avid interest in science, and had many friends and colleagues in science around the world. But, above all, it was to her husband and to their joint research activity that her unwavering loyalties remained as strong as ever, to the end.

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The complexity of the regulation of the aldosterone synthase gene, or the
**Webspinning**

Melissa Westwood highlights the best on the web

**It’s a bind?**

www.blueprint.org

Here’s a site which should appeal to all the proteome junkies. A simple query (protein name or accession number) to the Biomolecular Interaction Network Database (BIND) returns a list of potentially interacting proteins, assembled from peer-reviewed literature and direct submissions to the database. Currently built around mouse, yeast and human proteins, each record provides freely available information on binding sites, cellular location, experimental evidence and links to relevant publications. With the promise of a large injection of cash to turn it into the world’s largest proteomics database, this is surely a site to keep an eye on.

**SERVICES:** L, D, T; **STRONG POINTS:** Excellent links; **WEAK POINTS:** In transition; **RATING:** Very good.

**Brenda 4 enzymes**

brenda.bc.uni-hoch.de

BRENDA - otherwise known as the comprehensive enzyme information system - is a really excellent database developed and maintained by biologists and chemists at the Institute of Biochemistry, University of Cologne. Visitors can search for a favourite enzyme by name or EC number, and retrieve hyperlinked hits providing information on synonyms, enzyme/ligand interactions, functional parameters, structure, molecular properties, related references and, in fact, just about anything in the NCBI database. What’s more, access for academics is free!

**SERVICES:** D, L; **STRONG POINTS:** Very well organised; **WEAK POINTS:** None; **RATING:** Excellent.

Thanks to Kevin Ahern and Genetic Engineering News. Don’t forget to visit the Society for Endocrinology on the web: www.endocrinology.org; tell us about your favourite web site: melissa.westwood@man.ac.uk.

**Account Handlers & Writers**

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Do you have an impressive academic track record in endocrinology? Are you excited by science and want to communicate its meaning and benefits to a wide variety of audiences? Meditec Media®, a leading independent international healthcare communications group, is currently recruiting talented individuals to join us as account handlers and writers.

You will assist with the research and writing of scientific content or in the effective management of a whole variety of scientific communications. It could be a ground-breaking CD-ROM of the latest therapeutic developments, the publication of key scientific data from a phase III trial, or a presentation by influential clinicians and researchers to an international congress – and often it will be all three at the same time. Our clients are top global pharmaceutical companies, scientific societies and non-governmental organizations, and as an agency we are greatly respected for our scientific knowledge and our ability to develop innovative solutions to our clients’ needs.

It goes without saying that you will need outstanding communication skills, and a life science degree to at least PhD level. You will also be dynamic, tenacious, self-reliant and able to demonstrate a high level of flexibility in your approach to work. On the job and paid professional training are available and actively encouraged in a working environment that is informal, fun and employee orientated. Other existing employees have successfully made the transition from academics to a thriving commercial environment. To find out how you can make that change, please contact Anthony McKenna, Human Resources Director, on +61 (0) 20 7388 0569, or apply online at:

www.meditec-media.com

**Integrity check**

www.cspinet.org/integrity

In public opinion surveys, university professors often appear near the top in terms of respected professors. But the increasing entanglement of university researchers with commercial enterprises, and the potential for conflict of interest, has led to concern about the integrity of science (and scientists). This web site from the Center for Science in the Public Interest seeks to clarify the situation. Site highlights include a searchable database of industry-scientist ties, a list of publications on the topic, and numerous links to guidelines and laws in the area.

**SERVICES:** L, D; **STRONG POINTS:** Very informative; **WEAK POINTS:** None; **RATING:** Good.

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<th><strong>Services</strong> provided at web sites:</th>
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<td>T Tools - Analytical computing tools</td>
<td>Excellent</td>
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<td>D Data - Searchable or downloadable database information</td>
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<td>G Goods - FTP delivery of useful items (e.g. full package, bug fix or demo software)</td>
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<td>N News - News of interest</td>
<td>Excellent</td>
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<td>S Support - Feedback in response to users’ enquiries</td>
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<tr>
<td>O Others - e.g. Innovative use of web tools, appearance, editorial point of view</td>
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Nothing below good will be reported here.
Sowing the seeds of sense

When endocrinology hits the headlines, it isn’t always for the reasons the researchers had in mind. The trust Sense About Science promotes evidence-based public debate about science and risk. Here, the trust’s Director, Tracey Brown, talks about managing public debate.

A quick rummage through recent fragmented memories of popular exposure to endocrinology produces a nonsensical sensationalist stream: HRT is a risk not worth the benefit, it apparently causes cancer; growth hormone - there was a problem with weight lifters using it, it comes from dead bodies, it also causes cancer; the hormones they put in meat make you immune to antibiotics; in the USA young girls develop breasts earlier because of the hormones in food (or is it that they get facial hair?); genetically modified food can make men sterile… No doubt you can remember an even longer list of popular claims. As regards public clarity about scientific evidence, endocrinology seems particularly scare-prone, because of its intimate connection with social behaviour, human health, current therapies and environmental exposures. Often, scientists’ results are released into wider debates that are already polarised or political. For example, hormone therapies have their advocates and detractors, and claims about ‘gender bending’ effects are de rigueur for environmental campaigners against agricultural chemicals, anti-GM groups, and some alternative health practitioners.

According to Dr Robin Lovell-Badge, developmental geneticist at the MRC National Institute for Medical Research, endocrinology’s inherent complexity doesn’t help. For instance, when considering endocrine disruption, ‘There are all sorts of variables in the way a chemical is handled both in the environment and in an organism. Results in this field rely on data that are difficult to collect in a uniform way, and consequently there are rarely ‘clean’ answers.’ Indeed, the WHO’s recent report on endocrine disruptors concluded that the publicity accorded to the area was not supported by convincing experimental data.

While this may help prioritise future research, the immediate challenge is how to achieve a measured discussion about the available evidence. In this regard, I suspect that endocrinologists, like other scientists, need to become more confrontational.

No doubt confrontation sounds at odds with our self-effacing, ‘dialogue’ focused times. But, before dismissing it, consider this paradox: despite the proliferation of ‘science communication’ initiatives, the rebranding of every aspect of society’s interface with science as a ‘science and society’ project, and a general anxiety about ensuring ‘stakeholder consultation’, have relations ever felt worse between the scientific community and society at large? Have the media ever been so controlling of how scientific claims are communicated? Has there ever been such scepticism about the role of science in social progress?

Most modern scientists are pleased to have distanced themselves from earlier methods of confronting public scares - which often took the form of a condescending dismissal! However, the adoption of alternative, effective ways of confronting distortions has not been straightforward. Scientists’ increased sensitivity to potential opposition seems also to have made them reticent when problems arise. More significantly, the scientific world has never before had to compete with so many health groups, environmental campaigns, campaigning journalists and new age therapy promoters, among others, each vying to comment on findings.

At Sense About Science, we encourage scientists to take on the challenges of the broader implications of their work at two levels. The first is straightforward - to think about how claims are likely to be presented. Good advice is readily available. The Science Media Centre, established last year to respond when science hits the headlines, helps anticipate the media reaction to results. Professional and learned societies also provide a (currently under-utilised) resource. They should at least be informed about work entering the public domain. The scope for generating public confusion is greatest when unprepared contacts are asked for their reactions. The Society for Endocrinology, according to External Relations Officer Tom Parkhill, still learns late in the day about research news, ‘most often because the press ring up asking for a response.’

The second level is to think more strategically about relationships with groups who have a role in how research results are received and understood, and to confront people directly over mistakes and disagreements. Active relationships can remove the scope for misunderstanding, and even for mischief. When we know people, we feel more compelled to confront them directly with disagreements rather than to project them publicly straightaway.

Public scares about scientific matters are usually generated by active players, which include a wide range of institutions that shape public opinion, beyond the journalists on whom we tend to focus. Commentators on recent public scares have often been able to
generate alternative interpretations of results in a relatively unimpeded way, with little insistence on distinctions between evidence and conjecture. When I speak to organisations with concerns about conservation, health risks and pollution, they have usually neither sought nor received contact with the scientists whose research they are reacting to, but have been dependent on news releases and discrete discussions among themselves.

Where scientists make direct contact with other commentators, it improves the public debate. Organisations that shape public opinion need to be treated in different ways. A few campaigns’ credibility is dependent on undermining scientific evidence per se. In most cases, however, being prepared to confront the sources of misinterpretation can set up useful relationships. Some scientists involved in research using animals and stem cells are directly in touch with interested medical charities, and we can see the benefits of this in recent discussions about the need for such work. At Sense About Science, we have created opportunities - some more challenging than others - for scientists to discuss evidence with people from conservation groups, aid NGOs, medical bodies and writers of parenting literature, among others.

Seeking direct, active engagement with the people who make the arguments influential may be less appealing than the vaguer consultations that often pass for ‘dialogue’, but it offers the only real prospect of being effective in reducing public scares. Those scientists who have been willing to confront significantly misleading claims are often rewarded with a better understanding of what different commentators represent, and the source of their reactions and anxieties. That understanding puts scientists more firmly in a position to swing the balance of public discussion away from scares and in favour of evidence.

**SPOTLIGHT ON...**

**Addison’s Disease Self-Help Group**

Addison’s disease (adrenal failure) affects several thousand people in the UK. Since 1984, the Addison’s Disease Self-Help Group (ADSHG) has existed as a voluntary group run by and for people with the disease. It currently has around 750 members, and is in the process of becoming a registered UK charity. Here, ADSHG’s Katherine White and Nick Willson tell us more about what the group can do for patients as well as their doctors, family and friends.

Membership of ADSHG is open to anyone with an interest in Addison’s disease. Our aim is to help people manage their condition and work well with their doctors. We achieve this by sharing information and experiences.

Through the combined efforts of our members, we produce a newsletter (six issues per year), offer an email discussion group, maintain an extensive web site (www.adshg.org.uk), and publish a twice-yearly summary of new web site pages. New members receive a copy of the group’s manual, ‘Living with Addison’s disease’, which is also available online. We hold an annual medical lecture, and arrange several social gatherings around the UK each year.

With a widely scattered membership, the web site and the email group are recent successes for ADSHG. We relaunched the web site last year. It now includes comprehensive instructions on how to deal with emergencies, members’ experiences and links to recent research and news. The site is read by around 70 people a day, receiving over 2000 visits a month. We have regular readers in Taiwan, Mexico, and many other countries where English is not the main language. ‘Living with Addison’s disease’, our 24-page manual, is the most popular item – it was downloaded over 400 times in one month. The most frequently used keyword searches deal with emergencies and what to do in a crisis.

Our email group now has over 120 members. Recent popular topics for discussion have included the merits of day curve analysis, whether to increase fludrocortisone in hot weather, and getting a reasonable deal on travel insurance.

In 2003, ADSHG circulated an international questionnaire for those with Addison’s disease, in collaboration with the Australian Addison’s Disease Association and the Canadian Addison’s Society. Professor John Wass of the Radcliffe Infirmary, Oxford, generously gave his time to supervise the research. Completed questionnaires from around 700 Addisonians are now being processed. Preliminary findings should be available by the end of the year.

With the right balance of daily medication, individuals with Addison’s disease can expect to have a normal lifespan and to lead busy and rewarding lives. Despite this, research finds that they often feel below par compared with healthy individuals. One recent study found that the rate of hospital admission for adrenal crisis is almost three times higher for women with autoimmune adrenalitis than it is for patients with secondary adrenal insufficiency. Many members of ADSHG have acted as volunteers in recent UK clinical trials of DHEA.

MedicAlert® has 2279 registered members with Addison’s disease across the UK, equivalent to around 38 cases per million inhabitants. Yet the most recent research from Norway found up to 140 diagnosed cases of Addison’s disease per million, suggesting more than 8000 possible cases of Addison’s disease in the UK. We would therefore ask all endocrinologists and those offering services to Addison’s patients to consider joining the ADSHG, and to let their patients know about us.

**For more information see**

www.senseaboutscience.org or email tdbrown@senseaboutscience.org.
Who's to say the risk's worth taking?

Faced with the fear that their science might be misused, what should a researcher do? Steve Bloom is in a quandary.

Here's a surprising confession from a research scientist: I am faced with a moral dilemma. My colleagues and I are working on a cure for a serious disease that could help millions of people. Yet the results of the work could be used in other - entirely unhealthy - ways. What should we do?

For more than a decade, we have been studying the circuits in the brain that control appetite, in the hope of finding a way to treat people who seriously overeat. You may have read about the team's recent success with a hormone called PYY 3-36: the research generated headlines around the world when it appeared in *Nature* (vol 418, p 650). What you won't have heard, however, is how uneasy this discovery makes me feel.

The hormone is released from the gastrointestinal tract after eating, and is part of the reason you don't feel hungry after a meal. As the substance builds up in the circulation, it crosses the blood-brain barrier and activates 'inhibitory' neurones in a part of the brain's hypothalamus called the arcuate nucleus. In effect, the hormone is the gut's way of telling the brain to stop generating hunger pangs. Now we know that the same message can be created by administering the hormone artificially. When we injected 12 people with the hormone, they consumed one-third fewer calories than people injected with a placebo. Their reduced appetite lasted for 12 hours. If clinical trials go as well as we hope, this hormone could be on the shelves as an anti-obesity drug within 4 years.

Eventually, our work could also lead to treatments for anorexia.

On the one hand, this is great news. In the USA, 26% of people are clinically obese, and 20% in Britain. The numbers are increasing rapidly in every country where there is adequate nutrition, including China and India, leading to premature death from heart disease, stroke, diabetes and cancer. Worse, efforts to curb obesity through education, low-calorie foods, dieting and exercise regimes simply aren't working. Trapped between a food industry that is trying to fatten us up and a health farm industry that is trying to slim us down, we desperately need another approach.

But my area of work has implications that could alter our society in undesirable ways. Once you start to interfere with the brain circuits that control appetite, you have the potential to alter someone's personality. You cannot turn a chubby gastronome into a thin person lacking any interest in food without changing them in other ways too. And if we can alter people's desire for food, we can alter other deep-seated desires: the hypothalamus is also home to brain circuits that influence sex drive and sexual orientation.

Is this power desirable? We are identifying the brain's most private secrets, but also how to control them. Will we end up with a 'character in a bottle' scenario in which people can choose their personalities? Even if our society uses it responsibly, what's to stop dictators or rogue cults from exploiting chemical alteration of human drives for their own ends, offering growth, sex or happiness benefits to loyal supporters and withholding them from others?

We already have drugs like Prozac that affect these circuits - and to some extent affect personality. But Prozac's effect is relatively weak. Future drugs will be better targeted and more effective - and could overwhelmingly alter someone's nature.

Suddenly we are treating humans entirely as machines, albeit complicated ones. Perhaps in as little as 10 years, neurochemical research could lead to such scenarios. It's getting a little scary.

Why voice these concerns now? There comes a stage during any research when it becomes possible to see where it may lead. There's another later stage at which it becomes obvious to everyone where it is leading, but it is far better to make decisions about research if you can tackle it at the earlier stage. So that, it takes people who have been in the game for a while. I have been working on neuropeptides since 1975, and when I look back over the years I can see how far we've moved forward, and how things might go.

So what should a researcher do? Close their eyes and run blindly forwards? I believe you cannot stop progress - although I am sure that the scientists who put together the first atom bomb thought much the same. Is it possible to cure these diseases without altering the circuits in the brain to some degree? I don't believe it is. So that inevitably raises the danger that someone else will use the knowledge we gain about brain circuitry, and manufacture drugs that go the whole way and induce a genuine change of character.

...if we can alter people's desire for food, we can alter other deep-seated desires

In the meantime, I believe a scientist has a clear duty to inform people of the direction their research is going, so that they can have an informed opinion. If a strand of research has a small advantage but a big risk, society may declare that it doesn't want to go with it. If it is not the job of scientists to make ethical decisions about their work, it is certainly their job to tell others where it is leading. We do not want to be credited with a societal tragedy on the level of the atom bomb.

STEVE BLOOM

This article was originally published in *New Scientist* on 21 September 2002 and is reproduced with permission.
Fame by association

It was extraordinary! There I was, just about to pay for my goods, when he walked into the store - the golden boy, Becks himself. Immediately I detected four women with exophthalmos and three women with unilateral neck spasm. For the next few minutes it would have been possible to escape without paying for anything, from a bunch of flowers to a three-piece suite. All normal security measures had been abandoned!

Forget the financial possibilities, I still did well out of Becks. At every occasion, whatever the circumstances, medical staff committee, clinics, seminars, etc., I mentioned the sighting. Why not? There is no reason to expect an endocrinologist to behave any differently from the rest of the UK public when it comes to being impressed by contact (well, almost) with celebrity. The potential for being star-struck is both human and limitless.

The intensity of ‘celebrity-itis’ was, however, really brought home to me by the Lenny affair. Over a number of months, different patients had asked if Lenny, a local man who had died a few years previously, was a relative? After all, we shared the same surname and a pretty unusual one at that.

I now live and work in a town far away from my roots, but I knew that, to determine if Lenny was my relative, the one reliable source of family information was my father. When contacted, Dad stated unequivocally that the only family in my part of the world consisted of me, my wife and children. And furthermore there was no family member called Lenny.

Nonetheless, new patients still kept asking ‘Are you related to Lenny?’ Gradually I found myself enquiring as to the nature and character of Lenny: ‘A saint!’ ‘A wonderful man, highly intelligent, handsome, kind, generous to a fault, a listener with a strong sense of community.’

I managed to contain myself for a while longer, but then it happened without any warning, planning or preparation - it just slipped out! It was the usual intro, ‘Oh doctor, what an unusual name; are you related to Lenny?’ ‘Cousin Lenny!’ I heard myself reply. ‘Cousin Lenny, I loved him like a brother!’

I couldn’t believe it - I had just stolen a relative! I then realised how badly I wanted to be related to someone as wonderful as Lenny. After all he was dead! Therefore I could see no disadvantage for him of our new relationship, and from my end it was all gain. I even sensed certain patients warming more to me because of my family connections.

Of course we have celebrities or cult figures in endocrinology, although I have to admit that my pleasure on seeing or meeting them depends on circumstances. Let me explain; I and two ‘fellows’ in the department recently attended the American Endocrine Society Meeting in Philadelphia. Several weeks earlier, in a moment of atypical generosity, I had suggested that I would take the two fellows out one evening for a meal and that I would pay the costs for the three of us; all I asked was that the fellows find a good restaurant in Philadelphia and make the booking, which they duly did.

In truth, from the outside, the restaurant looked unremarkable. Inside, however, it was wonderful, furnished in traditional French style and staffed by an astonishing number of flunkeys. The number of waiters exceeded even the size of the endocrine department at Barts! Before our backsides had settled in our seats, a glass of champagne was thrust into our hands - no mention of vintage and no idea of cost. The main ‘themed’ menu was six-course and magnificent - probably the best meal I have ever eaten, but nowhere in the menu was the cost made apparent.

The wine list itself could, in a dull moment, have been used for body-building and, in the main, consisted of French clarets between 8 and 50 years old. For a second I thought the prices were in lira given the number of noughts. The service matched the food and wine; this was the sort of joint in which a catheter was brought to the table to save the customer having to go to the bathroom. I was becoming increasingly nervous, the bill was going to be a big one! Did I have enough money, would my credit card cover it?

It was then that I first saw him, and my heart sank. There he was, tucked away unobtrusively in the corner: J A H Wass, endocrinologist of international repute but, more importantly, master gourmet and oenophilist. This is a man who, when asked to arrange a tasting of wines costing less than £10 for the Medvei Club (endocrinologists in training), replied that he was unaware such wines existed!

Now I knew I was in trouble, I didn’t know whether to clutch my credit card or adjust my pacemaker. I had broken one of my cardinal rules of endocrine life. Just like Groucho Marx refused to join any club that would have him as a member, I had vowed never to pay for a meal in a restaurant frequented by John Wass!

It was, however, the opening provided by a remark from one of the fellows that lifted my mood of despair. ‘Do you have any notable family members?’ she asked. Immediately, I sensed the presence of cousin Lenny and felt much better. In times of despondency, I find close relatives never let you down.

HOTSPUR
Molecular Endocrinology Workshop  
Manchester, UK, July 2003

The workshop was part of the Society’s excellent Summer School. The talks on transgenic techniques and RNA interference did a good job of explaining these topics to novices, even when the speakers talked about their specific areas of research. The session on serial analysis of gene expression became more difficult to understand, but this was largely due to the new and specialist nature of the subject; the accompanying reading list will be a useful resource.

NANCY LONG

Although the cost of setting up microarrays is currently prohibitive for our group, it was useful to hear that purchasing arrays from other groups might become a possibility. The presentation on proteome analysis answered some of my questions and provided a contact for a potential collaboration. I have also been able to pass on useful information about fluorescence resonance energy transfer to my colleagues, who are interested in using this technique.

JAYSON BISPHAM

This was a unique opportunity for those without a degree in molecular biology to develop familiarity with the techniques. It is always useful to know about them, even when they aren’t used directly in your own research. I would like to attend again to learn about quantitative RT-PCR, gene design, advances in electroporation and other transfection techniques.

ALI ALDIBBIAT

Endo 2003: 85th Annual Meeting of the Endocrine Society  
Philadelphia, PA, USA, June 2003

I especially enjoyed the two talks by Michael Mancini. His work outlines the previously neglected importance of sub-nuclear distribution and co-localisation of proteins. This is particularly relevant to my own research, and helped me to consolidate ideas and plan future experiments. The poster sessions gave me an opportunity to talk to others and to present a poster myself. I gained useful contacts for collaborations, as well as feedback on my work and experience of conveying my ideas to others.

HELEN GARSIDE

The new technology lectures helped me to understand the latest techniques, and I especially enjoyed the lecture on RNAi. G-protein signalling formed the basis of an excellent symposium. The sessions on intracellular signalling and gonadotrophins and gonadotrophin-releasing hormone were particularly relevant to my research. Attending this meeting will definitely help me complete my thesis!

PAULA GAULT

My expectations on attending my first ‘Endo’ conference were maybe pitched a little too high, as my experience turned out to be somewhat at odds with previous rave reviews. All too often there was a clash between sessions on my twin interests of cardiovascular biology and cell signalling. Michael Mancini, Malcolm Parker and Chris Glass provided some compensation for this disappointment. However, for me, the content of the conference turned out to be just like the weather - moments of brilliance but predominantly slightly dull.

CHARLOTTE WATERS

I not only had the opportunity to give an oral presentation, but also had a chance to talk to others in my field, including many academics whose papers I have closely scrutinised! A number of the talks and posters were directly relevant to my research.

ANDREW MILWARD

My poster was on upregulation of adipose 11β-HSD1 in human obesity, and it was good that most of the groups working in this area presented research. I enjoyed the plenary sessions with John Funder, Jeffrey Flier and Ronald Evans, as well as other sessions on subjects as diverse as osteoporosis and puberty.

DEBORAH WAKE

6th European Congress of Endocrinology  
Lyon, France, April 2003

With sessions on receptor signalling, the adrenal cortex and energy homeostasis, I struggled to attend everything I wanted to see. However, the programme had the right balance between clinical and basic science, and the poster sessions were friendly and a good opportunity to approach speakers. Having reached the halfway mark in my PhD, I felt it was time for my data to receive a roasting by an international field of experts. My poster was attended by a number of people whose names I had previously only seen at the top of references - one of whom has since sent me a useful cell line for my work.

LUKE NOON

My PhD was on the melanocortin 2 receptor, so this was a great opportunity to travel to the city where some of the early work on this subject was carried out. The symposia on receptors and the adrenal cortex were most interesting. I also met scientists who are well established in the melanocortin receptor field, and had the opportunity for much useful discussion with them.

A BAIG

30th Annual Meeting of the Fetal and Neonatal Physiology Society  
Banff, Canada, July 2003

The wide range of themes included cardiovascular control, perinatal endocrinology, placentation and developmental biology. The keynote lectures were very interesting and relevant to my work. I presented three oral and poster communications. Poster sessions dedicated 5 minutes to each presentation, leading to some excellent discussions and feedback. I gained a good insight into current research developments.

SARAH PEARCE

The Society is pleased to have been able to provide grants to support these members
Androgens in Health and Disease


This is a timely publication, collating the current scientific and medical understanding of this topical (and sometimes controversial) area of endocrinology. Clinicians are increasingly exposed to the so-called ‘testosterone revolution’, which has resulted from increased public and media awareness (especially in relation to aging), and the availability of new modes of testosterone administration.

The book is generally very well written, and attempts to help clinicians make difficult clinical decisions. However, it still leaves some grey areas. For example, there is no clear advice on the management of borderline hypogonadal patients.

One highlight is the book’s confrontation of novel potential clinical areas for the use of androgens. These include the andropause, frailty associated with aging, and chronic illness including HIV, cardiovascular disease, aplastic anaemia and anaemia associated with renal failure. Biochemical assessment of androgen deficiency is mentioned in several chapters, but no chapter is entirely or largely dedicated to this subject. This is disappointing, as interpretation of blood results is a key consideration, especially in the management of borderline hypogonadism.

Testosterone deficiency and its treatment in women have not generally been recognised by endocrinologists. This book includes a review of this controversial use of androgen replacement. The author considers the potential health risks, but acknowledges that such treatment may improve quality of life. Another chapter examines the effects of disorders of excess androgen production in women.

Overall, the book is very readable, providing a comprehensive, up-to-date account of current knowledge in this expanding subject. It will not only be valuable to specialist registrars and consultant endocrinologists, but also to interested physicians and general practitioners.

HUGH JONES

BOOK REVIEW

194th Meeting of the Society for Endocrinology

3-5 November 2003
Royal College of Physicians, London, UK

3-4 November
Plenary Lectures
European Medal Lecture - E Ghigo
Asia & Oceania Medal Lecture - MJ Waters
Society for Endocrinology Medal Lecture - PJ Lowry

Symposia
The endocrinologist and bone
New concepts of mineralocorticoid action
Melanocortin receptors
Gaseous signalling
plus Debate, Oral Communications,
Poster Presentations and Nurses Sessions

5 November
Joint day with Diabetes UK!
Lecture
Symposium
SpR Poster
Ask-the-Expert
Workshop Sessions

Further information from: Feona Horrex/Tamara Lloyd
Society for Endocrinology, 22 Apex Court, Woodlands, Bradley Stoke, Bristol BS32 4JT, UK
(Tel: 01454-642210; Fax: 01454-642222; E-mail: conferences@endocrinology.org;
Web: www.endocrinology.org/sfe/conf.htm)

Grants are available to UK-based young endocrinologists
9th International Workshop on Multiple Endocrine Neoplasias (MEN 2004) Bethesda, MD, USA, 20-22 June 2004
Contact: Constantin Strakatis, c/o Sue Perdue (Tel: +1-301-4964868; Fax: +1-301-4020574; Email: strakalis@mail.nih.gov).

20th Annual Meeting of the European Society of Human Reproduction and Embryology
Berlin, Germany, 27-30 June 2004
Contact: ESHRE Central Office, Van Alkenstraat 41, 1850 Grimbergen, Belgium (Email: info@ESHRE.com; Web: www.eshre.com).

10th International Congress of Auxology: Human Growth in Sickness and in Health
Florence, Italy, 4-7 July 2004
Contact: Centro Studi Auxologici, Piazza Madonna degli Aldobrandini 1, 50123 Firenze, Italy (Tel: +39-055-200932/212322; Fax: +39-055-200932; Email: congress@auxologia.org; Web: www.auxologia.org).

UK Advanced Diabetes Course
Exeter, UK, 7-9 July 2004
Contact: Rosemary Sowden, R&D Office, Exeter Postgraduate Medical Centre, Barrack Road, Exeter EX2 5DW, UK (Tel/Fax: +44-1392-403012; Email: rosemary.sowden@rdehc-tr.swest.nhs.uk).

Society for Endocrinology Molecular Endocrinology Workshop
Oxford, UK, 13 July 2004
Contact: Ann Lloyd, Society for Endocrinology, 22 Apex Court, Woodlands, Bradley Stoke, Bristol BS32 4JT, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; info@endocrinology.org; Web: www.endocrinology.org/sfe/train.htm).

Society for Endocrinology Advanced Endocrine Course
Oxford, UK, 14-15 July 2004
Contact: Ann Lloyd, Society for Endocrinology, 22 Apex Court, Woodlands, Bradley Stoke, Bristol BS32 4JT, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; info@endocrinology.org; Web: www.endocrinology.org/sfe/train.htm).

FORTHCOMING MEETINGS

23rd Joint Meeting of the British Endocrine Societies with the European Federation of Endocrine Societies
22-24 March 2004
THE BRIGHTON CENTRE, BRIGHTON, UK
Plenary lectures, Symposia, Clinical management workshops, Molecular endocrinology workshop, Debate, The expert’s view, Oral communications, Young endocrinologists workshop, Endocrine nurses symposium
Abstract deadline: Friday 14 November 2003
Further details from: Feona Horrex/Tamara Lloyd, BES, 22 Apex Court, Woodlands, Bradley Stoke, Bristol BS32 4JT, UK (Tel: 01454-642210; Fax: 01454-642222; Email: conferences@endocrinology.org; Web: www.endocrinology.org/sfe/conf.htm)
PTEN holds key to prostate cancer treatment

Prostate cancer is the most common visceral cancer in American men. It can be eradicated when confined to the organ, but most patients with systemic disease relapse and develop androgen-independent tumours, for which there is no well-established treatment.

The tumour suppressor gene PTEN is found to be non-functional in many cases of prostate cancer. This may help us understand how the cancer progresses to an androgen-independent state. Nan et al. have now performed a series of elegant experiments demonstrating that PTEN reduces androgen receptor (AR) transcriptional activity in prostate cancer cell lines.

The authors propose that PTEN antagonises AR through the inhibition of Akt activation, and that this does not depend on the prevention of Akt-mediated AR phosphorylation. There is some controversy about the way in which AR-PTEN(Akt) interacts. However, the potential of the PTEN-Akt pathway as a therapeutic target must be further investigated, given systemic prostate cancer’s insensitivity to current treatments. NG

(See the full article in Journal of Molecular Endocrinology 31(1), August 2003)

Caspases in glucocorticoid-resistant asthma

Asthma treatment relies on glucocorticoids, but a small proportion of patients fail to respond to even high oral doses - a condition which is costly and difficult to manage.

Phagocytosis of apoptotic eosinophils (the main effector cells in asthmatic inflammation) can clear their proinflammatory potential. In this article, Walsh and colleagues review the effects of glucocorticoids on bronchial epithelial cell phagocytosis. Dexamethasone increased the percentage of bronchial epithelial cells engulfing apoptotic eosinophils and the number of apoptotic eosinophils ingested by each epithelial cell.

Caspases are key intracellular molecules in the control of apoptosis. Defects in caspase-induced apoptosis in eosinophils from steroid-resistant patients may contribute to the molecular basis of glucocorticoid insensitivity. Importantly, eosinophils from glucocorticoid-resistant patients are still susceptible to apoptosis induction. The authors suggest that this discovery may lead to new, more targeted anti-inflammatory therapies for asthma, including the development of alternative therapies in glucocorticoid resistance. MM

(See the full article in Journal of Endocrinology 178(1), July 2003)

Breast cancer chemoprevention

Women at high risk of breast cancer have, until recently, only had the option of prophylactic mastectomy and frequent monitoring, including mammography.

However, a number of trials on women already diagnosed with breast cancer have identified chemotherapeutic/hormonal agents that could prevent the cancer developing in the first place. This insightful review by Smith and Good discusses some of the studies (many by the National Surgical Adjuvant Breast and Bowel Project) that led to the identification of these risk-reducing agents.

This excellent overview covers the extensive, and sometimes contradictory, data obtained from these studies. It examines the major chemoprevention trials conducted in the search for an agent to prevent breast cancer developing in otherwise healthy women. The authors highlight the need for accurate identification of women who are at risk and are likely to benefit from such therapy, as well as the development of further agents that will be both effective and non-toxic. NG

(See the full article in Endocrine-Related Cancer 10(3), September 2003)