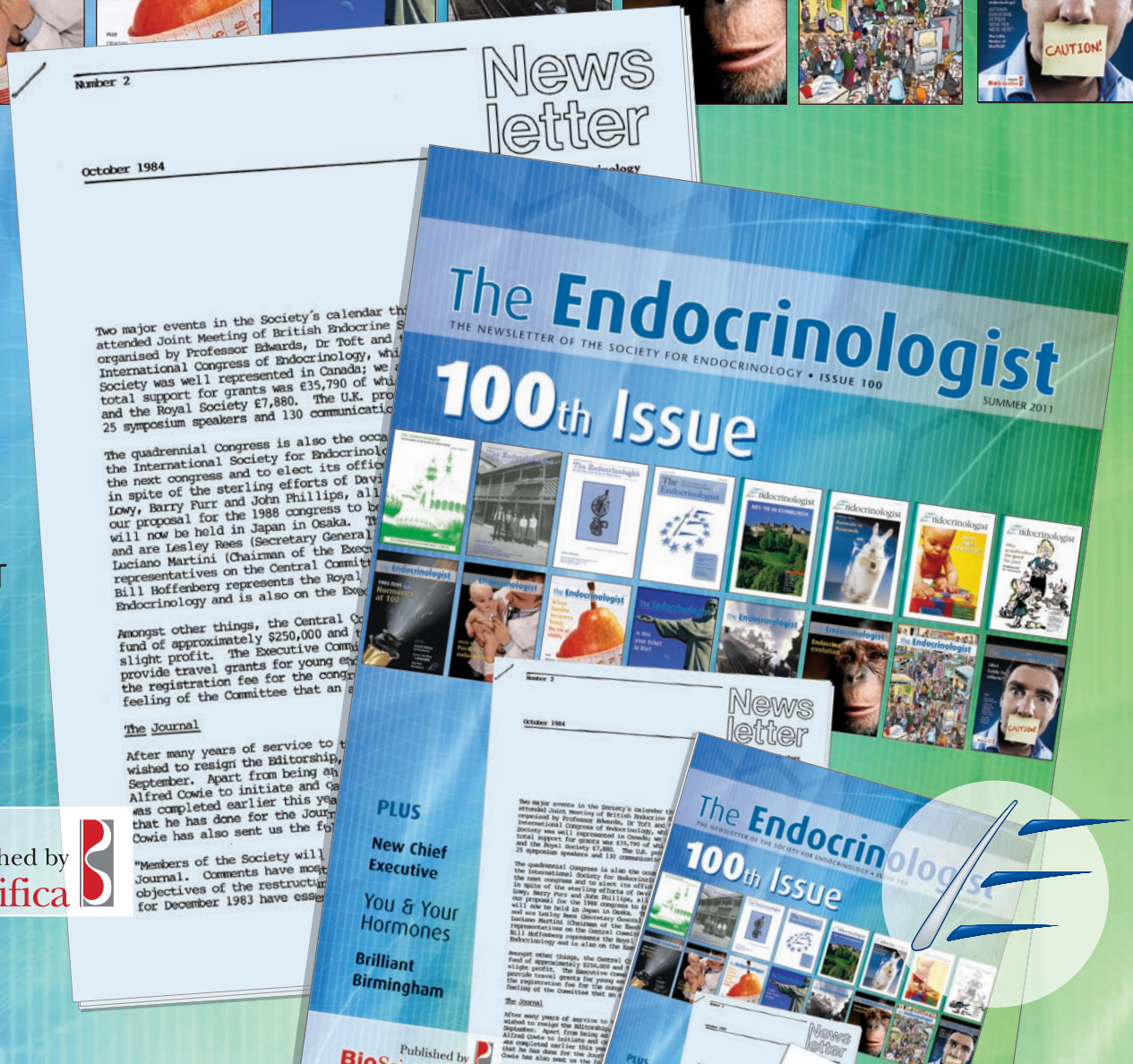
The Endocrinologist

THE NEWSLETTER OF THE SOCIETY FOR ENDOCRINOLOGY • ISSUE 100 SUMMER 2011

100th Issue



PLUS

New Chief Executive

You & Your Hormones

Brilliant Birmingham

Published by BioScientifica

EDITORIAL

What with the wedding, referendum and warmest spring on record, we've not been short of landmark events over recent months. The Society has a few of its own to add to the list. The Society's new chief executive, Leon Heward-Mills, took up the reigns on 1 June. There's a mini profile of Leon on page 3, with more to follow in the next issue, including his thoughts on his first one hundred days. I'm sure we all welcome Leon and look forward to this next chapter in the Society's history; thanks are due to Pat Barter and the rest of the senior management team for so ably looking after the operation for the last 10 months.

Also, as you'll have realised from the 'way we were' cover, this issue is the 100th edition of *The Endocrinologist*. Like the discipline itself, the newsletter has expanded and developed over the last 25 years. We've definitely moved on from the original format – two sheets of typed A4, so thanks must go to the past editors, regular contributors (Hotspur fans fear not – he'll be back in a brand new season later in the year) and the Society for building the newsletter up to the glossy 20 page magazine you see before you.

Another aspect of the Society that has gone from strength to strength is the promotion and support of public engagement. The new public website, 'You & Your Hormones', was launched at the BES, but in case you missed the live event, there's a lowdown on who, what and why on page 8. An upcoming initiative is the Society's Public Engagement Grant scheme to help members' stage public engagement activities. Application details are still to be revealed but in the meantime, reading about recent successes (the Doctor and the Master, page 6) might whet your appetite and get the creative juices flowing. The Society also gives much appreciated grants to patient support groups. Jackie Waters from the Prader-Willi Syndrome Association UK talks about how they used their award, and their experience of having a stand at the BES, on page 12.

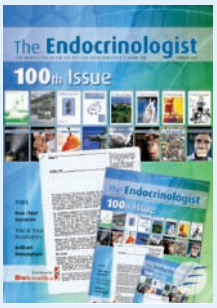
The BES also saw the climax of this year's CET Visiting Professor UK tour (see page 13), with Jim Fagin giving an outstanding lecture on the genetics of thyroid cancer. Thyroid function also came to the attention of the press thanks to a presentation by Mark Vanderpump on the UK's iodine status and the efforts of the Society's press office, which works hard on our behalf to ensure that endocrinology receives appropriate media coverage; turn to page 11 for other BES contributions that made it into the news. As ever, the Young Endocrinologists made a huge contribution to the success of the meeting and certainly seemed to have enjoyed both the science (see page 10 for a roundup of the prize winners) and the social scene (page 12). Congratulations to our Programme Secretary, Márta Korbonits, and all involved in putting together, and pulling off, another fabulous conference.

The interdepartmental peer review of clinical services continues. Endocrine nurses are now included in the team of Reviewers and Reviewees; their perspective on both sides of the process (page 14) suggests it's a positive experience for all involved. Speaking of visiting, page 16 gives you all the reasons to accept Patrick Bell's invitation to board the Endo Train (and boat!) to Belfast. Aside from the famous Irish hospitality, you'll be treated to a wealth of clinical and academic endocrinology and diabetes, so you will. If you fancy venturing a little further afield, turn to page 15 for a fascinating glimpse into a day in the life of Babatope Kolawole, one of the Society's Nigerian members. No doubt the clinical academics amongst you will recognise the juggling of skills required to fit everything in. We're really keen to hear more from our overseas members – contact info@endocrinology.org if you'd like to share your experiences.

Enjoy the summer. I was going to say something about hoping sunny skies would prevail; but I see from my window that the Manchester weather has already reverted to normal.

MELISSA WESTWOOD

The Society welcomes contributions and article suggestions; contact the Editorial office at info@endocrinology.org. Deadline for news items for the Autumn 2011 issue: 5 August 2011. Deadline for news items for the Winter 2011 issue: 7 October 2011.



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New Chief Executive

The Society for Endocrinology and its trading company BioScientifica are pleased to welcome Mr Leon Heward-Mills to the post of Chief Executive of the Society for Endocrinology and Managing Director of BioScientifica Ltd.

▶ Leon brings with him 15 years of experience of working with learned societies and their trading companies through his previous role as Head of Publishing at Thomas Telford Ltd, the subsidiary company of the Institution of Civil Engineers. He took up his post on 1 June 2011. He replaces Sue Thorn, who stepped down from the post following 19 years of service. Leon read Law and Biology at university and has spent his career to date in scientific publishing. He worked initially at Chapman and Hall, before moving to Thomas Telford Ltd, where he was Head of Publishing with responsibility for a portfolio of 30 journals and 30 books a year. In addition, he took on the role of Vice Chairman of the Association of Learned and Professional Society Publishers (ALPSP).

Professor Julia Buckingham, President of the Society for Endocrinology, said "I'm delighted to have appointed Leon to the role of Chief Executive of the Society for Endocrinology and Managing Director of BioScientifica. Leon brings with him a wealth of experience that will help the Society and BioScientifica build on their current success and keep supporting our membership in these difficult economic times. Both Council and the staff at the Bristol office look forward to welcoming Leon to the company."

Leon Heward-Mills, new Chief Executive of the Society for Endocrinology said "I'm delighted to be joining the Society for Endocrinology and BioScientifica as Chief Executive. The two organisations have an unrivalled reputation for providing members, client organisations and the international community with the highest levels of service and content. I look forward to working with staff, Council and members of the Society to build on these achievements."

Double Honour

We are delighted to announce that Professor Steve O'Rahilly, Institute of Metabolic Science, Addenbrooke's Hospital, Cambridge has been selected for two prestigious honours.

The first is his election as a Foreign Associate of the National Academy of Sciences in the USA. The National Academy is the USA's premier scientific academy, each year, it elects 72 new members and just 18 Foreign Associates from all scientific disciplines. Professor O'Rahilly is distinguished for his research in metabolic and endocrine disease, and for his leadership in clinical science.

The second honour was his selection to give the Royal College of Physicians' Croonian Lecture earlier this year.

Congratulations!

Are also due to Professor Dominic Withers, Professor of Diabetes and Endocrinology and Honorary Consultant in Diabetes and Endocrinology, Imperial College London, who has been elected as a Fellow to the Academy of Medical Sciences.

We love to hear from members who are recipients of national or international awards other than those offered by the Society. Please do not hesitate to let us know if you or any of your colleagues are awarded any prizes or lectureships, so that we may include it in the newsletter. Please contact Julie Cragg (julie.cragg@endocrinology.org).

NATIONAL CLINICAL CASES 2011 - RECORD BREAKING

▶ The Society's annual National Clinical Cases meeting held in association with the Endocrinology and Diabetes Section of the Royal Society of Medicine attracted a record-breaking 76 abstracts and 106 attendees. Moreover, everyone who provided feedback was pleased with the meeting, with 72% rating it as 'excellent'.

Prize winners

Our heartiest congratulations go to:

- Rachel Roberts (London, oral presentation first prize)
- Konstantinos Manolopoulos (Aylesbury, oral presentation runner-up prize)
- Sathish Parthasarathy (Brighton, poster presentation prize)
- Marni Greig (Sheffield, poster presentation prize)

Future meetings

In addition to the annual National meeting, the Society now holds two Regional Clinical Cases meetings every year. The next two meetings will be held in Liverpool (11 October) and Exeter (December). See www.endocrinology.org/meetings/clinicalcases/.

If your regional endocrine club would like to host a clinical cases meeting in association with the Society please email Abhi Vora (abhi.vora@endocrinology.org).

SOCIETY CALENDAR

19–20 September 2011
Endocrine Nurse Update
Stratford-upon-Avon, UK

11 October 2011
Regional Clinical Cases
Hilton Hotel, Liverpool, UK

14–16 October 2011
Autumn Endocrine Retreat 2011
Milton Hill Hall, Oxfordshire, UK

7–9 November 2011
Clinical Update 2011
Hilton Hotel, Sheffield, UK

18–22 March 2012
Society for Endocrinology BES 2012
Harrogate International Conference Centre

Society of Biology offers 50% off

The Society of Biology has partnered with the Society for Endocrinology to offer all Society members a special rate on Society of Biology membership: a discount of 50% for the first year's membership. This offer is open until 30 June 2011.

The Society of Biology launched on 1 October 2009 providing a much needed single voice for the life sciences. Membership gives you access to a wide and diverse network of biologists. The Society of Biology has grades of membership suitable for all levels of skills and qualifications. If you wish to join the Society of Biology, please email jonkudlick@societyofbiology.org, stating that you are a member of the Society for Endocrinology.

News from the 2011 AGM

Articles of Association

At the AGM, members voted on the adoption of the new Articles of Association. These have been revised to reflect Council's decision to change the term 'Chairman' of the Society to 'President' of the Society, as well as changes to the terms of office of President and General Secretary, and increased flexibility on who may attend Council meetings. The full Articles can be accessed at www.endocrinology.org/about/memorandum.html.

New Officers and Council members

We are delighted to welcome Professor Ashley Grossman to the post of Society President, Professor David Ray to the post of General Secretary and Professor Chris McCabe to the post of Programme Secretary. They are currently shadowing the present officers and will take up office at the 2012 AGM.

Congratulations to Professors Jonathan Seckl, Tony Weetman and Anne White who were elected to Council. Our thanks go to Dr Nigel Brooks, Professor Peter Clayton and Professor Steve O'Rahilly who have just retired from Council having served their 4-year term of office.

At-Bristol

On 10 March 2011 the Society for Endocrinology was invited to the launch of a new exhibition – All About Us – at At-Bristol (www.at-bristol.org.uk) the largest science centre in the south west.

Funded by a £1.5 million grant from the Wellcome Trust, the exhibition is a landmark of innovation, demonstration and investigation. All the exhibits have been researched, designed and built on-site by At-Bristol's expert exhibitions team, covering seven themes: cardiovascular, reproduction, locomotion, senses, digestion, DNA and the brain.

Pride of place in the exhibition is a real human brain sitting in a transparent tank (I will leave it to readers to investigate whether the pituitary is still intact), for which the centre has obtained a Human Tissue Authority licence and consent from the brain donor. To see a real brain up close one feels eerily privileged – perhaps Damien Hirst was doing more for science than he thought.

In the 'Live Lab', an area where visitors can take part in dissections and other real experiments, a stem-cell derived culture of beating cardiac myocytes, donated by GE Healthcare, can be viewed through a microscope. Next to the donated brain it demonstrates the power of science as a progressive force: thanks to this rapidly expanding field there is the prospect of a time when transplants no longer require lengthy waits and a convenient fatality.

There is plenty more for scientists and 'civilians' alike to enjoy at At-Bristol, including a wall mapping out the endocrine system, bones, growth and puberty in large scale, a fairly extraordinary birthing experience, and interactive exhibits showing the power of the senses.

DEADLINES
Don't Miss Out!

Nominations

Deadline: 8 July 2011

Receipt of nomination forms for Clinical, Finance, Nurse, Programme, Public Engagement and Science Committees, and the YE Steering Group. See www.endocrinology.org/about/committee/.

Clinical Update 2011 early bird registration

Deadline: 3 October 2011

See www.endocrinology.org/meetings/

Young Endocrinologists' Prize Lectures call for abstracts

Deadline: 17 October 2011

Undergraduate Achievement Award

Applications open: 17 June 2011
Applications deadline: 15 July 2011

The Society for Endocrinology Undergraduate Achievement Award continues to encourage excellence in the study of endocrinology by undergraduate students. Departments are invited to submit applications to the Society for an award to outstanding undergraduates. The award will consist of a £300 per year, for three years, to the department and a certificate from the Society to the award winner.

Postgraduate Essay Prize

Deadline: 14 October 2011

We are delighted to be able to run this competition again, extending an opportunity to postgraduate students. First prize consists of £1000, and runner-up prizes will also be available. The competition is open to all students registered for a higher degree in the UK or Ireland at the time of submission (e.g. a Masters or research degree such as MPhil/PhD/MDRes or equivalent). The winner will be announced at the Society BES 2012 awards ceremony and will be offered free registration to the meeting with a complimentary conference dinner ticket.

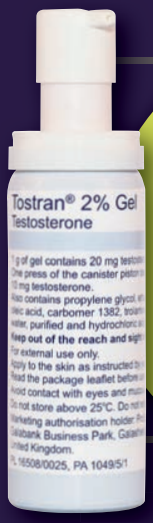
Early Career Grant

Deadline: 27 November 2011

Value: up to £10 000

For more information please see www.endocrinology.org/grants/

Hypogonadism – an endocrine issue which causes significant morbidity and substantial reduction in quality of life[1]



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Presentation
Tostran 2% Gel, contains testosterone, 20 mg/g.
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Replacement therapy with testosterone for male hypogonadism when testosterone deficiency has been confirmed by clinical symptoms and laboratory analyses.
Posology
The starting dose is 3 g gel (60 mg testosterone) applied once daily at approximately the same time each morning to clean, dry, intact skin, alternately on the abdomen or to both inner thighs. Adjust dose according to clinical and laboratory responses. Do not exceed 4 g of gel (80 mg testosterone) daily. Patients who wash in the morning should apply Tostran after washing, bathing or showering. Do not apply to the genitals. Do not use in women, or children under the age of 18 years.
Contraindications
Known or suspected carcinoma of the breast or the prostate; hypersensitivity to any of the ingredients.
Special warnings and precautions for use
Tostran should not be used to treat non-specific symptoms suggestive of hypogonadism if testosterone deficiency has not been demonstrated and if other aetiologies responsible for the symptoms have not been excluded. Not indicated for treatment of male sterility or sexual impotence. All patients must be pre-examined to exclude a risk of pre-existing prostatic cancer. Perform careful and regular monitoring of breast and prostate. Androgens may accelerate the development of subclinical prostatic cancer and benign prostatic hyperplasia. Oedema with/without congestive heart failure may be a serious complication in patients with pre-existing cardiac, renal or hepatic disease. Discontinue immediately if such complications occur. Use with caution in hypertension as testosterone may raise blood pressure. Use with caution in ischemic heart disease, epilepsy, migraine and sleep apnoea as these conditions may be aggravated. Care should be taken with skeletal metastases due to risk of hypercalcaemia/hypercalcuria. Androgen treatment may result in improved insulin sensitivity. Inform the patient about the risk of testosterone transfer and give safety instructions. Health professionals/carers should use disposable gloves resistant to alcohols.
Interactions
When androgens are given simultaneously with anticoagulants, the anticoagulant effect can increase and patients require close monitoring of their INR. Concurrent administration with ACTH or corticosteroids may increase the likelihood of oedema and caution should be exercised.
Undesirable effects
Very common (≥1/10): application site reactions (including paresthesia, xerosis, pruritis, rash or erythema); common (≥1/100, <1/10): increased haemoglobin, haematocrit; increased male pattern hair distribution; hypertension; gynaecomastia; peripheral oedema; increased PSA. Certain excipients may cause irritation and dry skin. Consult SPC for other undesirable effects of testosterone.
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 Date of PI Preparation: September 2010

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk. Adverse events should also be reported to ProStrakan Limited on 01896 664000.

References:
1. Nieschlag E et al. Hum Reprod Update 2004; 10: 409 - 419
2. Dumas C. Poster presented at the 25th Scandinavian Meeting of Urology, Göteborg, June 2005
3. MIMS December 2010
4. Swerdloff R. J Clin Endocrinol Metab 2000, 85; 12: 4500 - 4510
5. Tostran® data calculation - ProStrakan data on file 2011
6. Tostran® Summary of Product Characteristics June 2010

ProStrakan

M015/1103 Date of preparation January 2011

THE DOCTOR & THE MASTER

▶ On Thursday 21 April, the Society for Endocrinology visited the Edinburgh International Science Festival 2011 to deliver a public event on the pituitary gland – The Doctor & the Master. Edinburgh International Science Festival held the world's first celebration of science and technology in 1989, and has since organised a science festival annually to encourage people of all ages and backgrounds to discover the wonder of the world around them.

Professor Steve Shalet (Christie Hospital, Manchester) started proceedings by introducing himself as an endocrinologist and explaining what an endocrinologist does. By setting the scene in this way, he was able to use the 'master gland' as a model for endocrinology, and give the 70 or so people present in the audience more insight into the field as a whole.

Professor Shalet then described the anatomy and physiology of the pituitary gland, before going on to discuss its function in the body at large. His endocrine experience shone through in detailing the remarkably complex system of hormones that defines the interaction between the hypothalamus, pituitary, and target organs, saying of feedback mechanisms 'it is a beautiful system, which is why endocrinologists love the pituitary'. The session then moved on to how pituitary dysfunction can cause disease, and discussed mass lesion effects such as visual disturbances and functioning and non-functioning tumours. In closing, Professor Shalet painted a vivid picture of the astounding changes that can take place in pituitary disease, from Cushing's disease to acromegaly and diabetes insipidus.

At this point the floor was handed to Dr Rob Murray (Leeds Teaching Hospitals NHS Trust), whose job it was to discuss the management of pituitary disease. Dr Murray performed admirably, dealing with such topics as past and current surgical management of pituitary tumours (accompanied by some dramatic MRI scans from his and colleagues' clinics), radiotherapy and gamma knife, and the medical management of pituitary conditions, including hormone replacement and an interesting diversion into drug-receptor interactions. A lively question and answer session followed – the audience clearly shared in the fascination that the pituitary gland holds for endocrinologists.

The Society for Endocrinology would like to thank Professor Stephen Shalet and Dr Robert Murray for giving up their time to speak at the event. Those of you who would like to hold your own public event may be interested in the Society's new Public Engagement Grants, which will provide up to £1000 for members to hold public engagement activities. Keep an eye out later this year for more information.

TOBY STEAD

Rare Disease UK

▶ At this year's Society BES meeting we invited Rare Disease UK (RDUK, www.raredisease.org.uk) to talk to the many patient groups with whom the Society works. RDUK was formed, in part, in response to the European Commission's call for the development of a rare disease strategic plan in all Member States by 2013.

Individually, a rare disease will affect no more than 5 in 10 000 of the general population at any one time, yet collectively rare diseases affect over 3.5 million people in the UK. RDUK's latest project 'Experiences of rare diseases' documents the experiences of patients with rare diseases to identify shared problems. It highlighted that a lack of information can lead to uninformed health decisions, lengthy delays in diagnosis, frequent misdiagnosis, a lack of support, poor usage of transitional services and patchy access to treatment.

Obstacles to addressing these problems all stem from the nature of rare diseases; the diffuse patient populations afford scant research opportunities, and the apparent absence of a market means that the area is one that is traditionally neglected by the pharmaceutical industry. Since the publication of a European Commission report in 2008, efforts to overcome this have escalated in preparation for the drafting of the strategic plans in 2013. RDUK's own recommendations state that the UK's plan should be independent of NHS reforms, adaptable to the health services of each of the four Home Nations and should champion a more effective, targeted use of resources: delayed and frequently mistaken diagnoses are inherently wasteful.

Many are agreed that collaboration will be a key component in any effective strategy for rare diseases, and central to this is patient action – Rare Disease Day (28 February, 29 February on leap years) will see patient advocacy groups assemble at their Home Nation's Parliament to demonstrate to MPs the impact of rare diseases.

Great initiatives are springing up everywhere as information networks improve. The OrphaNet rare disease registry is just one example. So what can we do in the run up to 2013? One important issue is the perception that stakeholders are few in number, and the best way of overcoming this is to contact your MP. For those that have ideas and wish to be involved, RDUK are holding a consultation on the UK's draft strategy later this year, and will hold a workshop on the consultation to inform their response. Any and all who have something to say are encouraged to take part.

The Society for Endocrinology is a member organisation of Rare Disease UK, an alliance of key stakeholders brought together to develop strategic planning for rare diseases in the UK.

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The 12 mg pre-filled pen GoQuick is colour coded purple. **Genotropin Cartridge:** Two-chamber cartridge for use in a re-useable injection device, Genotropin pen, or in a reconstitution device. The cartridges contain either 5.3 mg or 12 mg somatropin (rbe). Each cartridge also contains 0.3% metacresol as preservative. The Genotropin Pens are colour coded, and must be used with the matching colour coded Genotropin two-chamber cartridge to give the correct dose. The Genotropin Pen 5.3 (blue) must be used with Genotropin 5.3 mg cartridge (blue). The Genotropin Pen 12 (purple) must be used with Genotropin 12 mg cartridge (purple). Instruction on reconstitution plus use of devices is supplied separately as are the Pen and Genotropin Mixer devices and any necessary consumables. **Genotropin MiniQuick:** Two compartment cartridge in single dose syringe containing powder and solvent for injection together with an injection needle. Each device contains either 0.2 mg, 0.4 mg, 0.6 mg, 0.8 mg, 1 mg, 1.2 mg, 1.4 mg, 1.6 mg, 1.8 mg or 2 mg somatropin (rbe). **Indications: Children:** Treatment of growth disturbance due to insufficient secretion of growth hormone (growth hormone deficiency, GHD) or associated with gonadal dysgenesis (Turner Syndrome) or chronic renal insufficiency (CRI) or in short children born Small for Gestational Age (SGA) with a birth weight and/or length below –2SD, who failed to show catch-up growth by 4 years of age or later. Prader-Willi syndrome (PWS), for improvement of growth and body composition. The diagnosis of PWS should be confirmed by appropriate genetic testing. **Adults:** Replacement therapy in adults with pronounced GH deficiency. Adult onset: Patients who have severe growth hormone deficiency associated with multiple hormone deficiencies as a result of known hypothalamic or pituitary pathology and who have at least one known deficiency of pituitary hormone not being prolactin. Childhood Onset: Patients who were growth hormone deficient during childhood as a result of congenital, genetic, acquired, or idiopathic causes. **Dosage and Administration:** Dose should be personalised for each individual. The subcutaneous injection site should be varied to prevent lipoatrophy. **Insufficient Secretion of GH in children:** 0.025–0.035 mg/kg body weight day. Higher doses have been used. Where childhood onset GHD persists into adolescence, treatment should be continued to achieve full somatic development (e.g. body composition, bone mass). For monitoring, the attainment of a normal peak bone mass defined as a T score > –1 (i.e. standardised to average adult peak bone mass measured by dual energy X-ray absorptiometry taking into account sex and ethnicity) is one of the therapeutic objectives during the transition period. **Prader-Willi Syndrome:** 0.035 mg/kg body weight per day. Daily doses of 2.7 mg should not be exceeded. **Gonadal Dysgenesis (Turner Syndrome):** 0.045–0.050 mg/kg body weight per day. **CRI:** A dose of 0.045–0.050 mg/kg body weight per day. Higher doses can be needed if growth velocity is too low. Dose correction can be needed after 6 months treatment. **Short children born SGA:** 0.035 mg/kg body weight per day until final height is reached. **GH Deficient Adults:** In patients who continue growth hormone therapy after childhood GHD, the recommended dose to restart is 0.2–0.5 mg per day. The dose should be gradually increased or decreased according to individual patient requirements as determined by the IGF-I concentration. In patients with adult-onset GHD, start with low dose, 0.15–0.3 mg/day. The dose should be gradually increased as determined by the IGF-1 concentration. Clinical response and side effects may guide dose titration. It is recognised that there are patients with GHD who do not normalise IGF-I levels despite a good clinical response, and thus do not require dose escalation. The maintenance dose seldom exceeds 1.0 mg per day. Women (especially those on oral oestrogen) may require higher doses than men. As normal physiological growth hormone production decreases with age, dose requirements are reduced. In patients above 60 years, therapy should start with a dose of 0.1– 0.2 mg per day and should be slowly increased according to individual patient requirements. The minimum effective dose should be used. The maintenance dose in these patients seldom exceeds 0.5 mg per day. **Contra-indications, Warnings etc:** Hypersensitivity to the active substance or to any of the excipients. Any evidence of tumour activity exists. Anti-tumour treatment must be complete. Genotropin should not be used for growth promotion in children with closed epiphyses. Patients with acute critical illness suffering complications following open heart surgery, abdominal surgery, multiple accidental trauma, acute respiratory failure or similar conditions should not be treated with Genotropin. Hypersensitivity to the active substance or to any of the excipients. **Precautions:** Diagnosis and therapy should be initiated and monitored by suitably qualified and experienced doctors. Somatropin may induce insulin sensitivity and in some patients diabetes mellitus. Patients with diabetes, glucose intolerance, or additional risk factors for diabetes should be monitored closely during somatropin therapy. As thyroid function may be affected, monitoring of thyroid function should be conducted in all patients. In patients with hypopituitarism on standard replacement therapy, the potential effect of growth hormone treatment on thyroid function must be closely monitored. Signs of any relapse of malignant disease should be monitored. In patients with endocrine disorders, slipped epiphyses of the hip may occur. In case of severe or recurrent headache, visual problems, nausea and/or vomiting, a funduscopy for papilloedema is recommended as some rare cases of benign intracranial hypertension have been reported and if appropriate treatment should be discontinued. Leukaemia has been reported in a small number of growth hormone deficiency patients, some of whom have been treated with somatropin. However, there is no evidence that leukaemia incidence is increased in growth hormone recipients without predisposition factors. As with all somatropin containing products, a small percentage of patients may develop antibodies to GENOTROPIN. The binding capacity of these antibodies is low and there is no effect on growth rate. Testing for antibodies to somatropin should be carried out in any patient with otherwise unexplained lack of response. Experience in patients above 80 years is limited. Elderly patients may be more sensitive to the action of Genotropin, and therefore may be more prone to develop adverse reactions. In acute, critically ill adult patients, GH may increase mortality. In CRI, renal function should be below 50% of normal before institution of therapy and growth should be followed for a year preceding institution of therapy. Conservative treatment for renal insufficiency should have been established and be maintained during therapy. Discontinue GH after renal transplantation. There have been reports of fatalities associated with the use of growth hormone in paediatric patients with Prader-Willi syndrome who had one or more of the following risk factors: severe obesity (those patients exceeding a weight/height of 200%), history of respiratory impairment or sleep apnoea, or unidentified respiratory infection. Patients with one or more of these factors may be at increased risk. Before initiation of treatment with somatropin in patients with Prader-Willi syndrome, signs for upper airway obstruction, sleep apnoea, or respiratory infections should be assessed. Patients should be monitored for signs of respiratory infections, which should be diagnosed as early as possible and treated aggressively. All patients with Prader-Willi syndrome should also have effective weight control before and during growth hormone treatment. Scoliosis is common in PWS and signs for scoliosis should be monitored. Experience of prolonged therapy in adults and patients with PWS is limited. In short children born SGA other medical reasons or treatments that could explain growth disturbance should be ruled out before starting treatment. Not recommended to initiate treatment in SGA patients near onset of puberty. **Interactions:** Concomitant treatment with glucocorticoids may inhibit the growth-promoting effects of somatropin containing products. Therefore, patients treated with glucocorticoids should have their growth monitored carefully to assess the potential impact of glucocorticoid treatment on growth. The clearance of compounds metabolised by cytochrome P450 3A4 (e.g. sex steroids, corticosteroids, anticonvulsants and ciclosporin) may be increased resulting in lower plasma levels of these compounds. The clinical significance of this is unknown. In diabetes mellitus, insulin dosage may need adjustment. Somatropin has been reported to reduce serum cortisol levels, possibly by affecting carrier proteins or by increased hepatic clearance. The clinical relevance of these findings may be limited. Corticosteroid replacement therapy should be optimised before initiation of Genotropin therapy. **Pregnancy and Lactation:** Animal studies are insufficient with regard to effects on pregnancy, embryofoetal development, parturition or postnatal development. There are no clinical studies available on exposed pregnancies. Therefore, somatropin containing products are not recommended during pregnancy and in women of childbearing potential not using contraception. There have been no clinical studies conducted with somatropin containing products in breast-feeding women. It is not known whether somatropin is excreted in human milk, but absorption of intact protein from the infant GI tract is unlikely. Therefore caution should be exercised when somatropin containing products are administered to breast-feeding women. **Overdosage:** Acute overdosage could lead initially to hypoglycaemia and subsequently to hyperglycaemia and Long-term overdosage could result in signs and symptoms consistent with the known effects of human growth hormone excess. **Side Effects:** In adult patients, common adverse effects related to fluid retention; such as peripheral oedema, stiffness in the extremities, paraesthesia, arthralgia and myalgia. These effects are mild to moderate, arise within the first months of treatment and subside spontaneously or with dose reduction. Formation of antibodies of low binding capacity in approximately 1% of patients; *in vitro* chromosome aberrations of unknown clinical significance. Very rare cases (< 1/10,000) of leukaemia have been reported in GH deficient children treated with somatropin, but the incidence appears to be similar to that in children without GH deficiency. In Prader-Willi Syndrome patients treated with somatropin rare cases of sudden death have been reported, although no causal link has been established. **Pharmaceutical Precautions:** Keep Genotropin in the outer carton to protect from light. **Before reconstitution:** store in the refrigerator (2–8°C). *Genotropin Miniquick:* Solely for ambulatory use, only, the product may be stored at or below 25°C by the end user for a single period of not more than 6 months. During and/or at the end of this 6 months period, the product should not be put back in the refrigerator. *Genotropin Cartridge:* Storage up to 1 month at or below 25°C allowed. **After reconstitution:** *Genotropin Miniquick:* Use immediately or within 24 hours. *Genotropin Cartridge:* Store in a refrigerator (2°C–8°C), do not freeze. Keep the container in the outer carton in order to protect from light. Use within 4 weeks. **Legal Category:** CD (Sch 4, Part I), POM. **Pack/Basic NHS Price/PL No:** Genotropin 5.3 mg Pre-filled pen (GoQuick) x 1 £122.87 00022/0085. Genotropin 12 mg Pre-filled pen (GoQuick) x 1 £278.20 00022/0098. Genotropin 5.3 mg Two chamber cartridge x 1 £122.87 00022/0085. Genotropin 12 mg Two chamber cartridge x 1 £278.20 00022/0098. Genotropin MiniQuick 0.2 mg x 7 £32.46 00022/0186. Genotropin MiniQuick 0.4 mg x 7 £64.91 00022/0187. Genotropin MiniQuick 0.6 mg x 7 £97.37 00022/0188. Genotropin MiniQuick 0.8 mg x 7 £129.82 00022/0189. Genotropin MiniQuick 1 mg x 7 £162.28 00022/0190. Genotropin MiniQuick 1.2 mg x 7 £194.74 00022/0191. Genotropin MiniQuick 1.4 mg x 7 £227.19 00022/0192. Genotropin MiniQuick 1.6 mg x 7 £259.65 00022/0193. Genotropin MiniQuick 1.8 mg x 7 £292.11 00022/0194. Genotropin MiniQuick 2 mg x 7 £324.56 00022/0195. **PL Holder:** Pharmacia Laboratories Limited, Ramsgate Road, Sandwich, Kent, CT13 9NJ, UK. Further information is available on request from Medical Information Department at Pfizer Limited, Walton Oaks, Dorking Road, Tadworth, Surrey, KT20 7NS, UK. **Date of preparation:** August 2010. **Company reference:** GN20_0

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk. Adverse events should also be reported to Pfizer Medical Information on 01304 616161.

GEN3243C Date of preparation: January 2011

YOU & YOUR HORMONES – WHAT YOU NEED TO KNOW!

▶ At the Society BES meeting the Society's new public website, You & Your Hormones (www.yourhormones.info), was launched. This project has been two years in the making and represents a major step forward in the Society's public engagement strategy. Here, we provide you with a quick-fire guide to all you need to know about the Society's latest science communication project …

WHAT?

You & Your Hormones provides information on endocrinology, and on hormones and endocrine conditions in particular. We aim for it to be a user-friendly resource that provides objective, reliable, scientifically accurate information on endocrinology.

WHY?

The Society's charitable remit includes education: one of our key aims is to 'educate and inform the public on all aspects of endocrinology'. The Society has become increasingly concerned with the amount of misinformation on hormones which is available on the internet, and wished to provide a reliable UK-based website which provides trustworthy information on the whole of the endocrine system in a manner that was accessible to the public.

Our vision is that You & Your Hormones will act in a two-fold manner: firstly as the provider of scientifically accurate information on the field of endocrinology, and secondly as a portal to bring together the highest-quality endocrine resources currently available on the web, making them easy to find and to set these resources in the context of the endocrine system as a whole.

WHO?

The You & Your Hormones website is freely available for anyone to access and is primarily aimed at the general public. In this first phase of development, we see our main target audience as being people with an endocrine condition and those with a general interest in how their bodies work. However, as we develop the website further, we hope to provide information that is relevant to schools.

For this first release of the website, we have concentrated on providing information on the well-known hormones, glands and common endocrine conditions. We currently have over 100 articles on the site which cover topics from adrenaline to testosterone and acromegaly to thyrotoxicosis. The website is a work in progress and we will be continually updating it with new articles. We are aware that we still have many endocrine topics to cover. If you would like to suggest a topic for inclusion or think you can help us with this, please do get in touch.

HOW?

All articles were initially written by an endocrinologist and were then reviewed by a minimum of two endocrinologists to check for accuracy before being uploaded onto the website. During this process, the articles were also reviewed by a non-scientific editor to make sure that the language was accessible to the general public and conformed to our house style. We are indebted to a huge number of our members who helped with this process (see page 9).

We hope that You & Your Hormones will become the hub of the Society's public engagement activities. From here, we will be able to advertise public events that the Society has organised to a wider audience, and to host resources from these events. This will effectively extend the lifespan of the event and mean that we are able to reach even more people.

THE FUTURE?

We have big plans for the development of You & Your Hormones! The initial release of the website is just the first step in a much bigger strategy. We plan to increase the number of articles and expand the topics covered. We would particularly like to increase the number of feature articles, which examine how hormones affect aspects of general biology and look at the wider implications for society, such as the use of performance enhancing drugs.

CAN I CONTRIBUTE?

We are still looking for people to write and review new articles for the website. If you are interested in contributing, please email us at public@endocrinology.org. We will send you a questionnaire to fill out and then match your research area to the articles we have available.

We also welcome and encourage links from other websites to You & Your Hormones and are particularly keen to promote links from university/hospital/research institute websites. If you feel You & Your Hormones is a useful website for your workplace, please add a link!

All feedback on the website is gratefully received. We would really like to hear your views on how we can improve the site and which new topic areas we should aim to cover – just fill out the contact form available on the website:

www.yourhormones.info

YOU & YOUR HORMONES

The Society would like to extend its thanks to the following people and organisations who have helped with development of the website and the content now available:

Editorial board

Overall management of the You & Your Hormones website is overseen by an editorial board who report to the Society's Public Engagement Committee. Current members are:

Professor Karim Meeran
(London)

Dr Stephen Orme
(Leeds)

Professor Saffron Whitehead
(London)

Ms Rachel Evans
(Society for Endocrinology)

Dr Jennie Evans
(Society for Endocrinology)

Dr Rebecca Ramsden
(Society for Endocrinology)

Mr Toby Stead
(Society for Endocrinology)

Website development

Technical development of the website was managed by the Society for Endocrinology and BioScientifica's web development team; particular thanks go to Mr Steven Perry and Ms Kandis Douglas.

Editorial services

Editorial services were provided by Mr & Mrs Peter & Sheila Brill at Net.Mentor (www.net-mentor.com).

Professor Ashley Grossman speaking at the launch

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BRILLIANT BIRMINGHAM: SOCIETY BES 2011

Our second visit to Birmingham for the Society for Endocrinology BES meeting proved a huge success. Although the meeting was held later in the year than traditionally, 1023 delegates attended, making for a vibrant meeting in the spring sunshine. Here is just a selection of the news

PRIZES!

Young Endocrinologists' prizes

Prize Lecture winners: Laura Matthews (Manchester), basic science prize, with 'Novel glucocorticoid effects: signalling from the membrane to the nucleus'; and Harvinder Chalal (London), clinical prize with 'Clinical, genetic and molecular characterisation of patients with familial isolated pituitary adenomas (FIPA) - novel mechanism of somatostatin resistance'.

The basic science oral communications prize went to Nicole Reisch (München, Germany) with 'Evidence for the existence and significance of an alternative pathway towards androgen synthesis during early human life', while Johanna Miquet (Buenos Aires, Argentina), Daniel Ezra (London) and Tijana Mitic (Edinburgh) were all highly commended. The clinical oral communications prize went to Jan Idowiak (Birmingham) with 'Mutant cytochrome b5 causing 46,XY disorder of sex development (DSD) due to apparent CYP17A1 17,20 lyase deficiency', while Preethi Rao (Durham), Ning Yu (Dundee) and Ahmed Iqbal (Bristol) were all highly commended.

The basic science poster prize went to Robert Seed (Birmingham), while Rebecca Gorrigan (London), Guatam Rajpal (Michigan, USA), Atul Kalhan (Cardiff) and Suzanne Meredith (Manchester) were all highly commended. The clinical poster prize went to Narayanan Kandasamy (Cambridge), while Peter Taylor (Bristol), Ning Yu (Dundee), Barbara Alberts (Oxford) and Anupam Brahma (Norwich) were all highly commended.

Harvinder Chalal receives his award from Professor Peter Trainer

Jan Idowiak (top), Robert Seed (centre) & Narayanan Kandasamy (above) receive their awards from Professor Julia Buckingham

AMEND Young Investigator's Award

Was won by Giampaolo Trivellin (London), with 'miR-107 inhibits the expression of aryl hydrocarbon receptor interacting protein (AIP) and is potentially involved in pituitary tumorigenesis'.

British Thyroid Association Award

Was won by Daniel Ezra (London), with 'Developing an *in vitro* model of tissue expansion in Graves' ophthalmopathy: Exploring the role of IGF-1 receptor targeting as a novel treatment'.

Giampaolo Trivellin (left) and Daniel Ezra (right) receiving their awards from Professor Julia Buckingham

Clinical Endocrinology Trust Awards

The basic science CET prize went to Timothy Wells (Cardiff) with 'Hyperghrelinaemia, hyperphagia, food hoarding and reduced adiposity in an imprinting centre deletion mouse model of Prader-Willi syndrome', while the clinical prize went to Preethi Rao (Newcastle upon Tyne) with 'Thyroid hormones in the euthyroid range predict subsequent body mass composition in women: the OPUS study'.

The two CET nurses' prizes went to Katherine Powell (Norwich) with 'Audit of low dose dexamethasone suppression test to exclude androgen secreting tumours in hyperandrogenic women' and Dianna Mantripp (Oxford) with 'Nebido (Testosterone undecanoate) in patients over 60 years of age: a time to reduce dose frequency?'.

Meanwhile, the CET best abstract prizes in the Clinical practice/governance and case reports category went to Barbara Alberts (Oxford) and Radu Mihai (Oxford).

Timothy Wells (top), Preethi Rao (above), Diana Mantripp (below) and Katherine Powell (bottom) receiving their awards from Professor Julia Buckingham

Congratulations all!

Society BES 2011 in the news

The Society press office was as busy as always at the Society BES meeting, spreading the word about hormones and generating a lot of coverage from research presented at this year's conference.

A study on the UK iodine status presented by Dr Mark Vanderpump from the Royal Free Hospital, London, was the most viewed story on the BBC Health News website on Tuesday 12 April when the story was posted, and was also featured in many other media outlets, including an interview on BBC Radio 5 Live, and in the *Daily Mail*.

Research on the effect of a daily dose of pomegranate juice on blood pressure was also the subject of a live interview with Dr Emad Al-Dujaili from Queen Margaret University, Edinburgh, on BBC Radio Scotland, as well as the *Daily Express* and *The Scotsman*.

An interview with Professor Hugh Jones, from Barnsley Hospital NHS Foundation Trust, was aired on BBC Radio West Midlands' lunchtime show, which discussed his work on low testosterone in men with Type 2 diabetes. The study was covered in *The Daily Mirror*, as well as on the Elsevier Global Medical News website, helping research from the conference to reach an international audience of clinicians.

This was also true for the Society for Endocrinology's new clinical guidelines on the diagnosis and treatment of pituitary apoplexy, presented at the conference by Professor John Wass, which was covered on the Endocrine Today website. The guidelines are published in *Clinical Endocrinology* **74** 9–20.

We'd like to thank all those who helped with the press activity this year, and hope that endocrinology will continue to be a subject which fascinates the public and sparks debate. You can view the press releases from the conference at www.endocrinology.org/press/recent.html.

Fundraising at Society BES 2011

We are very pleased to announce that £454.22 was raised at the meeting, of which £234.22 will go to JustGiving. The money was raised by brave delegates taking part in the Wii challenge and the selling of raffle tickets. Congratulations go to the winners of the raffle: Professor Paul Stewart (1st prize), Peter Donachie (2nd prize) and Libby Campbell (3rd prize). The winner of the Wii challenge, Maria Warner, won a year's free membership to the Society. The money will be used to support Society grants to members.

Prader-Willi Syndrome Association UK

PWSA
Prader-Willi Syndrome Association UK

The meeting in Birmingham was our second experience of having a stand at a Society for Endocrinology conference. This was the first time, though, that we had used our new logo and banners. The logo - a puzzle piece - symbolises the complexity of Prader-Willi Syndrome (PWS), which still has many unanswered questions with regard to treating some of its aspects.

Caused by missing information from several genes on the paternal chromosome 15, it is usually a *de novo* occurrence, although there are hereditary forms of the syndrome. The hypothalamus is affected and this in turn leads to dysfunction in several areas, notably appetite, growth, sexual and emotional development, and sleep disorders. In addition, the obesity caused by a combination of hyperphagia and hypotonia, means that around a quarter of adults with PWS develop Type 2 diabetes. A minority also have hypothyroid problems. The majority have learning disabilities and varying degrees of challenging behaviour.

Whilst growth hormone treatment is helping many of today's generation of children attain a normal height and increased muscle mass, sex hormone treatment is still not routinely prescribed for men and women with PWS, and the hyperphagia is still not fully understand. A person with PWS will continue to feel hungry even after a very large meal; currently, the only way to manage this is by controlling the food environment and providing lower calorie meals.

The PWSA UK is a national charity with 30 years' experience in supporting families and people with PWS. We have a wide range of information about all aspects of the syndrome. Our latest publication "What is PWS? How can we help?" was made possible with a grant from the Society for Endocrinology.

Because PWS typically will involve a number of medical specialities including dietitians, orthopaedic specialists, psychiatrists, speech therapists, and endocrinologists, the PWSA UK is keen to support the setting up of multidisciplinary clinics - five now operate throughout the UK. For children, these are in Glasgow, Birmingham, Brighton and Chelsea & Westminster, with another at Hammersmith Hospital for adults. The PWSA UK sends a staff member to the clinics to offer pastoral support and non-medical advice. Information about these clinics was available on our stand and we are always happy to talk to other clinicians who may wish to consider a similar initiative.

It was not entirely surprising to us that amongst the multitude of posters at the conference, not one was about Prader-Willi syndrome. It is a rare syndrome, affecting around 1 in 22 000 live births, and hence it is not always easy to access patients with PWS to carry out research. However the complexity of the syndrome makes it a very interesting subject which involves many areas of endocrinology. The PWSA UK is in touch with over 800 families and can help to find subjects for research, as well as supporting research as part of our charitable aims.

JACKIE WATERS, Director Of Services, PWSA (UK), www.pwsa.co.uk

Endocrinologists-in-training

Once again the Young Endocrinologists' quiz night proved to be a popular and successful event. With great food and free libation, the forum provided a superb opportunity for the Young Endocrinologists (YEs) to network and meet senior members of the Society. Teams were captained by Steve Orme, Saffron Whitehead, Waljit Dhillo, Alan McNeilly, John Bevan, and Julian Davis, to name but a few! This year's quiz included the popular endocrine celebrities round and a new music round in the style of *Name that tune*! A fiercely competitive re-mark produced the winning team: The Northern Misfits captained by Steve Orme (team members included Helen Prescott, Hassan Kahal, Luke Teo, Gill Cooper, and Ka Ying Ng). Second place went to Bloom's Bacardi Breezers, and joint third place to North Meets West and Calorie Burners! Prizes were kindly awarded to the two winning teams courtesy of the Society.

This year's YE symposium was on 'A Successful Research Career'. Attendance was very good. The first session was by Dr Miguel Debono, who outlined routes to a research career in clinical academia. Professor McNeilly then gave a candid overview of how to manage your research degree, in particular highlighting the difficulties of further career progression. Dr Hanaloglu then gave a talk 'The things I wish I knew'. She gave a personal overview of her experience, both ups and downs, as a post-doc and her progression to becoming a principal investigator. Finally, Dr Webster gave us a taste of how to translate and protect successful scientific research through commercialisation and patents.

The Young Endocrinologists' Prize Lecture session was a fantastic demonstration of the great ability of our trainees and we congratulate both Dr Matthews (basic science) and Dr Chahal (clinical) for their superb lectures.

Finally, the conference dinner was very well attended by the YEs and it just remains for me, as outgoing YE Chair, to thank the YE Steering Group (Victoria Sharp, Louise Lloyd, Abd Tahrani and Jo George), and the Society for all their support and to welcome the incoming Chair Victoria Sharp.

ALIA MUNIR

A study day for nurses caring for adult endocrine patients

13 July 2011, St George's NHS Healthcare Trust, London

'Endocrinology for Nurses: Common conditions seen in endocrine clinics'

Topics include: acromegaly, endocrine biochemistry, growth hormone replacement and hyperthyroidism.

Please contact Fiona Anthonypillai (fiona.anthonypillai@stgeorges.nhs.uk)

Jim Fagin: CET Visiting Professor

The Clinical Endocrinology Trust (CET) Visiting Professor (CETVP) visits a series of UK endocrine centres over the two weeks before the Society for Endocrinology BES meeting and then delivers a medal lecture at the meeting itself. This year our guest was Professor Jim Fagin from the Memorial Sloan-Kettering Cancer Centre in New York. Among his many roles, Jim will be known to many people as Editor-in-Chief of the Society for Endocrinology's journal *Endocrine-Related Cancer* until 2010, and he is President-Elect of the American Thyroid Association.

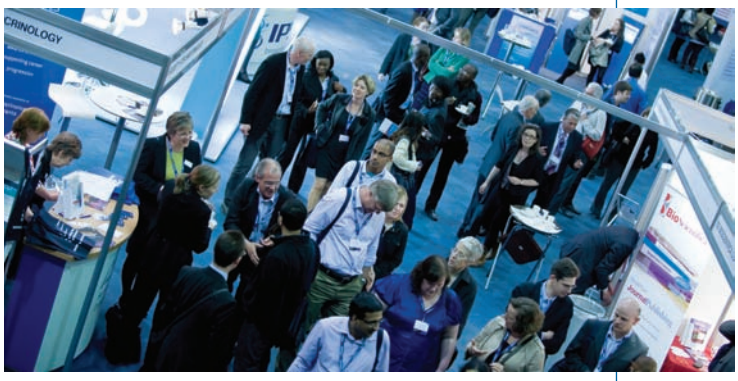
The task of the CETVP is a daunting one: Jim visited eight centres in the UK, delivering five different lectures in addition to his plenary lecture at the Society BES meeting on the final day of the conference. The tour of UK centres is quite challenging – not only does the visiting Professor have to meet eager and enthusiastic trainees and colleagues in each host centre, but he also has to enjoy a dinner in the evening before getting on the train the next morning to reach the next centre for another day of the same! After a gruelling tour of British rail stations he finally has to deliver an outstanding lecture.

Jim fulfilled this task outstandingly well. He visited Cardiff, Bristol, Oxford, London, Newcastle, Sheffield, Manchester and Birmingham, seeing much of the UK rail network en route. All of the centres thoroughly enjoyed his visit, and he was treated to a variety of local culture. In the north-east he was presented with a Newcastle United football shirt personalised with his name and naturally bearing the number 131. After visiting Sheffield on the hottest day of spring he was treated to an afternoon visit to Chatsworth House and its gardens, with a drive through the Peak District. His last visit was to Birmingham where he spent the weekend before the conference started, and had a trip to the Cotswolds, where he was able to reminisce about once working as a junior doctor in Banbury.

Having given a series of lectures on different aspects of thyroid cancer he delivered a superb plenary lecture on the genetics of thyroid cancer. This was real translational medicine with exciting and novel transgenic mouse work explaining more about the biology of thyroid cancer, leading on to a clinical trial which is already showing exciting promise for the induction of 131I sensitivity in patients with difficult metastatic thyroid carcinoma. All in all, his visit was a real treat for everyone involved, and everyone who met Jim was grateful for the time and energy he devoted to the visits before hastening back to New York, with perhaps just a few hours' rest on the plane?

The CET which funds the Visiting Professorship, is a UK charity, supported by a profit-share from the Society's official clinical journal, *Clinical Endocrinology*.

JULIAN DAVIS, CET SECRETARY



Nurses' News

▶ It was nice to see so many nurses at the Society BES Meeting in Birmingham: the feedback was good and the nurses' sessions were well attended by both nurses and our medical colleagues. Nurses are now being included in the Society's interdepartmental peer review process: find reports from both sides of this process below. I was privileged to be a reviewer recently, and found the process very informative.

The committee will be losing four members this year so, if you would like to become a member, please visit www.endocrinology.org/about/committee.html.

The deadline for applications is 8 July 2011.

Following on from the success of the last Endocrine Nurse Update, I hope to see you on 19–20 September in Stratford-upon-Avon for what promises to be another really interesting event. As I know that some of you struggle to find funds to attend meetings, please consider the Society's Conference Grants and the free registration that AMEND is offering to three UK Nurse Members to learn about multiple endocrine neoplasia (MEN) and/or endocrine tumours associated with MEN. Full details and conditions can be found at www.endocrinology.org/grants/and www.amend.org.uk/links.asp?viewingid=335&contentof=96

NIKKI KIEFFER, CHAIR, NURSE COMMITTEE

Endocrine Review

▶ My colleagues and I took part in a peer review of the endocrine services in Edinburgh. I was informed that someone was coming to our unit to 'have a look around' as part of an audit. I didn't think they would be very interested in the nursing side of the service, so imagine my surprise when four members of the review team turned up and spent several hours in the unit interviewing various staff groups including the nurses.

I didn't know what to expect from the review, but the interview I had with the team was very relaxed and informal. We were quizzed on our workload, our nursing practice, how many trained nurses we had and whether we had any specialist nurses.

It was quite interesting and useful to just sit and think about what we actually do.

The nurses in the department have all been working in the metabolic unit for several years: at times we carry out our workload on 'automatic pilot'. This opportunity to reflect on the changes that have happened over the past few years will help us develop the service.

I understand it is a relatively new concept to include nurses in the review; I feel this can only be a positive step given the contribution of nursing to patient care and service improvement. I await the review findings with eager anticipation!

APRIL ROBERTSON

Certificate of adult endocrine nursing ... recently relaunched with many revised criteria

For details see www.endocrinology.org/endocrinenurse/training.html.

Interdepartmental Peer Review: Cardiff

▶ Interdepartmental Peer Review of endocrinology departments seeks to support endocrinologists, and facilitate the exchange of ideas and experience in order to improve practice. The review is usually carried out by two endocrinologists, though recently it was decided to include nurses on the team. Specialist Nurses Lisa Shepherd (Birmingham) and Chris Gibson (Manchester) were the first nurses to be involved in interdepartmental peer review when they accompanied Petros Perros and John Bevan to Cardiff.

Multidisciplinary working means that specialist nurses are often important members of the endocrine team. Their practice can have a significant effect on how a department functions and how patients are managed. The review process has always recognised this and some specific questions on nursing input were historically included: the inclusion of nurses as reviewers allows for a much more comprehensive review of nursing structure.

The nurses accompanied the medical staff through the stages of the traditional review in addition to time allocated to speaking with the specialist nurses in each centre about their challenges and practice. This is a supportive process and is meant to identify good practice as well as highlighting areas that may benefit from change. The Cardiff nurses all responded positively to the process, recognising areas of good practice and the pressures faced in clinical work.

In future visits hospital nurses will receive a questionnaire prior to the visit, in order to emphasize the supportive nature of the review and its aims. It may also help to open up discussion around the wider issues in nursing and endocrinology. Many of the challenges facing teams are apparent in all centres. Financial constraints are a fact of life for nursing services, as with all areas of the NHS. Specialist nursing services can be particularly vulnerable in this climate. Peer review reports are an invaluable way of proving the importance of nurse specialists.

CHRIS GIBSON

(l–r) John Bevan, Chris Gibson, Lisa Shepherd and Petros Perros

Information resource for nurses

The Nurse Committee has developed an online resource for Nurse Members, on the members' secure area of the website (www.bioscientifica.info/sfe/sfemembers/login.aspx). Topics include endocrine tests, abstract writing, poster preparation, and presenting case studies.

A day in the life of a Nigerian endocrinologist

The founding fathers

The practice of endocrinology as a specialty in Nigeria dates back to the 1950s. The founding fathers (Professors T Johnson, O L Ekpechi, J Oli, and B K Adadevoh) trained under the British system and returned home to found endocrinology units in institutions across the country, mainly in Southern Nigeria. In those days they could boast of well equipped laboratories and laboratory personnel. They carried out a lot of pioneering work, especially in the areas of diabetes and thyroidology, even though these endocrine disorders were considered rare.

Nigerian endocrinology today

Nigeria currently boasts of some 80–100 clinical and basic endocrinologists (including trainees) spread over the country. Training is carried out in the universities and affiliated university teaching hospitals, and certification is provided by the West African and Nigerian National Post Graduate Medical Colleges. The Nigerian Society for Endocrinology & Metabolism (NSEM) is the professional body that brings together all practising endocrinologists in Nigeria.

I work with the Obafemi Awolowo University, Ile-Ife, South West Nigeria. Universities are the main employer of most Nigerian endocrinologists, though a few have their own practices. Being employed by the university implies that your responsibilities and duties will be three-pronged: first is that you'll teach both undergraduate and post graduate students, second is research, and third is your clinical duty, which is done in your capacity as a consultant to the university teaching hospital. This multiplicity of roles leaves the physician with little or no spare time!

Wednesday's child is full of woe

In an attempt to fulfil these roles, my schedule varies from day to day, but there are instances in which I find myself being everything in a 24 hour period. I will describe one such day, my Wednesdays. A typical Wednesday begins with a drive down to Ilesa, a 30-minute journey to the east of Ile-Ife, where the University Teaching Hospital has another tertiary referral facility. I join the residents, interns and medical students to review the previous night's admissions in the hospital cafeteria, which also doubles as our meeting room. Particular cases and issues discussed at this forum span all the various specialties of internal medicine and are often medical emergencies such as acute metabolic complications of diabetes, cerebrovascular disease, acute severe asthma, and heart failure to name but a few.

With the admission review complete the team now splits into two: one arm comprising the senior registrar, registrar and a few interns leave immediately to begin attending to patients in the endocrinology clinic, while I lead the other arm to conduct a one hour problem-solving ward round. We are often confronted with issues such as uncontrolled blood glucose owing to a patient's inability to procure insulin and other medications, diagnostic dilemmas occasioned not by the inability to identify clinical signs and symptoms, but by a lack of infrastructure (especially laboratory and radiological facilities) to pursue such cases to logical conclusions. A typical example is a patient with a suspected pituitary tumour requiring MRI or sophisticated hormonal assays. When absolutely necessary, patients have to travel several kilometres to have such tests done in Lagos, Nigeria's commercial capital; of course the poor often cannot afford the trip. At other times, even when a diagnosis has been made, a definite management plan cannot be instituted because of the absence of trained personnel or treatment infrastructure. Complex neurosurgical procedures fall into this category.

Costus spectabilis, *the national flower of Nigeria.*
IMAGE COURTESY OF JACOB ULUWEHI KNECT

United we stand

Later, the whole team combines again in the endocrinology outpatients' clinic to attend to over 100 waiting patients, most of whom have diabetes mellitus. Just as on the ward, we are confronted by glucose control issues and the consequences: the diabetic foot, neuropathies, cardiac disease, eye and kidney complications. The majority of our thyroid disease patients have either Graves' disease or toxic multinodular goitre. They are mostly treated medically, and radio iodine treatment has also become available at the neighbouring University College Hospital, Ibadan. Most of the simple goitres are referred to the surgeons from the General Outpatients Department. Clinics continue well into the afternoon with the consultant sharing his stuffy consulting room with a battery of students and interns. My working day continues thereafter on the university campus where I attend to other academic and research matters, and the inevitable administrative burden.

By and large, endocrinology in Nigeria is rewarding given our successes in reducing the morbidity and mortality attributable to endocrine disorders, though these successes require great effort given the competition for government funding presented by other medical areas – particularly infection and other communicable diseases. The dearth of basic infrastructure and personnel with attendant late diagnosis and suboptimal treatment outcomes also do not help matters. It is hoped that our fledgling health insurance system and the much anticipated transfer of technology will help ameliorate these challenges.

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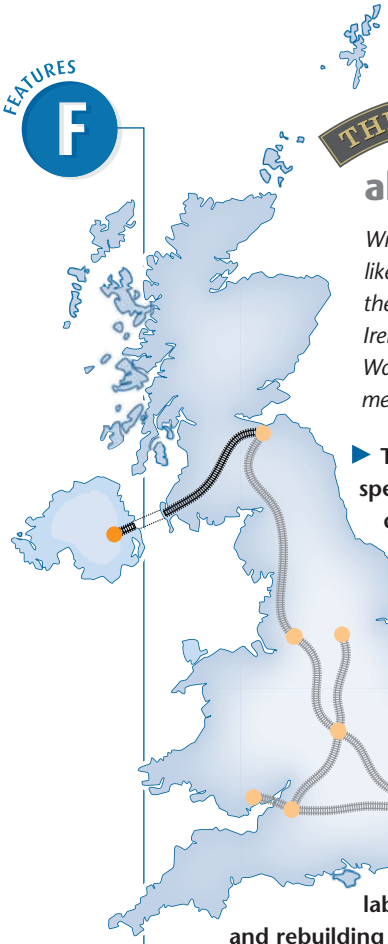
The editorial team are keen to hear from other overseas members' who wish to give us a snap-shot into the endocrine scene in their country. Get in touch with Andrew Lowe via info@endocrinology.org

THE ENDO TRAIN

all aboard for... Belfast



Writing in 1934 the novelist George Birmingham remarked 'I was born in Belfast and brought up to believe, like St Paul, I am a citizen of no mean city'. Tarsus on the Lagan grew from a small commercial port serving the needs of a rural economy, to become, by the beginning of the 20th century, the leading industrial city in Ireland and a powerhouse of British manufacturing. Industrial decline accelerated after the Second World War, and the eruption of intercommunal strife in 1968 brought terrible human and economic costs. As memories of those days fade, Belfast has emerged as a vibrant city of culture and enterprise.

The first physician to develop a specialist interest in endocrine diseases in Belfast was Professor Desmond Montgomery. He was joined by Professor David Hadden and Dr John Weaver in the newly established Metabolic Unit, a purpose built facility opened in 1957 on the Royal Victoria Hospital site combining inpatient beds, an outpatient suite and laboratory facilities. As expansion and rebuilding took place it has not been possible to maintain this close physical integration of all facilities; however, the close functional linkages built up by these early pioneers remain in place as essential features of endocrinology in Belfast.

Clinical interactions and networking

Desmond Montgomery's successor Professor Brew Atkinson was a major influence in the redevelopment of the Royal Victoria Hospital site and the new Regional Centre for Endocrinology and Diabetes which opened in 2003. This comprises an outpatient and day patient facility with a small clinical research suite. Endocrine and diabetes inpatient beds are in the same building.

All consultants in the Regional Centre are engaged in both general endocrine and diabetes practice, within which they have their own areas of special interest. As well as traditional organ-based endocrine sub-specialisation with separate endocrine hypertension, thyroid and pituitary/adrenal clinics, diabetes secondary care has become increasingly sub-specialist with the development of pump, foot and renal diabetes clinics. Multidisciplinary working is well established, and community-based networking is developing rapidly in diabetes.

The new Royal Victoria Hospital building

Endocrinologists continue to be fortunate in having nearly all of the related specialties necessary to run a comprehensive endocrine service on a single Royal Victoria Hospital site. Thus Mr Stephen Cooke in the Regional Neurosurgery Unit carries out all of the pituitary surgery, Dr Peter Ellis undertakes all aspects of endocrine radiology including adrenal vein and petrosal sinus sampling, and Dr Fiona Eatock has just been appointed in endocrine surgery. Also on the same site are paediatric endocrinology, ophthalmology, vascular surgery, the Royal Jubilee Maternity Hospital and the Regional Fertility Unit. There are well established joint clinics in transition diabetes, antenatal care for diabetes, gynaecological endocrinology and other endocrine conditions. Endocrine cancers are considered at a multidisciplinary meeting, and there is a separate joint clinic and multidisciplinary meeting for neuroendocrine tumours. Specialist renal services are based at the nearby Belfast City Hospital.

This concentration of clinical facilities has been of major benefit in the care of complex endocrine cases. Equally, however, the informal network of excellent endocrinologists at other hospitals in Belfast (including the nearby Belfast City and Mater Infirmorum Hospitals, which with the Royal Victoria Hospital are part of the same Trust) and the rest of Northern Ireland has streamlined central referral of more complex conditions, and enabled the continued peripheral management of many others.

Training

All undergraduate students from the Queen's University Belfast medical school do a one week attachment in endocrinology/diabetes at the Royal Victoria Hospital during their third year. A further week is spent at one of the teaching hospitals attached to Queen's where teaching and learning in diabetes and benign thyroid disease is consolidated. Undergraduate education is coordinated by Dr Karen Mullan, who also provides a student selected module for more in-depth study.

The training of specialist registrars, under the Training Programme Director Dr Steven Hunter, has benefited from the good working relations between central and more peripheral units to ensure a balance of training opportunities. Twelve Specialist Trainee positions are available, with trainees usually spending one to two years at the Royal Victoria Hospital and three to four years at other sites. At any time two or three trainees may be out of programme in research or other training. There is a regular programme of teaching days in endocrinology and general internal medicine, including a joint training day with colleagues from the Republic of Ireland.

A glucose clamp study in progress, Dr Ian Wallace (left), Mr Cieran Ennis (right).

Research

As a relatively small centre, and to maintain a critical mass of research activity, the Regional Centre has concentrated on certain areas which span both endocrinology and diabetes. Similarly, to sustain high quality research in a small region, endocrinologists have been pleased to collaborate with other academics in the Department of Epidemiology and Public Health at Queen's University Belfast, including Professor Peter Maxwell, who directs a programme of research on clinical and genetic aspects of diabetic renal disease, and Professor Ian Young, who leads a laboratory-based team examining links between nutrition and cardiovascular disease. In the last few years there has been increasing collaboration with the School of Biomedical Sciences at the University of Ulster, where Professors Peter Flatt and Finbarr O'Harte have investigated the entero-insular axis and use of novel peptides in diabetes management, and where Professor Vivienne Coates is a leader in developing evidence-based practice in diabetes care, which involves a range of health care professionals on different sites.

Endocrine research in Belfast uses these academic linkages to build on the interests and research expertise of the clinical endocrinology team. Maintaining the endocrine/diabetes connection has been vital in a number of these investigations. Professor Patrick Bell has led the application of metabolic assessment, including insulin action, to a number of insulin resistant states including diabetes, hypertension and other endocrine diseases. This has been extended by Dr Steven Hunter in collaboration with Professor Ian Young and his team into the effects of dietary manipulations on insulin action and its determinants. Professor David McCance has continued and developed the work of Professor David Hadden in diabetes in pregnancy. David, supported by Dr Hamish Courtney, leads clinical care in the antenatal diabetes clinic, and continues a major research interest in diabetes pregnancy outcome. This hit the headlines recently with the publication of the Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Study, for which Belfast was both a field centre and the world-wide laboratory in this international collaboration. Belfast was also coordinating centre for the UK Diabetes and Pre-eclampsia Intervention Trial (DAPIT) funded by the Wellcome Trust.

The patient base of pituitary and adrenal disease has provided many opportunities for clinically focussed studies. Important publications led by Professor Brew Atkinson have helped define the optimum investigation and management of several endocrine conditions, especially Cushing's syndrome and hyperaldosteronism. This work is being taken on by Professor David McCance, Dr Steven Hunter, Dr Hamish Courtney and Dr Karen Mullan with the enthusiastic support of our endocrine nurse specialist Teresa Rea.

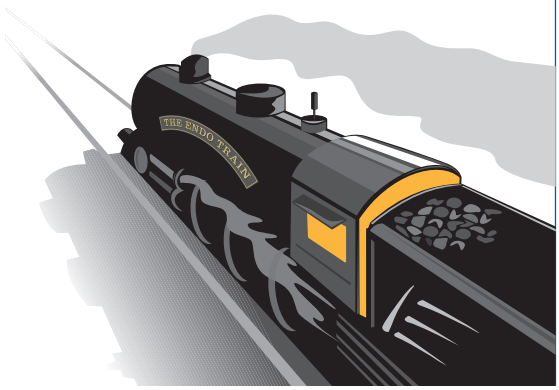
A further important research support mechanism is the Northern Ireland Diabetes Clinical Research Network (NICRN Diabetes). The coordinating centre is within the Belfast Trust, where Professor Patrick Bell is Clinical Lead, but the network encompasses all of Northern Ireland and is designed to support both academic and industry-sponsored research. It provides an opportunity for physicians who are well trained and interested in research, but are clinically busy, to contribute to research and innovation.

An invitation

It has not always been easy to attract students and trainees to cross the Irish Sea to sample medical life in Belfast. The door remains wide open. Those who do come seem to enjoy it.

PATRICK BELL

Members of the research team in Belfast: (back row l–r) Network Nurse Aileen Smith, Dr Ian Wallace, Mr Cieran Ennis, Dr Hamish Courtney, Dr Anthony Lewis, Professor Brew Atkinson, Dr Ciara McLaughlin; (front row l–r) Professor Patrick Bell, Dr Karen Mullan, Dr Steven Hunter



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Funding opportunities for Nurse Members may be available. Please contact conferences@endocrinology.org for more information.

RCN accreditation pending.

Conference Secretariat: Bioscientifica Ltd, Euro House, 22 Apex Court, Woodlands, Bradley Stoke, BS32 4JT, UK.

Hot Topics

Journal of Endocrinology

Exercise and insulin secretion

The mechanism behind the enhanced insulin sensitivity developed during regular exercise is not well understood. Calegari and colleagues speculated that the decrease in glucose-induced insulin secretion could involve the AMPK pathway. Male Wistar rats underwent different periods of endurance training and assessment. They found that AMPK activation is enhanced by endurance exercise which leads to increased UCP2 protein content, resulting in decreased insulin secretion. This research has implications for treatment of type 2 diabetes.

Read the full article in *Journal of Endocrinology* **208** 257–264

Glucocorticoids and IL-6 in pregnancy

Glucocorticoids modulate the immune response during pregnancy. Cui and colleagues investigated the role of glucocorticoids in pregnancy in rats. Immune challenge in non-pregnant rats releases glucocorticoids and interleukin-6 (IL-6). This response is attenuated in late pregnancy. They also observed that during pregnancy, the lipopolysaccharide-induction of IL-6 is not corticosterone-dependent. Thus, in late pregnancy, the glucocorticoid regulation of IL-6 is altered and could form that basis of the specialized functions of IL-6 during pregnancy.

Read the full article in *Journal of Endocrinology* **209** 95–103

Pancreatic islet neogenesis

Transplantation of pancreatic islet-like cells and beta cells is a promising approach for treatment of type 1 diabetes mellitus. Milanesi and colleagues used a series of epigenetic manipulations to differentiate nestin-positive stem cells from rat bone marrow into pancreatic cell phenotypes *in vitro*. The cells expressed insulin and GLUT-2 and, importantly, secreted the hormone in a glucose-responsive manner. This is an exciting novel cellular system with potential therapeutic applications.

Read the full article in *Journal of Endocrinology* **209** 193–201

Endocrine-Related Cancer

Rac1 regulation of ER

Rac1 stimulates migration and invasion in breast cancer cells. It is a downstream mediator of EGFR which activates ER; this lead Rosenblatt and colleagues to investigate Rac1 and ER crosstalk. A novel mechanism was identified, with Vav3 as an upstream activator and Pak-1 as a downstream effector. They found ER activity in breast cancer cells could be inhibited using a Rac1 inhibitor, and that this inhibitor also decreased oestrogen-induced cell proliferation in tamoxifen-resistant breast cancer cells.

Read the full article in *Endocrine-Related Cancer* **18** 207–219

ESR2 alleles and colorectal cancer

Sex steroids may be involved in the higher incidence of colorectal cancer found in men. In this German case-control study, Sainz and colleagues studied 47 SNPs in sex steroid hormone signalling, transport or metabolism genes. The most significant CRC risk in women was associated with two variants of ESR2, suggesting that oestrogen influences normal colon function. Other genes with alleles which may be involved were HSD17B1, ABCB1 and SHBG.

Read the full article in *Endocrine-Related Cancer* **18** 265–276

Journal of Molecular Endocrinology

MDM2 enhances oestrogen responsiveness

Overexpression of murine double minute clone 2 (MDM2) suppresses p53, and is therefore a potential prognostic indicator of cancer. Kim and colleagues used RNA interference to show that MDM2 enhances 17β-estradiol-dependent growth and transactivation. Overexpression of MDM2 also coactivated ERα/SP1, enhancing ERα-mediated gene expression. MDM2 thus plays a critical role in the growth of ER-positive breast cancer cells, leading to the possibility that MDM2 inhibitors would have therapeutic potential.

Read the full article in *Journal of Molecular Endocrinology* **46** 67–79

Retinoic acid in endometrial cancer

The molecular mechanisms behind the roles that retinoic acid plays in apoptosis and growth inhibition have remained unclear. Cheng and colleagues sought to identify specific retinoic acid receptor-α target genes in endometrial Ishikawa cells. Four highly regulated genes were subsequently validated as being regulated by the retinoic acid agonist AM580. Further, both retinoic acid and AM580 were shown, for the first time, to inhibit endometrial cancer cell proliferation. Retinoic acid thus has potential as a therapeutic agent.

Read the full article in *Journal of Molecular Endocrinology* **46** 139–153

Clinical Endocrinology

PCOS investigation

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in females and is often associated with diabetes and obesity. This thorough summary of research into PCOS by Pasquali and members of the PCOS Forum highlights a number of promising areas for future investigation and discussion of improved individualized therapeutic strategies for women with PCOS.

Read the full article in *Clinical Endocrinology* **74** 424–443

Glucagonoma

Glucagonoma is an exceedingly rare glucagon-secreting pancreatic neuroendocrine tumour (NET) arising from pancreatic islet alpha cells, and is often accompanied by a characteristic clinical syndrome. In this study, Eldor and colleagues present six patients diagnosed with the glucagonoma syndrome and their response to somatostatin analogue therapy. This study indicates that somatostatin analogues and an aggressive surgical approach offer symptom relief and tumour control.

Read the full article in *Clinical Endocrinology* **74** 593–598

Central hypothyroidism treatment

Central hypothyroidism is a rare cause of hypothyroidism, caused by the insufficient stimulation of an otherwise normal thyroid gland. While the mechanisms behind central hypothyroidism have been described, in this commentary Paolo Beck-Peccoz discusses the significant difficulties in diagnosis and treatment that remain, particularly the common pitfalls in diagnosis made on a biochemical basis and difficulties experienced with LT4 therapy.

Read the full article in *Clinical Endocrinology* June issue

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The 12 mg pre-filled pen GoQuick is colour coded purple. **Genotropin Cartridge:** Two-chamber cartridge for use in a re-useable injection device, Genotropin pen, or in a reconstitution device. The cartridges contain either 5.3 mg or 12 mg somatropin (rbe). Each cartridge also contains 0.3% metacresol as preservative. The Genotropin Pens are colour coded, and must be used with the matching colour coded Genotropin two-chamber cartridge to give the correct dose. The Genotropin Pen 5.3 (blue) must be used with Genotropin 5.3 mg cartridge (blue). The Genotropin Pen 12 (purple) must be used with Genotropin 12 mg cartridge (purple). Instruction on reconstitution plus use of devices is supplied separately as are the Pen and Genotropin Mixer devices and any necessary consumables. **Genotropin MiniQuick:** Two compartment cartridge in single dose syringe containing powder and solvent for injection together with an injection needle. Each device contains either 0.2 mg, 0.4 mg, 0.6 mg, 0.8 mg, 1 mg, 1.2 mg, 1.4 mg, 1.6 mg, 1.8 mg or 2 mg somatropin (rbe). **Indications: Children:** Treatment of growth disturbance due to insufficient secretion of growth hormone (growth hormone deficiency, GHD) or associated with gonadal dysgenesis (Turner Syndrome) or chronic renal insufficiency (CRI) or in short children born Small for Gestational Age (SGA) with a birth weight and/or length below −2SD, who failed to show catch-up growth by 4 years of age or later. Prader-Willi syndrome (PWS), for improvement of growth and body composition. The diagnosis of PWS should be confirmed by appropriate genetic testing. **Adults:** Replacement therapy in adults with pronounced GH deficiency. Adult onset: Patients who have severe growth hormone deficiency associated with multiple hormone deficiencies as a result of known hypothalamic or pituitary pathology and who have at least one known deficiency of pituitary hormone not being prolactin. Childhood Onset: Patients who were growth hormone deficient during childhood as a result of congenital, genetic, acquired, or idiopathic causes. **Dosage and Administration:** Dose should be personalised for each individual. The subcutaneous injection site should be varied to prevent lipoatrophy. **Insufficient Secretion of GH in children:** 0.025–0.035 mg/kg body weight day. Higher doses have been used. Where childhood onset GHD persists into adolescence, treatment should be continued to achieve full somatic development (e.g. body composition, bone mass). For monitoring, the attainment of a normal peak bone mass defined as a T score > −1 (i.e. standardised to average adult peak bone mass measured by dual energy X-ray absorptiometry taking into account sex and ethnicity) is one of the therapeutic objectives during the transition period. **Prader-Willi Syndrome:** 0.035 mg/kg body weight per day. Daily doses of 2.7 mg should not be exceeded. **Gonadal Dysgenesis (Turner Syndrome):** 0.045–0.050 mg/kg body weight per day. **CRI:** A dose of 0.045–0.050 mg/kg body weight per day. Higher doses can be needed if growth velocity is too low. Dose correction can be needed after 6 months treatment. **Short children born SGA:** 0.035 mg/kg body weight per day until final height is reached. **GH Deficient Adults:** In patients who continue growth hormone therapy after childhood GHD, the recommended dose to restart is 0.2–0.5 mg per day. The dose should be gradually increased or decreased according to individual patient requirements as determined by the IGF-I concentration. In patients with adult-onset GHD, start with low dose, 0.15–0.3 mg/day. The dose should be gradually increased as determined by the IGF-1 concentration. Clinical response and side effects may guide dose titration. It is recognised that there are patients with GHD who do not normalise IGF-I levels despite a good clinical response, and thus do not require dose escalation. The maintenance dose seldom exceeds 1.0 mg per day. Women (especially those on oral oestrogen) may require higher doses than men. As normal physiological growth hormone production decreases with age, dose requirements are reduced. In patients above 60 years, therapy should start with a dose of 0.1– 0.2 mg per day and should be slowly increased according to individual patient requirements. The minimum effective dose should be used. The maintenance dose in these patients seldom exceeds 0.5 mg per day. **Contra-indications, Warnings etc:** Hypersensitivity to the active substance or to any of the excipients. Any evidence of tumour activity exists. Anti-tumour treatment must be complete. Genotropin should not be used for growth promotion in children with closed epiphyses. Patients with acute critical illness suffering complications following open heart surgery, abdominal surgery, multiple accidental trauma, acute respiratory failure or similar conditions should not be treated with Genotropin. Hypersensitivity to the active substance or to any of the excipients. **Precautions:** Diagnosis and therapy should be initiated and monitored by suitably qualified and experienced doctors. Somatropin may induce insulin sensitivity and in some patients diabetes mellitus. Patients with diabetes, glucose intolerance, or additional risk factors for diabetes should be monitored closely during somatropin therapy. As thyroid function may be affected, monitoring of thyroid function should be conducted in all patients. In patients with hypopituitarism on standard replacement therapy, the potential effect of growth hormone treatment on thyroid function must be closely monitored. Signs of any relapse of malignant disease should be monitored. In patients with endocrine disorders, slipped epiphyses of the hip may occur. In case of severe or recurrent headache, visual problems, nausea and/or vomiting, a funduscopy for papilloedema is recommended as some rare cases of benign intracranial hypertension have been reported and if appropriate treatment should be discontinued. Leukaemia has been reported in a small number of growth hormone deficiency patients, some of whom have been treated with somatropin. However, there is no evidence that leukaemia incidence is increased in growth hormone recipients without predisposition factors. As with all somatropin containing products, a small percentage of patients may develop antibodies to GENOTROPIN. The binding capacity of these antibodies is low and there is no effect on growth rate. Testing for antibodies to somatropin should be carried out in any patient with otherwise unexplained lack of response. Experience in patients above 80 years is limited. Elderly patients may be more sensitive to the action of Genotropin, and therefore may be more prone to develop adverse reactions. In acute, critically ill adult patients, GH may increase mortality. In CRI, renal function should be below 50% of normal before institution of therapy and growth should be followed for a year preceding institution of therapy. Conservative treatment for renal insufficiency should have been established and be maintained during therapy. Discontinue GH after renal transplantation. There have been reports of fatalities associated with the use of growth hormone in paediatric patients with Prader-Willi syndrome who had one or more of the following risk factors: severe obesity (those patients exceeding a weight/height of 200%), history of respiratory impairment or sleep apnoea, or unidentified respiratory infection. Patients with one or more of these factors may be at increased risk. Before initiation of treatment with somatropin in patients with Prader-Willi syndrome, signs for upper airway obstruction, sleep apnoea, or respiratory infections should be assessed. Patients should be monitored for signs of respiratory infections, which should be diagnosed as early as possible and treated aggressively. All patients with Prader-Willi syndrome should also have effective weight control before and during growth hormone treatment. Scoliosis is common in PWS and signs for scoliosis should be monitored. Experience of prolonged therapy in adults and patients with PWS is limited. In short children born SGA other medical reasons or treatments that could explain growth disturbance should be ruled out before starting treatment. Not recommended to initiate treatment in SGA patients near onset of puberty. **Interactions:** Concomitant treatment with glucocorticoids may inhibit the growth-promoting effects of somatropin containing products. Therefore, patients treated with glucocorticoids should have their growth monitored carefully to assess the potential impact of glucocorticoid treatment on growth. The clearance of compounds metabolised by cytochrome P450 3A4 (e.g. sex steroids, corticosteroids, anticonvulsants and ciclosporin) may be increased resulting in lower plasma levels of these compounds. The clinical significance of this is unknown. In diabetes mellitus, insulin dosage may need adjustment. Somatropin has been reported to reduce serum cortisol levels, possibly by affecting carrier proteins or by increased hepatic clearance. The clinical relevance of these findings may be limited. Corticosteroid replacement therapy should be optimised before initiation of Genotropin therapy. **Pregnancy and Lactation:** Animal studies are insufficient with regard to effects on pregnancy, embryofoetal development, parturition or postnatal development. There are no clinical studies available on exposed pregnancies. Therefore, somatropin containing products are not recommended during pregnancy and in women of childbearing potential not using contraception. There have been no clinical studies conducted with somatropin containing products in breast-feeding women. It is not known whether somatropin is excreted in human milk, but absorption of intact protein from the infant GI tract is unlikely. Therefore caution should be exercised when somatropin containing products are administered to breast-feeding women. **Overdosage:** Acute overdosage could lead initially to hypoglycaemia and subsequently to hyperglycaemia and Long-term overdosage could result in signs and symptoms consistent with the known effects of human growth hormone excess. **Side Effects:** In adult patients, common adverse effects related to fluid retention; such as peripheral oedema, stiffness in the extremities, paraesthesia, arthralgia and myalgia. These effects are mild to moderate, arise within the first months of treatment and subside spontaneously or with dose reduction. Formation of antibodies of low binding capacity in approximately 1% of patients; *in vitro* chromosome aberrations of unknown clinical significance. Very rare cases (< 1/10,000) of leukaemia have been reported in GH deficient children treated with somatropin, but the incidence appears to be similar to that in children without GH deficiency. In Prader-Willi Syndrome patients treated with somatropin rare cases of sudden death have been reported, although no causal link has been established. **Pharmaceutical Precautions:** Keep Genotropin in the outer carton to protect from light. **Before reconstitution:** store in the refrigerator (2–8°C). *Genotropin Miniquick:* Solely for ambulatory use, only, the product may be stored at or below 25°C by the end user for a single period of not more than 6 months. During and/or at the end of this 6 months period, the product should not be put back in the refrigerator. *Genotropin Cartridge:* Storage up to 1 month at or below 25°C allowed. **After reconstitution:** *Genotropin Miniquick:* Use immediately or within 24 hours. *Genotropin Cartridge:* Store in a refrigerator (2°C–8°C), do not freeze. Keep the container in the outer carton in order to protect from light. Use within 4 weeks. **Legal Category:** CD (Sch 4, Part I), POM. **Pack/Basic NHS Price/PL No:** Genotropin 5.3 mg Pre-filled pen (GoQuick) x 1 £122.87 00022/0085. Genotropin 12 mg Pre-filled pen (GoQuick) x 1 £278.20 00022/0098. Genotropin 5.3 mg Two chamber cartridge x 1 £122.87 00022/0085. Genotropin 12 mg Two chamber cartridge x 1 £278.20 00022/0098. Genotropin MiniQuick 0.2 mg x 7 £32.46 00022/0186. Genotropin MiniQuick 0.4 mg x 7 £64.91 00022/0187. Genotropin MiniQuick 0.6 mg x 7 £97.37 00022/0188. Genotropin MiniQuick 0.8 mg x 7 £129.82 00022/0189. Genotropin MiniQuick 1 mg x 7 £162.28 00022/0190. Genotropin MiniQuick 1.2 mg x 7 £194.74 00022/0191. Genotropin MiniQuick 1.4 mg x 7 £227.19 00022/0192. Genotropin MiniQuick 1.6 mg x 7 £259.65 00022/0193. Genotropin MiniQuick 1.8 mg x 7 £292.11 00022/0194. Genotropin MiniQuick 2 mg x 7 £324.56 00022/0195. **PL Holder:** Pharmacia Laboratories Limited, Ramsgate Road, Sandwich, Kent, CT13 9NJ, UK. Further information is available on request from Medical Information Department at Pfizer Limited, Walton Oaks, Dorking Road, Tadworth, Surrey, KT20 7NS, UK. **Date of preparation:** August 2010. **Company reference:** GN20_0

Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk. Adverse events should also be reported to Pfizer Medical Information on 01304 616161.

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