

ESE News

Issue 29 Winter 2015/16

THE NEWSLETTER OF **THE EUROPEAN SOCIETY OF ENDOCRINOLOGY** –
THE EUROPEAN HORMONE SOCIETY

ISSN 2045-1563 (print)
ISSN 2045-1571 (online)

ECE 2016: **Time to meet in Munich!**

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guidelines –
building on
success**



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This document is available on the ESE website, www.es-e-hormones.org

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ESE would like to thank its Corporate Members for their continued support: Chiasma, Eli Lilly, Ipsen, Laboratoire HRA Pharma, Merck Serono, Novartis Pharmaceuticals, Novo Nordisk, Pfizer, Sandoz International GmbH, Shire

Editorial

Spring will soon be here, and it will be time to head to Munich, for the 18th European Congress of Endocrinology.

In case you need to be reminded, ECE 2016 offers you an amazing opportunity to meet other endocrinologists and learn about the latest discoveries in our fascinating discipline. This issue of *ESE News* highlights just a few of the sessions and activities that you can enjoy.

On page 7, Programme Organising Committee (POC) Chair Ilpo Huhtaniemi reviews some of the cutting edge research that will feature in Munich. We are also fortunate to have tasters of two of our prize lectures, from Geoffrey Harris Prize recipient Albert Beckers, and *European Journal of Endocrinology* Prize winner Jason Carroll.

Ilpo also shares excerpts from his diary (page 11), as he recalls 'Two years in the life of a POC Chair', and the immense care taken by the POC in ensuring the Congress programme lives up to your expectations. Of course, it benefits greatly from the ideas and feedback you provide during the planning process – thank you so much for your support.

Local Organising Committee (LOC) members Günter Stalla and Marily Theodoropoulou draw our attention to Munich's fine scientific and cultural past on page 3, and Wouter de Herder takes



a deeper look into Bavaria's scientific pedigree on page 10. A modern day scientist in Bavaria, Natalia Pellegata, brings us back up to date as she discusses her group's work on multiple endocrine neoplasia (page 9).

ESE clinical guidelines remain a strong focus for the Society. On page 8, we consider the first of these, on hypoparathyroidism, published in *European Journal of Endocrinology* in 2015. Jens Bollerslev, Olaf Dekkers and Pia Burman explain the process and issues behind guideline development in endocrinology. In their article, and in Jérôme Bertherat's column on page 6, we look forward to guidelines on the management of pheochromocytoma/ paraganglioma and also adrenal incidentalomas, which you can look forward to later in 2016.

So now it just remains for me to remind you to submit your abstracts for ECE 2016 by 1 February, to ensure your own research is firmly on the Congress agenda. I look forward to seeing you once again when we gather in Munich.

AJ van der Lely
ESE President
Co-Editor of *ESE News*

From the ESE office

The review of ESE's strategy continues (see *ESE News* issue 28). We would like to consult as widely as possible, so if you would like to have your say, but we don't already have your email address, please send us your details via www.es-e-hormones.org/about/strategyreview.

Collaboration with our network of Affiliated Societies is one of the most important aspects of ESE's work. ECAS (the ESE Council of Affiliated Societies) aims to improve communication between our organisations and to support joint projects. The fifth meeting of ECAS took place in October. Agenda items of interest across Europe included a new membership category for Affiliated Society members, which

will be launched for 2017, and progress in educational initiatives, such as the creation of a Europe-wide endocrinology curriculum and exam.

We are also pleased and proud to be working closely with the German Society of Endocrinology (see page 3) on ECE 2016 in Munich, thus ensuring the Congress's continuing success. I would like to echo AJ's message above – do submit your abstract by 1 February at www.ece2016.org/abstracts-and-posters, to ensure you are part of this exciting meeting!

As ever, please get in touch at any time at info@euro-endo.org.

Helen Gregson
ESE General Manager



Welcome from the German Society of Endocrinology



The German Society of Endocrinology (Deutsche Gesellschaft für Endokrinologie, DGE) was established in

1964. It is one of Europe's largest continuously growing societies of endocrinology, currently with more than 1500 members. The DGE is run by a board of members, representing diverse disciplines.

The Society aims to promote research and clinical practice in endocrinology and to foster the scientific exchange of ideas between different fields. One of DGE's strengths is the diversity of its members, since everyone engaged in endocrine research and practice can apply for membership. Among the disciplines represented are biology, biochemistry, pharmacology, veterinary medicine, internal medicine, paediatrics, gynaecology and surgery. Members are employed in high-ranking scientific institutions, in university hospitals, in industry or in private practice.

DGE's annual meetings attract about 1200 participants, a number which is steadily increasing. The meetings have a broad and international character. The DGE is also linked to many other European societies through joint symposia, grant applications and scientific exchange. These excellent links will prompt many delegates to attend ECE 2016.

Collaboration with ESE takes place at many levels, including *European Journal of Endocrinology*, *ESE News* and the website.

The DGE, together with the Austrian Society for Endocrinology and Metabolism and the Swiss Society for Endocrinology and Diabetes, is excited to welcome ECE 2016. Herzlich Willkommen in München!

Martin Reincke, Günter K Stalla and Johanna Faust
www.endokrinologie.net

Make your way to Munich!

18th European Congress of Endocrinology, 28–31 May 2016

Munich, the capital of Bavaria and Germany's third largest city, has the honour of hosting the 18th European Congress of Endocrinology in 2016.

A city with a long academic tradition, exemplified by two universities and the numerous research institutions of the Max Planck, Helmholtz and Fraunhofer Societies, Munich has discarded its humble origins as 'Munichen' (a reference to the Benedictine monks who once ran the area), to become a vibrant cultural, commercial, technological and scientific centre. In 2013, lifestyle magazine *Monocle* ranked Munich as the world's most liveable city, with the highest quality of life.

Munich's two universities, the Ludwig-Maximilians University (c 1472) and the Technical University (c 1868), are listed in the top 100 worldwide and have hosted over 30 Nobel laureates. Their medical faculties, with state of the art training and scientific excellence, are a hotbed for future physicians and researchers. Hans Krebs (of Krebs' cycle fame) undertook his clinical training at the University of Munich, while Wilhelm Conrad Röntgen, the 'father' of X-rays, Feodor Lynen, who elucidated the mechanisms of cholesterol and fatty acid metabolism, and Adolf Butenandt,

who isolated the sex hormones and paved the way for the development of birth control pills, taught there.

ECE 2016 takes place in the Internationales Congress Center München, one of the world's most modern convention centres. The elegant architecture, flooded with natural daylight, provides the perfect setting for productive discussions (perhaps about circadian rhythms!). A well-placed subway system connects it to the city centre, with limitless opportunities to enjoy the Munich's cultural delights.

Munich connects East with West, and North with South Europe, symbolising the efforts to foster European political, economic and cultural harmony. It has long acted as a bridge, bringing in specialists from Eastern Europe and enriching the medical landscape.

With a large well-connected airport and extensive train network there is little excuse to miss a superb meeting in a most charming location. Nothing helps scientific exchange better than meeting old friends and new colleagues over a chilled glass of 'Weißbier' (wheat beer) in an atmosphere of beer garden 'Gemütlichkeit' (a state of warmth, friendliness and good cheer).

We look forward to welcoming you to a memorable Congress. 'Griäss aich, laidl, gfraid me, dass hergfundn habts!' Or, in other words, 'Greetings, I am glad that you found your way here!'

Günter K Stalla and Marily Theodoropoulou
Local Organising Committee, ECE 2016

Abstract deadline:
1 February 2016

Early bird registration:
28 March 2016

Find out more at
www.ece2016.org

ECE 2016 nurses' course: Cushing's disease

The ESE Nurses' Working Group is working with the German Endocrine Nurses' Group to plan the next pre-congress course at ECE 2016 in Munich, which will be on the subject of Cushing's disease.

It was in 2012 that the Congress's dedicated programme for nurses began, and it has had excellent feedback and attendance. Each year, three 90-minute Nurses' Symposia have been included as part of the Congress programme.

Unfortunately, funding to attend ECE remains a barrier for endocrine nurses. Against this background, we introduced a pre-congress course for nurses in 2015, on acromegaly. In collaboration with the ESE Office and the Programme Organising Committee, the ESE Nurses' Working Group sent an application for an unrestricted educational grant to the pharmaceutical industry. This funding facilitated travel grants for a substantial number of ESE endocrine nurse members to attend the pre-congress course and ECE 2015. We extend our thanks to our pharmaceutical



sponsors, Pfizer, Novartis, Ipsen and Shire, for their support.

In total, 44 nurses attended the course in 2015, which covered 'Diagnosis and surgical treatment', 'Medical treatment and patient education', 'Long term monitoring of patients post-acromegaly treatment' and 'Hypopituitarism post-surgery and quality of life'. Each session was presented by a group of expert clinical colleagues including endocrine nurses.

The programme contained a good mix of medicine, nursing and psychology of a very high quality and each session

was followed by fruitful discussions. The course was a great opportunity for networking among nurses from different countries. The sessions are available on the ESE YouTube Channel at www.youtube.com/user/esehormones.

The pre-congress course at ECE 2016 offers endocrine nurses an equally exciting opportunity to learn and network, this time with a focus on Cushing's disease. To find out more see www.ece2016.org/endocrine-nurses.

Cecilia Follin

Pre-congress Course Programme Lead
On behalf of the ESE Nurses' Working Group



EndoBridge celebrates its third year

Antalya, Turkey, 15–18 October 2015

The annual EndoBridge® meeting attracted world-leading experts, with 440 colleagues from over 25 countries. It was co-hosted by the Society of Endocrinology and Metabolism of Turkey, ESE and the Endocrine Society. The meeting was held in English with simultaneous translation into Russian, Arabic and Turkish.

The 3-day programme included 23 state of the art lectures, 16 interactive case discussion sessions and poster case presentations, providing a comprehensive update across hormonal disorders.

EndoBridge founder, Bulent Yildiz (Ankara, Turkey) reflected, 'Endocrinology has become a large and rapidly growing field of medicine that has been instrumental in improving health and addressing pandemics of diabetes, obesity and cancer. The search for contemporary solutions to endocrine disorders is now global in scope. As endocrinologists from different countries and cultures, we really need to learn from each other so that we can help patients prevent, manage and treat their diseases and achieve better outcomes.'

'I thought Turkey would be a wonderful venue to bridge the world of endocrinology, the country itself having acted as a bridge for hundreds of years between East and West. Since 2013, we have brought together more than 1300 physicians and scientists from over 45 countries to participate in discussions with global leaders in endocrinology.'

The 4th EndoBridge meeting will take place in Antalya, Turkey, on 20–23 October 2016. See www.endobridge.org.



EYES Symposium at ECE 2016

Young endocrinologists always have a strong presence at the annual Congress. ECE 2016 in Munich will be no exception. For the fourth time, the Programme Organising Committee has dedicated a special symposium to be planned by EYES. It will highlight the work of young researchers who are making important contributions to their field.

The EYES Symposium takes place at 10.30 on Monday 30 May. It will feature Carmina Fuß (Würzburg, Germany), who won the award for the best presentation at the recent EYES meeting in Modena, Italy.

Carmina's presentation on the role of the chemokine receptor CXCR4 in adrenal physiology and tumour disease stood out amongst the array of brilliant and talented researchers at that excellent meeting.

Three other promising young scientists who are just beginning to make their mark on the world of endocrinology will join her on stage: two will be chosen for their scientific achievements, and the third will be selected from abstracts submitted to ECE 2016.

So, whether you are a new endocrine enthusiast or a giant in your field, we invite you to join us at the EYES Symposium during ECE 2016 to see the bright future of endocrinology.

Visit the EYES forum

<http://eyes.forumatic.com>

EYES is on Facebook



www.facebook.com/groups/eyes.endo

We also warmly invite you to join us during ECE 2016 at our social event, for a great chance to network. This invitation extends to all young researchers, EYES members, EYES alumni and those of you who are young at heart! To find out the time and location of the event, join us at the EYES Symposium.

We look forward to seeing you in Munich!

Young Active Research in Endocrinology: German Young Endocrinologists

Young Active Research in Endocrinology was founded by young endocrinologists during the Annual Meeting of the German Society of Endocrinology (Deutsche Gesellschaft für Endokrinologie, DGE) in 1999. Since 2013, YARE has been an association of DGE, with whom we work closely.

Communication and collaboration

YARE aims to boost interaction, communication and collaboration among young researchers early in their careers. We have an ongoing, close collaboration with EYES, which was originally inspired by the YARE philosophy, but at a European level. We are pleased that young endocrinologists worldwide are increasingly getting involved!

We define 'young endocrinologists' not by age but as those 'new to endocrinology'. We provide a platform for all, from undergraduates to postdocs. YARE has more than 400 members of its Facebook group (www.facebook.com/groups/yare.endo). This lists job opportunities and YARE activities, and provides the opportunity to get rapid feedback on scientific and technical questions.



Current YARE Board members: L-R Alexander Fischer, Tina Kienitz, Felix Machleidt, Stephanie Fliedner, Henriette Undeutsch, Carolin Höfig, Mareike Stieg, Carmina Fuß, Torsten Schröder. Rebecca Ölkrug is not pictured.

The YARE Board (pictured) oversees all YARE's activities and is happy to be contacted at yare@yare-endo.de.

Events and activities

We organise an Annual YARE Meeting in Germany where young researchers can present their work, get feedback and network. The participation and accommodation fees are kept low, to make it widely accessible.

The best speaker from the Annual YARE Meeting gives a presentation at our YARE Symposium during the DGE Annual Meeting, and so we enable young scientists to present their data to experts in the field.

In 2016, the German, Swiss and Austrian endocrinology organisations are holding a joint research meeting in Munich on 26–28 May, just before ECE. Here, YARE is co-organising a science 'slam' entitled 'Hormonally driven?!', where talented 'slammers' will present their work in an entertaining rather than scientific way.

YARE is also involved in organising the ESE Bregenz Summer School on Endocrinology (31 July–4 August 2016). Next year's main topics will be placental endocrinology, endocrinology of stem cells, 101 years of L-thyroxine, new techniques and novel animal models, as well as career perspectives in endocrinology.

New YARE grants

In December 2015 we launched YARE travel grants (a total of €3000 for up to five applicants; maximum €1000 per applicant) and a thesis prize (€2000), with support from Novartis. See www.yare-endo.de/foerderung.html for further information.

So join us on Facebook to stay informed, and don't forget to register as an official YARE member and find out more at www.yare-endo.de!

Science Committee update

ESE has a grant for you



ESE Summer School on Endocrinology

The ESE Science Committee aims to increase the visibility of endocrine research in Europe. Last August's ESE Summer School on Endocrinology, and the 40th Symposium on Hormones and Cell Regulation ESE (on hormones, metabolism and cancer) in October, met with great success. We now look forward to the ESE Basic Course on Endocrine and Neuroendocrine Cancer on 17–19 February 2016, in Porto, Portugal. See

www.eese-hormones.org/education/basicscience.aspx to find out more.

In this issue of *ESE News*, I would like to focus on the funding opportunities available to ESE basic science members for research visits and career development.

If you are interested in a short (1-week to 3-month) visit to a lab outside your current country to learn a new technique, benefit from expertise or collaborate on a

project, then you may be eligible for an ESE Short-Term Fellowship. These award up to €2500 for travel, accommodation and subsistence.

The ESE International Endocrine Scholars Programme (IESP) promotes the career development of young endocrinologists from around the globe by identifying talented young investigators and offering them an exceptional training experience. Scholars receive €3000 for visiting host labs, free membership of ESE for 3 years, travel, registration and accommodation to attend ECE and the support of an IESP mentor.

We also aim to recognise the achievements of those members who have already accomplished great things in their careers. The *European Journal of Endocrinology* Prize is awarded to a candidate who has significantly contributed to the advancement of knowledge in endocrinology through publication.

You can find out more, including details of Travel Grants, at www.eese-hormones.org/prizes.

Márta Korbonits
Chair, ESE Science Committee

The value of guidelines from your Clinical Committee

Guidelines for the management of patients with endocrine disease are one of the major responsibilities of the ESE Clinical Committee.

The important work undertaken when a group of experts collaborate to produce a guideline is the perfect occasion to examine with a rigorous methodology the 'state of the art' in a specific field. We must acknowledge the commitment of the experts who analyse all the associated literature. This step often provides an excellent opportunity for novel meta-analysis, shedding new light on specific areas of endocrinology. It is interesting that, for some rare endocrine diseases where evidence is limited, experts may choose to analyse European patient databases or to carry out an international survey of existing cases to generate new data to support their work.

The results are presented as a 'guideline' text, aimed at a broad international audience. For ESE guidelines, this text is submitted for comments to all ESE members before finalisation and publication in *European Journal of Endocrinology*. In this way, the first ESE guideline on 'Treatment of chronic hypoparathyroidism in adults' was published in 2015, and you can read more from the authors on page 8.

Alongside the guidelines process, ESE also promotes patient education. Consequently, a patient information leaflet on hypoparathyroidism has been developed and will be available soon. Guidelines also generate a precise list of unsolved questions and unmet needs that should be addressed to progress the field, so ESE guidelines are important in steering clinical research.

Jérôme Bertherat
Chair, ESE Clinical Committee

What's next for ESE guidelines?

Clinical guidelines for publication in early 2016*

- Long term follow-up in patients operated on for pheochromocytoma or paraganglioma, co-ordinated by Pierre François Plouin (currently available to ESE members for comment)
- Management of adrenal incidentaloma, co-ordinated by Martin Fassnacht (to be presented at ECE 2016 in Munich)

Future plans

- Expert opinion views on aggressive pituitary tumours from the ESE specific interest group, co-ordinated by Gerald Raverot
- Guideline on Turner syndrome, initiated by Claus Gravholt

*Please note the date is subject to change.

Hormones, metabolism and cancer... a few of the highlights at ECE 2016

Debating contentious issues is a major aim of scientific meetings. ECE 2016 is no exception, and the Programme Organising Committee (POC) have selected a few controversies for discussion.

Diagnosis of many endocrine problems depends on the accuracy of hormone measurements, and methods keep evolving. In Munich, you can learn about the strengths and challenges of hormone immunoassays and mass spectrometry in a debate on this important topic. The controversial use of NSAIDs in endocrine cancers will also be keenly discussed. The benefits and risks of testosterone replacement therapy in ageing men remain contentious, and plenary lecturer **Peter Snyder** is set to update you on this topic.

Thirty symposia will offer you a cornucopia of topics in a format equally appealing to basic scientists and clinicians. If you are curious, then be a 'hitchhiker' and travel through the microcosm of G-protein coupled receptors and nuclear receptors, or encounter different types of adipose tissues, including fat stored within bone marrow. Learn how to diagnose endocrine disease in obese patients, and find out about the hypothalamic reward systems and neurohypophysis, or what happens when the pituitary gets old. These are just a few of the symposium topics, which will also include a 'late breaking' session, finalised just before the Congress.

Exciting ESE prize lectures

European Hormone Medal Lecture

Felipe Casanueva (Spain)

Geoffrey Harris Prize Lecture

Albert Beckers (Belgium)

European Journal of Endocrinology Prize Lecture

Jason Carroll (UK)

Clinical Endocrinology Trust Award Lecture

Wiebke Arlt (UK)



You can learn about the important subject of endocrine disruption in **Barbara Demeneix's** plenary lecture and in a symposium on the impact of mixtures, medicines and diet. For those interested in reproduction, there will be symposia on genetics and epigenetics of male infertility and the polycystic ovary syndrome.

Daily 'Meet the Expert' sessions will cover clinical topics for daily practice as well as issues like systems medicine, and how big data will impact endocrinology. Among the highlights of translational medicine, don't miss **Steven Russell's** plenary lecture on the bionic pancreas.

Four lectures in the 'New Scientific Approaches' series will teach you how to build a functional ovary *in vitro*, how micro-RNAs control gene activity in remote organs, how to repair errors in genes by genome editing, and how to extract novel information from analysis of single cells.

Finally, the POC will select a few highlights from the submitted abstracts for presentation to the wider audience. So please submit your best work by **1 February 2016** and come to discuss it and to network with your colleagues in Munich!

Ilpo Huhtaniemi

Chair, POC

Robin P Peeters

Clinical Science co-Chair, POC

Ewa Rajpert-De Meyts

Basic Science co-Chair, POC

From the Adenoma Valley to X-LAG

Pituitary tumours highlight the importance of neuroendocrine control mechanisms on body function, particularly growth. I will describe noticing apparent clusters of pituitary adenoma patients in the 'Adenoma Valley', before disproving this in favour of a high frequency of pituitary adenomas in the general population. I will trace how conversations about family history in my clinic led me to describe familial isolated pituitary adenomas (FIPA), and how examining the genetics of FIPA led me to the classical disease of gigantism and the new disorder X-linked acrogigantism (X-LAG) syndrome. Much of this resulted from gathering worldwide collaborators to focus on a single problem. The power of such collaborations comes from observing our own patients in the settings we know best.

Albert Beckers

Geoffrey Harris Prize Lecturer

Targeting ER in breast cancer

Oestrogen receptor (ER) mediates gene expression and cell growth in most breast cancers. We have explored the properties that allow oestrogen-ER to reside on DNA and regulate gene expression, with the goal of therapeutic intervention. Our discoveries include a role for FoxA1, a protein that tethers ER to the DNA and is essential for ER function in drug-sensitive and endocrine-resistant cancer. We have explored ways of perturbing this pathway. In addition, we have found novel cross-talk between the progesterone-PR and ER pathways, and we hypothesise that parallel hormonal pathways (such as progesterone) can be modulated to inhibit ER activity. There is growing evidence that distinct hormonal pathways intersect and can be exploited therapeutically – an area that I will discuss.

Jason Carroll

European Journal of Endocrinology
Prize Lecturer

Treatment of chronic hypoparathyroidism in adults

ESE's first clinical guideline

July 2015 saw a historic moment for ESE, with the publication of the Society's first stand-alone clinical guideline, on the treatment of chronic hypoparathyroidism (HypoPT) in adults, in *European Journal of Endocrinology*.¹

In 2013, ESE decided to develop evidence-based guidelines in clinical endocrinology, to improve patient care across Europe. These guidelines will address areas not covered by other organisations, or where recommendations are not directly applicable to the European standard of care.

To identify relevant topics, ESE's Clinical Committee reviewed more than 150 guidelines, position papers and consensus statements issued by endocrine societies, specialty organisations and expert groups in Europe and the USA from 2005 to 2013.² This resulted in the selection of three initial topics for guideline development by ESE:

- management of chronic HypoPT
- management of adrenal incidentalomas
- management after surgery for pheochromocytoma.

Hypoparathyroidism

HypoPT is a rare endocrine disease with insufficient circulating parathyroid hormone levels and therefore low calcium, most often in adults secondary to thyroid surgery. Standard treatment is activated vitamin D analogues and calcium supplementation and not replacement of the deficient hormone, as in other hormonal deficiency states. The guideline provides clinicians with advice on the daily management, treatment and monitoring of chronic HypoPT in adults without end-stage renal disease.

A search of the literature for available evidence found 1100 articles, which were reduced to 312 based on title and abstract. The working group assessed these for eligibility, identifying 32 full-text articles.

Little evidence is available on how to treat HypoPT. Data on quality of life and the risk of complications are just emerging, and clinical trials on optimising therapy

are essentially non-existent. Most studies are of limited sample size, hampering firm conclusions. Interestingly, no studies are available relating target calcium levels to clinically relevant endpoints. The guideline is therefore mainly based on how patients are managed in clinical practice, as reported in small cohort studies and based on the experiences of the authors.

Guidelines in endocrinology

In an ideal setting, guidelines are based on evidence from randomised trials and accompanied by strong recommendations. Unfortunately, most areas in endocrinology (except diabetes and osteoporosis) are not well covered by randomised trials, and available evidence is often weak, or non-existent. This was clearly the case for the HypoPT guideline. These limitations in available evidence challenge a guideline panel.

ESE guidelines will use the GRADE system for guideline development.³ However, the use of a systematic and widely adopted methodological approach is not a 'magic bullet', able to transform the quality of evidence to a higher level. The alternative, abstaining from recommendations in the absence of evidence, is a no-go, as one cannot abstain from treatment decisions for patients.

However, it is important to emphasise a lack of solid evidence in the guideline, to acknowledge the larger role of expert opinions and to resist strong recommendations. Besides recommendations based on low quality evidence, the good practice statement should go without formal assessment of the evidence, as the lack of evidence might wrongly suggest the lack of a good rationale for clinical practice.⁴ That a diagnosis of HypoPT should be considered in patients with a low serum calcium level is an example of good clinical practice not in need of further evidence.



The ESE guidelines will include a summary of the literature, indicating important gaps in clinical knowledge, and making suggestions for future research. This will hopefully initiate collaborative efforts to investigate clinically relevant questions.

Jens Bollerslev, Olaf Dekkers and Pia Burman

ESE Clinical Committee and Hypoparathyroidism Guideline Group

References

1. Bollerslev *et al.* 2015 *European Journal of Endocrinology* **173** G1–G20.
2. Dekkers & Burman 2015 *European Journal of Endocrinology* **173** E1–E2.
3. Guyatt *et al.* 2011 *Journal of Clinical Epidemiology* **64** 383–394.
4. Guyatt *et al.* 2015 *Journal of Clinical Epidemiology* **68** 597–600.

ESE guideline consultation

- The completed draft of each guideline is sent to all ESE members, via email. Members have around 1 month to provide their views.
- Their comments are reviewed by the guideline working group.
- ESE may also contact other societies and patient support groups for feedback.
- The reviewed guidelines are then published in *European Journal of Endocrinology*.

See page 6 for news of forthcoming guidelines.



Of rats and men: a tale of shared endocrine pathologies

In Munich, Natalia Pellegata's team has been busy unravelling the story behind multiple endocrine neoplasia.

Over a decade ago, I met my now long term research partners: a unique strain of laboratory rats. These animals spontaneously develop endogenous endocrine tumours with a spectrum overlapping both multiple endocrine neoplasia type 1 (MEN1) and type 2 (MEN2) syndromes in humans. Specifically, they present with bilateral pheochromocytoma (PCC), pituitary adenomas, medullary thyroid tumours and other neoplasms. The rat multi-tumour syndrome was named MENX.

Thanks to this encounter, I developed a keen interest in neuroendocrine tumours (NETs) that persists to this day.

Unravelling the genetic predisposition

Our first discovery was that mutation of the *Cdkn1b* gene (encoding the cell cycle inhibitor p27) causes the MENX syndrome in rats.¹ Subsequently, we and others demonstrated that mutations in the human homologue *CDKN1B* occur, although at low frequency, in patients presenting with a MEN1-like phenotype. This established *CDKN1B* as a novel susceptibility gene for multiple endocrine tumours, and led to identification of a novel MEN syndrome in humans, MEN4.

A model of human NETs

To verify that the rat neoplasms recapitulated the corresponding human tumours, we set out to 'phenotype' MENX-associated tumours. We demonstrated that rat PCCs share histopathological, physiological,

ultrastructural and molecular features with their human counterparts. Following immunohistological, hormonal and ultrastructural analyses, we also showed that rat pituitary adenomas are of gonadotroph origin, and mostly resemble human aggressive non-functioning pituitary adenomas (NFPAs).

Tackling clinically relevant issues

We then wondered: can MENX rats help us elucidate the molecular pathogenesis of NETs? Could we exploit them to address issues clinically relevant to NET patients? The answer to both questions was yes. I will briefly summarise two representative stories.

PCCs are mostly benign, but can occasionally be aggressive and spread to other organs. Currently, no curative treatment exists for malignant PCC. While the genetic aetiology of familial PCC (25%) has been well defined, less is known about the somatic mechanisms driving the more frequent sporadic tumours. Suitable animal models could help identify novel molecular pathways implicated in PCC development, which could then be tested for their therapeutic potential *in vivo*. With this in mind, we employed rat PCCs as a gene discovery tool to identify novel tumour biomarkers.

We identified *BMP7*, encoding a secreted growth factor never before associated with PCC, as being upregulated in both rat and human tumours. In a large cohort of patients, we confirmed

BMP7 overexpression in 72% of PCCs. Extensive functional studies demonstrated that active BMP signalling promotes proliferation, migration and invasion of PCC cells, and represents a novel therapeutic target for PCC. Indeed, treatment with a BMP antagonist suppressed PCC cell proliferation and migration, and holds great promise for future targeted therapies.²

What about pituitary adenomas? Human NFPAs are often invasive, not amenable to complete surgical resection, and so tend to relapse. No medical therapy exists for NFPAs. So, we decided to take advantage of MENX rats, the only spontaneous model of NFPAs, to identify an effective treatment. Given that rat pituitary adenomas, like human NFPAs, show hyperactivation of the PI3K/AKT/mTOR pathway, we tested the efficacy of a novel dual PI3K/mTOR inhibitor, NVP-BE235, in MENX rats *in vivo*. We showed that NVP-BE235 has cytostatic and cytotoxic actions on NFPAs. Functional imaging was successfully used for early therapy monitoring. These findings provide a rationale for the clinical investigation of PI3K/mTOR inhibitors in NFPAs, and may have translational relevance for treatment of patients with residual and recurrent disease.³

We have learned many lessons from our research partners, the MENX rats. We plan to continue exploiting them for translational studies of NETs.

Natalia S Pellegata

Head, Neuroendocrine Cell Transformation and Dysfunction Group
Helmholtz Zentrum München, Germany

References

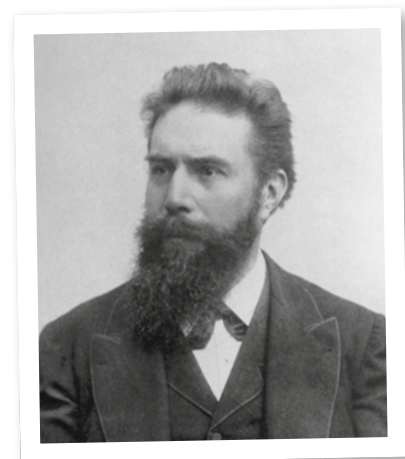
1. Pellegata et al. 2006 *PNAS* **103** 15558–15563.
2. Leinhäuser et al. 2015 *Oncotarget* (doi: 10.18632/oncotarget.4912).
3. Lee et al. 2015 *Clinical Cancer Research* **21** 3204–3215.

Munich – fruitful soil for top quality science!

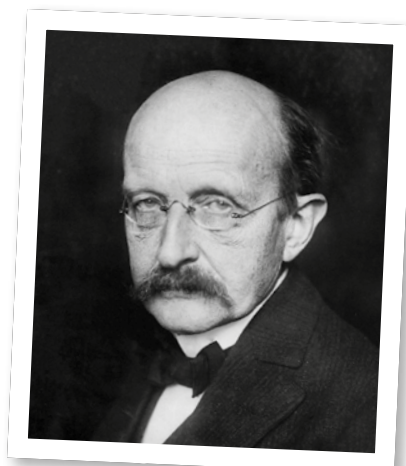
ESE has chosen Munich as its seat for the 18th European Congress of Endocrinology. This selection might seem arbitrary, but could there be a rationale for hosting our premier event in this city? If we look back at the history of medicine and other sciences in Munich, we discover just how many famous researchers have found inspiration here before us.



Siegfried Oberndorfer (1876–1944), the pathologist and physician, introduced the term ‘carcinoid tumours’ for neuroendocrine tumours arising in the small bowel in 1907. He was born in Munich and studied medicine there. Between 1911 and 1933 he was the Head of the Pathology Department of the hospital in Munich-Schwabing.



Wilhelm Röntgen (1845–1923) produced and detected electromagnetic radiation known as X-rays or Röntgen rays on 8 November 1895, while working at the University of Würzburg. In 1900, he was granted the Chair in Physics at the University of Munich, where he remained for the rest of his career. He received the first Nobel Prize in Physics in 1901.



Originator of the quantum theory, the theoretical physicist Max Planck (1858–1947) revolutionised our understanding of atomic and subatomic processes. He went to school in Munich and studied at the university there. He briefly taught mathematics and physics at his former school. He received the Nobel Prize in Physics in 1918.

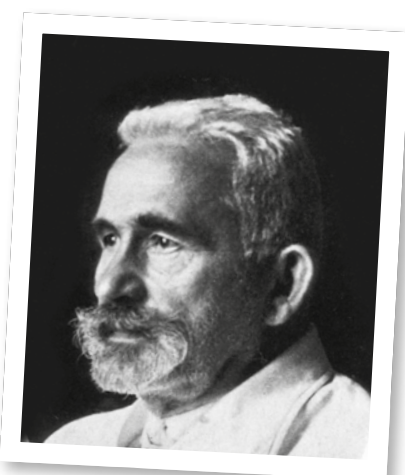


Oh ... I almost forgot to mention the psychiatrist and neuropathologist Alois (Aloysius) Alzheimer (1864–1915). He first published a case of ‘presenile dementia’ in 1906, while working in the lab of Emil Kraepelin in Munich.

So, this firm foundation for top level science in Munich should certainly stimulate our discussions and lead to a very successful and fruitful 18th European Congress of Endocrinology. I look forward to seeing you there!

Wouter de Herder

Professor of Endocrine Oncology
Erasmus MC, Rotterdam, The Netherlands



The psychiatrist Emil Kraepelin (1856–1926) is considered to be the founder of modern scientific psychiatry, as well as of psychiatric genetics and psychopharmacology. In 1903, he moved to Munich to become Professor of Clinical Psychiatry.



The organic chemist Richard Willstätter (1872–1942) investigated the structure of plant pigments, for which he received the Nobel Prize in Chemistry in 1915. He studied science at the University of Munich and stayed in the Department of Chemistry until 1905.

Two Years in the life of...

A POC Chair

Summer 2014

Construction of the programme for each European Congress of Endocrinology begins almost 2 years earlier, with nomination of the Programme Organising Committee (POC) Chair by ESE's Executive Committee. The Chair then invites two individuals as Clinical Science and Basic Science co-Chairs; for ECE 2016 these are Robin Peeters (The Netherlands) and Ewa Rajpert-de Meys (Denmark).

The rest of the POC, about 20 in total, consists of *ex-officio* members (ESE officials) and *ad hoc* members, invited to balance the Committee with respect to subspecialty in endocrinology, geography, gender and age. And then it's time to start work...

Spring 2015

The process begins by soliciting suggestions from POC and ESE members for the plenary lectures, symposia, and Meet the Expert and New Scientific Achievements sessions. This is achieved through announcements in *ESE News*, the website and direct emails to members. The request for programme suggestions was very successful this year, and the number of proposals we received over the ensuing period was about three times the number of available slots. It was a good starting point for the POC to compose the scientific programme!

Summer 2015

The important first POC meeting for ECE 2016 took place in Munich in July 2015. The POC was divided into working groups with expertise in the endocrine subspecialties. Each group was asked to select symposia, the number of which was based on experience from previous years, the quantity of abstracts submitted, and what was considered topical.

The general theme of ECE 2016 was also chosen: 'Hormones, metabolism and cancer'. Some extra space was allocated to these topics.

The plenary lectures will include the ESE prize lectures and talks on selected hot topics by world leading scientists. The educational part of the programme will include Meet the Expert and New Scientific Approaches sessions and debates.

Although most participants at ECE 2016 will be clinicians, the POC specifically aims to create a programme that will also interest basic scientists. Their contribution, and active contacts between basic scientists and clinicians, are vital to maintain the scientific quality of the Congress. As a practical rule of thumb, if basic scientists consider the programme too clinical and clinicians consider it too basic, we have reached the right balance!



Programme Organising Committee, ECE 2016

An optimal symposium should have one basic, one translational and one clinical presentation; the educational aspect between 'basics' and 'clinics' thus becomes bidirectional. A vein of basic and translational science topics throughout the Congress will prevent basic scientists from feeling lost in the sea of clinical endocrinology. The latter after all, and rightfully, will form the main body of the programme.

There are manifold challenges in planning the programme. Excellence of science is the number one criterion. In addition, we must manage a variety of balancing tasks, some scientific, some political – the devil is in the detail. We need a good balance between basic and clinical science and the different subtopics of endocrinology, and we must also take into account the geographic location, age and gender of the invited speakers. It often proves difficult to find good speakers on desired topics from the less obvious parts of Europe. We have tried our best to succeed in this difficult balancing act!

Winter 2015-2016

We are receiving the final acceptances from invited speakers, and the programme is becoming a reality.

Very shortly (by 1 February!) we look forward to receiving your abstracts, and then we will organise their evaluation by a large group of invited referees. Sorting out the evaluations, allocating the abstracts to oral and poster sessions, and finalising the list of invited speakers and session chairs will be the task of the second POC meeting at the beginning of March 2016.

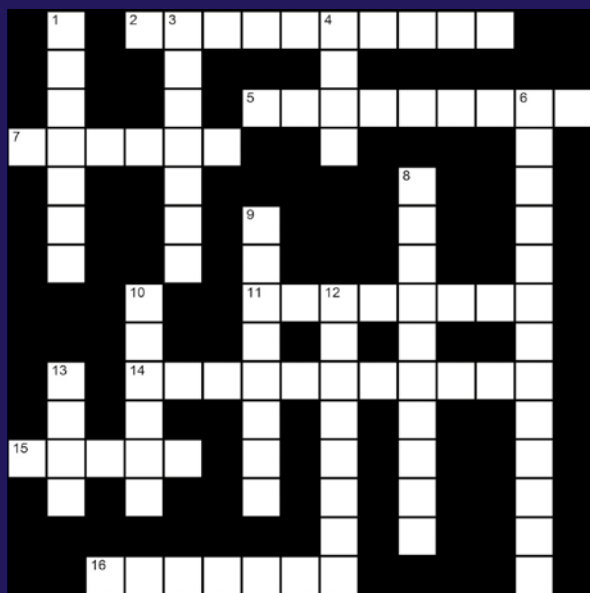
Thereafter everything is hopefully 'said and done' in planning the programme, and you and I can look forward to enjoying an excellent Congress. But it takes over a year of hard work from the POC to reach this goal...

Iipo Huhtaniemi

POC Chair, ECE 2016

**WIN!
WIN!
WIN!**

Send us your solutions to this topical puzzle for your chance to win one of three €20 Amazon vouchers! Let us have your answers, along with your name and email address, by emailing them to info@euro-endo.org or faxing them to 0044 1454 642222.



Congratulations to RaghuVansh Kumar (Patiala, India), winner from issue 28.

Answers to the puzzle in issue 28

- ACROSS 5. USP8, 7. DDT, 9. Haem, 10. Seveso, 11. Iron, 13. ACTH, 15. Vitellogenin, 16. Smoltify, 18. Perchlorate, 19. MSH
DOWN 1. Zoosperm, 2. Fructose, 3. Bile, 4. DSD, 6. PIK3CA, 8. Teeth, 9. Hershberger, 12. Niacin, 14. Cadmium, 17. Trp

Endo Prize Puzzle

Across

- 2 Pancreatic NET causing low blood glucose (10)
- 5 Source of diet linked to rapid development of obesity? (9)
- 7 Prefix meaning yellow (6)
- 11 Sulphur-containing amino acid (8)
- 14 Munich beer festival in late September (11)
- 15 German-born biochemist, awarded Nobel Prize for his eponymous cycle (5)
- 16 Alternative name for jaundice (7)

Down

- 1 German state, capital city Munich (7)
- 3 Renal urine-producing structure (7)
- 4 More common name for somatomedin C (abbrev.) (4)
- 6 Subject of forthcoming ESE guideline: discovered by chance? (13)
- 8 Cytokine released by host cells on exposure to pathogens (10)
- 9 Death of body tissue (8)
- 10 Test to detect antibodies adhered to erythrocytes (6)
- 12 Syndrome resulting from pituitary damage after heavy bleeding in childbirth (8)
- 13 Name given to layer of cells from which all organs and tissues develop (4)

Did you know?

Surgical songs



In April 2014, the Guinean singer Alama Kante (who lives in France) sang while undergoing surgery to

remove a parathyroid tumour. This enabled surgeons to avoid damaging her vocal cords. She was given just a local anaesthetic and hypnotised to help with the pain during the operation, which took place in Paris.



Poisoning by polar bears

In 1597, a team of Dutch explorers, led by Willem Barentsz (1550–1597) and Jacob van Heemskerck (1567–1607), became stranded on Nova Zembla, an island in the Barents Sea to the north of Russia. They most probably suffered from vitamin A and D intoxication caused by eating too much liver from polar bears.

Save the Dates!

For more information about any ESE event see www.e-se-hormones.org/meetings.

ESE Basic Course on Endocrine and Neuroendocrine Cancer

17–19 February 2016
Porto, Portugal

18th ESE Postgraduate Course on Endocrinology, Diabetes and Metabolism

25–28 February 2016
Opatija, Croatia



18th European Congress of Endocrinology (ECE 2016)

28–31 May 2016
Munich, Germany

4th European Young Endocrine Scientists Meeting

22–24 September 2016
Moscow, Russia

19th European Congress of Endocrinology (ECE 2017)

20–23 May 2017
Lisbon, Portugal

Deadlines:

1 February 2016
ECE 2016 – abstract deadline

28 February 2016
Geoffrey Harris and European Journal of Endocrinology Prizes – nomination deadline

28 March 2016
ECE 2016 – early bird registration deadline

31 March 2016
ESE Small Meeting Grant – application deadline

31 May 2016
ESE Short-Term Fellowship – application deadline