

Issue 35 Winter 2017/18

ESE News

The newsletter of the European Society of Endocrinology



Barcelona 2018:

ECE welcomes you!

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Also in this issue

Brexit: in your own words

New ESE guideline for aggressive pituitary tumours



European Society
of Endocrinology



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

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Editorial



I am warmed by the thought of travelling to the Mediterranean coast in May, to spend time with colleagues from around the world and catch up on endocrinology. I hope you too are already making plans to be at ECE 2018 in Barcelona, Spain.

This issue of *ESE News* reminds us of the wide breadth of our discipline, which will all be on show at the Congress. Turn to pages 8–9, where Programme

Organising Committee Chair Márta Korbonits and co-Chairs Barbara Obermayer-Pietsch and Raúl Luque have picked out many highlights for you. These include snapshots of the talks we will enjoy from three of our award lecturers: Christos Mantzoros (Geoffrey Harris Award), Filip Knop (*European Journal of Endocrinology* Award) and Philippe Chanson (Clinical Endocrinology Trust Award).

Our colleagues in Spain have a reputation for excellence in endocrinology. Their passion for our discipline is equally evident, as Justo Castaño demonstrates in his 'research tour of Córdoba', on pages 10–11. On page 14, we are proud to feature the impressive life's work of Gabriella Morreale de Escobar of Madrid, one of ESE's first Honorary Members. Her son, the endocrinologist Héctor Escobar-Morreale, provides a personal and touching insight into her work. The University of Santiago de Compostela is also a hive of activity. Here, translational endocrinologist Clara Alvarez lets us have a glimpse at a day in her very busy life (page 15).

On pages 12–13, we are reminded that ESE itself is also very busy and productive, as Gérald Raverot examines the development of the Society's new and valuable clinical guideline on aggressive pituitary tumours. Also on page 13, Jérôme Bertherat encourages us to support patient associations so that they, in turn, may support the exciting new Endo-ERN – the European Reference Network for rare endocrine conditions.

Brexit, the unfortunately painful process surrounding the UK's departure from the EU, rumbles on. This inevitably affects a number of ESE members, and we are pleased to be able to give them space to voice their thoughts (pages 6–7). ESE would like to hear the views of a wide selection of its members on this subject, and we encourage you to write to us with your perspective. By its very nature, science transcends borders, and we as a Society will continue to support science and scientists through this period of change.

It is in the spirit of support for our discipline and ourselves that we look forward to ECE 2018, and prepare to share our science. Do please remember to submit your abstracts by the imminent deadline of 29 January, and to take advantage of the early bird registration deadline of 6 April.

I look forward to seeing you all in Barcelona.

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

Cover image: Mosaic detail from Gaudi's Parc Güell, Barcelona. © iStock



Key dates

Abstract deadline:
29 January 2018

Early bird registration deadline:
6 April 2018

See www.ece2018.org



Let Barcelona welcome you!

20th European Congress of Endocrinology 19–22 May 2018

The beautiful and exciting city of Barcelona has a long history; the area was already occupied when the Romans arrived here 2000 years ago. Since then, it has grown to be the second largest city in Spain, and is the capital of Catalonia.

Amongst the best known of the city's universities are the University of Barcelona in the city centre (founded 1450) and the Autonomous University of Barcelona (founded 1968), located about 20km to the north. There are a number of teaching hospitals, and the city has an impressive reputation in the medical sciences.

One of Europe's great cultural centres, Barcelona is renowned for its unique blend of historical tradition, modernist architecture, museums and art galleries, music concerts and other performances – as well as its rich gastronomy. Antoni Gaudí (1852–1926), Spain's most famous architect, designed many of the city's landmarks, including the Sagrada

Família. Barcelona has strong links with artists such as Pablo Picasso (1881–1973), Salvador Dalí (1904–1989) and Joan Miró (1893–1983).

Others may be more familiar with Barcelona's sporting associations: particularly the very successful FC Barcelona and the 1992 Olympic Games which were held in the city.

Barcelona is a Mediterranean city open to people and to the world. It has a unique, vibrant atmosphere and almost perfect climate. You can easily reach Barcelona by direct flights to its international airport from many locations. The integrated local public transport system includes the metro, buses, trams and local trains.

A truly exceptional Congress such as ECE 2018 deserves an exceptional space. Barcelona's International Convention Centre (CCIB), designed by the famous Catalan architect Josep Lluís Mateo, maximises the use of natural light. It has an enormous exhibition hall and the banqueting hall provides spectacular views of the Mediterranean Sea. Nearby, several comfortable hotels will provide you with ample, convenient accommodation. There is no better place to hold our upcoming event, and it is sure to make ECE 2018 a resounding success.

We look forward to welcoming you to Barcelona in 2018!

From the ESE Office

With a strong focus on our strategy 'to provide continuous endocrine-related education and training for all career stages in clinical practice and basic research', ESE was delighted to publish its curriculum on clinical endocrinology, diabetes and metabolism a few months ago (see www.ece-hormones.org/education). We will also soon launch a pan-European examination with UEMS, which can be taken at any Pearson Vue centre across Europe. These initiatives sit alongside ESE's well respected courses.

Our next task is to bring these activities together, to demonstrate their ability to underpin endocrine education at all stages. We aim to cover the full curriculum in a number of courses, over a limited time period, and to make this as accessible as possible. Online provision could allow endocrinologists everywhere to benefit. We will also take the curriculum into consideration across all our activities, 'sign-posting' events which cover different topics.

Effective coverage of the curriculum is a substantial project. We are very much at the planning stage (and dependent on funding considerations), but the Education Committee (chaired by Camilla Schalin-Jäntti, Finland) and the ESE team are highly motivated to make real progress over the next 12 months.

We want to consider a range of views, and two sessions in November (with early career endocrinologists at Endobridge, Turkey, and with our Affiliated Societies at the ESE Council of Affiliated Societies meeting, Serbia) sought feedback on how ESE can best provide support. Thank you to everyone who has taken part – there are exciting times ahead!

Helen Gregson

Chief Executive Officer, ESE
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Ion channels in hormonal homeostasis

Mont Sainte Odile, France, 4–7 October 2017

The 42nd Symposium on Hormones and Cell Regulation (ESE) was attended by 90 scientists from across Europe and the USA.

The symposium focused on 'ion channels in hormonal homeostasis: transient receptor potential channels and calcium signalling'. These channels constitute, along with the G protein complex, receptor tyrosine kinases, receptor channels and nuclear receptors, one of the major types of receptor which enable our cells to respond to external hormonal, chemical and physical signals, and thus to react to physiological and pathological situations.

More than 30 of these receptors are known. They allow calcium to enter cells and modulate their polarisation and behaviour. They are involved in multiple aspects of the physiological control of metabolism, nervous function, the heart, reproduction, inflammation etc.

World-leading experts attended, and there was ample time for discussion. Most of the younger researchers presented their results in short talks and posters. The meeting was a great scientific success. Participants also enjoyed the surroundings and views of the Rhine valley.

We thank the organisers Veit Flockerzi (Homburg, Germany), Thomas Guderman (Munich, Germany) and Ulrich Boehm (Homburg, Germany), and also ESE and the other sponsors: the Leopoldina (Halle, Germany), TRR152 (Munich, Germany) and IRIBHM (Brussels, Belgium).

You can learn more about next year's event at www.hormones-cell-regulation.eu.

Jacques Dumont, President, Hormones and Cell Regulation Council

ESE Postgraduate Training Course in Ukraine

Lviv, Ukraine, 5–7 October 2017



The 21st ESE Postgraduate Training Course on Endocrinology, Diabetes and Metabolism was held in October, taking place for the first time in Ukraine. The host city Lviv is a historic centre, with many higher education establishments and important cultural institutions.

Almost 200 attendees came from across Ukraine and further afield, as far as Asia and Africa. The programme consisted of plenary lectures, meet-the-expert parallel sessions and

a very important session presenting cases submitted by local participants. This covered several difficult cases, which were widely discussed. Many comments from the Chairs and the audience suggested further management proposals. This illustrated some difficulties in endocrine diagnostics and therapy at a local level. It emphasised the real need to repeat educational activities, such as the ESE course, in order to improve management of endocrine patients in this European country.

The event was organised by the Ukrainian Association of Endocrinologists, and supported by an unrestricted educational grant from Novo Nordisk. The next course is in Visegrád, Hungary, on 22–25 February 2018 (see www.esepostgraduate2018.hu).

Marek Bolanowski, Chair, Programme Organising Committee

EndoBridge celebrates 5th year

Antalya, Turkey, 19–22 October 2017



EndoBridge is co-hosted by the Society of Endocrinology and Metabolism of Turkey, ESE and the Endocrine Society. This year's meeting brought together global leaders in endocrinology and 473 delegates from 39 countries. It was held in English with simultaneous translation into Russian, Arabic and Turkish.

Accredited by the European Accreditation Council for Continuing Medical Education (EACCME) and covering all aspects of endocrinology, the 3-day programme included 24 state-of-the-art lectures, 16 interactive case discussion sessions, and poster case presentations covering over 80 interesting clinical cases.

EndoBridge Founder and President, Bulent Yildiz (Turkey) commented, 'In addition to our usual inspiring lectures and discussion of interesting and challenging clinical cases, the meeting provided a great opportunity for our colleagues to share their experiences and perspectives. EndoBridge enhances cross-cultural dialogue and collaboration in the world of hormones.'

The 6th EndoBridge meeting will be in Antalya, Turkey, on 25–28 October 2018 (see www.endobridge.org).

2nd Polish–Romanian Endocrine Symposium

Wrocław, Poland, 28–29 September 2017

This bilateral meeting dedicated to the latest advances in clinical endocrinology and endocrine education focused on the local characteristics of the two countries. It featured interesting clinical sessions and important discussions on endocrine specialty education, board examinations, the availability of hormonal therapies and reimbursement.

Co-operation between the Polish and Romanian Endocrine

Societies dates back many years, with delegates from the societies being invited to one another's meetings. This culminated in the 1st Romanian–Polish Symposium in Timisoara, Romania, in 2015. The next symposium will see a return to Romania in 2019 for a meeting in Bucharest.

We believe our bilateral co-operation has an important impact in the development of European endocrinology.





EYES at ECE 2018

In light of the forthcoming Congress in Barcelona, EYES was delighted to talk recently to Manuel Gahete, a young endocrine scientist from Spain. Manuel is organising and chairing the EYES Symposium at ECE 2018, along with Tatjana Isailovic (Serbia, an EYES Committee member). Here, he tells us about his interests and enthusiasm for endocrinology.

Manuel, what is your background?

I am a translational researcher in the 'Hormones and Cancer' Research Group at the University of Córdoba and Maimonides Biomedical Research Institute of Córdoba. My scientific career has mainly focused on different aspects of endocrinology and metabolism, including the identification and characterisation of novel endocrine elements (truncated somatostatin receptors, splicing variants of ghrelin etc.) and their involvement in pathological situations. This developed during my PhD studies under the supervision of Justo Castaño and Raúl Luque.

I undertook post-doctoral training at the University of Illinois (Chicago, IL, USA), supervised by Rhonda Kineman. Here I investigated the reciprocal

interplay between different endocrine axes (i.e. pituitary, hypothalamus) and metabolic environments (i.e. insulin, insulin-like growth factor-I, somatostatin, ghrelin), and their dysregulation during extreme metabolic conditions and cancer.

What have you been working on lately?

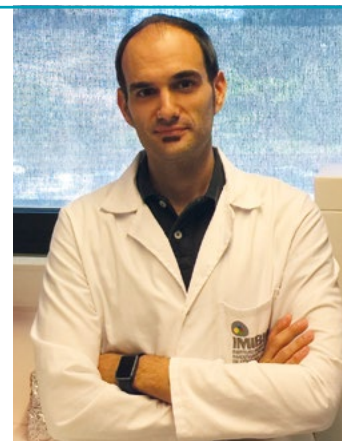
Nowadays, my research interests are more focused towards exploring novel elements and cellular and molecular mechanisms (such as alternative splicing, miRNAs and extracellular vesicles) at the crossroads between the endocrine system, the metabolic pathologies (obesity, diabetes etc.) and the development and progression of different endocrine-related cancers, such as those of the liver, prostate, pituitary or neuroendocrine system.

Which endocrine organisations are you involved in?

I have tried to be actively involved in the activities and functioning of the different endocrine societies and their affiliated committees, associations and initiatives led by young endocrinologists. Indeed, I am a member of the European Neuroendocrine Association (ENEA) Young Researcher Committee (EYRC) and have been involved in many of the activities promoted by EYES.

What do you think about EYES and EYES activities?

My personal view is that the EYES Committee has adopted an admirable and insightful approach to promote, disseminate and support the work carried out by young endocrinologists throughout Europe and beyond. Indeed, the



eyes 
european young
endocrine scientists
looking forward

activities promoted by EYES through the EYES Meeting, social media and liaison with other early career endocrine groups encourage young endocrinologists from Europe and other countries to pursue and succeed in their scientific careers.

A return to Modena: 1st ICGR–GnRH Congress



Just over 2 years ago, the 3rd EYES Meeting took place in Modena, Italy. This September, Modena was again a wonderful host to EYES. Manuela Simoni (Italy) and Ilpo Huhtaniemi (UK) organised the joint 4th International Conference on Gonadotropins and Receptors and the 12th International Symposium on Gonadotropin-Releasing Hormone. It was one of those very special meetings filled with new and exciting discoveries, as well as great energy and good spirit among participants.

The opening symposium was organised in honour of the 90th birthday of Bruno Lunenfeld (Israel). Marcella Motta (Italy) introduced Professor Lunenfeld's Bernard Zondek lecture, entitled

'The control of ovarian cycle from "Prolan A" to "KNDy neurons"', with a warm welcome. It was heart-warming to see that endocrinology is not only about science but also about good friends and pleasant memories. Listening to Professor Lunenfeld's retrospective talk on the control of the ovarian cycle was one of those moments to be treasured and remembered.

EYES was very proud to be represented by Daniele Santi (Italy), who gave a talk on new aspects of gonadotrophin combinations in assisted reproduction. Daniele presented results from his latest meta-analysis, which investigated the efficacy of different regimens using follicle-stimulating hormone (FSH) alone or with the

addition of luteinising hormone (LH) or human chorionic gonadotrophin or human menopausal gonadotrophin alone. It was very interesting to learn that FSH alone resulted in a higher oocyte number, while addition of LH resulted in a higher pregnancy rate.

In a friendly and exciting environment, EYES is growing and moving forward.

Ljiljana Marina
EYES Committee



Brexit – too many unanswered questions?

Eighteen months ago, in June 2016, the UK electorate voted by a narrow margin to leave the EU. Both the ‘Leave’ and ‘Remain’ campaigns were criticised then, and the UK Government has been criticised since, for an absence of any detail about what ‘Brexit’ means in practice.

In September 2017, in response to calls from the scientific community, the UK Government published a position paper entitled ‘Collaboration on science and innovation: a future partnership paper’.¹ While welcomed as a ‘first step’ in identifying issues to be addressed during the Brexit process, there remains a lack of clarity which leaves scientists across Europe and the globe uncertain about future relations between the UK and its neighbours in the rest of the EU.

Endocrinologists are, inevitably, affected by the lack of certainty. We canvassed the opinions of several colleagues. These range from well-established endocrinologists who moved to the UK some time ago and now call Britain their home, to others earlier in their careers, wondering about the wisdom of moving to the UK, or what the future will hold for those already resident.

Residency, recruitment and retention

Perhaps the most fundamental concern surrounds the UK’s unclear future migration policy. Professor Antonio Vidal-Puig (Cambridge, UK) comments that while his institution maintains a good supportive working relationship with the EU, ‘...there has been a change in the mood. Most European researchers who came to my team were also attracted by the prospect of establishing their career in the UK under the perception of quality, excellence, internationalisation and easy integration. This perception is not as optimistic now. There is a new feeling, the one that separates us and them. This feeling is negative and decreases morale, making engagement and commitment more difficult.’ Professor Luigi Gnudi (King’s College London, UK) adds ‘There

are certainly fewer requests from EU students to attend our institution. Many students move to other EU countries for study or for work experience.’

Medical Research Council (MRC) Senior Clinician Scientist and Consultant Michele Vacca (Cambridge, UK) comments, ‘Uncertainties are clearly the main reason for this decline in applications, and they count more than a really bad deal would do. Compared with other EU countries, UK Research Councils and Government strongly support research, but we are also heavily sponsored by the EU. Understanding if the UK will still be part of the Horizon programme and, if not, what contingency plans the UK Government will put in place are crucial.’

Punith Kempegowda is a Specialist Registrar in Birmingham, UK. He says the uncertainty about future collaborations with EU partners has put him off embarking on research projects at present. Brexit puts the UK at risk of ‘a significant impact on research funding,’ Punith reflects, ‘The main hit would be for those aspiring to conduct research in the UK through Marie Curie grants which are provided by the EU.’

Amsterdam-based endocrinologist Maarten Soeters provides a perspective from outside the UK, though he previously spent 3 years as a post-doc at the Vidal-Puig lab in Cambridge, supported by a Marie Curie grant. ‘As a clinical scientist outside the UK, it may be difficult to predict the consequences for my own work. Collaborations within Europe are important ... I have been surprised by the quality of care and research funded by bodies such as the Wellcome Trust and the MRC, as well as EU grants. The first two will most likely stimulate collaboration between the UK and other European countries after Brexit.’

A looming lack of skills?

Reflecting on the future of healthcare in the UK, Toni Vidal-Puig is concerned: ‘The combination of leaving the EU, the decrease in the value of the pound, and a perception of being more foreign incentivises [individuals] moving. The instinct to move is not driven



by the lack of jobs. There is a shortage of health-related professionals in the UK and the ageing demographics of the medics will make the problem more difficult. The deficit of nurses and midwives is huge and will get worse. This, together with lack of investment in the NHS, may have devastating effects for the provision of healthcare.'

As regards the future of UK research, Maarten Soeters also fears a 'brain drain', but rests his hopes on the lengthy negotiations: 'Probably, the Brexit effects will become clear during the negotiating process during the upcoming years. Applications for EU funding might change, foreign investors in drug or tech companies may be challenged, and [there may be] an increased brain drain. It remains to be established if the Brexit deal will be as profitable as is expected by its advocates. On the other hand, the UK may not be that dependent on the EU and collaborations with other partners such as the USA and Asia may be luring.'

Luigi Gnudi also looks to the negotiations, but is not expecting clarity anytime soon. He says, 'It will all depend on the agreements between the EU and UK; now seeing how negotiations are proceeding, I am unsure of any outcome. A "so-called" mild Brexit (if it had to happen) would be much preferable. Isolation from the EU would not be welcome and many might decide to move away from the UK.'

Make the message clear

All the scientists we spoke to feel that the UK Government must take urgent steps to offer security and support. Maarten Soeters calls for them to provide some answers, 'How important is science to the UK Government? And with that clinical care? Innovative strategies? Long term safety for people and environment? This, for me, is the fundamental question: is the UK Government (or its voters) interested in investing or compensating after possible losses inflicted by Brexit?'

Michele Vacca emphasises the need for the UK Government to see the situation from the perspective of scientists who have moved to the UK in recent years. 'The cut-off date to be recognised as "permanent residents" is still unclear. For those who arrived in the UK in the last 5 years there are only uncertainties. Would you buy a house or set up a family, or think to have a child in a country that might ask you to leave if you lose your job for a few months? Would you consider embarking on a training programme in the UK if your title is valid only in that country?'

Toni Vidal-Puig offers some heartfelt advice, 'Change the message. The most supportive messages indicate that the UK wants Europeans to stay because we are needed. It would be more effective to say the UK wants Europeans to stay because we contribute so much that they consider us as one of them. Some of the most supportive messages

I have heard say that there is an enormous risk that Europeans will go back home, without realising that for many of us, the UK has become our home. The risk [to the UK] is losing, unnecessarily, the engagement and commitment of the Europeans, and this is something Government, politicians and people do not seem to realise.'

Connections and co-operation

Avoiding the isolation of UK medical science is of paramount importance. Luigi Gnudi comments 'If science were to become isolated, I see major disruption. Channels will have to remain wide open for research and education in general, ALWAYS.' Punith Kempegowda agrees: 'The Government should establish clear agreements for bilateral co-operation for research between the UK and the EU, similar to trade and commerce.' Michele Vacca adds, 'Make sure that we stay in the Horizon 2020/Marie Curie programmes and other things will follow; as members, third parties or with a "new deal" – it does not matter – but not being part of the EU scientific community is to commit scientific suicide.'

There is general agreement with Luigi Gnudi's closing comment, 'I really hope that good sense and pragmatism will prevail over a complete political nonsense.' Maarten Soeters remains optimistic 'The people who voted against Brexit realise that the UK is not the more or less isolated island it once was. The UK is not immune to the challenges the other EU countries face. The optimist in me expects that UK scientists will thrive, although we do not yet know if this comes with a temporary cost.'

Supporting science

ESE is keen to understand its members' views and concerns about the impact of Brexit on the European and international endocrine community. Please contact us at info@euro-endo.org if you wish to share your thoughts or experience of its impact on scientists, clinicians, research or healthcare. In future issues of *ESE News*, we will return to this topic, to share the viewpoints and actions of other groups and organisations.

REFERENCES

1. HM Government 2017 *Collaboration on Science and Innovation: a Future Partnership Paper* www.gov.uk/government/publications/collaboration-on-science-and-innovation-a-future-partnership-paper.





ECE 2018: a feast of endocrinology

Barcelona, Spain, 19–22 May 2018

The 20th European Congress of Endocrinology promises to be exciting and rewarding. Clinicians, basic and clinical scientists and leading guest speakers will discuss and present the latest advances in endocrine research, sharing their frontline knowledge and experience with international attendees.

ECE 2018 has been specifically designed to support scientific and professional interaction across all fields of endocrinology and metabolism, from bench to bedside, with the aim of advancing knowledge and improving patient care.

The Programme Organising Committee has created an exciting scientific programme featuring the best international, European and local experts as speakers in a versatile schedule covering ESE's eight focus areas:

- adrenal and neuroendocrine tumours
- calcium and bone
- diabetes, obesity and metabolism
- environment, society and governance
- interdisciplinary endocrinology
- pituitary and neuroendocrinology
- reproductive endocrinology
- thyroid.



Sessions for nurses

Specialised endocrinology nurses are catered for by our dedicated Endocrine Nurse and Meet the Nurse Expert sessions.

6 New Scientific Approaches sessions

Well known experts will cover fresh ideas and approaches in clinical or translational endocrine research, such as the spliceosome and miRNAs as new tools in endocrine tumours, and re-programming strategies to obtain functional endocrine units.

11 award and plenary lectures

These lecturers will highlight the most exciting advances in endocrinology and metabolism, ranging from the opening plenary lecture by former ESE President Philippe Bouchard (France) on the past and future of contraception, to the closing plenary lecture by Manuel Serrano (Spain) on the metabolic control of longevity.

ECE 2018

20th European Congress of Endocrinology

30 symposia on hot topics

Renowned experts will cover all focus areas in symposia spanning our field. Invited speakers will bring together the very best perspectives on clinical, translational and basic research, as well as offering a stunning education programme just right for potential newcomers to the field and for long-standing professionals.

16 Meet the Expert sessions for clinicians

These will cover important endocrine topics such as the use of diabetes technologies to optimise patient self-care, thyroid cancer, adrenal incidentalomas, erectile dysfunction, the management of acromegaly after surgery, osteoporosis in men, hyperlipidaemia, delayed puberty and premature ovarian failure.

3 Meet the Expert sessions for basic/translational scientists

Here you can learn about mouse models in endocrine tumours, single-cell sequencing in endocrine diseases and non-classical mechanisms of thyroid hormone action.

3 attended poster sessions

We return to the well-established poster boards (each poster up for 1 day), to give you the opportunity to personally discuss your findings with experts and students working in various fields. The guided poster tours will be highlights at lunchtime, while the electronic boards and online posters will facilitate discussions during (and even after) the Congress.

6 exciting debates

You can see expert speakers 'battle' about endocrine disruptors, the use of receptor profiling for predicting pituitary therapy, aldosteronism and hypothyroidism, anti-müllerian hormone as a primary marker of fertility and screening of thyroid hormones and antibodies in pregnant women.

Late-breaking news and EYES

A special symposium will discuss the newest, most exciting topics in endocrinology, while a session organised by the European Young Endocrine Scientists (EYES) will focus on the study of neuroendocrine diseases.



ECE 2018 therefore promises to be an exciting Congress, greatly stimulating discussion and knowledge-sharing. We will also hear about ESE's new guidelines and an update on the European Reference Network for rare endocrine conditions (Endo-ERN).

If you share our fascination for the rapidly advancing fields of endocrinology, then this is a meeting you simply cannot miss. You will find no better opportunity to learn about the latest advances, to interact with world-renowned endocrinologists and clinical and basic researchers, and to participate in discussions about some of the most important issues facing us in daily clinical practice. You will have the chance to renew old friendships and make new ones and to take part in outstanding networking opportunities while enjoying the Mediterranean atmosphere.

We very much look forward to welcoming you to the 20th European Congress of Endocrinology on 19–22 May 2018. So, save the date – and see you in Barcelona!

Márta Korbonits, ECE 2018 Programme Committee Chair
Barbara Obermayer-Pietsch, ECE 2018 Clinical Co-Chair
Raúl M Luque, ECE 2018 Basic Science Co-Chair

Key dates

Remember to submit your abstracts by **29 January**.
 The early bird registration deadline is **6 April 2018**.



Our award lecturers



Christos Mantzoros

Geoffrey Harris Award

In the mid-1990s, leptin's discovery raised hopes of a treatment for obesity. Named from the Greek 'leptos' (meaning thin), leptin secreted by fat cells appeared to switch off the urge to eat in preclinical animal studies.

My laboratory was the first to perform pharmacokinetic studies of leptin in humans. We subsequently found that, although leptin at supraphysiological levels may decrease body weight in lean subjects, this did not translate to overweight or obese humans. We were also first to demonstrate leptin's role in the human neuroendocrine response to energy deprivation, and

in the pathophysiology and treatment of energy deficiency states (lipodystrophy, hypothalamic amenorrhoea etc.). Subsequent work resulted in the paradigm-shifting concept that adipose tissue is not an inert energy storage organ but an active endocrine organ – this revolutionised the way endocrinologists view metabolic disorders.

Neuroendocrine abnormalities and metabolic diseases, including obesity and its comorbidities, diabetes, cardiovascular disease and malignancies, are the epidemics of the 21st century. My laboratory's many novel discoveries associated with these disorders have contributed to our understanding of underlying mechanisms.

I will present my findings along with translational contributions that advanced our understanding of the physiology and therapeutic utility of leptin and adipokines in humans, the development of novel diagnostic and therapeutic tools for neuroendocrine and metabolic disease, and our knowledge of other key molecules and hormones secreted by muscle and the gastrointestinal tract.



Filip Knop

European Journal of Endocrinology Award

Glucagon's role as a glucose-mobilising hormone secreted from pancreatic α -cells during low blood glucose concentrations represents a well-established and fundamental part of human physiology. Likewise, hyperglucagonaemia

constitutes an acknowledged part of diabetes pathophysiology, contributing by as much as 50% to the aberrant hyperglycaemia in type 2 diabetes.

Nevertheless, the cause of and mechanisms underlying hyperglucagonaemia in type 2 diabetes are incompletely understood. The general understanding is that the diabetic α -cells are less sensitive to the glucagon-suppressive effects of glucose and insulin. However, this notion has recently been challenged by studies

suggesting that the gut may play a hitherto underestimated role in type 2 diabetic hyperglucagonaemia. To better understand this, we have performed studies which suggest that the gut-derived hormone glucose-dependent insulinotropic polypeptide may be involved.

In addition, we recently undertook studies in totally pancreatectomised patients using mass spectrometry which proved that glucagon (hitherto considered a pancreas-specific hormone) may also be secreted from extrapancreatic tissues. This is most likely to be from proglucagon-producing enteroendocrine cells immunohistochemically positive for the enzyme prohormone convertase 2 (previously considered to be limited to pancreatic α -cells). We also identified such cells in patients with type 2 diabetes, explaining their postprandial hyperglucagonaemia.

The observation that gut-derived glucagon is likely to play an important role in diabetic pathophysiology has improved our understanding of the disease and may lead to new treatment strategies.



Philippe Chanson

Clinical Endocrinology Trust Award

Growth hormone (GH) and insulin-like growth factor-I (IGF-I) have important metabolic actions. GH/IGF-I excess and GH deficiency are each associated with 'opposing' comorbidities that often mirror one another. Cardiac and vascular comorbidity demonstrates

that 'too much' may be as bad as 'too little'.

An association between acromegaly and increased cardiac mortality has long been claimed. This was based on epidemiological studies of patients treated a long time ago, when the current therapeutic tools were not available and radiotherapy was widely used. Recent epidemiological studies and data from acromegaly registries show no

excess mortality and that cardiovascular disease is not the leading cause of death. This is thanks to effective treatment of acromegaly and aggressive management of comorbidities (diabetes, hypertension, lipid disorders). Observations resemble those in the background general population.

In contrast, the clinical features of hypopituitarism with GH deficiency are more like those of the metabolic syndrome. This may explain why patients have an increased cardiovascular and cerebrovascular risk. GH treatment improves cardiovascular risk factors and is associated with a decreased incidence of cardiovascular (but not cerebrovascular) events in some studies. It also seems to be associated with a reduction in all-cause mortality in both sexes, but particularly in males, who attain the level of the general population.

Thus, according to our homeostatic model, the GH/IGF-I axis follows the general rule that *in medio stat virtus* or 'virtue stands in the middle'!



The Endo Explorer

Evolving a passion for endocrinology



Justo Castaño and Raúl Luque's group

In retrospect, one realises that endocrinology was deeply engraved on the heart, and the fate, of Córdoba, the beautiful Spanish city of famous physicians like Avicena and Maimonides.

In the beginning...

Indeed, almost 40 years ago, in the midst of the golden era of neuroendocrinology, while competing labs were boiling the world over to discover, isolate and characterise the 'predicted' hypophysiotrophic hypothalamic hormones (then named 'factors'), a very young university was giving birth to two initially unrelated research labs, which were to become a true endocrine-related scientific family – although, at that time, we just did not know it.

In 1978, at the Department of Cell Biology of the School of Biological Sciences, Francisco (Paco) Gracia-Navarro was completing his seminal PhD dissertation on the ultrastructural and functional characterisation of amphibian pituitary cell types, introducing 'modern' techniques such as immunofluorescence and immunoelectron microscopy, and creating a group of comparative endocrinologists, who became very active players within the European Society for Comparative Endocrinology (ESCE), and organised their 17th Congress in Córdoba in 1994.

Soon thereafter, Paco Gracia-Navarro became the first President of the newly created Iberian Association of Comparative Endocrinology (AIEC). In the 1980s and 1990s, results from this group contributed to the understanding of the mechanisms underlying the hypothalamic regulation of pituitary function in frogs, pigs and rats, paying special attention to somatotrophs and melanotrophs, and to the then emerging concepts of heterogeneity of endocrine cell types and the secretory cell cycle.

A few blocks away, Enrique Aguilar Benítez de Lugo, a physician scientist who arrived at the Physiology Section of the School of Medicine in 1980, initiated the building of a new research group focused on reproductive physiology, with special emphasis on the neuroendocrine mechanisms regulating puberty, fertility and reproductive health and their interactions with growth and metabolism. The group applied classic and novel methodologies in experimental neuroendocrinology to characterise, using rodent models, the role of gonadal hormones and different neurotransmitters in the central control of sex differentiation and pituitary secretion, with special attention to gonadotrophins, prolactin and growth hormone, thereby fostering quality research in this field.

After two decades of evolution

Like everything else in life, research groups develop and evolve. At the turn of this century, the team of Paco Gracia-Navarro grew, under the joint leadership of his former disciples Maria Malagón and Justo Castaño, to unveil the cellular and molecular signalling mechanisms underlying the regulatory actions of ghrelin, PACAP (pituitary adenylate cyclase-activating polypeptide), growth hormone-releasing hormone, somatostatin, adipokines and their receptors in somatotrophs and other pituitary cell types. In addition, they explored the role of novel players in the processing and trafficking of pituitary hormones, particularly in melanotrophs. These multiple interests naturally led to the generation of two novel, independent research groups, led by Professors Malagón and Castaño, which expanded their particular endocrine interests into two strongly emerging fields: adipobiology and endocrine oncology respectively.

At about the same time, Dr Aguilar's group passed the baton on to a new leader, his disciple Manuel Tena-Sempere, who was busy at the time igniting the 'Kiss' explosion in the field of reproductive neuroendocrinology. Indeed, Tena-Sempere's team robustly contributed to the discovery and dissection of the kisspeptin system as a key player in the control of puberty in particular and, more broadly, in reproductive physiology.

To the present day

Currently, Manuel Tena-Sempere's highly productive group focuses their activities on reproductive and metabolic neuroendocrinology, with particular interest in the neuroendocrine regulation of energy homeostasis, puberty and the reproductive axis, and the reciprocal interplay between these key bodily functions.

The ultimate aim of this team is to understand the basis for alterations of puberty and fertility linked to severe metabolic disturbances, from obesity to anorexia, and to decipher the mechanisms of metabolic perturbations associated with gonadal dysfunction. This is a basic science research group, which routinely uses suitable preclinical models, including genetically modified lines, and implements a wide arsenal of analytical techniques. However, the group has also developed a strong drive for translational research, which materialises in various projects addressing prevalent human diseases, including polycystic ovary syndrome and other reproductive pathologies, pubertal alterations, obesity and related metabolic perturbations.



Maria Malagón's group



Manuel Tena-Sempere's group

'The best part of the journey has been the number of incredible collaborators and friends that we have met and enjoyed along the way: we thank them all'



Enrique Aguilar Benítez de Lugo



Francisco Gracia-Navarro

Over the last decade, Dr Malagon's group has focused on elucidating the cellular and molecular mechanisms underlying adipose tissue (dys)function, in order to unveil the pathogenic pathways leading to the development of metabolic disease in obesity. Taking advantage of their previous background in cell signalling and intracellular membrane traffic in endocrine cells, the group, co-led by Rafael Vázquez-Martínez, has significantly contributed to identifying novel players in insulin signalling and lipid traffic, such as septins, and to further understanding the function and regulation of the central regulatory hub for lipid storage and mobilisation in adipocytes, the lipid droplet, under the orchestration of Rab proteins.

The group has also pioneered the application of different proteomic techniques in the study of human adipose tissue, including the analysis of protein post-translational modifications. They have recently developed a unique protocol for MALDI (matrix-assisted laser desorption ionisation) imaging, to analyse the distribution of lipids in human adipose tissue sections, which are being used to establish the protein and lipid fingerprints of the adipose tissue in health and disease.

Meanwhile, the hormones and cancer research group, co-directed by Raúl Luque and Justo Castaño, has centred its efforts on understanding the cellular and molecular principles underlying the natural processes of neuroendocrine regulation of pituitary cell types. They have paid special attention to somatotrophs and the somatostatin and ghrelin systems, their relationship with metabolism, and their dysfunction in tumour diseases and cancer.

In this context, the discovery of novel splicing variants of these two neuropeptide systems (sst5TMD4 and In1-ghrelin) opened up new research avenues to establish their presence and pathophysiological relevance in different endocrine-related cancers. This ultimately led to the exploration of the role of alternative splicing and its defects in hormone-related tumours and cancer. So, departing from a comparative endocrinology setting, this team has also embraced translational research, in the quest for the discovery and application of relevant changes that could have diagnostic or prognostic value and could contribute to the future design of innovative therapeutic strategies.

Moreover, while keeping a close eye on hormones and so remaining endocrinologists, our teams have embarked down some of endocrinology's broad research 'tentacles' by analysing, for instance, the metabolic control of hormonal secretion and endocrine cancers or exploring the hormonal regulation of adipocytes and cancer cells. Likewise, an integrative scientific approach has characterised our vision of endocrinology, where whole animal studies at a physiological level have been combined with intimate molecular approaches, to understand the role of specific signals and receptors, using genomics, proteomics or spliceosomics.

With help from our friends

Our teams have always actively collaborated, and our development would not have been the same without close interaction with clinical research teams in Córdoba, at the Reina Sofia University Hospital and the Maimonides Institute of Biomedical Research of Córdoba (IMIBIC). The best part of the journey has been the number of incredible collaborators and friends that we have met and enjoyed along the way: we thank them all.

We have always believed very strongly in the value of scientific societies, and remain actively involved in the life of ESE and its major Congress (remembering that ECE 2018 is coming to Barcelona), as well as many other related national and international societies.

Writing this perspective has prompted us to believe that the strong endocrine-related family which has grown and evolved around our university and hospital, and lives now at IMIBIC, will continue to flourish. Our labs and research are open to welcome your collaboration!

Justo Castaño, María Malagón, Manuel Tena-Sempere and Raúl Luque

Maimonides Institute for Biomedical Research of Córdoba (IMIBIC); Department of Cell Biology, Physiology and Immunology, University of Córdoba; Reina Sofia University Hospital; and CIBER Fisiopatología de la Obesidad y Nutrición (CIBERObn), Córdoba, Spain

This article is dedicated to the memory of our colleagues Enrique Aguilar Benítez de Lugo and Rafael Vázquez-Martínez, two excellent endocrine researchers and fine men, whose untimely death this year has left us heartbroken.

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European Society
of Endocrinology



Aggressive pituitary tumours: a new ESE guideline



ESE's latest clinical practice guideline addresses pituitary tumours that are resistant to conventional treatment. While such cases are rare, the need for guidance was indisputable, as Gérald Raverot explains.

Pituitary tumours are usually benign, revealed by symptoms associated with hormonal dysregulation (hypersecretion or deficit) or signs associated with tumour growth (such as visual field defects or headaches). Most of these tumours are well controlled by surgery and/or medical treatment and, in some cases, radiation therapy. However, a subset of tumours proves resistant to the conventional approach. These patients present with multiple recurrence (so-called aggressive pituitary tumours) and, in rare cases, metastasis (a defining feature of pituitary carcinomas).

Different inefficient therapeutic options were tested before the successful introduction of temozolomide for the treatment of aggressive pituitary tumours and pituitary carcinomas. Temozolomide is an alkylating agent indicated in the treatment of glioblastoma. It was used for the first time in 2006 for the treatment of pituitary carcinoma. Following the first publication, numerous case reports and small series were published demonstrating the potential efficacy of this new treatment. However, many questions regarding treatment efficacy and patient management in this rare condition remained. Experience was gleaned from limited patient numbers with short duration of follow up.

A need to answer questions

To address these questions, Pia Burman (then Chair of the ESE Clinical Committee) initiated the formation of a Special Interest Group on aggressive pituitary tumours. The group met for the first time during ECE 2015 in Dublin, Ireland.

The group's first initiative was an international survey to collect information on larger patient cohorts and specifically to gather experience on temozolomide treatment, other chemotherapeutic drugs and peptide receptor radionuclide therapy. This survey was distributed to ESE members. We were able to collect clinical



The guideline panel: (L–R) Jacqueline Trouillas, Stephan Petersenn, Anthony Heaney, Pia Burman, Ann McCormack, Vera Popovic, Gérald Raverot (Olaf Dekkers was absent)

information from 166 patients (24% pituitary carcinomas and 76% aggressive pituitary tumours), including 157 patients treated with temozolomide as first-line therapy after failure of conventional therapies.¹

Establishing guidance

In parallel to this survey, and initiated by current ESE Clinical Committee Chair Jérôme Bertherat, we began to develop a guideline on diagnosis, treatment and follow up in aggressive pituitary tumours and carcinomas. The rarity of the condition, the absence of controlled trials and the limited data from the literature underlined the need to provide clinical guidance.

With the help of Olaf Dekkers, our methodological expert, we decided up front, while acknowledging that literature on aggressive pituitary tumours and carcinomas is scarce, to systematically review the literature according to the GRADE (Grading of Recommendations Assessment, Development and Evaluation) system.

The review focused primarily on first- and second-line treatment in aggressive pituitary tumours and carcinomas. We included 14 single arm cohort studies (including at least three patients), most on temozolomide treatment ($n=11$). This review demonstrated a positive effect in 47% (95% CI 36–58%) of temozolomide-treated cases, confirming temozolomide as the first-line treatment after failure of conventional therapy in aggressive pituitary tumours and carcinomas.

The working group had four face-to-face meetings to draft the guideline. A critical review by eight pituitary experts (including two neurosurgeons and one neuroradiologist) and comments from ESE members and the ESE Council of Affiliated Societies (ECAS) contributed to the final form of the recommendations. Moreover, the Endocrine Society endorsed this ESE Clinical Practice Guideline for the Management of Aggressive Pituitary Tumours and Carcinomas, confirming its worldwide interest. The guideline has recently been published in *European Journal of Endocrinology*.²

Key recommendations

The following recommendations are central to the new ESE guideline:

- (1) Patients with aggressive pituitary tumours should be managed by a multidisciplinary expert team.
- (2) Histopathological analysis, including pituitary hormones and proliferative markers, is needed for correct tumour classification.
- (3) Temozolomide monotherapy is the first-line chemotherapy for aggressive pituitary tumours and pituitary carcinomas after failure of standard therapies. Treatment evaluation after three cycles allows identification of responder and non-responder patients.
- (4) In patients responding to first-line temozolomide, we suggest continuing the treatment for at least 6 months in total.

Furthermore, the guideline offers recommendations for patients who recurred after temozolomide treatment, for those who did not respond to temozolomide, and for patients with systemic metastasis.





'Research on these rare aggressive pituitary tumours is likely to reveal new molecular mechanisms of tumour growth that may allow the identification of new therapeutic targets. A multidisciplinary approach to these tumours is key, both for the clinical management of patients and for research'

The publication of the ESE Clinical Practice Guideline for the Management of Aggressive Pituitary Tumours and Carcinomas will hopefully improve identification and treatment of these rare tumours. Future efforts should combine the work of researchers and clinicians to establish an international register for this rare disorder. The overall aim of such a register would be to work towards attaining consensus in diagnosis and to foster improved treatment and follow-up strategies for these patients.

Research on these rare aggressive pituitary tumours is likely to reveal new molecular mechanisms of tumour growth that may allow the identification of new therapeutic targets. A multidisciplinary approach to these tumours is key, both for the clinical management of patients and for research.

Gérald Raverot

Centre Hospitalier Universitaire de Lyon, France

Olaf Dekkers

Leiden University Medical Centre, The Netherlands

Pia Burman

Lund University, Sweden

We thank all the guideline working group members (pictured), as well as Alex Harrison at ESE for logistical support with the consensus meeting organisation and technical support for the ESE survey.

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2. Raverot et al. 2018 *European Journal of Endocrinology* 178 G1–G24.



The importance of patient associations

Among the various initiatives that have attracted the attention and support of ESE's Clinical Committee are the emergency cards and the European Reference Network for rare endocrine conditions (Endo-ERN). These two initiatives would have not been successful without the interest, support and involvement of patient associations.



As was initially the case for most endocrine societies in Europe, patient associations for endocrine diseases have mostly developed at the national level. Interestingly, there is now an emerging movement, supporting the action of these associations at the European level. Both the adrenal insufficiency card and the Endo-ERN are good examples of that growing European dimension.

The adrenal insufficiency card was developed with the support and involvement of various patient associations, in collaboration with academic endocrinologists with a specific expertise in adrenal disorders, and was endorsed by ESE (see *ESE News* issue 33, page 6). Patient associations from several European countries were

very active, from the stage of translating the side of the card which is in the national language, to printing and dissemination of the card in their countries. This is a situation of benefit to both patients and physicians, stimulating the development and diffusion of a simple tool to improve patient management.

The ERN programme developed by the European Community to improve management of rare and complex low prevalence conditions was very actively promoted by an alliance of over 700 patient associations named EURORDIS–Rare Diseases Europe. Patient associations form part of the ERNs, and their voices and initiatives are important for ERN development and promotion.

At present, ten patient associations from five countries are members of the European Patient Advocacy Group (ePAG) of the Endo-ERN (see www.endo-ern.eu/patients/european-patient-advocacy-group). The mutually beneficial nature of the interactions between these ePAG members and the various healthcare providers (HCP) dedicated to rare endocrine diseases is obvious. However, it is clear that the number of active patient associations is not sufficient to cover all the rare endocrine diseases and European countries. We should, as endocrinologists, stimulate this development, and inform our patients about these activities.

Jérôme Bertherat

Chair, Clinical Committee



Gabriella Morreale de Escobar was one of ESE's first Honorary Members, back in 2008. She has long been recognised as a pillar of Spanish endocrinology. Along with her husband, the late Francisco Escobar, she has contributed greatly to our discipline. Here, their son, Héctor Escobar-Morreale, himself an endocrinologist, gives us an insight into their lives and work.



Gabriella Morreale de Escobar: queen of Spanish endocrinology



In 2001

Gabriella was born in Milan, Italy, in 1930, the daughter of Eugenio Morreale (a Sicilian biologist, journalist and diplomat) and Emilia de Castro (biologist and curator at the Natural History Museum of Milan). The family moved around the globe following her father's assignments, and Gabriella picked up languages as other children pick up rhymes. They finally settled in Malaga, Spain, during the last years of World War II.

Always an 'A grade' student, Gabriella was one of the few women who attended university in Spain during the 1950s. She excelled in chemistry at the University of Sciences of Granada, earning the nickname 'niña electrón' (electron girl) on her first day when, asked by the professor, she explained with ease and precision the spin of an electron in a hydrogen atom to the whole class. She ultimately

won the Special Prize for Graduates in Sciences.

Her outstanding beauty gained the attention of a recent graduate in medicine, my late father, Francisco 'Paco' Escobar, who rapidly won her heart and, as he constantly reminded everybody including her, was at her faithful service from the day they married (1 August 1953) until he passed away (16 December 2015) at the age of 92.

When my parents met, Paco was completing his doctorate at the Department of Medicine, led by Eduardo Ortiz de Landázuri. Because his interest was endemic goitre, he convinced his masters to hire a chemist, to measure iodine concentrations in biological samples. This is how Gabriella became interested in the thyroid – and the rest, as they say, is history...

My mother's natural intelligence, curiosity and ruthless dedication, coupled with my father's humanity, compromise and delicate sense of humour, made the couple a formidable team in life and in science.

Soon after marrying they moved to Leiden in The Netherlands, where they trained for 3 years with Andries Querido, one of the most respected endocrinologists and researchers in endemic goitre at the time. Upon returning to Spain, they joined the nascent Spanish Research Council, where they worked for their whole, exceptionally successful, careers.

The impact of their work largely exceeded what is usually expected from basic scientists. Their publication record was unparalleled at the time and Gabriella's h-index, 52, is still the fourth among all living Spanish endocrinologists, even though she finally retired (at the age of 80) in 2010, soon after receiving the Lissitzky Career Award from the European Thyroid Association.

Gabriella served in various positions in several international and Spanish scientific societies. She received Honorary Membership of ESE in 2008 for 'her tremendous achievements and significant contributions to European endocrinology', and is the only female Honorary Member of the European Thyroid Association, which she and Paco helped found. She received many other honours, most of which she shared with Paco, as she was always the first to give credit to his contribution to their success.

But even more important were their enormous contributions to public health. They took into their own hands problems that were far beyond their professional responsibilities. Their epidemiological studies of endemic goitre across all regions of Spain, supported by experimental data from the rat and their tireless efforts, finally convinced the Spanish Health Authorities to introduce and promote salt iodination in the early 1980s.

Also, being intimately convinced by their own animal

data of the importance of thyroid hormones for brain development, they began a pilot trial of neonatal screening for congenital hypothyroidism in newborns from public hospitals in Madrid. This effort led to universal screening for this condition, as currently implemented throughout Spain.

In the late 1990s, their data showing borderline iodine deficiency in pregnant women from a relatively wealthy area of Madrid were followed by all kinds of efforts to convince obstetricians and health authorities of the need for iodine supplementation during pregnancy, a practice that is routine nowadays, mostly thanks to their resolve.

Outstanding scientists, they were also wonderful teachers. They trained several generations of the most respected basic and clinical Spanish endocrinologists of all time, who followed their example with great success. Being trained by my parents was a privilege but also imposed a certain obligation, given their devotion to the cause of science and the progress of humankind.

I will end these lines with the dedication I included in my own PhD thesis, of which Gabriella was Director: 'A mis padres, que a la vez son mis maestros' ('To my parents, who are also my masters'). With love, respect and admiration!

Héctor F Escobar-Morreale
Professor of Endocrinology and Medicine, Madrid, Spain



A day in the life of...

...a researcher in translational endocrinology



07.30

The alarm goes off and, before doing anything else, I have a big cup of coffee, toast and an orange juice. I also check my email and chat with my husband and children. Following a quick shower, I am ready to go to work.

08.30

I travel to the School of Medicine in my old car (a 27-year-old Seat Marbella). I go directly to the classroom and start teaching the medical undergraduates. I really enjoy teaching endocrinology and, moreover, I think they like it too, since (despite it being the first class of the day) the room is almost full. My only regret is that our university has the most medical undergraduates in the whole of Spain (an intake of 350 each year) and I will need to repeat the same lesson four times (twice this morning and twice on another afternoon)!

10.30

After 2 hours of pituitary teaching, I have a 10-min drive to CIMUS (the Centre for Investigations in Molecular Medicine and Chronic Disease), my centre for research, next to

the hospital. I am lucky because I have two technicians, Mari and Sihara, who are superb at cell culture and anything related to nucleic acid techniques respectively. They tell me the latest news, including that a patient with thyroid cancer is just undergoing surgery and that Pathology has alerted us to collect a small sample at midday, so we can do cell culture and banking of the DNA and RNA from this patient. We finish with some bureaucracy and paperwork.

My two youngest PhD students, Miguel and Fernando, join the meeting. They both work in thyroid biology using the primary cell cultures and tissue samples we obtain from the patients. Our goal is to find mechanisms that separate the behaviour of a cancer cell from that of a normal cell, both growing in culture. We are also looking for non-follicular populations present in the human cultures.

Then I go and discuss the latest developments with the other PhD students. First, I meet Elvin, who is from Azerbaijan and is finishing his thesis. Since he is a general surgeon in his

home country, his topic is mainly thyroid cancer using clinical and immunohistochemistry data from our registry, but he has also developed a new method which allows multiple staining of paraffin sections with antibodies for immunofluorescence, using the same clinically validated secondary antibody.

Next I sit with Angela, who is also finishing her PhD, which concerns part of our long-standing interest in the RET receptor and its role in the pituitary. We are also collaborating with Márta Korbonits (London, UK) and we are very excited at the phenotype exhibited by animals expressing some of the very same mutations in *AIP* that are found in patients with pituitary tumours. We plan the next set of biochemical analyses, and joke about whether this will be the last Western blot needed for this project!

13.00

Ignacio Bernabeu, the senior clinical endocrinologist in our group, just arrived as planned with Iria, a young endocrinologist currently doing her PhD. After looking at the latest cell cultures set up using a surgical sample from one of his patients with acromegaly, we sit at the computer and review the REMAH (Molecular Registry of Pituitary Adenomas) data. This national registry gathers clinical data together with RNA expression.

14.00

It's lunchtime and I run to the hospital's cafeteria. Today, I've made an appointment to have lunch with José Cameselle, our senior pathologist renowned in thyroid cancer, with whom we have been collaborating for many years. We review the current state of our bank and make a tentative plan about how to finish some of the pending issues in the parallel

projects where we gather data from pathology series together with follicular cell biology in culture.

15.30

I accompany Montse, my postdoc, to the confocal microscope. She is a real expert in advanced technical microscopy and has completed relevant work in the pituitary stem cell field. Today, we want to help Joana, one of my senior PhD students, to take detailed pictures of mitosis in thyroid anaplastic cells. She is working on a new protein, not described in the thyroid until now. She has been able to localise the function in mitosis, and needs a perfect co-localisation with markers such as Aurora, p-H3 (phosphohistone H3) or γ -tubulin.

18.00

Finally, I arrive in my office. This is the only time I can be undisturbed, and I spend the next 2 hours answering emails and browsing new publications, databanks and other research resources on the internet. I have frequent correspondence with my collaborators, some of them friends like Laura Fugazzola (Milan, Italy), and with Robin Peeters (Rotterdam, The Netherlands), with whom I am starting a thyroid working group for ESE.

20.30

I arrive home at last. After a few minutes outside, playing with our two very active dogs, I go indoors. There is time for some exercise on our static bike followed by dinner. Then I just read my book until I fall asleep.

Clara V Alvarez

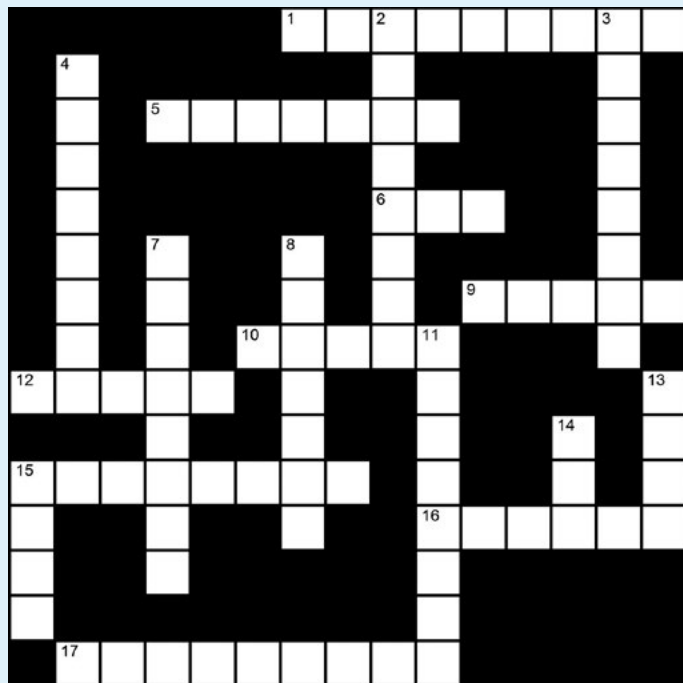
Head, Neoplasia and Endocrine Differentiation Group, CIMUS, and Professor of Physiology, School of Medicine, University of Santiago de Compostela, Spain



The Endo Crossword



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

Our winners from issue 34 were Filip Gabalec (Czech Republic) and Matthew Sinton (UK).

Answers to the puzzle in issue 34

Across

2. Moon, 6. Jernegan, 7. Piltown, 11. GM-CSF, 13. De Quervain, 14. FISH.

Down

1. Hwang Woo-Suk, 2. Melan, 3. Ninov, 4. Golgi, 5. Phe, 8. Tasaday, 9. Cardiff, 10. Foersch, 12. MAPK.

Endo Prize Puzzle

Across

- 1 and 2 down** Architect of the two Barcelona UNESCO World Heritage Sites not linked to Gaudí (8,1,8)
- 5** Pale yellow, greenly fluorescent cofactors (7)
- 6** Amino acid known to react with carbohydrates to produce acrylamide in hot food (abbrev.) (3)
- 9** Number of Barcelona UNESCO World Heritage sites attributable to Gaudí (5)
- 10** The fort at 4 down was important in determining the size of which SI unit? (5)
- 12** Gram negative, facultatively anaerobic bacillus producing vitamin K2 in lower intestine (abbrev.) (1,4)
- 15** One of 24 novel steroid hormones isolated in the 1930s by the recipients of the 1950 Nobel Prize (8)

- 16** A covering membrane generally composed of connective tissue (6)
- 17** 'El clavel': the national flower of Spain (9)

Down

- 2** See 1 across
- 3** Roman god whose pillars appear either side of the Spanish coat of arms (8)
- 4** Hill in SW Barcelona, site of the Olympic Stadium (8)
- 7** Location of Barcelona art school attended by Picasso and Miró (2,6)
- 8** Effect on oestrous cycles when female rodents are housed separately from males (3-4)
- 11** How many towers will Gaudí's Sagrada Família have when complete? (8)
- 13** Chief mammalian nitrogenous breakdown product of protein (4)
- 14** Non-invasive diagnostic procedure based on alignment of hydrogen ions in a field (abbrev.) (3)
- 15** Sparkling wine, largely produced in Catalonia (4)

Did you know?

A Viking mystery

The Icelandic poet Egil Skallagrímsson (c 910–990) quite possibly had Paget's disease of bone: a cause of misshapen bones which can be hereditary. In the Old Norse sagas, he (like his father and grandfather) is noted for his large menacing features, with shoulders 'far heavier than those of other men'. Egil's poetry documents his other developing symptoms: deafness and blindness, loss of balance, headaches, cold feet and periods of lethargy. These and his irritability and extreme violence may have resulted from the thickening of his skull which, when exhumed 150 years after his death, was so massive it could not be split with an axe.



Save the date

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

10th ESE Clinical Update

12–13 January 2018

Abu Dhabi, UAE

22nd ESE Postgraduate Course on Endocrinology, Diabetes & Metabolism

22–25 February 2018

Budapest, Hungary

ECE2018

20th European Congress of Endocrinology

19–22 May 2018

Barcelona, Spain

Deadlines

14 January 2018

International Endocrine Scholars Programme

Nomination deadline

29 January 2018

ECE 2018

Abstract deadline

28 February 2018

Geoffrey Harris Award

Nomination deadline

28 February 2018

European Journal of Endocrinology Award

Nomination deadline

28 February 2018

Clinical Endocrinology Trust Award

Nomination deadline

31 March 2018

Small Meeting Grants

Application deadline

6 April 2018

ECE 2018

Early bird registration deadline

31 May 2018

Short-term Fellowship Grants

Application deadline