

Issue 9 | Autumn 2020

# eyes NEWS

The Newsletter of the ESE Young Endocrinologists and Scientists

**Endocrine disrupting chemicals:  
Increasing awareness**

EYES at e-ECE 2020

EYES Clinical Observership Program



European Society  
of Endocrinology



## In this issue

### EYES News

03 EYES news

04 First ever e-ECE 2020

05 EYES Clinical Observership Program

### Features

06 History of endocrine disruptors

07 ED<sup>2</sup>: endocrine disruptors and  
erectile dysfunction, any evidence?

08 Amazing careers: Meet Raul M. Luque

10 Metabolism disrupting chemicals

11 ESE and endocrine disruptors

11 Endocrine disruptors and cancer

12 Early career endocrinologist in the UK

13 Yuvocrinology:

The Young Endocrinologists of India

14 ESE Journals

### At the back

16 Latest research

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Editor:

Ljiljana Marina, *Serbia*

Copy-Editor:

Ayse Zengin, *UK/Australia*

Editorial board:

Antoan Stefan Sojat, *Serbia*

Stavroula Paschou, *Greece*

Eva Coopmans, *The Netherlands*

Walter Vena, *Italy*

Juan Manuel Jimenez Vacas, *Spain*

Philip McBride, *UK*

Design:

Ljiljana Marina & Walter Vena

Cover page: Photo by Isaac Quesada

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## EDITORIAL



We hope you enjoyed e-ECE 2020 as much as we did. It was great meeting you all online and we hope to meet you face-to-face soon! Read about the recent EYES news on page 3, the exciting e-ECE 2020 events and EYES symposium on page 4. Further, we present the first EYES C.O.P grant winners on page 5.

This issue of the EYES Newsletter is dedicated to endocrine disruptors (ED), their effects on our health, and their role in disease(s). Read the dedicated *EYES selection* of short reviews about EDs on pages 6 to 11.

He was the first to share his scientific photo as the Issue 7 cover page – meet the inspiring scientist Raúl Luque on page 8. Read about the activities of early career endocrinologists in the UK on page 11, and on page 13 we introduce The Young Endocrinologists of India - Yuvocrinology. We hear from ESE's journal publishing house, Bioscientifica, about ESE's journals on pages 14 and 15. Last but not least, read the latest hot topics in the research selection on page 16.

We hope you enjoy this Newsletter!

Ljiljana Marina, *Serbia*

**eyes** 

ESE young endocrinologists  
and scientists  
looking forward

# EYES news

It's been a busy few months – a lot has been happening behind the scenes, with the transition from face-to-face meetings into virtual formats. This has taken a lot of effort and time, but definitely worth it. I think you will all agree that the e-ECE 2020 was a great success! We were extremely pleased with all of you who attended the EYES symposium as we had a great line-up of speakers. Our networking event, i.e. the quiz, was a lot of fun and we look forward to continuing this the next time we're able to meet face-to-face! We're looking forward to being able to see you all in person, safely, post-COVID19...

We're very excited to announce the successful funded applicants of the very first Clinical Observership Program (C.O.P). We received a lot of excellent applications, so this new scheme was very competitive. We'd like to congratulate Sanja Medenica (Montenegro), Seda Turgut (Turkey) and Vaduva Patricia Madalina (France) who were the three highest scoring applicants – well done! All three successful applicants will have an observership at their chosen centre of expertise. We would like to let you all know that we are currently working to make the C.O.P even bigger for the next round – so be sure to keep an eye out for the next call.

All 25 mentees have been matched to mentors within the ESE as part of our Mentoring Program. We anticipate all pairs would have had at least one meeting by now, as the summer break is over and quite a few of you have been on vacation. This is the first year that we have launched this initiative, and we hope to develop it into a more fruitful program upon the feedback we receive.

Finally, we have put a call out for new EYES Committee Members. If you think you can contribute and add to making EYES even better, we encourage you to submit an application. To ensure equal representation across disciplines, one role will be dedicated to a basic scientist. I have been part of EYES for quite some time now, first as the secretary and now as the co-chair, and I believe it has grown bigger and better with every year! Everyone one of us on the Committee goes above and beyond, to develop initiatives that will be beneficial as an early career investigator – we hope that the EYES positive and bubbly energy continues on for years to come...

**Ayse Zengin,**  
EYES Co-chair

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## Key dates

**22 - 22 Oct 2020**

Endobridge 2020 *Online*

**27 - 29 Oct 2020**

ESE Clinical Update on Acromegaly 2020 *Online*

**30 - 31 Oct 2020**

Congenital adrenal hyperplasia: from molecular medical research to clinical application *Nijmegen, The Netherlands*

**16 - 20 Nov 2020**

SfE BES Conference 2020 *Online*

**23 - 27 Nov 2020**

26th ESE Postgraduate Training Course on Endocrinology, Diabetes and Metabolism *Online*

**29 Nov - 2 Dec 2020**

ENE 2020 *Porto, Portugal*

**22 - 25 May 2021**

23rd European Congress of Endocrinology (ECE 2021)

**22 - 25 May 2021**

Plenareno Diabetes, Obesity and Cholesterol Metabolism *Belgrade, Serbia*

**03 - 09 Sept 2021**

EYES Annual Meeting

**6 - 9 Oct 2021**

45 Symposium on hormones and cell regulation

Sex and signaling: The molecular basis of sex and gender medicine *Mont Ste Odile, France*

# The first-ever e-ECE EYES Symposium and ESE quiz

Thanks to everyone who attended the first-ever e-ECE EYES Symposium and ESE online quiz!

Filip Gabalec (Czech Republic) and I organised the symposium, and it was chaired by Jakob Dal. As one of the co-chairs of EYES, I had the honour of giving a brief introduction to EYES and what the future holds for us. This includes our new Clinical Observership Programme (i.e. C.O.P), and I had the privilege of announcing the ten applicants with the highest scores – congratulations again to the winners! After this introduction, we asked our two invited speakers to the online floor: Nikolaos Nikolaou from Greece/UK and Cristina Olarescu from Norway. I think that many will agree with me that this year's EYES Symposium covered innovative science about endocrine-related diseases from a molecular point of view with very clear and high-level talks. The true advantage of the EYES symposium online was to read the comments after speaking. In our session, we were overwhelmed by questions from early-career investigators and senior researchers – including 'possibilities of AKR1D1 for patients with NFALD in the long term' and 'can you please explain differences in spliceosome component expression between FCA and SCA'. I hope that we can also welcome Nikolaos and Cristina at our upcoming EYES Annual Meeting in Birmingham, UK next year so that you can ask them (again) all your burning questions.

In the evening, it was time for the ESE online quiz, with Antoan Stefan Sojat (Serbia) and I hosting on behalf of EYES. We prepared a fun, short, 'pub style' trivia quiz with over 200 participants.



While you might expect 'easy' endocrine-related questions, we instead decided to ask you hard questions about 'in which country is wife-carrying a traditional contest?' and about the 'monarch butterfly' and its migrating distance. We sincerely hope you learned some new facts and had an enjoyable time with us. After the quiz was finished, we were allocated into breakout rooms for networking opportunities with other early-career investigators. This is exactly what EYES is all about – we have become a network of friends and collaborators who can't wait to meet each other. We hope to continue to spread this enthusiasm, which is the most important strength of the EYES community. I hope to see you all again at one of our (online) EYES events!

Eva Coopmans,  
EYES co-chair

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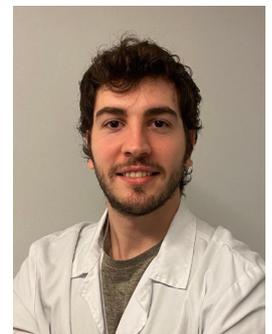
## Congratulations!



We are proud to announce that our own co-chair **Ayse Zengin** has received two distinguished awards, the Victorian Young Tall Poppy Award and ESCEO-IOF Young Investigator Award for her work entitled *Sex differences in the associations between peripheral calcified vessels, bone mineral density and body composition in aging adults from The Gambia, West Africa*.

Also, our editorial team member **Juan Manuel Jimenez Vacas** has just received the ESE Young Investigator Award during e-ECE 2020 for his work *Dysregulation of splicing Factor 3b Subunit 1 (SF3B1) is associated with the pathological transformation of the liver: pharmacological inhibition with pladienolide-B as novel therapeutic tool in liver disease*.

**Congratulations to Ayse and Juan on well-deserved awards!**



# EYES C.O.P

We have asked Sanja, Seda and Patricia, the first EYES C.O.P grant awardees, to tell us a little bit about themselves and share their thoughts about the C.O.P



It is a pleasure and honour to introduce myself to EYES prestigious and active Clinical Observership Program. My name is Sanja Medenica and I am currently an attending physician at the Clinical

Center of Montenegro, in the Department of Endocrinology, Internal Medicine Clinic. After graduating medical school from University of Belgrade, I pursued and completed Masters and PhD programs in endocrinology and an internal medicine residency at the same university, which is one of the strongest schools in Eastern Europe.

Receiving this remarkable opportunity to be part of EYES outstanding

program will help me to extend my knowledge and clinical skills in endocrinology. I am open to participating strongly in the program and giving my best to fulfill all the requirements and obligations, since it will have a tremendous impact on my future progress in endocrinology. One of the major aspects I am looking forward to is being exposed to a diverse patient population. Rome is a major metropolitan city, so I am sure there will be a wide

range of experiences available.

Having the opportunity to rotate through a medical center in Rome is truly extraordinary, and I am sure that the Centre of Expertise in Diabetes is full of endless possibilities.

I am very excited to take this major step in my career and I hope that the experience will open multiple doors in endocrinology.

**Sanja Medenica, Montenegro**



I am in the first year of the endocrinology and

metabolism fellowship program at the University of Health Science Bakirköy Dr. Sadi Konuk Training and Research Hospital, Istanbul. My enthusiasm for endocrinology, especially pituitary diseases, began in the early years of my internal medicine residency program. As a result, I will be attending the Centre of

Expertise for pituitary diseases, Novara, Italy. I think that the C.O.P program will provide a number of different perspectives and experiences to participants as young endocrinologists, and it will also help to build a valuable connection between different clinics. Further to this, I believe

that supporting this program with a grant would be a strong motivation for all participants, especially those who are continuing their education. Thanks to EYES for this opportunity. I am also happy and excited to be among the first EYES C.O.P grant winners.

**Seda Turgut, Turkey**



I am a final year French resident, specialising in Endocrinology, diabetes and metabolic diseases at Rennes University Hospital, France. During my residency, I have had the opportunity to work in the Endocrinology Unit of Cochin Hospital, Paris,

Reference Centre for Rare Adrenal Diseases. I have also obtained a Masters Degree in Endocrinology and Metabolism from the University of Paris Saclay, which has allowed me to develop a strong background in Endocrinology. In order to enhance my clinical knowledge, I am delighted to be spending a month in the European Centre of Expertise in Diabetic Foot at St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK.

The C.O.P is a great opportunity to improve my knowledge in Diabetology, discover new approaches in the treatment of diabetic foot, as well as experience a new health system and eventually create a partnership between my hometown hospital and the Diabetic Foot Department of St Mary's Hospital. This program is also a great way to improve confidence in the management of difficult cases.

This grant is a form of recognition of the work accomplished by young endocrinologists. It is, for

me, a wonderful driving force in the pursuit of developing skills in endocrinology and diabetology.

EYES gives us the opportunity to interact at the European level with young endocrinologists, and stimulates exchanges and collaborations around Europe. I am proud to be part of this dynamic community of young researchers and doctors, united by their passion for endocrinology.

**Vaduva Patricia, France**



# The history of endocrine disruptors



The ever-changing world is based on trial and error. Adapting natural resources in the pursuit of financial and economic growth has led to immense advances in industry and many would argue that the benefits outweigh the negatives. Despite this, behavioral and physiological activities of our organism rely on the precision and finesse of our natural “messaging system” - the endocrine system. By definition, endocrine disrupting chemicals (EDC) can interfere with any aspect of hormone action. There are now over 1000 chemicals reported to have this effect, with thousands of new chemicals entering the marketplace every day, while studies have found that there are EDC in every individual tested and in many ecosystems in distant corners of the world. So, what do we know about the timeline of this process?

In the 1920s, pig farmers noticed a lack of fertility in swine herds fed moldy grain. This was induced by consuming mycoestrogens that was in the mold. Cases of sheep with low fertility, wide scale masculinisation of bivalves and gastropods, loss of the alligator population and abnormal ovarian morphology were also connected to different chemicals used in various industries in the following years. The book *Silent Spring*, published in 1962, warned of the long-term consequences for loss of wildlife populations after the liberal use of pesticides and herbicides; but it wasn't until 1991, and the Wingspread Conference where the term endocrine disruptor was coined. In the 1970s, artificial estrogens prescribed from 1941 to 1970 resulted in unusual cancers in humans, shedding light on the fact that the effect of EDC spans more than presumed malignancy. Fast forward to year 2020, and years of interdisciplinary research introducing harmful aspects of very frequently used compounds such as BPA (bisphenols), phthalates, PCBs (polychlorinated biphenyl), DDT, lead etc. The evolution of knowledge itself is as powerful as any industrial or technological revolution. In the same way as an endocrine disruptor uncontrollably changes the natural signaling pathway, knowledge will alter the use of substances showing once again that every process in nature makes a full circle.

So, in the end, a mink and a physically disabled alligator walk into a bar and ask for bottled water from a bartender named Ed. The joke itself is a vivid and metaphorical depiction of the accidental human influence on natural cycles, since the animals that historically suffered from human-made endocrine disrupting chemicals are now far less influenced by these substances than man itself.

**Antoan Stefan Sojat, Serbia**

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# ED<sup>2</sup>: endocrine disruptors and erectile dysfunction, any evidence?



According to the European Commission definition, an endocrine disruptor is a substance or mixture able to alter the function of the endocrine system and consequently cause adverse health effects in an organism or its progeny<sup>1</sup>. Although the number of such substances is increasing on a daily basis due to industrial production, very little is known thus far about the possible impact of either short- or long-term exposure in terms of male reproductive and sexual function.

Nevertheless, some preclinical research projects have focused on this “evolutional” issue in recent decades, identifying the disruptive role of some of these compounds (e.g. diethylstilbestrol and bisphenol A) on hypothalamic-pituitary-gonadal axis in rats<sup>2</sup>.

Erectile dysfunction, along with low libido and low physical performance, is the main symptom of male hypogonadism, often resulting from “multifactorial” unhealthy conditions (e.g. obesity, cardiovascular disease, or psychological distress). Some literature reports were able to document the observation of at least one of the aforementioned symptoms in adult men following exposure to endocrine disruptors<sup>3</sup> but no evidence produced so far was able to prove a causal relationship between the observed events.

In this context, a study conducted on men with professional exposure to bisphenol A revealed a 3- to 7-fold increase of sexual dysfunction among exposed men, providing the first evidence of a linear relationship between exposure dose and disruption extent<sup>4</sup>.

The strict relationship between sexual life and endocrine disruptors is still to be determined from a molecular point of view, but evidence so far collected along with the unceasing identification of new substances belonging to this group, allows our scientific community to speculate about the potential disastrous impact on human sexual behavior, making the need of a better knowledge in the field an essential need for the years to come.

**Walter Vena, Italy**

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# Amazing careers:

## Meet Raúl M. Luque

*Raúl M. Luque is Professor of Cell Biology at the Department of Cell Biology, Physiology and Immunology of the University of Córdoba (UCO), and Head of the -OncObesity and Metabolism- group at the Maimonides Biomedical Research Institute of Córdoba (IMIBIC). He started his scientific career in Córdoba (Spain) and then, as a Research Assistant Professor at the University of Illinois (USA; 2003-2007). In 2007, he was reincorporated at the UCO,*



Raúl Luque

*establishing his own research research line focused on the pathological association between the dysregulation of metabolism (i.e. obesity, diabetes) and different endocrine-related cancers. He has published more than 150 articles in international peer-reviewed journals and has filed several international patents during the last years. He is an active promoter of the Andalusia, Spanish and European Societies of Endocrinology, Metabolism and Nutrition [e.g. Executive Committee member of the Andalusia and Spanish Societies (SEEN and SAEDYN), of the European Neuroendocrine Association (Enea), member of the Programme Organising Committee of the European Society of Endocrinology (ESE), etc.]. An example of his contribution and recognition of the field of endocrinology, he received in 2018 the “Jens Sandahl Christiansen Award” by the European Society of Endocrinology.*

*Meet Raúl M. Luque .*

### What motivated you to choose endocrinology?

This happened early in my career, probably during the second year of university when I met some professors at the Cell Biology Department, particularly Professor Maria del Mar Malagon, who immediately motivated me to have a strong passion for the endocrinology field. I was especially fascinated with the different and critical functional roles linked to the pituitary gland, and from that moment, I decided that I wanted to be involved in this specific research field as a research undergraduate student associated with this Department.

### How did your journey begin?

In the second year of my studies at university in the Biology Faculty, I started to closely participate in the activities of the Molecular and Cellular Endocrinology Group (Spain) led by Professor Francisco Gracia-Navarro at the University of Cordoba, under the direct supervision of Professor Maria del Mar Malagón. This great experience changed my perspective on how to focus my future career. Upon completing biology, I had the opportunity to perform my PhD studies in the same research group. At that moment I met Professor Justo Castaño who has been the most important person supporting the development of my entire scientific career. This experience, together with my short term stays at the University of Illinois at Chicago (USA) in 2000 and at the University Medical Center Hamburg-Eppendorf (Germany) in 2001, introduced me in the field of somatostatin receptors and the

hypothalamic-pituitary-growth hormone axis, which have been two of the most important areas in my scientific journey.

### What do you see as a key moment of your career?

I have many key moments in my scientific career. If I have to choose one, I will definitely say that the most important and inspiring moment (from a personal and professional point of view) has been to have the opportunity to closely work with Professor Rhonda D. Kineman during my postdoctoral period (2003-2007) at the University of Illinois in Chicago. This period of time was very motivating and successful for me in terms of number of publications in highly-ranked international peer-reviewed journals which allow me to obtain a highly competitive fellowship to return to Spain (Ramon y Cajal), which I consider another key moment since allowed me to continue my career as a principal investigator and to obtain a permanent position in the University of Cordoba (Spain).

### What do you consider your greatest achievement so far?

Honestly, I think my greatest achievement is to have a job that I really enjoy. I think that I am lucky since my job allows me to wake up every morning and be really happy to go to work. I also consider that one of the most important and gratifying parts of my job, is to have the opportunity to train, closely follow and supervise young brilliant researchers that have been or I am sure they will have very successful scientific careers.

**What were the greatest challenges you have encountered?**

Probably the greatest challenge for a senior translational researcher is the constant fight to obtain continuous financial support, and also the high pressure to publish results in high-impact journals. Nowadays, we live in a moment where it seems that your research is not sufficient or relevant to maintain your grants if you are not able to publish a good number of manuscripts every year in these high-impact journals. I consider that this is something dangerous for the basic-translational science, which is associated with immense pressure for early career researchers who aim to one day have an independent group.

**What do you think are the greatest challenges facing early-career endocrinologists now?**

The competition to obtain a position as clinical specialists or translational researchers is much harder now than when I started my career. My impression is that during the last 10-15 years, only the top students (in term of best ranking scores) seem to have the best opportunities to choose specific positions (i.e. medical speciality, prestigious research group, etc.), to obtain competitive fellowship, etc. and, in my experience, not always these students are the most motivated and brilliant. This introduces a lot of pressure, and sometimes a high level of disappointment, for early career clinical and basic endocrinologists, that deserve an opportunity to work in this fascinating field.

**How do these compare with when you were starting out in your career? Has there been any progress?**

There has been great progress in many aspects of the clinical and translational endocrinology field (e.g. new opportunities of interactions and learning through the social net-working, variety of specialized courses, many specific clinical-basic meetings, etc.) which is something really positive. However, as I mentioned before, nowadays the level of pressure and the associated stress for the young endocrinologists is much higher than when I started my career and, in my opinion, this is something that might be dangerous for a complex speciality such as endocrinology, where we need motivated professionals.

**In which areas do you think EYES can have the greatest and most useful impact in the future?**

I think people involved in EYES are doing an excellent job to put together early career clinical, translational and basic researchers from different areas of interest and countries. In my opinion they have to continue working hard to have relevant positions in the decision making committees not

only of the European Society of Endocrinology but also in the National Societies, since they will be the future of European Endocrinology and they have to be part of the important decisions right now. They have the responsibility to establish interactions among early career endocrinologists across different European but also non-European countries to create a solid and motivated network of endocrinologists. I think that if the clinical and basic researchers from different countries work together in the same direction, they will build a consortium that would be able to give the endocrinology field the important place that it deserves worldwide.

**What advice would you give people setting out in endocrinology today?**

First, I would advise choosing a good supervisor and a specific area that motivates them, since these initial selections will be critical to enjoy and love the endocrinology field for the rest of their lives. Then, I would also advise that they should be directly involved with the regional, national and European young committees of their endocrinology societies (i.e. EYES), since this will give them new opportunities at this stage of their career. Also, I will strongly suggest participating in the National and International Endocrinology Societies meetings to learn the most recent results and hot topics in their areas, and to interact with experts in the field since, all of this, will definitely motivate them and be an inspiration to continue working in this amazing field.

**Which endocrinologists did you find most inspirational when you were starting out, and why? Which have inspired you most since?**

This is a difficult question since there are many people working in the endocrinology field that have been a true inspiration for me throughout my whole career. From the researchers that have been my direct supervisors during many years (Professors Francisco Gracia-Navarro, Maria del Mar Malagón, Justo Castaño and Rhonda Kineman), to basic and clinical researchers whom publications have been very inspirational to me (e.g. Carlos Dieguez, Agnes Schonbrunn, Marta Korbonits, Shlomo Melmed, Ilan Shimon, Jaques Epelbaum, Steven Lamberts, Leo Hofland, etc.). Gratefully, I had the opportunity to personally interact with many of them at international meetings and conferences, which also has been highly stimulating and motivating for me.

**Juan Manuel Jimenez Vacas, Spain**



# Metabolism disrupting chemicals



Obesity represents a chronic pandemic for the western world. More than 60% of adults in USA, where detailed data exist, are overweight or obese. Type 2 diabetes prevalence follows the increased rates of obesity and around 10% of the adult population in these countries suffer from the disease. This is the result of the gene-environment interaction, which leads to changes in the equation of energy intake and energy expenditure and results in fat excess.

Environment is everything other than the genome. An endocrine disruptor chemical (EDC) is an exogenous chemical, or mixture of chemicals, that interferes with any aspect of hormone action. Any EDCs that alter susceptibility to metabolic disorders are called metabolism disrupting chemicals (MDCs), known also as obesogens, diabetogens or diabetesogens. The list of documented MDCs is long and includes dichlorodiphenyltrichloroethane (DDT), dioxins and furans, perfluorinated compounds (PFCs), polychlorinated biphenyls (PCBs), polybrominated flame retardants (BDE-47, TBBPA), bisphenol A (BPA) and phthalates.

MDCs can alter energy intake by targeting gut cells involved in nutrient transport, gut cells involved in peptide secretion, gut microbiota or hypothalamic neurons that control hunger and saturation. They can also alter energy output by targeting brown adipose tissue function,

skeletal muscle metabolism or thyroid hormone production and action. Furthermore, MDCs can act on the most important metabolic tissues involved in energy storage, namely pancreas, liver, white adipose tissue and skeletal muscle. More specifically, MDCs may decrease or increase insulin production. They can affect lipogenesis through insulin concentrations changes, upregulation or downregulation of lipogenic enzymes or direct impact on the mitochondrial respiratory chain.

MDCs can also increase liver fat and induce insulin resistance. Last but not least, they may alter gene expression and cell differentiation. The molecular mechanisms include direct nuclear receptor activation or epigenetic regulations through DNA methylation and histone modifications.

The exposure levels, the timing of exposure, the sex and age are important variables for the final phenotype. Epigenetic transgenerational inheritance is of great importance, therefore pregnant women represent a vulnerable population. MDCs, and EDCs in general, exist everywhere and we all carry a certain chemical body burden. EDCs are a matter of high concern for the World Health Organization (WHO) and relevant scientific societies, such as the European Society of Endocrinology and Endocrine Society.

Stavroula A. Paschou, Greece

# ESE and endocrine disruptors

European Society of Endocrinology (ESE) Endocrine Disrupting Chemicals Working Group, chaired by Prof Josef Köhrle (Charité, Berlin, Germany), is working hard on increasing the visibility of EDCs through the inclusion of this topic in ESE-supported conferences, workshops, training courses, and other educational activities. Furthermore, at the European Union (EU) level, ESE has focused its activities mainly around EDCs. Just recently, in June 2020, ESE submitted its views to the European Commission's Chemicals Strategy for Sustainability. This EU Strategy is one of the cornerstones of the ongoing European Commission's work to build a healthier and more resilient EU society. In its input, ESE urges the Commission to develop new guidelines for the burden of proof required for an EDC to be classified as such. ESE also calls for increased attention on creating consistent definitions, criteria, and data identification requirements for EDCs across all EU related legislations, while pointing out that coordinated funding for independent research is a prerequisite to obtaining impartial insights into the impact of EDCs. As EDCs increase the prevalence of obesity and diabetes – resulting in higher susceptibility to COVID-19 – this input is very important during the current pandemic.

This issue is dedicated to EDCs and their effects on our health as a small but important reminder that the greatest endocrine disruptor is none other than humans themselves.

Read more and stay up to date with ESE and EDC working group activities on <https://www.ese-hormones.org/advocacy/endocrine-disrupting-chemicals/>.

Ljiljana Marina, *Serbia*



## Endocrine disruptors and cancer

It is well-known that exposure to endocrine disruptors (EDs) contributes to the development and progression of certain endocrine-related cancers. In this sense, although the precise molecular mechanisms underlying the association between EDs and cancer are not fully understood, estrogen receptor alpha represents the main target of numerous EDs. Consequently, the most common ED-influenced endocrine-related cancers are breast cancer (BCa) and prostate cancer (PCa), mainly due to the key role that estrogens play in the development and aggressiveness of these tumour types<sup>1,2</sup>. As an example, the exposure to bisphenol A (BPA), one of the most studied EDs, leads to an increase in cell-proliferation and a decrease in apoptosis rate in BCa cells through the modulation of key molecular processes, including DNA repair<sup>3</sup>, gene methylation<sup>4</sup>, and oxidative stress<sup>5</sup>.

Interestingly, in the case of PCa, animal model studies show that the sensitivity of the prostate to EDs is much higher during development and puberty, suggesting that infants and children could be a highly vulnerable population for ED exposures and increased risk of PCa with aging<sup>6</sup>.

Finally, it should be noted that most of the information on EDs and cancer has arisen from retrospective cohort studies and cell-lines/animal-models. Given the noticeable limitations associated with these approaches, further studies and novel models are necessary to fully characterise the influence of EDs over the development and progression of endocrine-related cancers.

Juan Manuel Jimenez Vacas, *Spain*

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# Early Career Endocrinologists in the UK

We spoke with Dr Louise Hunter of the UK Society for Endocrinology Early Career Steering Group.

Dr Hunter is an endocrinology and diabetes NIHR Clinical Lecturer at University of Manchester. Her research focuses on the interaction between nuclear receptor signalling and the circadian clock, and how this serves to regulate metabolism.



Louise Hunter

## What sort of educational programmes do you develop for early career endocrinologists?

The Society for Endocrinology runs dedicated educational events for early career clinicians and researchers. For early career clinicians, the annual Clinical Update course is designed specifically to cover the curriculum of the UK Endocrinology & Diabetes Specialty Certificate Examination (SCE). For early career scientists, the Career Development Workshop includes small-group sessions focused on improving important skills such as grant writing and science communication. More recently, members of the Society have put together the "Lab in Your Living Room" series of webinars to help early career members develop new skills during the lockdown.

## How do you offer support to early career endocrinologists to help them get involved in events like SfE BES and EYES Conference?

Student and Early Career members of SfE can apply for Registration Grants (students) and Travel Grants (EC) to help cover the costs of attending SfE BES. There is a dedicated Early Career Symposium at BES, with a rolling programme covering academic career pathways, alternative career options, and public engagement. We have an Early Career Lounge and a quiz evening at BES, to provide EC members with networking opportunities. We also have a specific poster competition for student members, and Early Career Prize Lectures, which celebrate the work of EC scientists and clinicians.

## What advice would you offer early career endocrinology researchers who want to become more well-known?

Getting involved in the Society can certainly help EC members raise their profile. We will shortly be running a #ThisIsEndocrinology campaign to promote awareness of the breadth of endocrinology clinical practice and research.

Social media, used carefully, can certainly help EC researchers become better known, and this is a topic frequently covered in SfE BES public engagement sessions.

## What do you see as the greatest challenges facing an early career endocrinologists now (aside from COVID-19) and what advice would you give on overcoming these?

Acquiring funding continues to be highly competitive, and publishing high-quality papers to improve funding chances remains challenging! It's sensible to look for mentors and sponsors early in your career, to provide guidance and potentially put you forward for opportunities. Some organisations like the Academy of Medical Sciences offer formal mentorship programmes. The Society for Endocrinology also runs Leadership and Development Awards which provide promising EC members with tailored career advice and experience to help them advance. Keep an eye out for smaller starter grants to kickstart applications for larger funds; again, organisations such as the Society for Endocrinology can help here.

## How have you noticed COVID-19 impacting on endocrinology research and clinical practice for early career endocrinologists in the UK?

Early career researchers will almost certainly have had their research interrupted, as UK universities have largely closed their campuses, putting all but essential COVID-19 research on hold. Early career clinicians have been redeployed away from specialty work, to providing general medicine inpatient care, which has similarly interrupted their training. Even as lockdown eases, it will be a long time before activity resembles normal, for either researchers or clinicians, as social distancing will limit laboratory capacity and specialist clinic provision.

Philip McBride, UK



# Yuvocrinology: The Young Endocrinologists of India



“Yuvocrinology” is a conglomerate of young endocrinologists across India. The word ‘YUVA’ means ‘youth’ in the national Hindi language. The idea of Yuvocrinology was conceptualised by Prof SV Madhu, the founding President of the Endocrine Society of India (ESI), to provide a voice for early career endocrinologists. The concept was further spearheaded by the current office bearers of the ESI, Dr. Sanjay Kalra and Dr. KVS Hari Kumar, President and Joint Secretary, respectively. The first meeting of YUVACRINOLOGY was held in Goa in September 2019. Apart from an opportunity for networking, the meeting involved a combination of clinical talks, lectures, challenging mind and body games, as well as a series of workshops for personal and professional development. The meeting culminated with an open interactive forum with Prof SV Madhu, who gracefully answered all our queries and gave wonderful suggestions from his wealth of experience. He also promised to work on the suggestions given by the young members for promotion of endocrinology amongst lay people and fellow practitioners.

Acting on these suggestions, the Yuvocrinology brigade were tasked with handling the social media platforms of the ESI. The official ESI Twitter account (@IndiaESI) is managed by Dr. Mohan T Shenoy and the Twitter handle of Indian Journal of Endocrinology and Metabolism (@j\_metab), the official ESI journal, is managed by Dr. Chitra Selvan. Apart from regular updates, periodic quizzes are being conducted by the (@j\_metab) in association with Indian Journal of Critical Care Medicine (IJCCM) and Indian Journal of Medical Paediatric Oncology (IJMPO) to engage our endocrinologists.

With the emergence of the COVID-19 pandemic, Yuvocrinology members were instrumental in drafting a document for ‘telemedicine practices in India’ to guide doctors. The document preceded the release of official telemedicine guidelines by the Medical Council of India.



The Yuvocrinology team has published an article in a peer reviewed journal on ‘Telethyroidology’ which discusses how telemedicine can aid us in the treatment of various thyroid disorders. An ‘ESI-COVID-19 Ideathon’, was conducted to collect the best ideas on “How can endocrinologists help fight the COVID-19 pandemic in the country?” The submissions were reviewed by senior endocrinologists and the top-rated ideas were forwarded to the local public health authorities. Dr. Altamash Shaikh, made an impressive video showcasing the contribution of endocrinologists in the COVID-19 pandemic and many Yuvocrinology members came up with educational videos in regional languages regarding the management of endocrine disorders during these challenging times.

Taking a cue from the September 2019 meeting, the Yuvocrinology members are working closely with senior endocrinologists to improve awareness about endocrinology across India via a YouTube channel named ‘Wellness Endocrinology’. We also have Facebook and Instagram pages with the same name and theme. The Yuvocrinology team is also looking to build partnerships with similar societies across the world to bolster the growth and image of endocrinology.

Despite these difficult times throughout the world, the spirit of Yuvocrinology continues to thrive and we plan to hold our second annual meeting this year on a virtual platform and would like to seek active participation from the EYES community. Yuvocrinology members are taking an active role in the affairs of ESI, which is the parent body of all endocrinologists in the country. Yuvocrinology has been accepted as the voice of early career endocrinologists, by the endocrine leadership in the country. Finally, the Yuva brigade thanks all the endocrinologists of India and abroad, for working together to further the cause of our speciality.

**Dr Om Lakhani, MD, DNB;**

**Dr Sunil Kumar Kota, MD, DNB;**

**Dr Tejal Lathia, MD, DM**



# ESE Journals

In support of the ESE's mission to advance endocrinology, the Society partners with Bioscientifica (a well-established and trusted society publisher) in the publishing of a portfolio of highly-respected journals that cater to both scientists and clinicians.

As part of our ongoing series offering an insight into the ESE journals, below is an overview of everything you need to know about the *Journal of Endocrinology*, the *Journal of Molecular Endocrinology and Endocrine-Related Cancer*. ESE members benefit from free access to all of the ESE journals, as well as receiving a 40% discount on Article Publication Charges (APC) when publishing in *Endocrine Connections* and 25% off APCs when publishing in *Endocrinology, Diabetes & Metabolism Case Reports* (endorsed by ESE).



Led by Professor Colin Farquharson and Professor Martin Haluzik, the *Journal of Endocrinology* is a leading global journal that publishes high-quality original research articles, reviews and science guidelines in endocrine physiology and metabolism. This includes hormone secretion; hormone action; biological effects.

Further to this it also publishes basic and translational studies at the organ, tissue and whole organism level, as well as accepting submissions on cardiovascular, muscle and renal endocrinology as well as on the immune system where this impacts the endocrine system.

First published in 1939, the journal has a long history in disseminating the latest research in the advancements of endocrinology to the widest possible audience. The journal's latest Impact Factor is 4.041, with a selection of most highly cited content contributing to this fantastic result available for readers of the journal to explore. The journal also regularly publishes anniversary issues to mark the most significant historical advances in the field. These contain an editorial from the invited guest editor(s) and a collection of thematic reviews. The latest special issues can be found here.

If you have any questions about the journal, or wish to find out more about how to get your work published, please do not hesitate to contact a member of the editorial team at [joe@bioscientifica.com](mailto:joe@bioscientifica.com)

Register for content alerts and follow the journal on Twitter (@JEndocrinology) to stay up to date with the latest research and news from the *Journal of Endocrinology*.



## Journal of Molecular Endocrinology

The *Journal of Molecular Endocrinology* was launched in 1988 and is a leading global journal that publishes original research articles and reviews. The journal focuses on molecular and cellular mechanisms in endocrinology, including: gene regulation, cell biology, signalling, mutations, transgenics, hormone-dependant cancers, nuclear receptors, and omics. Basic and pathophysiological studies at the molecule and cell level are considered, as well as human sample studies where this is the experimental model of choice. Technique studies including CRISPR or gene editing are also encouraged.

With an Impact Factor of 3.562, the journal is a first-choice home for the latest research in molecular endocrinology. It is led by Professor Colin Farquharson and Professor Martin Haluzik, and is supported by a highly prestigious Editorial Board. In line with the *Journal of Endocrinology*, the *Journal of Molecular Endocrinology* regularly publishes thematic and anniversary issues in order to mark key advancements and milestones in the field. The latest of these issues is '90 Years of Progesterone', guest edited by Simak Ali and Bert W O'Malley.

To find out more about the journal, please do not hesitate to contact a member of the editorial team at [jme@bioscientifica.com](mailto:jme@bioscientifica.com).

Stay up to date with the latest content and news from the *Journal of Molecular Endocrinology* by signing up for content alerts and follow the journal on Twitter (@JMolEndo).



## Endocrine-Related Cancer

Endorsed by the ESE, *Endocrine-Related Cancer* provides a unique international forum for the publication of high quality original articles describing novel, cutting edge basic laboratory, translational and clinical investigations of human health and disease focusing on endocrine neoplasias and hormone-dependent cancers; and for the publication of authoritative review articles in these topics. The journal accepts Research, Reviews, Guidelines and Recommendations, Editorials and Letters to the Editor.

The journal has recently announced that Professor Matthew Ringel has been appointed as new Editor-in-Chief of *Endocrine-Related Cancer*. He is the Ralph W. Kurtz Professor of Medicine at The Ohio State University, USA. He will officially take over leadership of the journal from Professor Charis Eng on 1st January 2021. Every issue the Editor-in-Chief selects their 'Editor's choice' paper, which is made freely available online for anyone to read, alongside regular special issues and article collections sharing top viewed and cited articles. With an Impact Factor of 4.800 *Endocrine-Related Cancer* is a top-choice publication for anyone publishing in the field. Explore the latest issue for yourself and find out why the journal should be the home of your next article.

Follow *Endocrine-Related Cancer* on Twitter (@EndoCancer) and stay up to date with the latest research through our alerts service.

**Sarah Morgan, Bioscientifica**



# Latest research

## Type B insulin resistance syndrome associated with connective tissue disease and psoriasis

This case presents a 27-year-old Caucasian male with psoriasis and connective tissue disease who developed unexplained rapid weight loss, severe acanthosis nigricans, and hyperglycaemia. Euglycaemic clamping was used to confirm severe insulin resistance and immunoprecipitation assay demonstrated anti-insulin receptor antibodies. Over a 3-year follow-up treatment with metformin, hydroxychloroquine, and methotrexate proved successful for maintaining metabolic control; however, the patient did develop psoriatic arthritis.

Lebkowska, A., Krentowska, A., Adamska, A., Lipiriska, D., Piasecka, B., Kowal-Bielecka, O., Gorska, M., Semple, R., Kowalska, I. (2020). Type B insulin resistance syndrome associated with connective tissue disease and psoriasis, *Endocrinology, Diabetes & Metabolism Case Reports*, 2020, 20-0027.

## Circulating plasma proteins and new-onset diabetes in a population-based study: proteomic and genomic insights from the STANISLAS cohort

Increasing the understanding of factors associated with the development of pre-diabetes and type 2 diabetes is essential to improving the effectiveness of prevention strategies. The study by Ferreira and colleagues followed 1506 participants over a 20-year period. Unsurprisingly, age, BMI, blood pressure, glucose, LDL cholesterol, and low eGFR were associated with development of pre-diabetes. But more interesting is the specific proteins, such as pappalysin-1, that appeared to show associations with onset of both pre-diabetes and type 2 diabetes.

Ferreira, J., Lamiral, Z., Xhaard, C., Duarte, K., Bresson, E., Devignes, M., Le Floch, E., Roulland, C., Deleuze, J., Wagner, S., Guerci, B., Girerd, N., Zannad, F., Boivin, J., Rossignol, P. (2020). Circulating plasma proteins and new-onset diabetes in a population-based study: proteomic and genomic insights from the STANISLAS cohort, *European Journal of Endocrinology*, 183(3), 285-295.

## Clinical considerations for the treatment of secondary differentiated thyroid carcinoma in childhood cancer survivors

Due to increased rates of survival and improvements to treatment and supportive care for childhood cancer survivors, the rates of differentiated thyroid carcinoma have increased dramatically – and are expected to continue increase in coming years. Van Santen et al, sought to provide more detailed guidance on considerations clinicians should make in the management of patients with differentiated thyroid carcinoma. Due to limited evidence, the team largely based their conclusions on clinical experience. They recommend individualised plans of therapy. They also suggest that the childhood cancer survivor should be included in the decision-making process. The patient should be given clear and understandable information to aid them in their decision-making.

Van Santen, H., Alexander, E., Rivkees, S., Frey, E., Clement, S., Dierselhuys, M., Lebbink, C., Links, T., Lorenz, K., Peeters, R., Reiners, C., Vriens, M., Nathan, P., Schneider, A., Verburg, F. (2020). Clinical considerations for the treatment of secondary differentiated thyroid carcinoma in childhood cancer survivors, *European Journal of Endocrinology*, 183(3), P1-P10.

## Effect of sex and sex steroids on brown adipose tissue heat production in humans

Based on the premise that women have larger proportions of brown adipose tissue than men, this research aimed to characterise some of the effects that sex and sex steroids had on brown adipose tissue activity in men and women at two stages of the menstrual cycle. The team used infrared thermography to measure responses of supraclavicular temperature to a cold stimulus and a meal stimulus. The analysis found that women elicited a greater thermogenic response than men to the different stimuli. They also identified that women in the luteal phase of their menstrual cycle have elevated supraclavicular temperatures at baseline. This could have a significant impact on future research investigating brown adipose tissue activation and energy expenditure at different stages of the menstrual cycle.

Fuller-Jackson, J., Dordevic, A., Clarke I., Henry, B. (2020). Effect of sex and sex hormones on brown adipose tissue heat production in humans, *European Journal of Endocrinology*, 183(3), 343-355.

## COVID-19 and androgen-targeted therapy for prostate cancer patients

The review builds on previous work suggesting that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) critically targets transmembrane serine protease 2 (TMPRSS2) and angiotensin converting enzyme 2 (ACE2) to enter host cells. In the current environment of vaccine development, the authors highlight the potential of using androgen suppression to downregulate TMPRSS2 and ACE2. Further, they suggest that androgen signalling may be an avenue for treatment of SARS-CoV-2, particularly in prostate cancer patients, many of whom will already have experienced this therapy.

Bhowmick, N., Oft, J., Dorff, T., Pal, S., Agarwal, N., Figlin, R., Posadas, E., Freedland, S., Gong, J. (2020). COVID-19 and androgen-targeted therapy for prostate cancer patients, *Endocrine-Related Cancer*, 27(9), R281-R292.

Philip McBride, UK