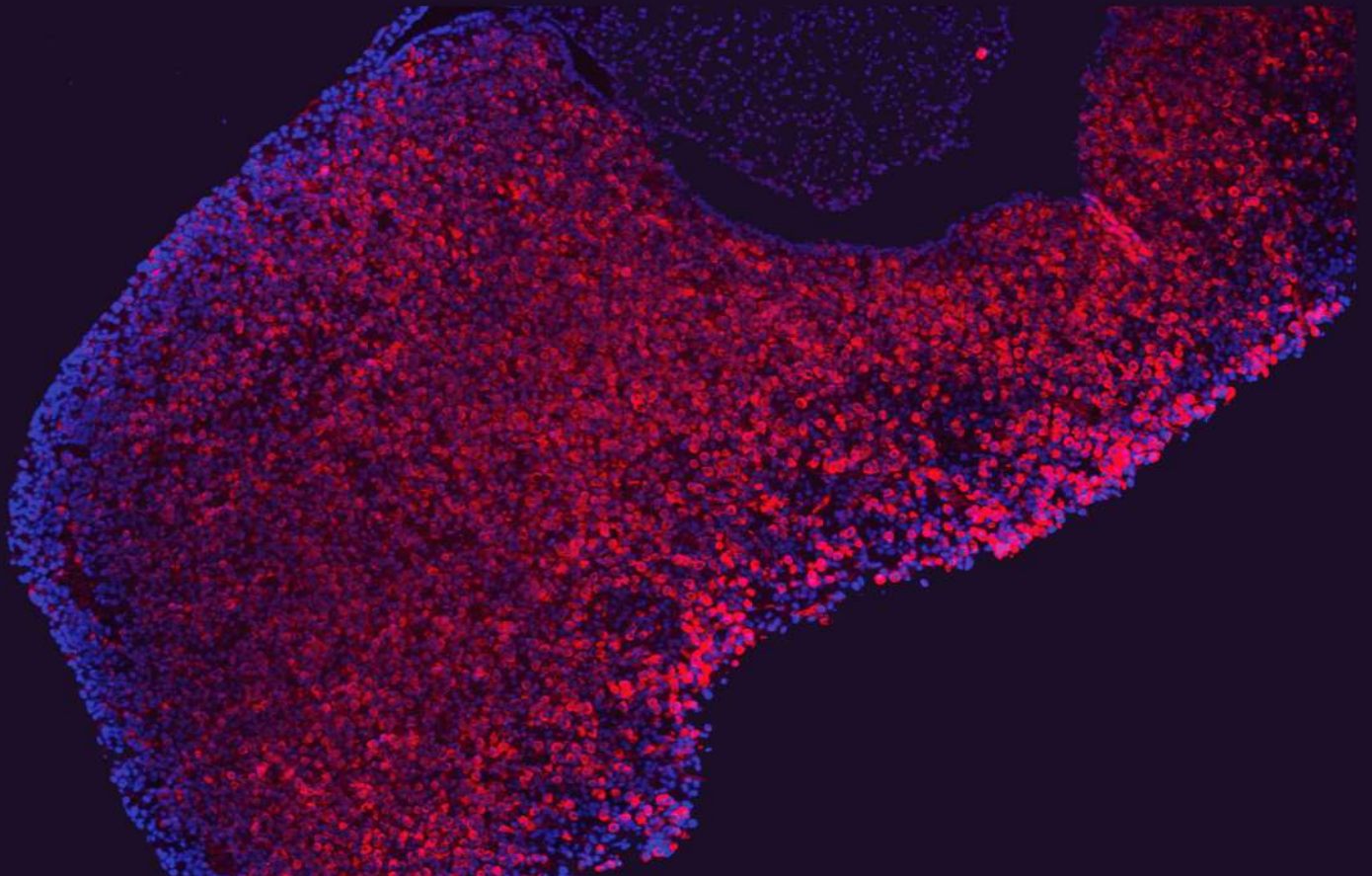


Issue 7 | Winter 2020

# eyes NEWS

The Newsletter of the ESE Young Endocrinologists and Scientists



**We invite you to EYES 2020**

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**Also in this issue:**  
**Introducing: AndroYoung -  
Italian Young Andrology Society**



**European Society  
of Endocrinology**



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This document is available on the ESE website:  
[www.e-se-hormones.org](http://www.e-se-hormones.org)  
 and also  [fb.com/groups/eyes.endo](https://fb.com/groups/eyes.endo)

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 (full description on Page 6)

## EDITORIAL



What an exciting issue! This issue of the EYES Newsletter will be sent in print to all early career ESE members. Also, with three new members on the editorial board, we are now stronger than ever. Read all about it on Page 3. Full coverage of the EYES 2019 annual meeting is on pages 3 and 4, and a very interesting data analysis piece on page 14.

On page 5, we invite you to EYES 2020 and on page 10 to ECE 2020. Find out about AndroYoung on page 7 and meet the amazing Marco Bonomi on page 8. Read short reviews on pages 12 and 13.

You will find the announcements of two amazing Post Graduate courses on pages 9 and 11. Read about EYES activities during Endo Bridge on page 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, EYES co-chair



ESE young endocrinologists  
 and scientists  
 looking forward



## EYES at its BEST

### EYES annual meeting

### Athens 2019

The 7th EYES Meeting took place in Athens, Greece during 13 to 15 September 2019. With 200 participants from 32 countries (71% international, 29% Greek), 115 abstracts in total, 68 oral and 47 poster presentations, the 7th EYES meeting was the very best place for early career investigators within the field of endocrinology.

On top of high quality original research presentations from submitted abstracts, there were 6 invited lectures and 2 workshops delivered by well-known senior Greek endocrinologists - together contributed to an exciting scientific meeting. The best oral presentation of the meeting was awarded to Dr Nikolaos Nikolaou (UK); and

the Hellenic Society's best oral presentation was awarded to Jose L. Flores-Guerrero (The Netherlands). These winners will present their work at the 22nd European Congress of Endocrinology and the Hellenic Endocrine Society Meeting, respectively. All of the meeting abstracts have been published, for first time, in Endocrine Abstracts, <https://www.endocrine-abstracts.org/ea/0067>.

Beyond excellent science, delegates had the opportunity to network, to meet old friends and make new ones in a rich cultural setting at the historical centre of Athens. Just in front of the famous Temple of Zeus, close to the National Garden and underneath the Acropolis sacred rock, EYES shared wonderful moments and created unforgettable memories.

The 7th EYES meeting was organized by the EYES Committee and the local Athens 2019 EYES team, comprised of 40 enthusiastic young Greek endocrinologists, led by Dr. Stavroula A. Paschou, also a member of the EYES Committee.

## The 2020 EYES initiatives

We have been extremely busy over the past year reshaping the EYES Committee and strategizing new initiatives that will be most beneficial for the EYES community. The research and clinic environment are only getting more and more competitive. As such, we wanted to help those within the EYES community, to stand out from the rest and gain as much as possible during their early career phase - enabling them to be competitive for future funding and senior positions. With that, we would like to launch TWO new initiatives for 2020:

1. **Clinical Observership Program (C.O.P)**: enables Early Career Investigators (ECIs) from Europe, to grow and learn during a short, one-month stay in various European endocrine centres of excellence. Due to different European laws, the time spent at the host centre will be defined only as an "observership". Nine centres across Europe have thus far agreed to participate including hospitals from London,

Athens, Thessaloniki, Florence, Novara, Naples, Rome, Belgrade and Rotterdam. In the first year of this program, we will be offering three places in the C.O.P, where successful applicants will receive 1000€ contribution toward travel expenses. **Applications will open soon, so be sure to check the EYES website regularly.**

2. **Mentorship Program**: aims to give ECIs the opportunity to connect with a senior ESE member (i.e. mentor) who is **not** from their own country. This program will help gain a realistic insight into their chosen profession and to provide strategic career development advice. These may include applying for fellowships and grants, being involved with guideline development, journal editorial opportunities, applying for promotions, real insight in profession (work-life balance), gain leadership skills, and many other aspects of career development in the clinic and research. We will be accepting applications at the end of January, where applicants will be matched to a mentor by the end of February. **There will be an official "meet and greet" afternoon tea session at ECE 2020 Prague.** Guidelines and application form will be available on the EYES website.

Ayse Zengin, EYES co-chair



## Best oral presentation at EYES 2019 annual meeting

### Me and EYES

We'd like to introduce Dr Nikolaos Nikolaou (UK) who was awarded the best oral presentation at the recent annual EYES meeting in Athens.

#### What is your current research interest?

My current research focuses on the role of pre-receptor regulation of steroid hormone action and bile acid synthesis in the pathogenesis of non-alcoholic fatty liver disease (NAFLD). I was awarded my DPhil in Medical Sciences in 2018 from the University of Oxford and I am now a post-doctoral researcher, currently based at the Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM) of the University of Oxford, working with Prof Jeremy Tomlinson.

#### Given this is basic science, can you explain the clinical relevance?

NAFLD is a public health-time bomb, with an unselected population prevalence of approximately 30%, rising to over 80% in patients with obesity and those with type 2 diabetes mellitus. However, the cellular processes that govern disease development and progression remain to be fully defined, and there is currently no cure. My research is trying to unravel the molecular mechanisms that drive NAFLD as well as to identify novel molecular targets within human liver and reveal their therapeutic potential. Through this work, we aim to develop and characterise pharmacological agents that can eventually serve as novel drugs for the treatment of fatty liver disease and metabolic syndrome.

#### How did you get involved with EYES?

I have been a member of the European Society of



Endocrinology (ESE) for more than 7 years now, through which I was first informed about EYES back in 2014. I have attended two EYES meetings so far (Modena 2015, Athens 2019) and I am looking forward to Birmingham 2020, here in the UK. They have been really vibrant meetings, exclusively focused on the work of young European investigators, providing a unique opportunity to communicate your science and network with some of those who will be the future leaders in Endocrinology and Metabolism.

#### As part of your award, you are invited to deliver a talk at the ECE in Prague 2020. As an Early Career Investigator, this is a great achievement - how do you feel about this?

Being invited to deliver a talk during the ECE in Prague this year is indeed a big achievement, and I would like to thank the EYES committee for giving me this award. I am really excited I will be able to present my work to such a wide audience, full of scientists and endocrinologists from all around Europe. I am looking forward to discussing, exchanging ideas and potentially initiating future collaborations!



European Society  
of Endocrinology

## European Board Examination

The next European Board Exam will take place on 10 June 2020.

Prospective candidates must register between 19 February and 18 March. You can sit the exam at various centres across Europe. For full details and applications, see [www.ebeedm.eu](http://www.ebeedm.eu).

ESE members may apply for a grant to cover 50% of the exam fee. See <https://www.es-e-hormones.org/grants-and-awards/grants/> for details.

You will also find an online practice paper at

<https://www.es-e-hormones.org/education/european-board-examination/sample-european-board-exam/>.

# We invite you to EYES 2020 in Birmingham, UK

In September 2020, come experience a conference organised by early career endocrinologists and scientists for early career endocrinologists and scientists!



ESE young endocrinologists and scientists looking forward



**EYES 2020**  
4<sup>th</sup> - 6<sup>th</sup> September 2020  
Birmingham, UK

**ESE Young Endocrinologists and Scientists' Annual Meeting**  
4<sup>th</sup> - 6<sup>th</sup> September 2020, Birmingham, UK



We invite you to join us at the 8th European Society of Endocrinology (ESE) Young Endocrinologists & Scientists (EYES) conference in Birmingham, UK from 4th to 6th September 2020. EYES 2020 will be a unique opportunity to share your knowledge and experience, promote future collaborations, and network with peers from across Europe and beyond in a friendly environment.

The focus will be to inspire early career clinicians and scientists in endocrinology, diabetes and metabolism to aspire for higher clinical and scientific achievements. The ESE and EYES are excited the EYES 2020 LOC have secured endorsements by several national and international organisations including Society for Endocrinology (SfE), University Hospitals Birmingham Charity, Institute of Metabolism and Systems Research at the University of Birmingham (IMSR-UoB), United Kingdom and Ireland Neuroendocrine Tumour Society (UKI-NETS), Association for Multiple Endocrine Neoplasia Disorders (AMEND), Association for the Study of Obesity-United Kingdom (ASO-UK) and Georgian Association of Endocrinology and Metabolism (GAEM) for 8th EYES Meeting.

Registration and abstract submission for EYES 2020 will open in April 2020. Registration will cost £70 and will include accommodation (places are limited, and priority will be given to those submitting an abstract), and access to EYES 2020 networking and social events. In order to benefit from this subsidised fee, you will have to be a member of the EYES community (free to join - <https://membermojo.co.uk/eyes>).

You can also benefit for travel grants for the EYES meeting and other privileges by becoming a member of ESE (<https://www.es-hormones.org/about-us/membership/>).

Have a look at our dedicated EYES 2020 website (<http://birmingham.ac.uk/eyes2020>) for the exciting preliminary programme, keynote speakers, and information regarding venue, accommodation, and travel arrangements.

For further information, please contact us via: [eyes2020@contacts.bham.ac.uk](mailto:eyes2020@contacts.bham.ac.uk)

We look forward to seeing you in Birmingham!

The EYES 2020 team





# Announcements

We would like to welcome Walter Vena (Italy), Juan Manuel Jimenez Vacas (Spain), and Philip McBride (UK) to the EYES Newsletter Editorial Board. Their contribution to this issue has already proven to be invaluable as we have now grown to an even more exciting 16 pages! Special thank you to Raúl M. Luque and Rhonda D. Kineman for sending us their photo for our cover page. It is GH immunofluorescence of an anterior pituitary cross-section taken from a control mouse (C57BL/6 background): Luque RM et al. Metabolic impact of adult-onset, isolated, growth hormone deficiency (AOiGHD) due to destruction of pituitary somatotropes. PloS one 6, e15767 (2011). A great image can capture a moment, and communicate a message; it can also help us share the various aspects of our scientific work and communicate exciting new discoveries. Some examples include: microscopic cells, CT, crystal structures, MRI, brain cross-sectional structures, electron microscopy etc. Submitted images must be high resolution (min 300 dpi), .jpg or .tiff images and cannot exceed 20mb. Each submission should have a title (max 10 words), image caption (max 60 words), and file name (last name\_first name). Please submit images to: [youngendocrinescientists@gmail.com](mailto:youngendocrinescientists@gmail.com).

## Introducing: EYES wide open

Intimate interviews with some of the most prominent experts and innovators in the field of medical research. Sharing wisdom, knowledge, experience and advice for our growing community



*We have talked to Professor Chrousos...*

**First publication ever?**

My first publication was when I was a medical student. I worked for a summer at Harvard with a scholarship and the work that I did for about three months ended up with a very good publication, so that was a good start. Then, when I was a resident in New York University, I published my second publication which was a fascinating case of a pediatric patient with Churg-Strauss syndrome. At that time in pediatrics, it was not described. Then, I went to the NIH and that was the place to be. I set up two big projects, one on glucocorticoids and one on stress, and they moved very rapidly and productively. I got fantastic people that came to work with me. Many of them are now chiefs, professors in Europe and in America.

**Did the publishing process change?**

It was easier. I guess there were less scientists. It would take about six months to a year to get a paper published. Now it can be done much faster. Although, I realised that people do not want to spend time to review papers. I was editor and chief of Neuromodulation for a few years, and I would send people to review and they wouldn't do it because its work, and they don't get payed for it. It is an altruistic function. Many of the reviews I did myself, I gave later to my young people and then we discussed them so they learn the process.

**Advice for young doctors and scientists?**

For the full interview and more content tune in on EYES YouTube channel.

**Antoan Stefan Sojat, Serbia**

# Introducing AndroYoung



## The Second Italian Young Andrology Society's National Meeting in Florence

AndroYoung community came together over 22-23 November in Florence for the 2nd National Meeting. AndroYoung was founded in 2017, with the aim to create a strong network between young members of the Italian Society of Medical Andrology and Sexual Medicine (SIAMS), a twin society of the Italian Society of Endocrinology (SIE).

This community embraces all the heterogeneous professional figures involved in andrology, reproductive medicine, and medical sexology from the whole country. The meeting was a great experience for participants, and it was a real multidisciplinary scientific meeting, during which more than 40 young speakers (including doctors, biologists, psychologists) had the chance to present their

results from their respective fields. At the end of the meeting, two delegates were awarded the best oral presentations, and were commended on the originality of their work.

In addition to the science, the 100 delegates who attended the meeting were invited to join a "social dinner" where they had the chance to get to know each other while sharing traditional Tuscan recipes, as we were only a few steps away from the world-famous attractions of the historical Italian city.

*Walter Vena, Italy*



## EYES symposium: the Third Serbian Congress on Menopause and Involutive Hypoandrogenism

The 3rd Serbian Congress on Menopause and Involutive Hypoandrogenism with international participation, organised by the Serbian Society for Endocrinology of Gender and led by Professor Svetlana Vujovic took place in Belgrade, on October 19-20, 2019. With 480 participants and 15 foreign speakers, the Congress delivered top quality lectures covering multidisciplinary clinical approaches on infertility, premature ovarian insufficiency, menopause, osteoporosis, and various related conditions.

The highlight of the Congress was the EYES symposium with 6 speakers selected from the EYES community members who had submitted abstracts. All speakers were awarded with grants covering accommodation and registration.

Adam Czyzyk (Poland), Karin Zibar (Croatia), Dusan Biukovic (Republic of Srpska), Damianos Tsitlakidis (Germany), Juan Manuel Jimenez Vacas (Spain), and Antoan Stefan Sojat (Serbia) gave excellent presentations showing the true colours of EYES.

Last but not least, EYES had a dedicated lecture given by Panagiotis Anagnostis (Greece) who presented on menopause-related cardiovascular risk and its management. Nothing is more inspiring than sharing knowledge and science in a warm and friendly atmosphere.





## Amazing careers:

### Meet Marco Bonomi

**He is one of the most active Italian researchers in the field of both the congenital central hypogonadism and congenital central hypothyroidism disorders.**

**He is the author of 62 peer reviewed articles, he received the ESE Young Investigator Award of in 2009.**

**He is a board member on a number of working groups including: Italian Network for Central Hypogonadism (NICe group), Klinefelter ItaliaN Group (KING group), Endocrine European Reference Network (Endo-ERN) and European Registries for Rare Endocrine Conditions (EuRECa).**

**Meet Marco Bonomi.**



Marco Bonomi

#### **What motivated you to choose endocrinology?**

I became passionate about endocrinology as early as the fourth year of my medical studies. I remember being fascinated by the complexity and perfection of the hypothalamic-pituitary axes, and molecular mechanisms of hormonal action. I immediately appreciated the endocrine diseases clinics, but also the prospect of both clinical and basic research in endocrinology.

#### **How did your journey begin?**

During the fifth year of medical school, I decided to complete an internship at the Institute of Endocrine Sciences within the University of Milan, where I completed a thesis on Kallmann's syndrome and graduated from medical school. I then completed my residency in endocrinology at the same Institute, receiving daily inspiration from the remarkable scientists I worked with. Upon completing my residency, I was given the opportunity for a 3 year postdoc at the *Institut de Recherche Interdisciplinaire en Biologie Humaine et Moléculaire* of the Free University of Bruxelles (ULB). That experience introduced me to the G-protein coupled receptor (GCPR) field, which was formed the foundation of my career in basic research.

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

At least two moments were essential in laying the foundation for what I am today: the 5 years I spent during my residency in endocrinology, both clinically and scientifically; and the 3 years I was a postdoc at ULB that allowed me to acquire specific knowledge in basic research.

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

Being fully satisfied with my professional life and practice a profession that I very much enjoy. I have the opportunity to work in a stimulating academic environment that allows me to interact directly with patients while also supporting my passion for basic research. I also teach endocrinology to undergraduate students in Medicine, residents, and research fellows in the lab, allowing me to give back, at least part of what I received in the past. As a whole, these enable me to continually grow and enhance my expertise in endocrinology and medicine in general.

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

It was to have the strength and motivation necessary to persevere in my intent, during the long time (over 15 years), that elapsed between the end of my university education and the beginning of my academic career, with a permanent position.

#### **What do you think are the greatest challenges facing early career endocrinologist now?**

Today we live in an era that has allowed us to expand our medical and endocrine knowledge exponentially. I think it is difficult to gain a comprehensive understanding of endocrinology without succumbing to ultra-specialization. Also, I believe that today's young endocrinologists also have an increasing difficulty in finding a stable, permanent and satisfying professional position.



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

I personally think there has been progress in a number of areas. The advent of the internet era, and thus social networking, has allowed to speed up all the processes for young endocrinologists to connect with the entire international endocrine community, multiplying the possibility for cultural exchanges and working opportunities. Moreover, national and international endocrine societies are also increasingly funding activities targeted towards early career members.

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

I think that EYES can play an important role as a gym, where future European endocrinologists can grow and train, allowing them to create networks, get to know each other, and cultivate ideas and projects to develop. EYES will increasingly need to promote cultural exchanges between these new generations and will have to try to support their growth in the European context.

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

I would advise them to start learning all the endocrine diseases, and only later in time, select a specific field to focus on. I would advise them to be consistently updated through scientific literature and participation, as far as possible, in endocrine conferences. Finally, I would advise

them to participate in the activities of the European Society of Endocrinology, and to utilize the opportunities that are available while at the early career stage, for example involvement with EYES.

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

Several endocrinologists have inspired me throughout my career. Certainly, the first was Prof. G. Faglia. He was, what we call in Italy, "Maestro" – his knowledge of medicine and endocrinology was remarkable as well as his versatility in the field of clinical and basic research. Working by his side was an enriching experience, and I will always be grateful for this opportunity. The second, is the charismatic Prof. P. Beck-Peccoz, who first taught me endocrinology and transferred his expertise and knowledge of the molecular basis of endocrine pathology. The third is Prof. L. Persani, with whom I have been working with for the past 20 years, and who have the utmost respect and affection. He has mentored me in the many firsts of my academic career, for instance writing my first scientific work and presentation at my first scientific congress. All thanks to his guidance and support that I was able to excel and attain my current position.

**Walter Vena, Italy**

## 10 Postgraduate Training Course in Clinical Endocrinology Zagreb, 24-25 April 2020

ANNOUNCEMENTS 

It is my honor to announce that the 10th Postgraduate Training Course in Clinical Endocrinology will take place in Zagreb, Croatia from 24 to 25 April 2020. I believe that many European endocrinologists will benefit from the opportunity to visit Zagreb and to enjoy participating in this exceptional meeting. Our goal is to provide the participants with an opportunity to meet distinguished international speakers as well as to network with colleagues from the region in a unique and friendly environment. The course is endorsed by the European Society of Endocrinology and is organised by Zagreb University School of Medicine, Department of Endocrinology, University Hospital Center, Zagreb.

The scientific program will consist of up-to-date presentations on the most relevant aspects of clinical endocrinology (meet the expert sessions, clinical workshops, and case presentations). Early career investigators will have chance to highlight interesting cases through short oral presentations.

We encourage you to submit cases of note from your everyday clinical practice and present them in the workshops. Please send your presentations by 10 March 2020 via email to: [tdusek@mef.hr](mailto:tdusek@mef.hr). Registration is open from 1 December 2019. I look forward to meeting you in Zagreb.

**Karin Zibar Tomšić, Croatia**



Croatian Society  
for Endocrinology and Diabetology,  
Croatian Medical Association



# ECE 2020

22nd European Congress of Endocrinology

23–26 May 2020 in Prague, Czech Republic.

For more information contact:

[ece2020@endocrinology.org](mailto:ece2020@endocrinology.org)

## EYES at ECE 2020:

# It's time to grow out of endless growth

We are delighted to invite you to join us on Monday 25 May at the

8th ESE Young Endocrinologists and Scientists (EYES) Symposium during ECE 2020 in Prague

Entitled 'It's time to grow out of endless growth', the symposium will focus not on economic growth and sustainability, but on endocrine control of growth. It will include outstanding presentations by leading early career investigators from across Europe.

Nikolaos Nikolaou (Greece/UK), who gave the best oral presentation at the recent 8th EYES Annual Meeting in Athens, Greece, will discuss the latest research on aldo-keto reductase 1D1 (AKR1D1) as a novel regulator of metabolic phenotype in hepatocytes in patients with non-alcoholic fatty liver disease.

Nicoleta Cristina Olarescu (Norway), who gave the best oral presentation at the 6th ENEA Workshop in Athens, Greece, will deliver a talk entitled 'From silence to overt disease in corticotroph pituitary tumors'.

Dr. Mikulas Kosak (Czech Republic) will present his latest research on gamma knife radiosurgery and deliver a talk entitled '25-year experience with gamma knife radiosurgery for acromegaly in the Czech Republic'.

One other promising early career investigator selected from the best abstracts will join them on stage.

This symposium will give you the chance to immerse yourself in a stimulating scientific environment, and will promote communication between subspecialties within endocrinology in an informal setting. The friendly EYES community provides a great platform for potential collaborations between early career investigators.

There will be an informal opportunity to meet and establish links with colleagues at the now famous EYES networking event, the details of which will be announced at the symposium.

This invitation extends to ESE early career members and nonmembers, the EYES community and alumni, and those of you who are young at heart. Whether you are a new endocrine enthusiast or a giant in your field, we invite you to join us at the 8th EYES Symposium to see the bright future of endocrinology. We look forward to seeing you in Prague!

**Eva Coopmans and Filip Gabalec**  
Chairs, 8th EYES Symposium



European Society of Endocrinology (ESE) continuously supports EYES by providing resources and opportunities for early-career endocrine scientists. Visit the ESE website and find out how to join the Society from as little as 10€:

[www.ese-hormones.org](http://www.ese-hormones.org)



[fb.com/groups/eyes.endo](https://fb.com/groups/eyes.endo)



**eyes**   
ESE young endocrinologists  
and scientists  
[twitter.com/eyescientists](https://twitter.com/eyescientists)  
**looking forward**



# 26 ESE Postgraduate Training Course on Endocrinology, Diabetes and Metabolism

**19 - 22 March 2020**  
**Tbilisi, Georgia**

European Society of Endocrinology (ESE) in collaboration with the Georgian Association of Endocrinology and Metabolism (GAEM) is organizing the 26th ESE Postgraduate Training Course on Endocrinology, Diabetes and Metabolism for early career endocrinologists, including those in training.

This will be the first time for Georgia to host such a prominent course in endocrinology, and GAEM has the honour to be the local organizer of the event. The course gives a unique opportunity to advance knowledge and learn about the most recent developments. A friendly atmosphere allows networking with peers and promoting future collaborations.

The three-day meeting structure is based on lectures from internationally acknowledged experts in the field of endocrinology. The scientific programme is divided into sessions covering all aspects in endocrinology. In order to evaluate the productivity of the course, the delegates will have pre- and post-exams before and after the lectures.



Ann Kobaidze, Natia Vashakmadze, Nino Tedoradze, Meri Davitadze

On the second day of the course, there will be a special session for delegates to present exceptional and thought-provoking cases from their clinical practice.

We hope that you will find the programme interesting and practical, and you enjoy the spirit of the ancient and vibrant capital city Tbilisi. The conference will take place in the Holiday Inn Tbilisi between 19-22 March, 2020.

Check out the preliminary programme, here:

<https://www.e-se-hormones.org/media/2074/26th-ese-pg-course-111219-for-website.pdf>

We are looking forward to seeing you in Tbilisi.

**ESE Summer School 2020**  
**23-26 August 2020**  
**Innsbruck, Austria**



ESE Summer School is back! The capital of Tyrol and Austrian winter sports - Innsbruck, will host one of our favourite meetings. Join the ESE Summer School to experience the great mix of science and social interactions through plenary lectures, breakout working groups, poster sessions, sporting activities, communication, and networking.

Main topics:

- Aging and the Hormone System
- Hormones in prevention and Treatment of Hepatic Steatosis, NASH, NAFLD, Fibrosis and HCC
- Endocrine Disruptors
- Para-Endocrine communication via specialised cells
- Endocrinology of catecholamines
- New Models and Methods in Endocrine Research
- Professional skills & career perspectives

More information on registration and abstract submission coming soon:

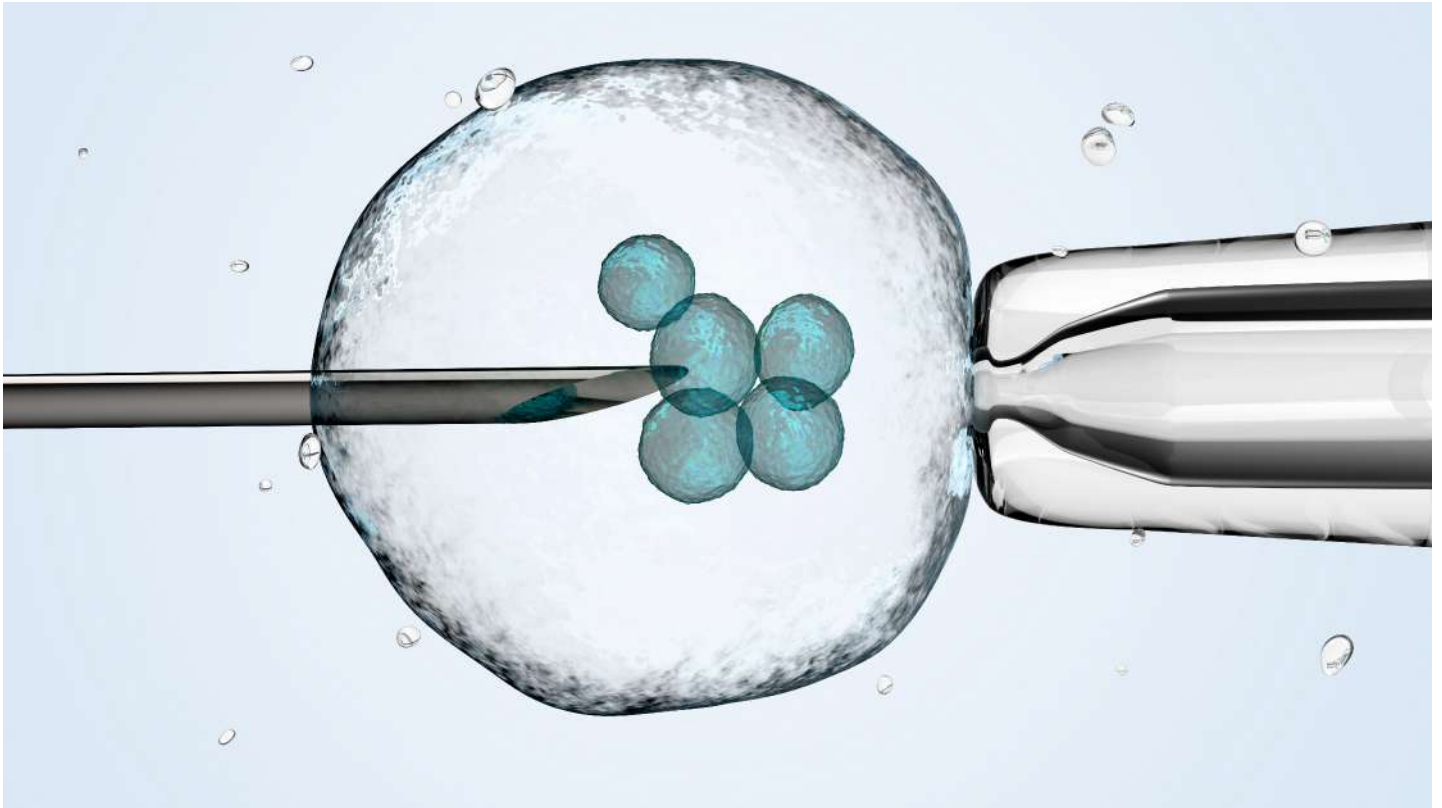
<https://www.e-se-hormones.org/events-deadlines/ese-events/ese-summer-school-2020/>



ESE young endocrinologists  
and scientists  
looking forward



# Do thyroid auto-antibodies in follicular fluid contribute to failure in assisted reproductive technology?



Thyroid autoantibodies are recognised as independent markers of ART outcome failure. Toulis et al. confirmed that the presence of thyroid autoimmunity (TAI) is associated with an increased risk of spontaneous miscarriage in subfertile women undergoing ART. Numerous obstetrical complications could be potentiated by thyroid antibodies, either as a consequence of general autoimmune response leading to the 'fetal graft' rejection, or inability of the thyroid gland to adapt to hormonal changes during pregnancy leading to hypothyroidism. When it comes to ART, it seems that ovarian stimulation per se affects thyroid function, TSH increasing a week after final oocyte maturation. Busnelli et al. showed that maintaining TSH below 2.5 mIU/L may overcome the detrimental effects of hypothyroidism on ART outcome.

For a good quality oocyte in ART, FF composition is important for maturation. Thyroid antibodies present in FF and their negative impact on ART outcome, for the first time, was demonstrated in a pilot study by Monteleone et al. Subsequently in a larger study population, we confirmed the presence of thyroid antibodies in FF, crossing follicular-blood barrier, and their strong correlation with serum concentrations. We assumed that thyroid antibodies do not directly impact oocytes and embryos during ART,

but may have an effect on the post-implantation embryo development, and lower pregnancy rate in TAI positive women as a consequence. We showed for the first time that concentrations of TSH and fT4 in FF are the same in women with and without TAI.

According to the WHO, infertility in women was ranked as the fifth highest serious global disability. Since the first test tube baby, the lovely Louise was born, we should continue to make every effort to fight this health condition.

**Sanja Medenica, Montenegro**

#### Literature:

- Toulis KA, Goulis DG, Venetis CA, Kolibianakis EM, Negro R, Tarlatzis BC, et al. Risk of spontaneous miscarriage in euthyroid women with thyroid autoimmunity undergoing IVF: a meta-analysis. *Eur J Endocrinol.*2010; 162:643–652.
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- Medenica S, Garalejic E, Arsic B, Medjo B, Bojovic Jovic D, Abazovic D, Vukovic R, Zarkovic M. Follicular fluid thyroid autoantibodies, thyrotropin, free thyroxine levels and assisted reproductive technology outcome. *PLoS One.* 2018; 13(10):e0206652.



# Sex matters: adrenal asymmetry and the potential impact on tumorigenesis

*Nicole Bechmann has specialized in tumor biology. She works in the lab of Prof. Graeme Eisenhofer at the University Hospital Carl Gustav Carus Dresden. Her research focus lies in the adrenal gland in health and disease (supported by the CRC/TRR 205, <https://adrenal-research.de>), working on basic research questions as well as clinical studies. During the 18th ENSAT meeting in Uppsala (Sweden), 2019 Nicole presented very interesting data and we have asked her to share it with us.*



Many adrenocortical tumour types are more common in women than in men, and there is emerging evidence of asymmetry in development of adrenal medullary and cortical tumours. Hence, one focus of our research is to better understand the sex-related adrenal asymmetry and relationships to tumorigenesis.

Using the ENS@T registry, we confirmed a higher prevalence of adrenocortical tumours in the left adrenal (e.g., adrenocortical carcinomas), while medullary pheochromocytomas more often occur in the right adrenal. To further explore these phenomena, we investigated sex differences and adrenal asymmetry in different mouse strains, focusing especially on morphological and metabolic differences. We have established a novel extraction procedure for investigation of adrenals. This procedure allows us the simultaneous determination of catecholamines and steroids, as well as proteomic and transcriptomic studies within each individual adrenal.

Our results show that adrenal asymmetry predominantly occurs in female mice, which consistently have larger adrenals compared to the males despite their

lower weight. Regardless of the size, we found higher amounts of catecholamines and the two main steroids, corticosterone and aldosterone, in males than in females.

Together with the results from our collaboration partner Prof. Schedl (Université Côte d'Azur, Nice, France), who demonstrated that tissue turnover of the adrenal cortex in females is three times higher than in males, our ongoing studies may explain left versus right adrenal asymmetry and sex differences in the development of adrenal medullary and cortical tumours.

We believe that a better understanding of differences between sexes and the underlying mechanisms in predisposition to adrenocortical and medullary tumours might lead to the development of sex-dependent therapeutic approaches.

## Key dates

**10 Jan 2020**

ESE Clinical Update, *Abu Dhabi Abu Dhabi, UAE*

**10 Jan 2020**

Early Bird Deadline: ESE 25th PG Course *Tbilisi, Georgia*

**3 Feb 2020**

ECE 2020 Abstract Submission Deadline

**4 - 6 Mar 2020**

Groningen Pituitary and Skull Base Symposium *Groningen, The Netherlands*

**19 - 22 Mar 2020**

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

**21 - 25 Mar 2020**

MGH-HMS Postgraduate Course Clinical Endocrinology 2020 *Boston, MA, USA*

**26 - 27 Mar 2020**

4th International Symposium on the Calcium Sensing Receptor (CaSR), *San Francisco, California, USA*

**8 Apr 2020**

ECE 2020 Early Bird Registration Deadline

**24 - 25 Apr 2020**

Postgraduate Training Course in Clinical Endocrinology *Zagreb, Croatia*

**23 - 26 May 2020**

22nd European Congress of Endocrinology *Prague, Czech Republic*

**23 - 26 Aug 2020**

ESE Summer School 2020 *Innsbruck, Austria*

**4 - 6 Sep 2020**

8 EYES Meeting, *Birmingham, UK*



## The history of adrenaline

Hormones are the main subject of study for the endocrinology field. The term '*hormone*' derives from the Greek verb ὀρμάω, which means 'to set in motion, to stimulate'. Although this term was first coined by Ernest Starling (who discovered secretin), it should be noted that the first reported hormone was adrenaline, in 1901. The adrenal gland became an especially interesting subject of study when Thomas Addison (1793-1860) discovered that certain lesions in this organ were able to cause a potentially fatal disease. In addition, George Oliver (1841-1915) and Edward Albert Schäfer (1850-1935) later reported that adrenal gland extracts, specifically the ones taken from the medulla, impacted key physiological functions (e.g. Increasing blood pressure, heart rate). This discovery generated an extraordinary curiosity among the scientific community. Everyone was wondering which molecule was responsible for such actions.

Consequently, after years of effort, numerous researchers believed that they had found the desired molecule. Firstly, in 1898, John Jacob Abel (1857-1938) published the formula of what he called epinephrine (C<sub>17</sub>H<sub>15</sub>NO<sub>4</sub>). In 1900, after pointing out that epinephrine was not the active molecule, Otto von Fürth (1867-1938) purified the so called suprarenin, (C<sub>5</sub>H<sub>9</sub>NO<sub>2</sub>). Then, in 1901 Jōkichi Takamine (1854-1922), from Parke-Davis pharmaceutical company shared with the world the formula of an active molecule isolated from adrenal gland medulla (C<sub>10</sub>H<sub>15</sub>NO<sub>3</sub>). However, his partner, Thomas Bell Aldrich (1861-1939), who was a collaborator of John Abel in the past, was who finally published the correct formula of adrenaline (C<sub>9</sub>H<sub>13</sub>NO<sub>3</sub>).

Although just one of these researchers was right, there is no doubt that they all supported the development of endocrinology and inspired future generations of endocrinologists. Therefore, all of us must be eternally grateful for this exciting historical period within the endocrinology field and to these investigators.

Juan Manuel Jiménez Vacas, Spain

### References

- Addison, T. *On the Constitutional and Local Effects of Disease of the Supra-renal Capsules*. Highley (1855).  
 Oliver, G. and Schäfer, E.A. *The physiological effects of extracts of the suprarenal capsules*. *J. Physiol.* (1895). 18, 230-276.  
 Abel, J.J. *On epinephrin, the active constituent of the suprarenal capsule and its compounds*. *Proc. Am. Physiol. Soc.* (1898). 3-5.  
 Von Fürth, O. *Zur kenntniss der brenzcatechinähnlichen substanz der nebennieren*. III. *Mittheilung. Z. Physiol. Chem.* (1900). 29, 105-123.  
 Takamine, J. *Adrenalin, the active principle of the suprarenal glands, and its mode of preparation*. *Am. J. Pharm.* (1901). 73, 523-531.  
 Aldrich, T.B. *A preliminary report on the active principle of the suprarenal gland*. *Am. J. Phys.* (1901). 5, 457-461.



Photo by Henry Perks on Unsplash

## 7th EYES meeting: data analysis

Data science is a growing field in which Python programming language is of constant interest. To demonstrate the use of Python, delegate data was used from abstracts submitted to the annual EYES meeting in Athens, Greece, 2019.

In total, there were 113 abstracts (59.2% oral, 40.7% poster) from 24 different countries. The top 5 most countries that submitted an abstract submitting were Greece, Romania, UK, Russia and Poland (see figure). The words "patient", "diabetes", "syndrome", and "case report" had the highest frequencies in submitted abstracts.

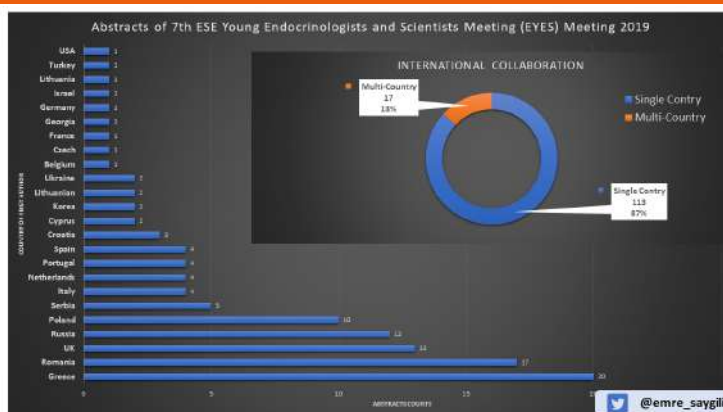
Abstract authors were women rather than men. The percentage of women as first and last authors was 72% and 60%, respectively. In line with this finding, a 2018 study analysed four American endocrinology journals to determine the distribution of female authorship over 25 years. In that analysis, the first authors were 62% female. This suggests that the rate of female leadership in endocrinology has, and will continue to, increase. The specialty of endocrinology should take a lead role in supporting changes for the successor female physicians.

Emre S. Saygili, Turkey

Sources :

Wadei Elhakimi et al. (2018) Female authorship in major endocrinology journals: a 25-year progression, *Journal of Endocrinology, Metabolism and Diabetes of South Africa*, 23:3, 76-79.

Elaine Pelley et al. Female Physicians and the Future of Endocrinology, *The Journal of Clinical Endocrinology & Metabolism*, Volume 101, Issue 1, 1 January 2016.





# Optimise the patient referral

## - 3rd ECCE/ECAS meeting -

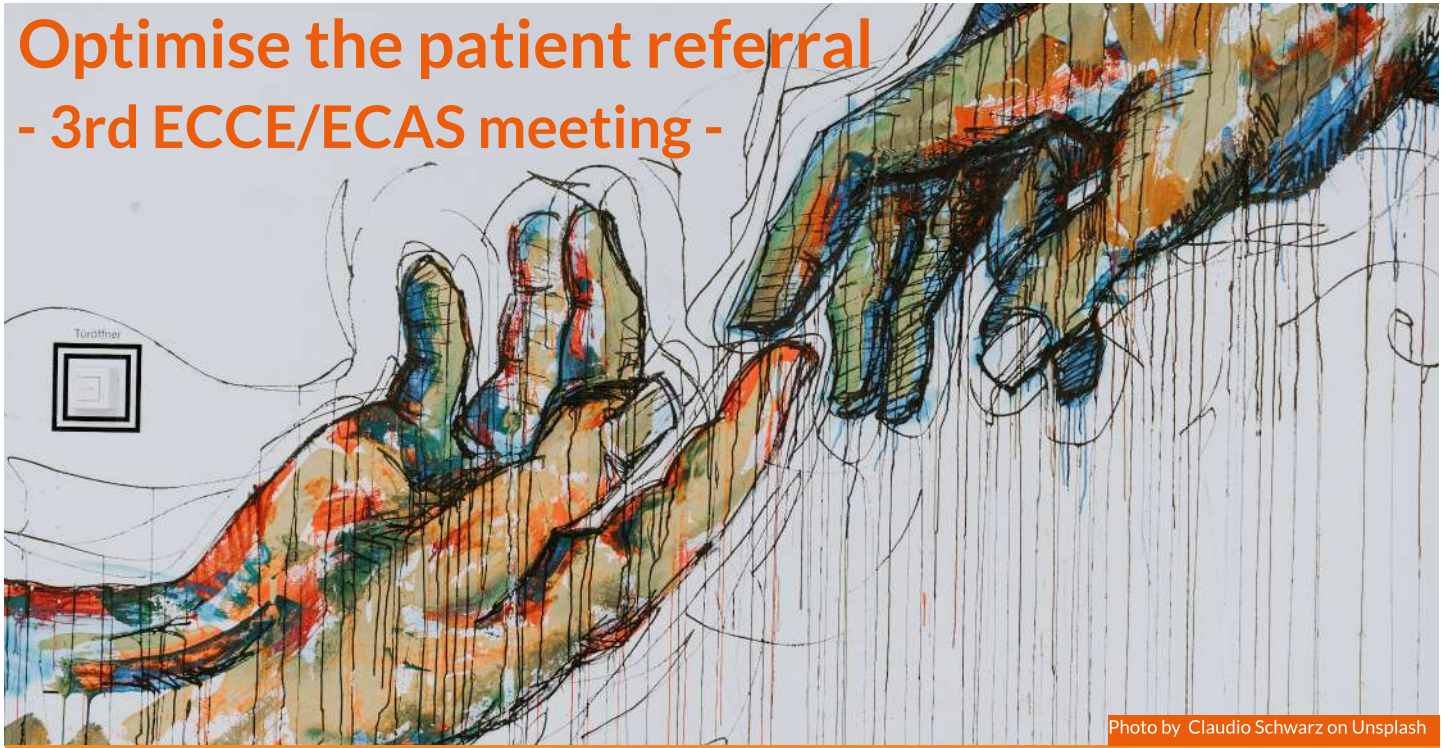


Photo by Claudio Schwarz on Unsplash

On 24 October 2019, in Antalya (Turkey), we attended the 3rd Early Career Clinical Endocrinologists (ECCE) meeting, organized by the European Council of Affiliated Societies (ECAS) of the European Society of Endocrinology (ESE). This 1-day event was held on the occasion of the 7th EndoBridge Meeting 2019.

We had the honour to represent our countries (Greece and The Netherlands) as well as the ESE Young Endocrinologists and Scientists (EYES) group. In total, 19 early career clinical endocrinologists participated, representing 18 countries. The main topic was the 'Formal procedure for the referral of a patient from primary care to the endocrinology unit'. A very fruitful discussion on the reality in various European countries, as well as the expectations and the challenges regarding referral procedures took place.

Second, organisation of clinical programmes, such as continuous medical education programs for primary care physicians who deal with diabetes or other common endocrine diseases, or joint clinics between primary care providers and specialists could essentially help towards this direction. In addition, guidelines written especially for primary care providers who deal with endocrine patients, including a section on referral to the endocrine unit could improve the quality of the referrals.

Third, we concluded that the communication between primary care physicians and the endocrine unit should be improved, such as with electronic record systems or with the possibility of electronic consultation (e-communication).

Fourth, the referrals from the primary care to the

Endocrinology Unit have to be uniform, fulfilling a set of minimum requirements (e.g. including patient history, medication and differential diagnosis). Last but not least, all participants agreed that National Societies and



The meeting was moderated by Professor Bulent Yildiz (Turkey), Professor Miša Pfeifer (Slovenia), and Professor Dimitrios G. Goulis (Greece). We identified several areas with the potential for advancement, as follows:

First, all participants agreed on the crucial need for better education of primary care physicians on the full spectrum of endocrine diseases. They need to be able to recognise when and when not to refer patients with endocrine diseases.

European Society of Endocrinology should collaborate as well as with governments and the European Union towards the confrontation of these challenges.

**Stavroula A. Paschou, Greece**

**Eva Coopmans, The Netherlands**



# Latest research

## DNA methylation analysis of negative pressure therapy effect in diabetic foot ulcers

The use of negative pressure wound therapy (NPWT) to treat diabetic foot ulcers (DFUs) has been a topic of interest for some time. However, despite the increase in use within clinical and research environments, the mechanisms of NPWT are still not fully understood. Following on from research analysing transcriptome wide gene expression, Ludwig-Slomczynska et al. investigated the effects of NPWT on methylation in type 2 diabetes patients with DFUs. The NPWT resulted in the identification of 426 differentially methylated regions, compared to none in the control group. This provides a strong basis for further investigation into the potential epigenetic alterations which may be brought about by NPWT treatment of DFUs.

Ludwig-Slomczynska, A., Borys, S., Seweryn, M., Hohendorff, J., Kapusta, P., Kiec-Wilk, B., Pitera, E., Wolkow, P., & Malecki, M. (2019). DNA methylation analysis of negative pressure therapy effect in diabetic foot ulcers, *Endocrine Connections*, 8(11), 1474-1482.

## Habitual activity associates with lower fasting and greater glucose-induced GLP-1 response in men

Janus et al. hypothesised that habitual physical activity (PA) was associated with greater GLP-1 responses, and subsequent improved glucose and appetite regulation in overweight men. The study found that in males, each 60 minute increase in moderate-to-vigorous physical activity (MVPA) was associated with 19.5% lower fasting GLP-1 levels (-33.0; -3.3%,  $p=0.021$ ). The study did not show any significant relationships between habitual PA and GLP-1 response in women. However, this could have been partly due to the PA levels of females in the study being approximately 70 minutes per week lower than the males. Nonetheless, this study provides strong evidence for the benefits of PA for glucose and appetite regulation in overweight men.

Janus, C., Vistisen, D., Amadid, H., Witte, D., Lauritzen, T., Brage, S., Bjerregaard, A., Hansen, T., Holst, J., Jørgensen, M., Pedersen, O., Færch, K., & Torekov, S. (2019). Habitual physical activity is associated with lower fasting and greater glucose-induced GLP-1 response in men, *Endocrine Connections*, 8(12), 1607-1617.

## Change in baseline characteristics over 20 years of adults with growth hormone (GH) deficiency on GH replacement therapy

With recent indications of changes to characteristics of individuals with adult-onset growth hormone deficiency (GHD), the aim of this paper was to compare the baseline characteristics of GHD adults at 3 different time periods (1994-1999; 2000-2004; 2005-2012). The analysis indicated that although the total number of cases of GHD has been decreasing, the proportion of cases presenting with comorbidities, such as hypertension and diabetes, has increased. It is suggested that starting GH replacement therapy earlier may work to maintain rather than normalise various metabolic, physiologic, and psychosocial factors.

Höybye, C., Burman, P., Feldt-Rasmussen, U., Hey-Hadavi, J., Aydin, F., Camacho-Hubner, C., & Mattsson, A. (2019). Change in baseline characteristics over 20 years of adults with growth hormone (GH) deficiency on GH replacement therapy, *European Journal of Endocrinology*, 181(6), 629-638.

## Acute effects of insulin on skeletal muscle growth and differentiation in men with type 2 diabetes

This paper was a secondary analysis of data from a study investigating the metabolic aspects of testosterone deficiency and replacement in type 2 diabetic males. Dhindsa et al. assessed the acute modulation by insulin on muscle growth and differentiation genes (myoD, myogenin, Myf5, Mrf4, myostatin) and fibroblast growth factor 2 (FGF2). During euglycemic-hyperinsulinemic clamp (EHC), expression of several myogenic growth factors was altered by up to  $81 \pm 22\%$ . Granted, results observed during a EHC may be totally different to those that would be seen in free-living patients undergoing chronic insulin treatment. However, the study does make a strong case in support of insulin as a modulator of anabolic responses in skeletal muscle.

Dhindsa, S., Ghanim, H., Green, K., Abuaysheh, S., Batra, M., Makdissi, A., Chaudhuri, A., Sandhu, S., & Dandona, P. (2019). Acute effects of insulin on skeletal muscle growth and differentiation genes in men with type 2 diabetes, *European Journal of Endocrinology*, 181(6), K55-K59.

## Leptin and insulin in young adulthood are associated with weight in infancy

Simeoni et al. tested the hypothesis that healthy adults' circulating concentrations of leptin, adiponectin, and insulin are influenced by growth patterns in early life. The participants, aged 18-25, were assessed for various anthropometric, biochemical, and body composition measures, and this was tracked against their height and weight at various time points during their early life (4 months, 9 months, 2 years, 6 years, and 12 years). It appears that low weight by the age of 2 years is associated with elevated plasma leptin in early adulthood. High leptin can be an important factor in increased fat accumulation and risk of cardiometabolic disorders, so closer monitoring of growth patterns could be a valuable pursuit.

Simeoni, U., Osmond, C., Garay, R., Buffat, C., Boubred, F., Chagnaud, C., Jouve, E., Audebert, C., Antoine, J., & Thornburg, K. (2020). Leptin and insulin in young adulthood are associated with weight in infancy, *Journal of Endocrinology*, 244(2), 249-259.