



NEWSLETTER

Strengthening care for women with Androgen Excess Disorders

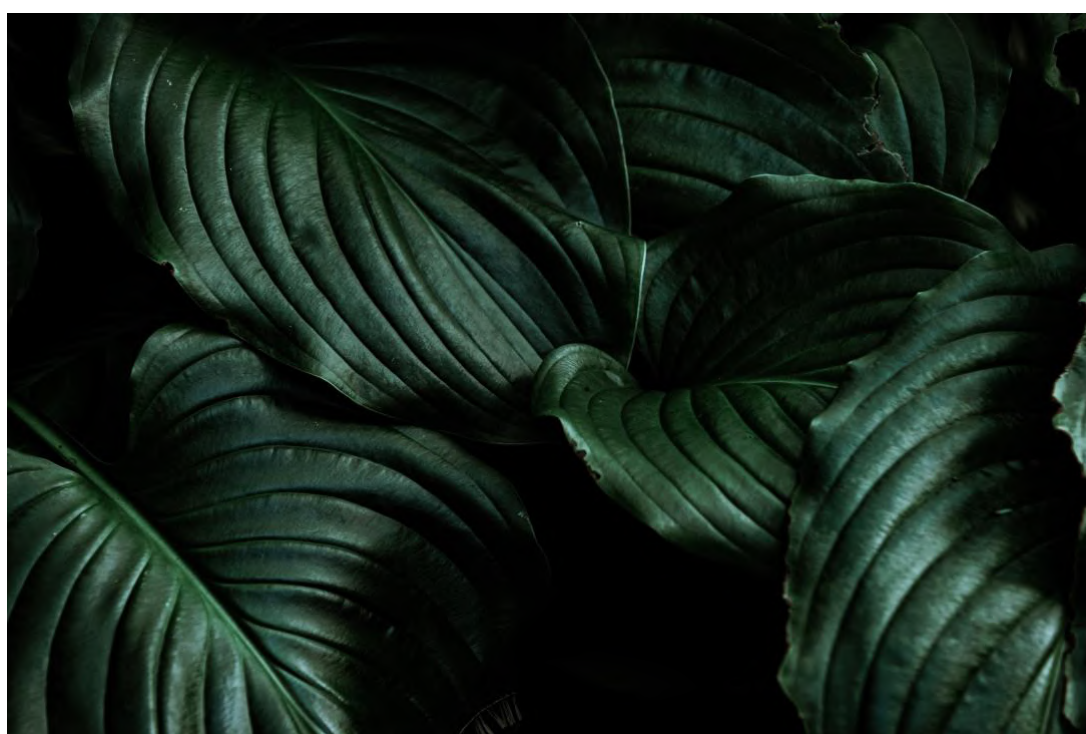


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FOREWORD FROM THE PRESIDENT

BY KATHLEEN HOEGER

As we move into uncharted territory in the pandemic, we are slowly opening the door to in person meetings and gatherings. While this pace differs around the world, we are looking very much forward to the first in person meeting in our society at the ENDO 2022 meeting with our AEPCOS update meeting scheduled for June 10, 2022 in Atlanta, GA, USA. Under the direction of Joop Laven and Paolo Giacobini, the meeting themed “PCOS is a brain disease” brings together experts in the central impact of PCOS and concludes with a debate on “PCOS is a brain disease” with Ricardo Azziz and Joop Laven debating. We look forward to as many members joining us as possible for this event. Please add to your ENDO registration if you are planning to attend ENDO 2022.

In 2022, we are grateful for the support of our members and we will be rolling out a members only section of our newly redesigned website. Please stay tuned for updates on this. Our membership is growing and we are actively seeking to recruit associate members who are in their training years or early career. Please encourage your trainees to consider joining as there are significant discounts for membership that will allow access to discounted registration at our annual meeting. We have a very active early career special interest group and would welcome all new members to participate.



Finally, we are looking forward to our 20th Anniversary AE-PCOS Annual meeting October 2022 in Anaheim, CA, USA. We are very excited to plan our first in person annual meeting in 3 years and details, including registration and abstract submission information will follow shortly, so watch your emails and check our website for updates. While no one has the inside track on what comes next with the pandemic, we are hopeful to meet in person with a hybrid component to maximize our outreach. We are excited to announce an unrestricted grant from the Waterloo Foundation that will support our patient advocacy efforts and look forward to including the patient perspective at our annual meeting.

We are looking forward to an exciting next few months and are grateful for your interest and support of the AE-PCOS Society.

Cheers,

Kathleen Hoeger MD MPH
President, AE-PCOS Society

AE-PCOS

SCIENTIFIC UPDATE MEETING

PCOS and the Brain !!!



June 10, 2022
Atlanta, GA

BY JILLIAN TAY

After 3 years of pandemic restrictions, we are so excited to announce the our AE-PCOS Scientific Update Meeting is offering in-person attendance this year to connect with our society members and other leaders in the PCOS field.

This year, the meeting will focus on the theme of brain functions and neurodevelopmental mechanisms of PCOS. Already, our committee members have put up a terrific programme covering research of the effects of neurokinine B, AMH, GABA, GnRH pulse frequency, androgens and endorphins in PCOS. You also do not want to miss a fiery debate between Prof Ricardo Azziz and Prof Joop Laven on the topic, "Is PCOS a brain disease?"

The preliminary programme are now available at the AEPCOS website for you to check out. Make sure you register and we look forward to seeing you!

Early Career Special Interest Group

Join our group!!!!

BY JILLIAN TAY

Our mission is to support the professional development of early career professionals interested in androgen excess disorders and polycystic ovary syndrome (PCOS). This is accomplished by:

- Providing a forum for networking and collaborating with peers and AE-PCOS Society members
- Establishing a platform to enable communication among AE-PCOS Society members and the broader research community
- Providing a resource for topics of interest to EC-SIG members relating to career development, leadership and networking.

The initiatives set forth by the EC-SIG are determined by the EC-SIG members and the Leadership Committee. We hold 4 quarterly meetings, as well as organise 3 Meet-the-Professor events with our members every year.

Enquiries about joining the EC-SIG

Please contact us at

aepcos.ecsig@gmail.com

2021 Leadership Committee

Faculty Lead

Marla Lujan

Chairs

Laura Cooney

Chau Thien Tay ( @TayJillian)

Secretary

Snigdha Alur-Gupta



EC-SIG CORNER

MEMBER SPOTLIGHT



**Dr. Alyse Goldberg
MD**

University of Toronto
Toronto, Canada

Dr. Alyse Goldberg obtained her Medical Degree from the University of Toronto and completed her residency training in Internal Medicine at Western University where she served as one of the chief medical residents. She returned to University of Toronto to complete her training in Endocrinology. Under the mentorship of Dr. Sheila Laredo, she chose to pursue a clinical fellowship at Women's College Hospital in Toronto on reproductive endocrine conditions, as these patients benefit from focused care early in their lives that will benefit their short and long term reproductive and metabolic health.

Dr. Goldberg currently practices as a consultant Endocrinologist at fertility centers in Toronto Canada, as well as a part of the DAN Women's and Babies Program team at Sunnybrook Health Sciences Centre managing patients with gestational diabetes. She has a special interest in multidisciplinary care of patients with polycystic ovarian syndrome as well as dispelling myths and misinformation targeted at this population.

EC-SIG IN ACTION

- Dr. Chau Thien Tay ([Twitter](#) @TayJillian) (Monash University, Australia) has received the [2022 Roger Bartop Research Establishment Fellowship](#) and started her first post-doc position at Monash Centre for Health Research and Implementation.
- Dr. Michelle Meyer (University of North Carolina-Chapel Hill, USA) is promoted to [Associated Professor with Tenure](#). Not only that, she also received a [National Institute of Health \(R01\) Grant](#)!
- Dr. Maryam Kazemi ([Twitter](#) @MrmKzm) (Icahn School of Medicine at Mount Sinai, USA) has received the [Columbia University SHARP Program Scholarship](#) and [Columbia University Career MODE Program Scholarship](#)! Further more, her paper examining [osteosarcopenia in PCOS](#) was featured in the Endocrine Society Thematic Issue on Bone Research 2022. Her research on [RCT on longitudinal lifestyle intervention in women with PCOS](#) was also awarded as one of the [top cited article in Clinical Endocrinology journal](#).

EC-SIG PUBLICATIONS

- **Bahri Khomami M**, Teede HJ, Joham AE, Moran LJ, Piltonen TT, Boyle JA. **Clinical management of pregnancy in women with polycystic ovary syndrome: An expert opinion**. Clin Endocrinol (Oxf). 2022 Apr 5. doi: 10.1111/cen.14723. Epub ahead of print. PMID: 35383999. [\[pubmed link\]](#)
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- **Benham JL**, Booth JE, Donovan LE, Leung AA, Sigal RJ, Rabi DM. **Prevalence of and risk factors for excess weight gain in pregnancy: a cross-sectional study using survey data**. CMAJ Open. 2021 Dec 14;9(4):E1168-E1174. doi: 10.9778/cmajo.20200276. PMID: 34906992; PMCID: PMC8687487. [\[pubmed link\]](#)
- **Kazemi M**, Kim JY, Wan C, Xiong JD, Parry SA, Azziz R, Lujan ME. **Comprehensive evaluation of disparities in cardiometabolic and reproductive risk between Hispanic and White women with polycystic ovary syndrome in the United States: a systematic review and meta-analysis**. Am J Obstet Gynecol. 2022 Feb;226(2):187-204.e15. doi: 10.1016/j.ajog.2021.07.032. Epub 2021 Aug 9. PMID: 34384776. [\[pubmed link\]](#)
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SPOTLIGHT ON RESEARCH LEADER

An Interview with Professor Bulent Yildiz

MD

Hecettepe University, Ankara, Turkey

 @obulentyildiz



Bulent Yildiz earned his medical degree from Hacettepe University School of Medicine, and completed his residency in Internal Medicine, and a fellowship in Endocrinology and Metabolism at the same institution. He was a postdoctoral scholar at the Center for Pharmacogenomics and Interdepartmental Clinical Pharmacology Center, David Geffen School of Medicine at UCLA, Los Angeles, California, where he also completed a National Institutes of Health training program in translational investigation.

He is currently Professor of Medicine/Endocrinology and Metabolism at Hacettepe University School of Medicine, Ankara, Turkey. His clinical and research interests involve obesity, diabetes and androgen excess disorders in women including polycystic ovary syndrome.

Prof. Yildiz has published over 140 original articles, reviews and book chapters. He has served on editorial boards of several highly ranked scientific journals. He was an Executive Committee Member and Officer of the European Society of Endocrinology and Board Member of Androgen Excess and PCOS Society. He chaired the Program Organizing Committee of the 19th European Congress of Endocrinology (ECE2017) and co-chaired the Congress of the Endocrine Society (ENDO2021). He is the founder and president of the EndoBridge®, a unique international educational initiative supported by Endocrine Society and the European Society of Endocrinology. He currently serves as the Clinical Lead for the ESE Reproductive and Developmental Endocrinology Focus Area and the Clinical Practice Chair for ENDO2022.

Among others, his awards include the Eisenhower Fellowship for international leadership from The Eisenhower Foundation of the United States. Fellowship of Dr. Yildiz focuses on the academia-government-industry relations on research, public policy and healthcare delivery for the prevention and management of chronic diseases, specifically diabetes and obesity.

Q1. How did you get involved in research in androgen excess diseases?

When I was a resident, the division chief of endocrinology and metabolism at our institution assigned me a research topic on insulin resistance and androgen excess in PCOS. Apparently, this was the first PCOS study to be conducted at our department. I was excited when I started reading research papers on PCOS and my excitement keeps growing since then.

Q2. What is the biggest factor that has helped you in your career? What are your success habits?

I have been fortunate to work with incredible mentors, mentees, and collaborators throughout my career. I strongly believe that peer mentorship is the key to success, and I highly value my network. As a physician-scientist, I consider myself a lifelong learner. I try to ask important questions and I am genuinely passionate about research.

Q3. What was the hardest decision you ever had to make?

After finishing my fellowship in endocrinology and metabolism at Hacettepe University, Turkey, I did my postdoctoral studies at UCLA in the field of neuroendocrinology. I have enjoyed my time there tremendously which provided me an opportunity to develop a broad set of skills in planning, funding and conducting research. I was surrounded by a nice community of colleagues and friends. I was offered a faculty position that I seriously thought about but eventually decided to go back to my home institution in Turkey in order to develop a research program there. This was a very hard decision for me like it has been for many other international researchers.

Q4. What are your thoughts regarding future directions of androgen excess research?

PCOS and other uncommon causes of androgen excess are currently underrecognized and underappreciated which results in underfunding of research in the field. This needs to change. Better understanding of the pathophysiology and development of safe and effective treatments require interdisciplinary team science covering wide array of medical fields. It is also critical to attract and retain promising young researchers. AE-PCOS Society has been playing a very important role facilitating androgen excess research.

Q5. What advice will you give to our upcoming researchers?

Reading literature, developing competence on hypothesis generation, writing scientific papers, delivering scientific presentations, serving as a reviewer, and being a good team member are all important for success in research. I suggest being proactive in national and international research networks, investing time in scientific organizations not only for presenting data and learning about most recent research findings, but also for meeting with other researchers who are future mentors and collaborators. The new era of hybrid workplace and meetings has the potential to transform research requiring new sets of skills and provides both challenges and opportunities for the upcoming researchers.

Q5. Would you be willing to mentor a mentee?

I would be happy to mentor a mentee through the AE-PCOS Society.

RESEARCH HIGHLIGHTS

Are women with PCOS really at risk for cardiovascular disease?

BY JOOP LAVEN



Are women with PCOS really at risk for cardiovascular disease?

BY JOOP LAVEN

Women with PCOS have an unfavourable cardiometabolic profile during their whole lifespan.

CVD risk factors

Women with PCOS generally have an unfavorable risk profile for cardiovascular disease. Polycystic ovary syndrome is associated with several cardiometabolic abnormalities, including obesity, dyslipidemia, elevated blood pressure, metabolic syndrome and prediabetes or type 2 diabetes¹. Moreover, hyperandrogenic women seem to have a higher risk for developing cardiovascular disease². Indeed, women with PCOS have higher levels of low-density lipoprotein cholesterol and triglycerides, and lower levels of high-density lipoprotein cholesterol than controls³. Meta-analysis showed that women with PCOS also have a much higher prevalence of overweight and obesity. Moreover, they seem to suffer from central obesity when compared to women without PCOS⁴. In another study 33% of women with PCOS had metabolic syndrome, and a separate meta-analysis reported around a threefold increase in metabolic syndrome in women with PCOS compared to healthy controls without PCOS⁵. Up to 95% of women with PCOS that are suffering from obesity are also at risk for insulin resistance and type 2 diabetes mellitus. Some studies even estimate the incidence of insulin resistance being as high 75% in lean women with PCOS⁶.

A recent meta-analysis revealed a greater risk of hypertension amongst PCOS patients during their reproductive lifespan indicating that after menopause a history of PCOS may not be as an important predisposing factor for developing hypertension⁷. The most recent data on these topics have been recently summarized and this paper concludes that women with PCOS have an unfavorable cardiometabolic profile during their whole life span⁸.

PCOS and atherosclerosis

Although women with PCOS have an unfavorable risk profile for cardiovascular disease, the question remains whether this also leads to more atherosclerosis. Large scale studies in postmenopausal women are therefore needed to assess this appropriately. Indeed, in women with PCOS it has been shown that higher free testosterone levels were associated with a greater relative coronary artery calcium progression a measure of subclinical atherosclerosis⁹. It seems that even after adjusting for BMI and age, the prevalence of coronary calcifications was higher in hyperandrogenic women with PCOS¹. Moreover, women with PCOS also have greater carotid intimal medial thickness and significantly greater prevalence of carotid plaque compared to controls¹⁰. However, a recent well designed study with a follow-up of more than 10 years reported that middle-aged women with PCOS exhibit only a moderately unfavorable cardiometabolic profile compared to age-matched controls, even though they present with an increased BMI and waist circumference. Furthermore, they found no evidence for more severe atherosclerosis compared with controls from the general population¹¹. Hence, literature on atherosclerosis in women with PCOS is contradictory due to differences in design, population characteristics and PCOS phenotyping.

PCOS and pregnancy complications

Since pregnancy is a kind of stress test for the cardiovascular system, hypertensive disorders might occur more often in women with PCOS. Indeed, a recent review revealed that PCOS conferred a 3-4 fold increase in the risks of gestational hypertension and pre-eclampsia¹². The latter was confirmed in a recent large meta-analysis that included around 30 studies. This study concluded that PCOS is independently associated with a significantly increased risk of hypertensive disease, pregnancy induced hypertension and pre-eclampsia during pregnancy. Moreover, the occurrence of hypertensive disorders was also associated with, BMI, age, hyperandrogenism, nulliparity and gestational diabetes¹³. This indicated that the cardiovascular system in women with PCOS is much more prone to develop cardiovascular disease later on in life.

PCOS and Cardiovascular Disease

Although women with PCOS might have more unfavorable risk factors and they might have an a-priori increased chance of developing cardiovascular disease there is only a limited number of studies that have tried to assess that incidence of cardiovascular disease in older postmenopausal women. Actually, only two studies assessed hard cardiovascular end points in women which were previously diagnosed with PCOS in their 8th or 9th decade of life. A well defined cohort of women with PCOS, examined in 1987 and 2008, was reexamined 32 years later in 2019 with an age range 72-91 years and compared with an age-matched reference group. That study found no evidence of increased all-cause mortality or mortality due to cardiovascular disease in women with PCOS.

The elevated testosterone levels as well as the unfavorable cardiovascular risk profile present during perimenopause in women with PCOS did not seem to be associated with neither increased morbidity nor mortality due to cardiovascular events like stroke or myocardial infarction¹⁴. Another fairly large study in women between 60 and 80 years of age did neither establish a significant increase in cardiovascular risk in women with elevated androgen levels in the post menopause nor in those previously diagnosed with PCOS¹⁵. A recent meta-analysis assessing cardiovascular endpoint in women with PCOS concluded that although PCOS was associated with a higher risk of hypertension and a slightly higher incidence of non-fatal stroke it was not associated with coronary disease events like myocardial infarction. Due to a paucity in mortality data they were not able to report on fatal cardiovascular endpoints¹⁶.

Conclusions

Studies following women with PCOS until very old age will eventually provide definitive answers on the risk for CVD and the involved mechanisms. Therefore, cardiovascular assessment and follow-up of women with PCOS are still necessary. At this time, however, one should conclude that although some metabolic disturbances are more prevalent amongst middle-aged women with PCOS there is no solid evidence for premature atherosclerosis or an increased risk real hard endpoints like stroke, myocardial infarction or general cardiovascular disease. Only, time and future sufficiently powered studies will provide whether this will indeed translate into a better cardiovascular health in women with PCOS than was previously anticipated.

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MEMBER ENGAGEMENT

BY JILLIAN TAY

Many of our society members are scientists or clinicians. We value our members' contribution and efforts in advancing our understanding and management of androgen excess disorders. This section of our newsletter aims to celebrate our member's success, achievement and milestones!

See below for some excellent news from our members!



Ricardo Azziz, USA



Ricardo Azziz, MD, MPH, MBA was awarded a Ferring Innovation Grant for Racial Equality in Reproductive Medicine and Maternal Health (RMMH) for "A comparative study between PCOS women in Nigeria and African-American women in the USA" and an Innovative Pilot Research Project in Women's Reproductive Health from the University-Wide Interdisciplinary Research Center (UWIRC) and the Center for Women's Reproductive Health (CWRH) at The University of Alabama at Birmingham (UAB), for his study entitled "A Novel epigenetic mechanism underlying adipose tissue dysfunction, inflammation, and insulin resistance in PCOS". He was named as Senior Editor of eLife and appointed to the editorial board of the Journal of Clinical Endocrinology and Metabolism (JCEM). Further, he was appointed as Chief Science & Strategy Officer and EVP for Operations, Strategy, and Scientific Affairs at The Lundquist Institute for Biomedical Innovation at Harbor-UCLA Medical Center. The article entitled "Health Care-Related Economic Burden of Polycystic Ovary Syndrome in the United States: Pregnancy-Related and Long-Term Health Consequences", for which he was senior author and was published in JCEM, was chosen for the Endocrine Society Thematic Issue on Women's Health 2022. He was also recipient of the 2021 UAB Excellence in Business Top 25 award. He continues his work on the faculties of the University of Albany, SUNY and UAB.



Fahimeh Ramezani Tehrani, Iran

02

Professor Fahimeh Ramezani Tehrani took first place at the 27th Razi Medical Science Research Festival, the most prestigious festival in the field of medical sciences in Iran, on February 14, 2022. Top researchers were awarded by the President for their contributions to the field of medical sciences. This was the second time she had received the Razi award; she had received a national award from President Rohani at the 19th Razi Research Festival in 2014.

Prof Tehrani has over 500 peer-reviewed articles, reviews, and book chapters to her credit, as well as three national and one international patent. Her name has been listed in the "World Ranking of Top 2% Scientists" in the 2021 database that was created by experts at Stanford University, USA. She is a physician-scientist and author who has made valuable contributions to evidence-based medicine, epidemiology, basic science, and clinical research, as well as the social sciences. She has pioneered many areas of Reproductive Endocrinology and is one of the most-cited scientists on "Androgen Excess and Polycystic Ovary Syndrome".

03

Courtney Manthey- Pierce, USA

Courtney Manthey-Pierce M.A. has recently formally committed to the University of Colorado Boulder's Anthropology PhD program where she will research the possible ancestral molecular genetic basis of polycystic ovarian syndrome (PCOS) under the guidance of geneticist Dr. Fernando Villanea of the Villanea Laboratory. Her research will examine the prevalence of PCOS associated genes in the *Homo neanderthalensis* genome to increase understanding of early human admixture and its corresponding impacts on extant female diseases. Along with this, she also aims to map more precise genetic flow and bottleneck occurrences related to PCOS throughout Asia and, most notably, Oceania.

Many regions of Oceania are under-represented in current PCOS research. Courtney intends to increase awareness of PCOS disease burden in these regions and create greater representation of Pacific Island women in disease research. Her goal is to highlight the origins of PCOS to possibly improve treatment options for females in the future through genomic science.





Mosammat Rashida Begum, Bangladesh



Prof. Dr. Mosammat Rashida Begum has achieved two great achievements in the year of 2021. She is awarded FRCOG from Royal College of Obstetric and Gynaecology (London) and also received best physician award from Medical Teachers' Welfare Trust & Platform of Medical and Dental Society.

Since graduating in medical science in 1982, she has furthered her studies and was awarded Diploma and Masters in Medical Education from the University of Dundee, UK in 1997 and 1999 respectively. In 2006 she completed MSc in Clinical Embryology from the University of Leeds, UK. She completed PhD in Reproductive Medicine from Dhaka University in 2014.

Prof Begum has received numerous prestigious awards through her career including Young Scientist Award from Asia Oceania Federation of Obstetrics and Gynecology (AOFOG) in 2005, Shining Personality Award in 2005 from Narikantha Foundation, Lifetime achievement for extensive service in infertility from Obstetrics and Gynecological Society, Bangladesh in 2016.

She is well established as a pioneer of infertility care in Bangladesh. Besides being a fantastic clinician and researcher, she is a regular contributor of different social welfare activities. She is also a lovely wife to her husband, a mother of two daughters and grandmother of two young grandsons.

CONSUMER ENGAGEMENT



WHAT WE DO

PCOS Vitality is a non-profit organisation set up in 2017 in Ireland. We aim to break barriers by raising awareness of the physical and psychological impact of PCOS across our lifespan and by providing peer support. We value patient and public involvement in research. We are committed to using the patient voice to inform research to improve health outcomes and research efficacy. We provide direct access to information on PCOS while tackling stigmas associated with PCOS.

A YEAR IN REVIEW

Despite the pandemic, PCOS Vitality has continued to thrive. Our social media presence has peaked at over 15K. Read on for a snapshot of some of our recent work delivery patient and public initiatives and network building among the patient and research community.

SUPPORT

Over 15K social media followers including our Facebook Peer Support Group & Whatsapp Support Group. We support all women and people with PCOS and are a diverse and inclusive group covering UK, Ireland and beyond.

EVENTS

World PCOS Day, Heart4PCOS, PCOS Blossoms Series (Instagram), Wave of Light, World Menopause Day, Who wants to be a PCOS Expert?, European Coalition for People Living with Obesity Patient Lounge – PCOS & Obesity, Science Week Ireland Bias Women's Health, MP-PCOS Society Live Panel, SIMBA PCOS Medical Educational Event approved by Society of Endocrinology.

COLLABORATIONS

- Dept of Health Ireland/An Roinn Slainte Women's Health Taskforce
- Northern Ireland All Party Parliamentary Group on Women's Health
- RCOG Women's Voices Panel
- Evidence submitted to UK Parliament Women's Health Strategy & Body Image Inquiry regarding PCOS
- Working with local authority to include PCOS in school curriculum & consulted on Regional Obesity Management Services.

RESEARCH

- Provided patient insight/feedback on various programmes including DAISy-PCOS, COMICs PCOS educational videos, SEVA Body Image Survey, 11- OXO Project, REFUEL PCOS study, Obesity Health Alliance Report 10 Year Healthy Weight Strategy, NHS Primary Care Handbook and other various research projects.
- Shared numerous research participants callouts.

Visit www.pcosvitality.com

Follow @pcosvitality

On Instagram, Facebook, Twitter, Tiktok, Youtube or Clubhouse

CALENDER OF EVENTS

AEPCOS Scientific Update Meeting: 10 Jun 2022, Atlanta Georgia, USA

US ENDO 2021: 11 – 14 Jun 2022, Atlanta, Georgia, USA

ESHRE Annual Meeting: 3 – 6 July 2022, Milan, Italy

ASRM Congress & Expo: 22 – 26 Oct 2022, Anaheim, CA, USA

Controversies in Gynaecology, Obstetrics and Infertility: 24-26 Nov 2022, Amsterdam, The Netherlands

CALL FOR NEWSLETTER CONTENTS

This is a new section of our newsletter!

We want to engage with our society members!

Have you recently been awarded a prize/grant?

Have you been offered a new faculty position or made a career change?

Have you been invited to speak in a major event?

Are you a rising academic researcher looking for young potential PhD students?

Do you have a job/fellowship to offer?

Have you participated in any research translation work?

Maybe you started writing a blog or joined a twitter/Instagram account you would like us to follow?

Share with us any news or announcements.

We want to hear from you!

Interested members please email newsletter@ae-society.org.

Use the subject line “Member engagement”.

We suggest the content to be around 200-300 words with 1-3 accompanying images.