2021 | Jun | ISSUE 2

NEWSLETTER

Androgen Excess and PCOS Society

Strengthening care for women with Androgen Excess Disorders

Photo by Matthew Barra from Pexels

Chair editor

Joop Laven, MD, PhD

Erasmus Medical Centre
Rotterdam, The Netherlands

Co-editors

Jillian (Chau Thien) Tay, MBBS (Hons), FRACP

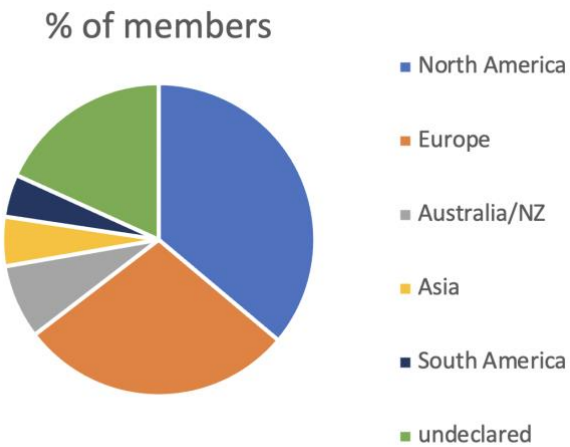
Monash University
Melbourne, Australia

In This Issue

FOREWORD FROM THE PRESIDENT

BY KATHLEEN HOEGER

It is my honor and pleasure to take the helm as the President of the AE-PCOS Society, taking over after the term of Dr. Lisa Stener-Victorin ended in November 2020. Lisa did an amazing job navigating our society through one if it's most challenging times and keeping our membership together. The year also saw our long-term executive director, Dr. Enrico Carmina retire, who was a huge influence on the international growth of the society. As we have all navigated 2020 with our new reality and have had to "meet" our colleagues virtually for the last year, and for the near-term future, our society has been most challenged as we are truly an international society. In the last 5 years our society has included members across the globe.



Our annual meeting in November 2020 was our first virtual event. While this decreased our personal face to face interactions, it did allow us to include participants more easily from around the world. We had record participation with good engagement from our members and guests attending. As our in- person meeting limitations will continue for 2021, we will proceed with a second virtual annual meeting in November 2021.

I want to take this chance to invite you all to again participate again in our virtual event as we are now developing the program and we anticipate continued excellent and ground breaking science. Our members are on the forefront of the best research in basic and clinical science in PCOS and androgen excess conditions. We are very hopeful to be able to meet in person again soon as the world reopens to travel, possibly in March 2022 at the Endocrine Society annual meeting, if we are able to offer our annual update meeting which has always been well attended and received, focusing a deep dive on a current research theme in PCOS.

"I want to take this chance to invite you all again in our virtual event…

… we anticipate continued excellent and ground breaking science."

Despite the physical challenges, we are a vibrant and growing society. We are planning a roll out of our new website with increased functionality and easier membership renewals. One of our goals this year in our society is to grow our membership from less resourced areas and in those who are starting their careers in both basic and clinical science related to androgen excess disorders. We will have new membership options and hope that all of our society colleagues will encourage their collaborators and trainees to join our society. Your voice is important as we grow and expand our presence. We will be offering webinars and focus on our early career members so hope you will spread the word.

Our society is looking forward to a great new year in this changing and challenging climate and want to encourage you to reach out with any questions or suggestions.

Warmest wishes,

Kathleen Hoeger MD MPH

President, AE-PCOS Society

AEPCOS Society Updates

BY TERHI PILTONEN

Dear AEPCOS society members, here are some of our latest society updates!

Improving connections with our members

We have planned several events and improvements for you to connect with the society and other members.

- We are building a new website with several new properties and content
- The upcoming scientific meeting will be held on a web-based platform to facilitate the attendance
- The Early Career Special Interest Group (EC-SIG) has planned on new virtual activities available for all members. Stay tuned for more information.

Updates on membership

- Regular membership fee has been lowered from $170 to $150
- Reduced membership fee has been lowered from $100 to $50 for Early Career members
- Reduced membership fees -50% for all low-income countries to encage and include new members to our society
- To support our members, we will announce several “travel grants” to attend the virtual meeting and cover the registration cost.

Thanks to our active members

- Kathy Hoeger has started strong as a new president of the society with the support of previous presidents Elisabet Stener-Victorin and Anuja Dokras. Great work Kathy!
- Rebecca Campbell and Anju Joham, welcome as the new society board members!
- Thanking to Anuja, we were able to receive again the NIH support grant to organize meetings and run the society. Great effort!
- Special thanks to Tania Burgert for her tireless enthusiasm organizing the e-meeting practicalities and now also the website!
- The EC- SIG has also change in lead. Michelle Meyer and Heidi Vanden Brink did amazing job as first chairs of this group and now Jillian Tay (Australia) and Laura Cooney (USA) will take over as chairs. Other members of the EC-SIG are Vice chair Anju Johan (Australia) and secretary Bassel Wattar (UK). Thank you also to Marla Lujan, the EC-SIG faculty lead, for effortless work for the society and supporting the team!

Early Career Special Interest Group Updates

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 AEPCOS Society members
- Establishing a platform to enable communication among AEPCOS 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.

Given our successful events at the 2020 AEPCOS Annual Meeting, we are now planning to have our upcoming Meet the Professor event available to the whole society!

More information in the next page!

2021 Leadership Committee

Faculty Lead

Marla Lujan

Chairs

Laura Cooney

Chau Thien Tay (Jillian)

Secretary

Bassel Wattar

Enquiries about joining the EC-SIG

Please contact Jillian Tay

Jillian.cttay@gmail.com

Meet the Professor Virtual Event

HOSTED BY THE EC-SIG GROUP

Please join us for a live interactive session

"Establishing International Research Collaborations"

with

Prof Anuja Dokras

MD, PhD

Director, Penn Polycystic Ovary Syndrome Centre
Medical Director, Reproductive Surgical Facility
Director, Penn Preimplantation Genetic Diagnosis Program
Chair, Gynaecology Team Women's Health Service Line
Professor of Obstetrics and Gynaecology, Hospital of the University of Pennsylvania

Prof Helena Teede

MBBS, PhD, FRACP, FAAHMS, FRANZCOG

Executive Director, Centre of Research Excellence of Women's Health in Reproductive Life
Executive Director, Monash Partners Academic Health Research Translation Centre
Director, Monash Centre for Health Research and Implementation

Date and Time:	Australia Eastern Standard Time	23rd June 2021 (Wed) 7am
	British Summer Time	22nd June 2021 (Tue) 10pm
	Eastern Daylight Time	22nd June 2021 (Tue) 5pm
Zoom link:	[Join using this link]	
Zoom meeting ID:	844 4313 9469	
Passcode:	556631	

A zoom invitation will be sent out 1-2 weeks to all AEPCPS members before the event.

In Memoriam

WALTER FUTTERWEIT, MD

1931-2021

BY RICARDO AZZIZ

Photo by fotografierende from Pexels

On February 2, 2021 we lost Walter Futterweit, a leader in the field of androgen excess and PCOS, a warm and caring colleague, a loving and dedicated husband and father, and a close friend.

Walter was born in Vienna, Austria on September 8, 1931. When the Nazi annexed Austria just a day after German troops entered the country on March 12, 1938, the invaders wasted no time in extending anti-Jewish legislation to the country. At the time Austria had a Jewish population of about 192,000, most living in Vienna. Before turning to using brutal and forced deportation to ghettos and concentration camps in other invaded territories, German policy regarding Jews initially was one primarily of shameful expropriation followed by Jewish emigration. In early 1939, after being kept in a holding camp, 8-year-old Walter along with his parents Regina and Henry and his younger sister Tilly were able to escape to Switzerland. Walter recounted that this was due to the generous (and then illegal) help by Paul Grüninger, a commander of the state police in St. Gallen, a small town in northeast Switzerland. Fortunately for Walter and his family, Grüninger chose morality over career and went on to save the lives of over 3500 Austrian Jews before being arrested, demoted, and jailed.

Like many other immigrants seeking safety, freedom, and opportunity, Walter and his family arrived in the U.S. through Ellis Island. The family settled among relatives in the Borough Park neighborhood of Brooklyn. His father, an observant Orthodox Jew, sent Walter to Yeshiva Rabbi Chaim Berlin, a private all-boys Jewish school in Brooklyn. There he attended both elementary school (*yeshiva ketana*) and high school (*mesivta*). Walter had wanted to be a physician since the age of 6, when he was still in Vienna, and "give of everything I had to the comfort and help to patients". Walter was admitted to New York University (NYU) for his undergraduate studies, where he graduated Cum Laude and was named to the Phi Beta Kappa Honorary Society. He then proceeded to attend medical school at NYU, graduating in 1957.

However, at the time more important events than medical school were enveloping Walter. In 1956 he met the proverbial 'girl next door' and a mere four dates later Walter proposed. He and Gloria were married September 8, 1957, on his birthday, shortly after he graduated from medical school. A beautiful and loving partnership that lasted 63 years, as their family grew to include three children, Lorelle, Stephen, and Debra, and four grandchildren.

Figure 1. Walter Futterweit at the first meeting of the Androgen Excess Society, June 18, 2003, Philadelphia, Pennsylvania (second from left in first row).

Walter went on to complete an internship at Beth Israel Hospital in Manhattan and a residency at Montefiore Hospital in the Bronx. He then undertook a one-year fellowship in endocrinology at Mount Sinai followed by another year of research at the Worcester Foundation for Experimental Biology in Shrewsbury, Massachusetts. There he worked under the direction of the eminent Ralph I. Dorfman, developing methods of isolating sex steroids in urine and blood using the novel technique of gas chromatography. Walter would continue his academic scholarship throughout his life, working with many well-known clinician-scientists including J. Lester Gabrilove, Andrea Dunaif, John Nestler, Enrico Carmina, and myself.

In 1963, Walter joined the staff at Mount Sinai Hospital in Manhattan as attending physician, eventually becoming Clinical Professor of Medicine and Endocrinology. He served the institution, one that he would remain with for the entirety of his career, in many capacities, including as Assistant Chief of the Endocrine Clinic and member of the Quality Assurance Committee. He was also an active member of the Endocrine Society, the American Association of Clinical Endocrinology, and, of course, the Androgen Excess & PCOS Society. A well-recognized figure at their annual meetings.

Figure 2. Walter Futterweit (right) receiving the inaugural 'Androgen Excess & PCOS Society Lifetime Contribution Award' at the 2017 Annual Meeting of the Society in San Antonio, Texas, presented by then Androgen Excess & PCOS Society Executive Director Enrico Carmina (left), and Senior Executive Director, Ricardo Azziz (center).

Like many of us, Walter developed a keen interest and passion for the plight of the androgenized woman. In 1988 he published a study on the role of hyperandrogenism in female alopecia, which has remained a classic in the field (*Futterweit W, Dunaif A, Yeh HC, Kingsley P. The prevalence of hyperandrogenism in 109 consecutive female patients with diffuse alopecia. J Am Acad Dermatol. 1988 Nov;19(5 Pt 1):831-6*). And in 1984 he published another classic, his book 'Polycystic Ovarian Disease', succinctly summarizing what we knew of this pervasive disorder at the time. He went on to establish a very prestigious and successful endocrine practice on Park Avenue in Manhattan, affording thousands of patients, many of whom were androgenized women, the answers that they were looking for.

It was through this shared interest that we became close friends. As some of us were mulling creating an organization that would serve those interested in androgen excess disorders in women, it was Walter who enthusiastically rallied us on. And it was Walter who proudly attended the first Androgen Excess Society (as the organization was then called) June 2003 in Philadelphia (you can see him in the first row of pictures of the time… **Figure 1**). He went on to serve as president of the Society in 2010-11. Later, as the Androgen Excess & PCOS Society grew, it was Walter who would chair the fund-raising committee for the organization, often identifying gifts among his own prominent patients. And it was Walter who received the inaugural 'Androgen Excess & PCOS Society Lifetime Contribution Award' at the 2017 Annual Meeting of the Society in San Antonio (**Figure 2**). Walter also went on to generously endow the 'Walter Futterweit Award in Excellence in Clinical Research' of the Society.

Walter had all the trapping of success -- a successful practice on storied Park Ave, an international reputation in the field, and a loving family. And yet, he was always humble, warm, and generous. His happiness and buoyancy were infectious. Towards the end of his life, as I was living in Albany, NY, I would often visit him in his Park Avenue office, full of memories and mementos, to share ideas and stories. I will forever cherish those moments.

Sources
https://www.legacy.com/obituaries/nytimes/obituary.aspx?n=w-futterweit&pid=197651401
https://www.mountsinai.org/about/newsroom/2010/walter-futterweit-md-named-president-of-the-androgen-excess-and-pcos-society
https://encyclopedia.ushmm.org/content/en/article/austria
https://en.wikipedia.org/wiki/Yeshiva_Rabbi_Chaim_Berlin
https://archives.med.nyu.edu/islandora/object/nyumed%3A16574/datastream/OBJ/download/NYU_Physician__Fall_1991_.pdf
https://www.aish.com/ho/p/The-Courage-to-Defy-Paul-Gruninger-Risked-Everything-to-Rescue-Jewish-Refugees.html
Walter Futterweit resume, CV, and personal letters regarding the Jacobi award

Ricardo Azziz
Birmingham, AL
March 22, 2021

RESEARCH HIGHLIGHTS

Birthweight & Childhood Overweight and The Risk of PCOS

BY JOOP LAVEN

Photo by Henley Design Studio on Unsplash

Birthweight and childhood obesity and the risk of PCOS

BY JOOP LAVEN

There is still some controversy about whether childhood and birthweight are risk factors for PCOS…

Recently a large population based Danish study was published in Obesity Facts showing that overweight and tall stature in childhood are positively associated with PCOS risk, but birthweight is not. In this large-scale, population-based, cohort study of Danish girls, it was reported that size at birth was not related to a subsequent risk of PCOS. At childhood ages, above-average BMI values or tall stature were associated with a significantly increased risk of PCOS. Furthermore, compared with girls being overweight at the age of 7 or 13 years, girls without overweight at either 7 or 13 years, but especially those without overweight at both of these ages, had a lower risk of PCOS. Finally, persistently tall girls or girls who changed from tall to average height had a higher risk of PCOS than those with average height growth (1).

Although there is still some controversy about whether childhood and birthweight are risk factors for PCOS this is the largest study in the field in an impressive number of women drawn from the general population. Limitations of this study might reside in the facts that the diagnostic criteria changed over the years from the NIH into the Rotterdam criteria. Moreover, numerous medical and socio-economic confounders are considered by the authors which might have impacted on the outcome of their study. However, the PCOS risk as well as the changes in BMI and height were minimal across the different birth cohorts. It is also stated that only women with hospital based diagnoses after clinical investigations were included in this study. The overall generalizability might indeed might therefore be limited to the more severe phenotypes in this study. However, they have shown that the reported increased risks of PCOS appeared already at BMI values that were significantly lower than those defined as overweight by international contemporary criteria. With the worldwide progression of the childhood obesity epidemic, the prevalence of PCOS will likely increase, causing a significant health burden for both women and society. Therefore we should aim at attaining and maintaining a healthy weight during childhood (1).

With worldwide progression of childhood obesity epidemic, the prevalence of PCOS will likely increase…

Based on the current data, the role of birthweight in the etiology of PCOS is still uncertain.

There are several other studies which addressed whether the development of obesity during childhood and adolescence are interrelated or associated with the risk of developing PCOS alter on in life. In a recent Dutch meta-analysis reported that out of 1484 studies 16 met the inclusion criteria for that meta-analysis and 14 reported their original data. That particular study indicated that a low birthweight as a summary measure of intrauterine environment may be associated with PCOS when diagnosed according to the Rotterdam criteria. They didn't report an association with higher birthweights. However, according to this study there was a considerable risk for publication bias (2). A very large Swedish study in a population based cohort of about 681000 reported that being born small for gestational age (SGA) was associated with a later diagnosis of PCOS in crude estimates, but the association was not significant after adjusting for maternal factors. Hence, the observed association between SGA and the development of PCOS appears to be mediated by maternal factors (3). Hence based on the current data the role of birthweight in the etiology of PCOS is still uncertain.

However, when childhood BMI was classified as overweight or non-overweight, overweight was associated with a nearly 3-fold higher risk of PCOS than non-overweight in the recent Danish study.

These findings illustrate that BMI at childhood ages, before PCOS is typically diagnosed, is relevant for this disorder (1). There are several other studies showing similar associations between being overweight during childhood or adolescence and the risk of developing PCOS. Although they all suffer from major limitations in that they fully rely on self-reported overweight or obesity they all show that a high BMI is associated with an increased incidence of hirsutism, menstrual problems and PCOS compared to girls without the latter diagnosis. In another Swedish study the risk for PCOS was also associated with a higher BMI during childhood as well as with a greater body size (4). One study in a British birth cohort showed that other than menstrual problems, childhood body mass index had little impact on the reproductive health of women (5). In contrast in the norther Finnish birth cohort birthweight and being small for gestational age or being born with a growth retardation were not associated with PCOS symptoms at adult ages. Only when girls were overweight at ages 14 years they tended to have in increased risk for PCOS (6). Another study in the same Finnish birth cohort observed that symptoms as well as the diagnosis of PCOS were associated with significant increase in weight in early adulthood. This study also identified a sensitive time period when weight gain plays a crucial role in the emergence of PCOS and underpinned the opportunity for preventive actions against metabolic and cardiovascular diseases (7). A recent combined Australian and American study found that greater childhood BMI and waist/height ratio in white but not black participants were associated with PCOS in adulthood (8).

In the Danish study it was also shown that girls without overweight or obesity during childhood were less likely to develop PCOS. Moreover they also showed that if weight reduction was successful in that respect that if a girl lost weight and regained a normal BMI the risk of developing PCOS was significantly reduced (1). The latter observation again highlight the importance of weight control during childhood and early adolescence. It is biologically plausible that excess weight in childhood contributes to PCOS development as well as exacerbating the severity of the syndrome through a worsening of metabolic and reproductive disturbances. Excess adiposity is associated with increased insulin resistance, and compensatory hyperinsulinemia stimulates the ovarian production of androgens and inhibits the production of sex-hormone-binding globulin. Although adult obesity and PCOS are closely interrelated, their temporal relation is complex and not fully understood. However, a similar relationship seems to exist already in youngsters before they even develop the PCOS phenotype. Hence early childhood may represent a critical time window during which body size and body weight influences PCOS development. Large studies in different ethnic populations are needed to further consolidate these findings whereas at the same time the need for weight governance during childhood is more important than ever.

Early childhood may represent a critical time window during which body size and body weight influences PCOS development.

References

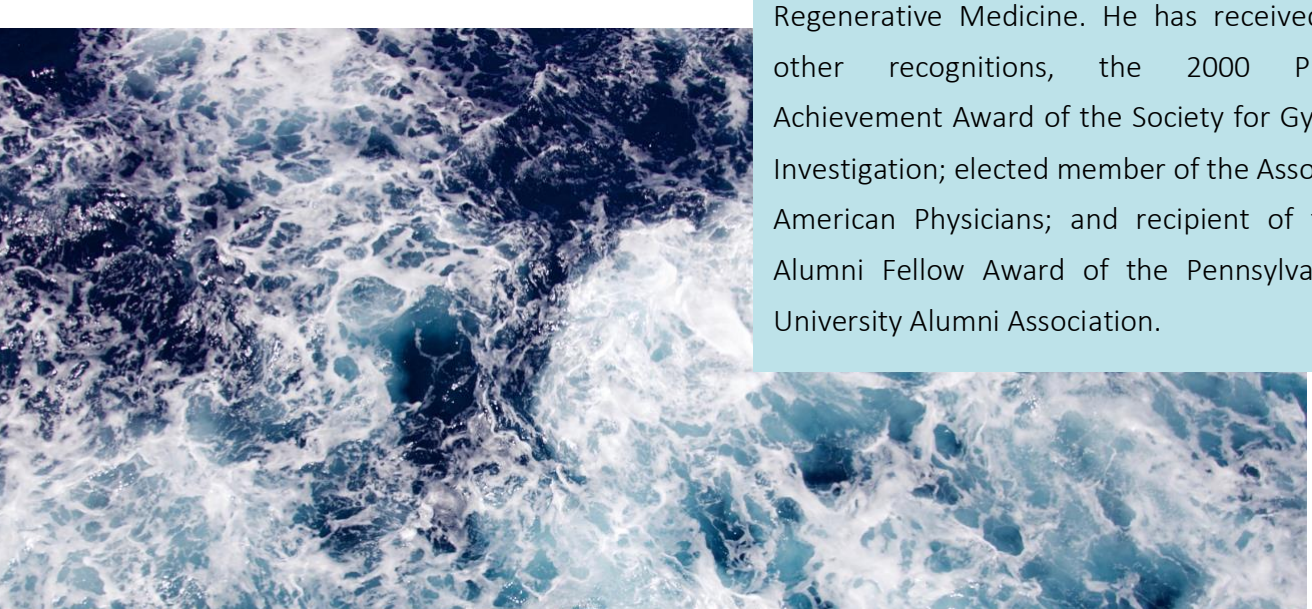
1. Aarestrup J, Pedersen DC, Thomas PE, Glintborg D, Holm JC, Bjerregaard LG, Baker JL. Birthweight, Childhood Body Mass Index, Height and Growth, and Risk of Polycystic Ovary Syndrome. Obes Facts. 2021 May 12:1-8. [pubmed link]
2. Sadrzadeh S, Hui EVH, Schoonmade LJ, Painter RC, Lambalk CB. Birthweight and PCOS: systematic review and meta-analysis. Hum Reprod Open. 2017;2017(2). [pubmed link]
3. Valgeirsdottir H, Vanky E, Sundström-Poromaa I, Roos N, Løvvik TS, Stephansson O, Wikström AK. Prenatal exposures and birth indices, and subsequent risk of polycystic ovary syndrome: a national registry-based cohort study. BJOG. 2019;126(2):244-251. [pubmed link]
4. Li J, Eriksson M, He W, Hall P, Czene K. Associations between childhood body size and seventeen adverse outcomes: analysis of 65,057 European women. Sci Rep. 2017;7:16917. [pubmed link]
5. Lake JK, Power C, Cole TJ. Women's reproductive health: the role of body mass index in early and adult life. Int J Obes Relat Metab Disord. 1997;21:432-8. [pubmed link]
6. Laitinen J, Taponen S, Martikainen H, Pouta A, Millwood I, Hartikainen AL, Ruokonen A, Sovio U, McCarthy MI, Franks S, Järvelin MR. Body size from birth to adulthood as a predictor of self-reported polycystic ovary syndrome symptoms. Int J Obes Relat Metab Disord. 2003;27:710-5. [pubmed link]
7. Ollila MM, Piltonen T, Puukka K, Ruokonen A, Järvelin MR, Tapanainen JS, Franks S, Morin-Papunen L. Weight Gain and Dyslipidemia in Early Adulthood Associate With Polycystic Ovary Syndrome: Prospective Cohort Study. J Clin Endocrinol Metab. 2016;101:739-47. [pubmed link]
8. He Y, Tian J, Blizzard L, Oddy WH, Dwyer T, Bazzano LA, Hickey M, Harville EW, Venn AJ. Associations of childhood adiposity with menstrual irregularity and polycystic ovary syndrome in adulthood: the Childhood Determinants of Adult Health Study and the Bogalusa Heart Study. Hum Reprod. 2020;35:1185-1198. [pubmed link]

SPOTLIGHT ON RESEARCH LEADER

An Interview with Professor Ricardo Azziz

MD, MPH, MBA
CEO, American Society for Reproductive Medicine, Birmingham, AL

Ricardo Azziz, MD, MPH, MBA is an internationally recognized physician, scientist, and executive. Dr. Azziz's biomedical research focuses on the study of androgen excess disorders. He has published over 500 original peer-reviewed articles, book chapters, and reviews. He previously served as Deputy Director, Clinical & Translational Sciences Institute and Assistant Dean, Clinical and Translational Sciences at UCLA; Director, Center for Androgen-Related Disorders at Cedars-Sinai Medical Center, Los Angeles; and founder and Executive Director/Senior Executive Director, Androgen Excess & PCOS Society. Among other advisory capacities, he has served on multiple NIH committees, chaired the U.S. FDA Advisory Board on Reproductive Health Drugs, and served on the oversight committee for the California Institute for Regenerative Medicine. He has received, among other recognitions, the 2000 President's Achievement Award of the Society for Gynecologic Investigation; elected member of the Association of American Physicians; and recipient of the 2014 Alumni Fellow Award of the Pennsylvania State University Alumni Association.



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

I became involved in androgen excess research through my work with Dr. Howard A. Zacur during my fellowship at Johns Hopkins Hospital. At that time, I had been working on a potential thesis project exploring the role of TRH in reproduction, only to find out that TRH was rapidly metabolized in the blood stream (as you would expect for a three amino acid protein), yielding unmeasurable results. Howard then suggested I then turn my attention to a series of patients who suffered from androgen excess that he had been collecting, to investigate them for possible 'late-onset' adrenal hyperplasia, patients he was working with then JHH Pediatric Endocrine chief, Claude J. Migeon. Claude felt that the diagnosis of these patients required complex measurements stemming from an acute ACTH stimulation test, and I did not.

We eventually proved that the diagnosis of what became known as '21-hydroxylase deficient non-classic adrenal hyperplasia' was relatively straightforward. The studies that I did with Howard and the many patients that came to see me at UAB, my first faculty appointment, educated me regarding the pervasiveness and significant impact that androgen excess disorders had in women and families. I became a fast convert concerning the need to address and care these women, who so many seemed to ignore. What I often call, the 'silent epidemic' *(for more see Azziz R. How polycystic ovary syndrome came into its own. F&S Science 2021;2(1): 2-10)*.

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

What has helped me most in my career are the patients that I have seen and the many fellows and students I have trained. The first because they were always demanding better care and the second because they were always asking good questions. The early support of my senior partners and chair, J. Benjamin Younger, Richard E. Blackwell, and Hugh M. Singleton was critical. I have to recognize my parents, one a nuclear physicist and the other a cultural anthropologist for instilling in me the passion for learning and the curiosity to know more. Finally, I also have to credit my own obstinance and drive in pursuing answers … character traits that have served me well. At least most of the time. As for many, it is difficult to point to one thing as the element responsible for one's success… if success is what I have.

Q3. What mistakes have you made along the way?

Mistakes? I have made so many that we simply do not have the space necessary to discuss them all. However, I will highlight just a couple. Although I have advised many budding researchers on this, I regret (to a certain degree) not being more selfish with my time *(for more see Azziz R. Polycystic ovary syndrome, microbiomics and why you should be a little selfish with your time. Expert Rev. Endocrinol. Metab. 2013;8(4), 329–331)*. However, it has been also a wonderful gift to be involved in so many different projects, to be able to help so many young -- and old – colleagues, friends and even strangers, and to experience the wide diversity of intellectual life.

I also regret not developing an understanding of clinical academic politics earlier in my career. It is so important for the survival and professional growth of many young academics. Academic politics means understanding how decisions are made, how your bosses, and their bosses' bosses think, what are the real 'expectations' for you, how academic institutions are financed, and how people get promoted – or not – to administrative and executive positions. It also means understanding how human resources work, including interviewing, hiring, and firing, what is strategic planning, how to build a business plan, and how to listen – and communicate effectively. It also means understanding how to grow as a leader, investing in your leadership development, proactively and deliberately growing your network, learning to 'manage up', and much, much more. Many individuals have the aptitude for leadership, but real leadership are developed and trained, because leadership skills are learned.

Q4. What was the hardest decision you ever had to make?

Leadership is about making hard decisions – almost always. Because nobody needs a leader if the choices are clear, or the decisions are easy. It is often about managing change – either because you need to change or because the environment is changing -- or more often both. So, leadership entails making many hard decisions. If I have to think back, one of the hardest decisions I ever was terminating a close friend from his position. The stakes were high, and it needed to be done. But wish I had done it differently. However, and as many of you have heard before, the role of leadership is to build teams that work towards the success of the common good, whatever that may be. In other words, to get the right people on the proverbial 'bus' and in the right seats -- and to get the wrong people of the bus. Knowing it's the right thing to do, doesn't make it easier. It just allows you to know why the hard choice has to be made. Leadership is hard. Worthwhile, but hard.

Q5. What are your thoughts regarding future directions of androgen excess research?

Big question. To suggest a few:

a. Develop targeted therapeutics tested through randomized controlled clinical trials.
b. Develop large cross-cultural international epidemiologic studies of PCOS to better understand the evolutionary path, and the impact of environment and ethnic/racial factors, on the prevalence, phenotype, and morbidity of PCOS world-wide.
c. Develop large multicenter trials addressing the metabolic and adipose dysfunction and morbidities of PCOS.
d. Develop large prospective trials assessing the impact of early screening and intervention in the progression or PCOS-associated morbidities.
e. Develop large multicenter global studies assessing the underlying genetic and epigenetic factors, and genetic-phenotypic associations, of PCOS.

Q6. What advice will you give to our upcoming researchers?

First, do not let anybody discourage you from the study of androgen excess disorders. It is still relatively unstudied, and the millions of women affected need and demand it. Second, be systematic and focused in your inquiry. Third, leverage your clinical practice on behalf of your research. Its hard to build a research program that is not supported by and congruent with your clinical responsibilities and vice-versa. Four, always be truthful and honest in your research.

Q7. Would you be willing to mentor a mentee?

I am always willing to be a mentor, although the availability of time, a key to good mentoring, often hampers the quality and stability of my mentoring.

CONSUMER ENGAGEMENT 1

Calling all PCOS Specialists:
You're invited to apply for the new PCOS Directory

The PCOS Awareness Association is inviting all PCOS specialists worldwide to join its new and exciting PCOS Directory. This free tool allows patients to discover and connect with qualified specialists.

The application process is free and easy to complete. Once your application is approved, you and your business will be included in the public, searchable database. You will be part of a tool that will be a valuable resource for those suffering from PCOS.

To help fulfill its mission of supporting patients, the PCOS Awareness Association set out to build the first comprehensive list of all PCOS specialists. The online database will help patients find the help and support they need regardless of where they live. The directory was just launched in early 2021, along with The Shades of Teal Network that offers even more helpful resources and tools for PCOS patients.

Any medical or health care professional who holds an advanced degree, certification, or license and specializes in Polycystic Ovarian Syndrome is welcome to apply to be listed in the PCOS directory. That includes everything from physicians, scientists, dentists, personal trainers, and more.

What to know about the PCOS Directory application process?

You can apply to be included in the directory online at www.pcosdirectory.org. Click on "Join the PCOS Directory" in the upper-righthand corner. You will be directed to an online form to fill out and submit to our team.

Once you submit your application to join the directory, our team member will contact you to verify your personal information. You will then receive a link to build your profile that will be featured within the directory, which you can edit or remove at any time.

The initial application requires that you provide your name, address, email address, and profession. You can also choose to give more information about your website, phone number, business, and demographic details. It should take just a few moments of your time to complete.

The PCOS Awareness Association will not sell or share the information you provide without your prior approval.

Why are we building a PCOS Directory?

The PCOS Awareness Association is committed to raising awareness about PCOS worldwide. However, we recognize that everyone does not have the same level of access to care and information.

The PCOS Directory is intended to help all patients worldwide connect with qualified professionals who can help enhance the quality of life for those suffering from PCOS. The directory also offers professionals and PCOS specialists a free and equal way to network and learn more about each other. The platform will serve as another resource by the PCOS Awareness Association to help support, educate, and advocate for PCOS awareness.

You can browse the PCOS specialists who have already been added to the directory online at pcosdirectory.org.

CONSUMER ENGAGEMENT 2

2021 VIRTUAL
September 17-19th

We are back for a third year of the wildly successful PCOS CON, this time coming to you virtually.

The PCOS Awareness Association is thrilled to be presenting PCOS CON this year **September 17-19th**. We invite you to join us for two-and-a-half days of virtual speakers, fun activities, helpful virtual exhibits, and more!

PCOS CON invites you to connect with medical professionals, companies, nonprofit organizations, researchers, and hundreds of individuals who either have PCOS or support someone who does. Attendees will have a unique opportunity to immerse themselves in a supportive community that is passionate about advancing awareness of PCOS.

PCOS can feel like a lonely journey, but it does not always have to be. The PCOS Awareness Association is committed to connecting PCOS patients with the resources and support systems they need to face their condition head-on. We hope our attendees leave the conference feeling empowered with more knowledge and more supported on their PCOS journeys.

Planning for PCOS CON is underway. Follow PCOS CON on social media for conference updates and speaker announcements.

How to attend 2021 VIRTUAL PCOS CON:

Tickets are on sale now at www.pcoscon.org until September 5!

We offer several attendance options to choose from:

- Standard Attendees: Receive access to select event sessions, access to select fun sessions, a standard swag box, a PCOS CON T-shirt, and an event recording that is available for 30 days. Cost: $100
- Man of Teal Attendee: Receive access to select event sessions, a Man of Teal T-shirt, and an event recording that's available for 30 days. Cost: $75
- International Teal Attendee: Receive access to select event sessions, access to select fun sessions, a standard swag box via international shipping, a PCOS CON T-shirt, and an event recording that's available for 30 days. Cost: $110
- Teal Attendee: All of the standard attendee perks, PLUS eight meals delivered to your home by Factor.
- VIP Attendee: All of the Teal Attendee perks, PLUS access to celebrity breakout sessions and special VIP Swag Box. Cost: $200
- International VIP Attendee: All of the VIP Attendee perks, PLUS international shipping for your special VIP swag box. Cost: $210

All attendees will need to have a reliable internet connection to view and participate in the event. You'll receive your login instructions for PCOS CON a few days before the event officially kicks off on September 17.

Please note that all live sessions are scheduled in Eastern Standard Time. Each attendee will have access to a recording of the event for up to 30 days.

How to get involved in this year's conference:

If you are interested in sponsoring PCOS CON, email Damika, Director of Operations, at damika@pcosaa.org.

Want a chance to speak at PCOS CON? Go to pcoscon.org/speakers-moderators to submit a brief application to be a speaker. All speakers and moderators must be approved by the PCOS Awareness Association.

Learn more about this year's conference at https://www.pcoscon.org/.

CALENDER OF EVENTS

PCOS Advocacy Day: 5 Mar 2021, Virtual

ENDO 2021: 20 Mar – 23 Mar 2021, Virtual

ESHRE Annual Meeting: 26 June – 1 Jul 2021, Virtual

PCOS CON by PCOSAA: 16 Sep – 18 Sep 2021, Virtual

PCOS Awareness Symposium: 25 Sep 2021, Philadelphia, PA

ASRM Congress & Expo: 16 Oct – 20 Oct 2021, Virtual

AEPCOS Society meeting: TBA

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 using the subject line "Member engagement".
We suggest the content to be around 300-400 words with 1-3 accompanying images.