

### APRIL 2014 NEWSLETTER

#### OVARIAN AND ADRENAL ANDROGEN EVALUATION BY LC-MS METHOD IN PCOS

The April newsletter is dedicated to measurement of ovarian and adrenal androgens by Liquid Chromatography/Tandem Mass Spectrometry in PCOS. Professor Joop Laven interviewed Corrine Welt, M.D. Corrine is board certified in Endocrinology and Metabolism, Associate Professor of Medicine at the Harvard Medical School and Assistant Professor of Medicine at Massachusetts General Hospital. Corrine has been a member of AEPCOS Society from 2013 and has extensively studied PCOS pathophysiology and phenotypes

The preliminary program of the 12<sup>th</sup> Annual Meeting of the AEPCOS Society is included. The meeting site is the Kauai Marriott Resort Hotel and Beach Club, Kalapaki Beach, Kauai, HI, USA, October 22-23, 2014.

The abstract deadline is September 7<sup>th</sup>, 2014. Abstract forms are available from [www.society.org](http://www.society.org) or from contacting [info@ae-society.org](mailto:info@ae-society.org)

VOLUME 2, ISSUE 4

APRIL 30, 2014

#### In this issue:

- \* Adrenal and ovarian androgen measurement by LC/MS
- \* Preliminary program of 12th Annual Meeting of AEPCOS Society

#### Editorial Board

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#### FORTHCOMING AEPCOS MEETINGS

- 12th Annual Meeting of Androgen Excess & PCOS Society, Kauai Marriott Resort Hotel and Beach Club, Kauai, Hawaii, USA, October 22-23, 2014
- Update Meeting of AEPCOS Society, San Diego, CA, USA, March 4, 2015
- 13th Annual Meeting of AEPCOS Society, Palermo, Italy, October 4-6, 2015

## 12<sup>TH</sup> AEPCOS ANNUAL MEETING, KAUAI, HAWAII, OCTOBER 22-23, 2014

The 12th Annual meeting of the AEPCOS Society will be held at Kauai Marriott Resort Hotel and Beach Club, Kalapaki Beach, Kauai, Hawaii, USA, October 22-23, 2014, immediately after the Honolulu ASRM Annual Meeting. The venue of next annual meeting is a wonderful resort that is located in the very beautiful island of Kauai. The airport of Lihue, only one mile from the resort, may be reached by a



short 20 minutes flight from Honolulu. Several airlines serve this route with more than 10 daily flights. Lihue airport may be reached also by daily direct flights leaving from main Western USA and Canada cities including Los Angeles, San Francisco, Phoenix, Seattle and Vancouver. We have negotiated a very good rate at the Kauai Marriott that will be available to all registered guests for the duration of the meeting and for the following three days. Resort fee is optional but registration includes free shuttle bus from the airport. **As a special bonus for pre-registered (before October 1, 2014) AEPCOS and ASRM members flying to Lihue from Honolulu, we will reimburse \$100 of the ticket price (actual cost of the return ticket is \$103). AEPCOS members flying directly to Lihue from continental USA will get \$50 reimburse.**

The meeting program will include invited lectures, meet the professor sessions and oral communications

# ANNUAL MEETING PRELIMINARY PROGRAM

## DAILY SCHEDULE

### WEDNESDAY, OCTOBER 22

#### AFTERNOON

4:00—4:15 pm **WELCOME**

#### MEET THE PROFESSOR SESSIONS

4:15—5:15 pm

1. DIAGNOSIS OF PCOS DURING ADOLESCENCE

*TBA*

2. TREATMENT OF PCOS DURING ADOLESCENCE

*TBA*

3. SONOGRAPHIC CRITERIA FOR DIAGNOSIS OF PCOS

*TBA*

5:15—6:15 pm

1. ROLE OF AMH IN DIAGNOSIS OF PCOS

*TBA*

2. TREATMENT OF INFERTILITY IN PCOS

*TBA*

3. CHOICE OF ESTROPROGESTIN PRODUCT IN PCOS:  
INFLUENCE OF BODY WEIGHT AND AGE

*TBA*

7:00-9:00 pm **WELCOME RECEPTION**

### THURSDAY OCTOBER 23

#### MORNING

8:00—9:20 am **OBESITY and PCOS**

Diet and exercise in PCOS

*Lisa Moran—Adelaide, Australia*

Weight loss strategies and reproduction in PCOS

*Kathy Hoeger—Rochester, USA*

Adipogenesis and PCOS

*Daniel Dumesic—Los Angeles, USA*

9:20—9:50 am **PRESIDENTIAL LECTURE**

Developmental origins of PCOS: Initiation or Amplification by fetal androgen excess?

*David Abbott—Madison, USA*

9:50—10:20 am **COFFEE BREAK**

10:20—11:40 am **OVARIAN AND PLACENTAL DYSFUNCTION  
ASSOCIATED WITH PCOS**

New concepts of the normal and polycystic ovary

*Ray Rodgers—Adelaide, Australia*

How does prenatal and prepubertal androgen exposure affect placental function and development of PCOS?

*Elisabet Stener Victorin—Gothenburg, Sweden*

Androgenic programming of ovarian dysfunction

*Vasanth Padmanabhan—Ann Arbor, USA*

11:40 am—1:00 pm **ORAL COMMUNICATIONS**

# ANNUAL MEETING PRELIMINARY PROGRAM

## DAILY SCHEDULE

THURSDAY, OCTOBER 23

AFTERNOON

1:00—2:30 pm **LUNCH AND POSTER SESSION**

2:30—3:20 pm **CVD risk in PCOS**

Chronic inflammation and cardiometabolic disorders

*Nehal Mehta—Bethesda, USA*

Statins and PCOS

*Antoni Duleba—San Diego, USA*

3:30—4:00 pm **KEYNOTE LECTURE**

Preparing for pregnancy: basic biology through to delivery of health services for women with PCOS

*Robert Norman—Adelaide, Australia*

4:00—4:30 pm **COFFEE BREAK**

4:30—5:30 pm **ORAL COMMUNICATIONS—CLINICAL**

5:30—6:20 pm **PCOS PHENOTYPES IN EASTERN ASIA**

Cardiometabolic risk in Taiwanese PCOS populations

*Ming I Hsu—Taipei, Taiwan*

Prevalence and characters of polycystic ovary syndrome in women in China: a large community-based study

*Jie Qiao—Beijing, China*

6:20—7:00 pm **BUSINESS MEETING**

## ABSTRACT SUBMISSION

You are invited to submit abstracts of your original research to be considered for presentation at the 12th Annual Meeting of the Androgen Excess & Polycystic Ovary Syndrome Society. For abstract form, connect to: [www.ae-society.org](http://www.ae-society.org) or contact: [info@ae-society.org](mailto:info@ae-society.org)

To be considered for presentation your abstract must be submitted no later than September 7th, 2014, 11:00 pm (2300 hrs.) PST. All abstracts must be submitted by email in word to: [info@ae-society.org](mailto:info@ae-society.org). The presenter is required to register for 12th Annual Meeting of the AE-PCOS Society on submission of the abstract

All abstracts will be reviewed by a blinded scientific committee nominated by AE-PCOS Annual Meeting Committee. Accepted abstracts will be published on the abstract book and presented as oral communications.

The Baumgartner-Azziz AE-PCOS fund will award 2 Travel Awards (\$750 each) to the best abstracts presented by young (<35 years) investigators.

# REGISTRATION FORM

## 12TH AEPCOS ANNUAL MEETING

### REGISTRATION

\_\_\_\_\_ AEPCOS members \$260 \_\_\_\_\_ Non AEPCOS members \$360

### KAUAI MARRIOTT RESORT HOTEL AND BEACH CLUB

\$219 for night

\_\_\_\_ October 22 \_\_\_\_ October 23 \_\_\_\_\_ Number and dates of additional nights

Payment amount: \$\_\_\_\_\_ Credit card payment: \_\_\_\_\_ VISA \_\_\_\_\_ MasterCard \_\_\_\_\_ AMEX

Credit card number \_\_\_\_\_ Expiration date: \_\_\_\_/\_\_\_\_ CVV \_\_\_\_\_

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Online payment \_\_\_\_\_ to safely pay online, connect to: [www.ae-society.org](http://www.ae-society.org)

Check payment \_\_\_\_\_ Make checks payable to Androgen Excess Society. Email, mail or fax the registration form to: Androgen Excess & PCOS Society, via delle Croci 47, 1st floor, suite 10, 90139 Palermo, Italy. Fax: +39-091328997, Email: [info@ae-society.org](mailto:info@ae-society.org)

Registration includes transportation from/to airport, lunch and 2 coffee breaks. Price of the room is for single or double garden view room but does not include taxes (13.42%). Add \$30 for partial ocean view. The same hotel rate will be applied for up to 3 additional nights. Resort fee (\$30 daily) is optional.

Only written cancellation by fax or e-mail will be accepted. For cancellations until September 1, 2014, a 50% fee will be applied. Only taxes will be refunded after that date. **Pre-registered (before October 1, 2014) AEPCOS and ASRM members flying the route Honolulu-Lihue will get reimburse of \$100 of air ticket price. Pre-registered AEPCOS members flying directly to Lihue from continental USA will get reimburse of \$50.** Reimburses will be available at the meeting.



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Corrine Welt, M.D.

## **MEASUREMENT OF OVARIAN AND ADRENAL ANDROGENS BY LIQUID CHROMATOGRAPHY- TANDEM MASS SPECTROMETRY**

In this month's Newsletter, Joop Laven interviewed Dr. Corrine Welt, who commented on her recent publication in PLOS One, April 8, 2014, entitled, "[Simultaneous Measurement of Thirteen Steroid Hormones in Women with Polycystic Ovary Syndrome and Control Women Using Liquid Chromatography-Tandem Mass Spectrometry](#)". This study compares the current state of the art LC-MS/MS methodology to measure androgens with the former ELISA and RIA assays.

Corrine why did you decide to perform this study? The editorial staff of the Journal of Clinical Endocrinology and Metabolism recently stated that LC-M/MS should be used to measure androgens.

We wanted to evaluate androgen levels using our current radioimmunoassays compared to liquid chromatography, tandem mass spectrometry (LC-MS/MS). The LC-MS/MS that we used measured 13 steroids in a single assay. Therefore, we could also compare the relative adrenal and ovarian androgen concentrations in women with PCOS compared to controls. Of note, JCEM has published a letter of concern in the April issue. The requirement for using mass spectrometry to measure sex steroids has been suspended pending further scientific review (Letter of Concern. J Clin Endocrinol Metab.2014;1499).

Could you summarize your findings?

We measured serum androgen and adrenal steroid levels in women with PCOS and compared with those in BMI matched healthy controls. Androgens levels were measured using LC-MS/MS as well as with a commercially available radioimmunoassay. Testosterone, androstenedione, progesterone and 17OH progesterone levels were higher when measured using RIA compared to LC-MS/MS, although the testosterone RIA demonstrated the best agreement with the LC-MS/MS using a Bland-Altman analysis. Results using LC-MS/MS demonstrated that the concentration of androgens and their precursors were higher in women with PCOS than controls.

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Corrine what are the exact implications of your findings for our daily practice?

The study suggests that our longstanding radioimmunoassay performs adequately to distinguish women with PCOS from controls. Each laboratory must evaluate its testosterone assay to its performance limitations. Androstenedione should be performed using LC-MS/MS. The androstenedione levels may be important in particular ethnic groups (Asian women, Icelandic women) and subsets of women with PCOS diagnosed using the Rotterdam criteria. In addition, if progesterone levels in the follicular phase range are used to determine potential success in an in vitro fertilization cycle, it may be important to use LC-MS/MS to improve accuracy. JCEM will be reviewing the scientific evidence and has postponed its recent plan to require LC-MS/MS for testosterone levels, particularly in women.

In the light of the recent NIH consensus meeting in Washington where it was decided that in the clinical setting the Rotterdam consensus criteria should be used to diagnose PCOS how would you redefine the cut-off values for the Free Androgen Index based on your current findings?

Until we have a universal mass standard for testosterone and other androgen levels, it will not be possible to create universal cutoffs for testosterone or other androgens. Each laboratory will need to determine the cutoff in their assay. We have used the 95<sup>th</sup> percentile in normal women to define a cutoff for normal levels. It will be interesting when we can compare these normative data across labs and in different ethnicities to determine whether cutoffs need to be adjusted depending on the country or ethnicity of the patients.