

# Endocrine Abstracts

September 2020 Volume 70  
ISSN 1479-6848 (online)

22nd European Congress of  
Endocrinology

5-9 September 2020, European Society of Endocrinology

**eECE 2020**  
22nd European Congress of Endocrinology



published by  
**bioscientifica**

Online version available at  
[www.endocrine-abstracts.org](http://www.endocrine-abstracts.org)



## 22<sup>nd</sup> European Congress of Endocrinology 5-9 September 2020, European Society of Endocrinology

### EDITORS

Abstracts were marked by the Abstract Marking Panel and selected by the Programme Organising Committee

### e-ECE 2020 Mini-Programme Organising Committee

Andrea Giustina (Italy), **ESE President**

Martin Reincke (Germany), **ESE President-Elect**

Bulent Yildiz (Turkey), **ESE Treasurer (until May 2020)**

Riccarda Granata (Italy), **ESE Congress Committee Chair**

Attila Balázs Patócs (Hungary), **2020 POC Co-Chair**

Jens Otto Lunde Jørgensen (Denmark), **2020 POC Co-Chair**

Daniela Cota (France), **2021 POC Co-Chair**

Lars Rejnmark (Denmark), **2021 POC Co-Chair**

Ljiljana Marina (Serbia), **EYES Chair**

Manel Puig Domingo (Spain), **2020 POC Member**

Mónica Marazuela (Spain), **ESE Secretary**

### Programme Organising Committee

Riccarda Granata (Italy), **ESE Congress Committee Chair**

Jens Otto Lunde Jørgensen (Denmark), **Clinical Co-Chair**

Attila Balázs Patócs (Hungary), **Basic Science Co-Chair**

Michal Kršek (Czech Republic), **Local Organising Committee Chair**

Zhanna Belaya (Russian Federation)

Nienke Biermasz (The Netherlands)

Jens Bollerslev (Norway)

Daniela Cota (France)

Ashley Grossman (UK)

Csilla Krausz (Italy)

Madalina Musat (Romania)

Uberto Pagotto (Italy)

Agnieszka Piekliko-Witkowska (Poland)

Vincent Prevot (France)

Manel Puig-Domingo (Spain)

Lars Rejnmark (Denmark)

Mark Sherlock (Ireland)

Marilyn Theodoropoulou (Germany)

Pierre Val (France)

AJ van der Lely (The Netherlands)

Wim van Hul (Belgium)

Greisa Vila (Austria)

Maria Chiara Zatelli (Italy)

### Ex Officio Members

Andrea Giustina (Italy), **ESE President**

Martin Reincke (Germany), **ESE President-Elect**

Bulent Yildiz (Turkey), **ESE Treasurer (until May 2020)**

Wiebke Artl (UK), **Editor in Chief, European Journal of Endocrinology**

Josef Köhrle (Germany), **Editor in Chief, Endocrine Connections**

Felix Beuschlein (Switzerland), **ESE Clinical Committee Chair**

Robin Peeters (Switzerland), **ESE Science Committee Chair**

Riccarda Granata (Italy), **ESE Congress Committee Chair**

Marek Ruchala (Poland), **ECAS Representative**

Mehul Dattani (UK) (Switzerland), **ESPE Representative**

Luis Cardoso (Portugal), **EYES Representative**

### Abstract Marking Panel

Marker Name	Country	L Czupryniak Poland	D Grigorie Romania	M Krsek Czech Republic	N Papanas Greece	E Shestakova Russia
M Alevizaki Greece		J Dahlgren Sweden	P Groop Finland	A Kurylowicz Poland	A Patócs Hungary	M Shestakova Russia
K Amrein Austria		P Dahlqvist Sweden	A Grossman UK	E Lalli France	R Peeters The Netherlands	M Simoni Italy
C Andoniadou UK		C Daousi UK	L Groussin France	B Langdahl Denmark	S Pekic Serbia	J Skrha Austria
G Assié France		M Dattani UK	G Gruden Italy	B Lapauw Belgium	N Pellegata Germany	P Soares Portugal
S Babajko France		C Dayan UK	L Guasti UK	J Laven The Netherlands	L Perez-Rivas Germany	A Solini Italy
C Badiu Romania		J de Castro Portugal	M Haluzik Czech Republic	G Lavery UK	H Perrild Denmark	A Spada Italy
A Baranowska-Bik Poland		W de Herder The Netherlands	R Hampl Czech Republic	L Laviola Italy	L Persani Italy	J Spranger Germany
A Barlier France		E de Koning The Netherlands	V Hána Czech Republic	I Lazurova Slovakia	G Perseghin Italy	A Spyrgioulou Germany
K Basham USA		W Dhillon UK	F Hannan UK	H Lefebvre France	M Petakov Serbia	G Stalla Germany
A Beckers Belgium		G Di Dalmazi Germany	A Heck Norway	J Leger France	A Piekliko-Witkowska Poland	E Stener-Victorin Sweden
P Beck-Peccoz Italy		E Diamanti-Kandarakis Greece	M Heikinheimo Finland	T Links The Netherlands	V Pirags Latvia	C Strasburger Germany
Z Belaya Russia		C Dieguez Spain	A Hoellich Germany	P Lips The Netherlands	C Poiana Romania	C Stratakis USA
J Bertherat France		E Dirinck Belgium	L Holland The Netherlands	S Llahana UK	R Poladian Lebanon	A Tabarin France
M Bidlingmaier Germany		M Donath Switzerland	A Hubalewska-Dydejczyk Poland	A Luger Austria	S Polyzos Greece	T Tankova Bulgaria
N Biermasz The Netherlands		J Drouin Canada	I Huhtaniemi UK	S Lund Denmark	P Poplawski Poland	M Tena-Sempere Spain
W Bik Poland		L Duntas Greece	E Husebye Norway	R Luque Spain	V Popović Serbia	N Tentolouris Greece
K Birkeland Norway		A Dwyer USA	P Igaz Hungary	D Macut Serbia	M Porta Italy	M Terzolo Italy
K Boelaert UK		G Eisenhofer Germany	I Ilvovskaya Russia	D Maiter France	M Poutanen Finland	M Theodoropoulou Germany
J Boguslawska Poland		V Elian Romania	E Isenovic Serbia	E Mamedova Russia	D Power Portugal	C Thompson Ireland
J Bollerslev Norway		F Fallo Italy	M Jaffrain-Rea Italy	M Mannelli Italy	M Puig Domingo Spain	H Timmers The Netherlands
R Bouillon Belgium		M Fassnacht Germany	B Jarzab Poland	E Mannucci Italy	C Quarta France	M Toth Hungary
M Brandi Italy		J Favier France	K Jazdzewski Poland	F Mantero Italy	S Radian Romania	P Touraine France
D Branisteanu Romania		R Feelders The Netherlands	N Jessen Denmark	G Mantovani ITALY	O Ragnarsson Sweden	R Trifanescu Romania
K Briot France		U Feldt-Rasmussen Denmark	D Jezova Slovakia	M Marazuela Spain	N Rahman Finland	A Tsapas Greece
T Brue France		F Fernandes Rosa France	G Johansson Sweden	L Marina Serbia	E Rajpert-De Meys Denmark	E Tsourdi Germany
G Brunetti Italy		S Fica Romania	A Jørgensen Norway	N Matikainen Finland	M Rauner Germany	MTzanela Greece
C Buchanan UK		E Fliers The Netherlands	J Jørgensen Denmark	C McCabe UK	G Raverot France	E Valassi Spain
P Burman Sweden		S Franks UK	U Kaiser USA	O Meijer The Netherlands	M Reincke Germany	G Valk The Netherlands
H Butz Hungary		W Fraser UK	G Kallias Greece	L Metherell UK	L Rejnmark Denmark	E van den Akker The Netherlands
S Cannavo Italy		J Frystyk Denmark	C Kanaka-Gantenbein Greece	D Miljic Serbia	S Rice UK	erlands
J Cap Czech Republic		L Fugazzola Italy	G Kanakis Greece	J Mittag Germany	M Robledo Spain	A van der Lely The Netherlands
C Capatina Romania		C Fuà Germany	T Kararup Hansen Denmark	N Moller Denmark	P Rodien France	J van Eck The Netherlands
M Caprio Italy		F Gabalec Czech Republic	D Karasek Czech Republic	L Morin-Papunen Finland	H Romijn The Netherlands	W van Hul Belgium
P Caron France		S Gaberšček Slovenia	N Karavitaki UK	A Mukherjee UK	C Ronchi Italy	M Vantyghem France
J Castaño Spain		M Gabete Spain	A Karlsson Sweden	M Musat Romania	R Ross UK	G Vila Austria
H Cederberg-Famminen Finland		R Gärtner Germany	S Kaser Austria	E Nagy Hungary	R Roussel France	E Visser The Netherlands
O Chabre France		B Gatta Cherifi France	D Kastelan Croatia	S Neggers The Netherlands	N Rucci Italy	J Visser The Netherlands
P Chanson France		L Gennari Italy	J Kaufman Belgium	J Newell-Price UK	M Ruchala Poland	V Volke Estonia
K Chatterjee UK		M Gheorghiu Romania	M Keil USA	N Nicolaidis Greece	E Rutten Belgium	J Widimsky Czech Republic
N Cherradi France		I Gherlan Romania	F Kelestimir Turkey	D Niculescu Romania	S Sanack Turkey	W Wiersinga The Netherlands
M Chiara Zatelli Italy		P Giacobini France	R Kineman USA	M Niedziela Poland	D Santi Greece	I Wilkinson UK
F Chiarelli Italy		J Giorgino Italy	T Kocjan Slovenia	R Nogueiras Spain	P Saunders UK	P Williams Germany
J Chowen Spain		A Giustina Italy	J Kopchick USA	B Obermayer-Pietsch Austria	C Schalin-Jäänti Finland	S Wudy Germany
S Christin-Maitre France		M Godlewska Poland	M Korbonits UK	C Olareus Norway	S Schmid Germany	P Yeoh UK
M Cohen-Solal France		J Gomez-Ambrosi Spain	B Kos-Kudla Poland	P Oliveira Portugal	J Schopohl Germany	B Yildiz Turkey
D Cota France		D Goulis Greece	C Krausz Italy	D Olsson Sweden	D Schulte Germany	M Zarkovic Serbia
D Cuthbertson UK		R Granata Italy	M Kroiss Germany	K Øystese Norway	P Schwarz Denmark	M Zennaro France
		C Gravholt Denmark	N Krone UK	U Pagotto Italy	M Sherlock Ireland	

The European Society of Endocrinology would like to thank its Corporate Members and the sponsors of e-ECE 2020.

**Premium Corporate Members**

Akcea Therapeutics  
Ipsen  
Pfizer  
Recordati Rare Diseases Sarl  
Takeda

**Corporate Members**

Advanced Accelerator Applications  
Amryt Pharmaceuticals (formerly Aegerion)  
Diurnal  
HRA Pharma  
Kyowa Kirin International  
Merck Serono  
Novo Nordisk  
Sandoz International GmbH  
Siemens-Healthineers  
Strongbridge Biopharma  
Uni-Pharma

**Supporters**

Chiasma  
Crinetics Pharmaceuticals  
Isotopen Technologien Munchen AG

**Gold Sponsors**

Ipsen  
Pfizer  
Takeda

**Silver Sponsor**

Recordati Rare Diseases

**Bronze Sponsors**

Advanced Accelerator Applications  
Amryt Pharma  
HRA Pharma Rare Diseases  
Kyowa Kirin  
Novo Nordisk



European Society of Endocrinology  
Starling House, 1600 Parkway  
North, Bristol, BS34 8YU, UK

Tel: +44 (0) 1454 642247  
Fax: +44 (0) 1454 642222  
E-mail: [info@euro-endo.org](mailto:info@euro-endo.org)  
Website: <http://www.endocrinology.org>



**Congress Secretariat:**

Bioscientifica Ltd  
Starling House, 1600 Parkway  
North, Bristol, BS34 8YU, UK

Tel: +44 (0)1454 642240  
Fax: +44 (0)1454 642222  
E-mail: [ece2020@endocrinology.org](mailto:ece2020@endocrinology.org)  
Website: [www.ece2020.org](http://www.ece2020.org)

## CONTENTS

*e-ECE 2020*

*22nd European Congress of Endocrinology*

### PRIZE LECTURES AND BIOGRAPHICAL NOTES

The Geoffrey Harris Prize Lecture .....	AP1
The <i>European Journal of Endocrinology</i> Prize Lecture .....	AP2
European Hormone Medal Lecture .....	AP3
Clinical Endocrinology Trust Lecture .....	AP4

### PLENARY LECTURES

Exercise as medicine – a translational perspective .....	PL1
Glucocorticoids in cancer: a new paradigm .....	PL2
Harnessing the microbiome in metabolic disease .....	PL3
Mechanisms for SARS-CoV-2 cell entry .....	PL4
Maternal thyroid hormone and child brain development .....	PL5
It takes thyroid hormone to make sense .....	PL6
Effects of EDCs on neuro-endocrine systems and behaviour .....	PL7

### SYMPOSIA

New horizons in pheochromocytoma and paraganglioma .....	S1.1–S1.3
Osteoporosis and fracture prediction .....	S2.1–S2.3
Controversial issues in bariatric surgery .....	S3.1–S3.3
Unveiling signatures in pituitary neuroendocrine tumours .....	S4.1–S4.3
Hyperthyroidism across the lifespan .....	S5.1–S5.3
Adrenocortical carcinoma .....	S6.1–S6.3
Endocrine disruptors, just a hype or not? .....	S7.1–S7.3
PCOS: from Genetics to Treatment .....	S8.1–S8.3

### COVID-19 SESSION

Endocrine targets related to COVID infection .....	CS1.1
Managing the Cytokine storm. ....	CS1.2
How strong is obesity as a risk factor for COVID-19 patients .....	CS1.3

### ORAL COMMUNICATIONS

Adrenal and Cardiovascular Endocrinology .....	OC1.1–OC1.7
Bone and Calcium .....	OC2.1–OC2.7
Diabetes, Obesity, Metabolism and Nutrition .....	OC3.1–OC3.7
Pituitary and Neuroendocrinology .....	OC4.1–OC4.7
Thyroid .....	OC5.1–OC5.7
Hot Topics (including COVID -19) .....	OC6.1–OC6.7
Endocrine-related Cancer .....	OC7.1–OC7.7
Environmental Endocrinology .....	OC8.1–OC8.6
Reproductive and Developmental Endocrinology .....	OC9.1–OC9.7
Young Investigators .....	YI1–YI12

**AUDIO EPOSTER PRESENTATIONS**

Adrenal and Cardiovascular Endocrinology .....	AEP1–AEP121
Bone and Calcium .....	AEP122–AEP242
Diabetes, Obesity, Metabolism and Nutrition .....	AEP243–AEP527
Endocrine-related Cancer .....	AEP528–AEP540, AEP655
Environmental Endocrinology .....	AEP541–AEP542
General Endocrinology .....	AEP543–AEP559
Pituitary and Neuroendocrinology .....	AEP560–AEP777
Reproductive and Developmental Endocrinology .....	AEP778–AEP856
Thyroid .....	AEP857–AEP1000
Hot topics (including COVID-19) .....	AEP1001–AEP1110

**EPOSTER PRESENTATIONS**

Adrenal and Cardiovascular Endocrinology .....	EP1–EP58
Bone and Calcium .....	EP59–EP123
Diabetes, Obesity, Metabolism and Nutrition .....	EP124–EP265
Endocrine-related Cancer .....	EP266–EP270
Environmental Endocrinology .....	EP271
General Endocrinology .....	EP272–EP279
Pituitary and Neuroendocrinology .....	EP280–EP373
Reproductive and Developmental Endocrinology .....	EP374–EP410
Thyroid .....	EP411–EP532
Hot topics (including COVID-19) .....	EP533–EP589

**AUTHOR INDEX**

# Audio ePoster Presentations

**AEP825****Influence of air pollutants of vehicular origin in hormonal and seminal parameters of traffic controllers**

Elaine Maria Frade Costa<sup>1</sup>, Paulo de N6voa Cardoso<sup>1</sup>, Thiago Afonso Teixeira<sup>2,3</sup>, Mariana Kim Hsieh<sup>4</sup>, Alessandra Renck<sup>1</sup>, Juliana Andrietta<sup>2</sup>, Juliana Risso Pariz<sup>3</sup>, Jorge Hallak<sup>2,3</sup> & Paulo Hilario Nascimento Saldiva<sup>5</sup>  
<sup>1</sup>Faculdade de Medicina da Universidade de Sao Paulo, Development Unit, Department of Endocrinology, Sao Paulo, Brazil; <sup>2</sup>Faculdade de Medicina da Universidade de Sao Paulo, Section of Andrology, Division of Urology, Department of Surgery, Sao Paulo, Brazil; <sup>3</sup>Androscience, High Complexity Clinical and Research Andrology Laboratory, Sao Paulo, Brazil; <sup>4</sup>Faculdade Israelita de Ci6ncias da Saude Albert Einstein, School of Medicine, Sao Paulo, Brazil; <sup>5</sup>Faculdade de Medicina da Universidade de S6o Paulo, Reproductive Toxicology Unit, Department of Pathology, Sao Paulo, Brazil

Sao Paulo is the most populous city in Brazil and its huge number of vehicles contributes for a higher concentration of air pollutants that may interfere in human fertility. The aim of this study was to evaluate the influence of air pollution of vehicular origin on hormonal and seminal parameters of traffic controllers. Clinical history, physical examination (testicular volume, presence of varicocele, cryptorchidism, malformations), hormonal (estradiol, LH, FSH and total testosterone) and seminal parameters (concentration, motility, morphology by WHO's criteria and Kruger's strict criteria, leukocytes detection test, CK, ROS and anti-sperm antibody tests) were carried out in 62 traffic controllers (exposed group) and in 210 proven fertile men from the pre-vasectomy group of Urologic Clinic at Hospital das Clinicas – University of Sao Paulo (control group). Exposition to air pollution was analyzed through the dispersion of pollutants recorded by Cetesb, generated in the software SURFER 8.0. Hormonal levels were at normal range in both groups: Estradiol ( $P=0.119$ ), LH ( $P=0.644$ ), FSH ( $P=0.140$ ) and Total Testosterone ( $P=0.365$ ). Traffic controllers presented bigger testicular volume than pre-vasectomy group ( $P<0.001$ ). Sperm concentration was homogeneous in both groups ( $P=0.395$ ): traffic controllers presented mean of  $124.9 \times 10^6/ml$  and pre-vasectomy group  $110.1 \times 10^6/ml$ . Exposed group presented total motility (60%) diminished than control group (65%) ( $P=0.047$ ), as progressive motility was also diminished in the exposed group ( $P<0.001$ ). The sperm morphologies as by WHO's criteria (exposed group=12%; control group=20%), as by Kruger's strict criteria (exposed group=3%; control group=6%) were significantly diminished in the exposed group ( $P<0.001$ ). Sperm maturity marker CK was at normal range at both groups, but higher in the control one ( $P<0.001$ ). Anti-sperm antibodies and ROS were elevated in both groups, however it was not significant ( $P=0.382$  and  $P=0.141$ , respectively). Air pollution has a deleterious effect on sperm motility and morphology but not in male hormonal levels. It also causes elevation of ROS levels, indicating deficit in sperm function, and elevation of anti-sperm antibodies levels, suggesting that air pollutants would have transposed the blood-testis barrier. Testicular volume in the exposed group was higher than those measured in the control group; we can suppose that it must occur due to an inflammatory reaction against the polluting agents. Although the significant difference in air pollutants concentrations between groups, no direct correlation to seminal parameters could be demonstrated.

DOI: 10.1530/endoabs.70.AEP825

**AEP826****Assessment of the status of the pituitary-gonadal axis in men who have been using androgenic anabolic steroids for a long time**

Mykola Lykhonosov<sup>1,2</sup>, Alina Y. Babenko<sup>2</sup>, Viktor A. Makarin<sup>1</sup> & Yuri N Fedotov<sup>1</sup>

<sup>1</sup>University hospital of Saint-Petersburg State University, Street Petersburg, Russian Federation; <sup>2</sup>Pavlov First Saint Petersburg State Medical University, Street Petersburg, Russian Federation

**Background**

The study of the state of the pituitary-gonadal axis (PGA) in users of anabolic androgenic steroids (AAS) is important. The severity of inhibition of luteinizing (LH), follicle-stimulating (FSH) hormones, total testosterone (Tt), inhibin B may depend on the type of AAS used, its doses, the simultaneous use of several types of AAS and the duration of their administration.

**Aim**

To evaluate the levels of LH, FSH, Tt and Inhibin B depending on the type, dose, pattern and duration of the use of AAS.

**Methods**

An observational prospective study was conducted among male AAS users. During the use of AAS, LH, FSH, and Tt levels were determined by the immunochemiluminescent method, and the inhibin B level was determined by an enzyme immunoassay. Data are presented as median and interquartile range. We used the Fisher's exact test, Spearman's Rank correlation coefficient. The differences were considered statistically significant at  $P<0.05$ .

**Results**

44 male volunteers were examined, median age 29 [27.75;34] years, the duration of the use of AAS were 6 [3.52; 7] months. AAS: testosterone propionate 97.7% ( $n=43$ ), dihydrotestosterone derivatives 65.9% ( $n=29$ ) and 19-nortestosterone 47.7% ( $n=21$ ). One drug were used 18% ( $n=8$ ), 2 drugs 50% ( $n=22$ ), 3 drugs 32% ( $n=14$ ) participants. Doses of injectable preparations varied: from 750 mg per week 25% ( $n=11$ ), to 1000 mg 36% ( $n=16$ ), above 1000 mg 39% ( $n=17$ ) men. Laboratory tests while using AAS: LH-0.2 mIU/ml [0.04; 0.47], Tt-4.34 ng/ml [1.05; 8.81]. The discrepancy between low levels of LH(0.2 mIU/ml) and normal testosterone levels is explained by exogenous testosterone. In our study, men with high levels of Tt were 29.5% ( $n=13$ ), and the maximum value of Tt was 45.56 ng/ml (157.96 nmol/l). In the study, the number of men with a LH level  $<1.24$  mIU/ml were 84% ( $n=37$ ) and Tt  $<3.4$  ng/ml was 47.7% ( $n=21$ ) participants. Inhibin B levels during AAS use: 131.7 [72.3;166.4] pg/ml. LH was lower when large doses of AAS were used ( $P=0.003$ ), when more AAS was used together ( $P<0.001$ ), and in cases of dihydrotestosterone ( $P=0.018$ ) or 19-nortestosterone ( $P<0.001$ ). Similar data were obtained for FSH, Tt, Inhibin B. A significant correlation was established between the duration of AAS use ( $-0.794$ ;  $P<0.001$ ), the amount of AAS ( $-0.411$ ;  $P=0.003$ ), the dose of AAS ( $-0.726$ ;  $P<0.001$ ), the type of AAS ( $-0.602$ ;  $P<0.001$ ) and LH levels.

**Conclusion**

A significant negative effect of the type, dose, duration of use and amount of simultaneously administered AAS on the levels of LH, FSH, Tt and Inhibin B were revealed.

DOI: 10.1530/endoabs.70.AEP826

**AEP827****Testosterone (T) is poorly related to sexual desire and Erectile Dysfunction (ED) in Young/Middle Aged Human immunodeficiency virus (HIV)-Infected Men**

Sara De Vincentis<sup>1,2</sup>, Maria Chiara Decaroli<sup>1,2</sup>, Chiara Diazzi<sup>2</sup>, Fabio Morini<sup>1</sup>, Davide Bertani<sup>1</sup>, Flaminia Fanelli<sup>3</sup>, Marco Mezzullo<sup>3</sup>, Daniele Santi<sup>1,2</sup>, Giulia Tartaro<sup>1,2</sup>, Enrica Baraldi<sup>4</sup>, Simonetta Tagliavini<sup>4</sup>, Umberto Pagotto<sup>3</sup>, Giovanni Guaraldi<sup>5</sup> & Vincenzo Rochira<sup>1,2</sup>

<sup>1</sup>Unit of Endocrinology, Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Modena, Italy; <sup>2</sup>Unit of Endocrinology, Department of Medical Specialties, Azienda Ospedaliero-Universitaria of Modena, Modena, Italy; <sup>3</sup>Endocrinology Unit and Center for Applied Biomedical Research (CRBA), Department of Medical and Surgical Sciences, University of Bologna – S. Orsola-Malpighi Hospital, Bologna, Italy; <sup>4</sup>Department of Laboratory Medicine and Anatomy Pathology, Azienda USL of Modena, Modena, Italy; <sup>5</sup>Multidisciplinary Metabolic Clinic, Unit of Infectious Diseases, University of Modena and Reggio Emilia, Modena, Italy

**Background**

ED is highly prevalent in HIV-infected men. T leads sexual behavior in men, but preliminary data suggests that ED is poorly related to serum T in HIV-infected men.

**Aim**

To explore the relationship between sexual function and gonadal function in young/middle-aged HIV-infected men.

**Methodology**

Prospective, cross-sectional, observational study on HIV-infected men (age  $<50$  years). Serum TT was assessed by the gold standard LC-MS/MS. Sex hormone-binding globulin (SHBG) was measured by chemiluminescent immunoassay and calculated free T (cFT) was obtained by Vermeulen equation. Biochemical hypogonadism was defined as TT levels below 320 ng/dl and/or cFT levels below 64 pg/ml. The validated International Index of Erectile Function (IIEF)-15 questionnaire was used to identify the presence of ED (score  $<25$ ) and its degree. IIEF-5 was performed to check if it is reliable as IIEF-15 in this setting.

**Statistical analysis**

Continuous and categorical variables were compared using ANOVA univariate and Chi-Square test. Correlations were performed using linear regression models.

**Results**

315 consecutive HIV-infected men were enrolled (mean age  $45.3 \pm 5.3$  years; mean duration of HIV-infection  $16.3 \pm 8.8$  years). A total of 187 patients (59.7%) had ED at IIEF-15; 59 patients (31.5%) presented a severe form of ED (score <10). Considering gonadal function, 35 patients (11.1%) had T deficiency. Scores of EF ( $P=0.039$ ) and sexual desire ( $P=0.015$ ) domains were higher in hypogonadal than eugonadal men. Accordingly, the prevalence of ED raised to 71.4% among hypogonadal men. By considering ED severity, patients with severe ED showed a longer duration of infection ( $P=0.039$ ) and lower cFT levels ( $P=0.041$ ) than patients with mild ED. No difference was found for age ( $P=0.224$ ) and TT levels ( $P=0.110$ ). IIEF-15 score was inversely related to duration of infection ( $R^2=0.030$ ,  $\beta=-0.173$ ,  $P=0.002$ ) and patients' age ( $R^2=0.020$ ,  $\beta=-0.140$ ,  $P=0.013$ ). No significant correlation was found between IIEF-15 score and total T ( $P=0.236$ ) and cFT ( $P=0.126$ ). The erectile function domain at IIEF-15 directly correlated with IIEF-5 score ( $R^2=0.545$ ,  $\beta=0.778$ ,  $P<0.001$ ).

**Conclusions**

In our HIV-cohort of young/middle-aged men, the prevalence of ED and T deficiency were high being of 60% and 11%, respectively. Serum TT and cFT did not correlate with sexual function parameters, even though sexual desire was lower in men with hypogonadism. ED seems to be better predicted by other factors, such as the duration of infection in this clinical setting, rather than the gonadal status. Furthermore, IIEF-5 seems to be as reliable as IIEF-15 for ED diagnosis in HIV-infected men.

DOI: 10.1530/endoabs.70.AEP827

**AEP828****Partial androgen insensitivity: A case report**

Rihab Laamouri, Bchir Najla, Zouaoui Chadia, Ben Salem Maram, Jaidane Amel & Ouertani Haroun  
University of Tunis Manar- Faculty of medicine, Tunis, Tunisia

**Introduction**

Androgen insensitivity syndrome (AIS) is an X-linked genetic disease characterized by resistance to the actions of androgen in an individual with 46, XY karyotype. It is the most common cause of DSD in 46, XY individuals.

**Case report**

We report a case of a 16-year-old girl who consulted for primary amenorrhea and hirsutism. Our patient had a 9-year-old sister who was operated for an inguinal hernia and the anathomopathological study concluded to a testicular tissue. Physical examination revealed virilization signs: clitorid-omegalia, deepening voice and muscle enlargement, female external genitalia and a blind ending vagina. Hormonal evaluation revealed markedly elevated testosterone (6.4 ng/ml), FSH, and LH serum levels. AMH level and dihydrotestosteronemia were low. HCG test showed an increasing testosterone level after HCG stimulation. Diagnostic imaging, including an abdominal ultrasound and a pelvic MRI, showed missing uterus and fallopian tubes and confirmed the presence of two solid structures compatible with gonads measuring 14 mm at the right and 24 mm at the left. Chromosomal analysis confirmed 46, XY karyotype with intact SRY. The patient underwent genetic testing, revealing no androgen receptor mutation. Therapeutically, the patient has benefited from a psychological support and bilateral gonadectomy is programmed especially since alpha foeto protein level was high.

**Conclusion and comments**

The androgen insensitivity is a rare pathology. Molecular diagnosis is achieved in almost all patients with complete AIS and in a lower frequency in PAIS individuals. In PAIS there is a risk of degenerancy in 20% of the patients, and bilateral gonadectomy is recommended in all individuals raised in the female social sex. In AIS, gender identity usually follows the sex of rearing, but sexual functioning and quality of life can be compromised, that's why it is important to keep patients in psychological care.

DOI: 10.1530/endoabs.70.AEP828

**AEP829****Gut microbiota and oral contraceptive use in polycystic ovary syndrome**

Damla Eyupoglu<sup>1</sup>, Koray Ergunay<sup>2</sup>, Aylin Acikgoz<sup>3</sup>, Yakut Akyon<sup>2</sup>, Engin Yilmaz<sup>4</sup> & Bulent Okan Yildiz<sup>5</sup>

<sup>1</sup>Hacettepe University, Department of Internal Medicine; <sup>2</sup>Hacettepe University, Department of Medical Microbiology; <sup>3</sup>Hacettepe University, Department of Nutrition and Dietetics; <sup>4</sup>Acibadem Mehmet Ali Aydinlar University, Department of Medical Biology; <sup>5</sup>Hacettepe University, Division of Endocrinology and Metabolism

**Context**

Polycystic ovary syndrome (PCOS) is a common and complex endocrine disorder. Emerging animal and human data point out to various changes in microbiota that could be linked with the syndrome. However, the effects of therapeutic approaches on gut microbial composition in women with PCOS remain unknown.

**Objective**

We aimed to assess whether gut microbial composition is altered in overweight/obese women with PCOS and to determine potential impact of oral contraceptive (OC) use on gut microbiota.

**Materials and methods**

The current study included 17 overweight/obese patients with PCOS and 15 age- and BMI-matched healthy control women. At baseline, clinical, hormonal and metabolic evaluations and gut microbial composition assessment by 16S rRNA gene amplicon sequencing were performed after a 3-day standardized diet. Patients received dienogest-ethinylestradiol (2 mg/0.03 mg) therapy along with general dietary advice for three months after which all measurements were repeated.

**Results**

Women with PCOS had higher total testosterone (T) and free androgen index (FAI) levels than healthy control women whereas whole body fat mass, fasting plasma glucose, insulin and lipids were similar between the groups. Alpha and beta diversity did not show a difference between PCOS and healthy controls at baseline and remained unaltered after 3 months of OC use in the PCOS group. Relative abundance of Ruminococcaceae family was higher in PCOS patients ( $P=0.006$ ) and did not show an alteration after treatment.

**Conclusion**

Relative abundance of Ruminococcaceae family is increased in women with PCOS whereas short-term OC use does not alter compositional features of gut microbiota in the syndrome.

DOI: 10.1530/endoabs.70.AEP829

**AEP830****Anti-müllerian hormone (AMH) as the primary marker for ovarian reserve in transgender male, with or without pcos, under chronic testosterone treatment**

Ines Modrego Pardo<sup>1</sup>, Marcelino Gómez Balaguer<sup>1</sup>, Sandra Garzón Pastor<sup>1</sup> & Carlos Morillas Ariño<sup>1,2</sup>

<sup>1</sup>Hospital Universitario Doctor Peset, València, Spain; <sup>2</sup>University of Valencia, València, Spain

**Background**

AMH represents a marker of ovarian reserve and is used in monitoring the effects of gonadotoxic drugs. In PCOS is higher and is an indirect marker of hyperandrogenism. In transsexual man(TM), high prevalence of PCOS is described and AMH provide information about ovarian reserve after exposure to testosterone.

**Objective**

To assess the prevalence of PCOS in young TM previously to testosterone treatment, study the evolution of AMH levels and differentiate its response patterns according to the presence of PCOS.

**Material and methods**

Retrospective cohort of TM treated with testosterone followed between 2010–2018. Levels of AMH, Testosterone, Androstenedione, LH, FSH and Estradiol at baseline and at 6 months after intramuscular testosterone were analyzed. The AMH response was evaluated based on the presence of ovariananalytic hyperandrogenism (AH) previous to treatment (testosterone  $\geq 0.7$  ng/ml or androstenedione  $\geq 5$  ng/ml) with or without clinical PCOS (Rotterdam Criteria).

**Results**

Of 162 HT included, the mean age was 21 years (range 13–39). Baseline AMH 3.5 ng/ml (Interquartile range (IR) 3), Testosterone 0.4 ng/ml (IR 0.1), androstenedione 3.23 ng/ml (IR 1.89), FSH 4.3 mIU/ml (IR 3), LH 5.1 mIU/ml (IR 5) and estradiol 63 pg/ml (IR 79). 8% ( $n=13$ ) of the sample had PCOS (median age 19 years (range 15–33)) and 19% ( $n=31$ ) had AH (median age 21 years (range 15–34)), without differences. A correlation was



## Author Index

- CRIO group AEP378  
A. Mirsaidova, U **AEP1078**  
Aardal, E AEP604  
Abadlia, S AEP442  
Abarca, J AEP653  
Abazovic, D AEP915  
Abballe, L AEP995  
Abbara, A **AEP585** & OC9.2  
Abbas, A **AEP130**  
Abd el shafy, S AEP456  
Abdelghani, T AEP895 & EP497  
Abdellaoui, W EP368  
Abdel-Wahab, YHA AEP364  
Abdesselem, H EP248, EP203, EP262, EP209 & EP195  
Abdi, H AEP888  
Abdulatipov, S AEP545  
Abdulhabirova, F AEP893 & AEP901  
Abdullaeva, A AEP412  
Abdullah, I AEP146  
Abdullahi Sidi, F AEP671  
Abela, AG AEP755  
Abelsen, K EP300  
Aberner, F AEP458  
Abesadze, N **EP584**  
Abidi, S AEP767 & EP34  
Abir, M **AEP510, EP178 & EP531**  
Abir, T EP342  
Aboud, N AEP1004  
Abou-Hussein, S AEP246  
Abouloula, M AEP101  
Abraitiene, A EP297  
Abramova, N **AEP267, AEP421**, AEP420, AEP300, AEP838, AEP959, AEP418, EP75 & EP117  
Abrosimov, A EP31  
Abzianidze, E AEP1105  
Ach, K EP536, EP177, AEP506, EP323, EP344, EP50, EP443, EP386 & EP366  
Acha Perez, J AEP481  
Achwak, M **EP557**  
Acierno, J AEP788  
Acikgoz, A AEP829  
Ackermans, MT AEP14  
Acosta Calero, C AEP90  
Acosta-Calero, C EP552, AEP1054 & AEP108  
Acsinte, D EP358  
Acuña-García, M EP372 & AEP625  
Adalbert, S EP68  
Adam, S AEP657  
Adamidou, L EP562 & EP559  
Adams, A EP542  
Adamsbaum, C OC2.1  
Adamska, A AEP797, AEP831 & EP376  
Adamski, M **AEP797**  
Adaş, M AEP598  
Adcock, H OC5.4  
Adebayo, A AEP444  
Adel, G AEP895 & EP497  
Adel, M AEP704, EP282 & AEP407  
Adilkhodjaeva, E **EP246**  
Adlan, M EP30  
Adolf, C AEP1001 & AEP1002  
Afanasyev, D EP80  
Aflorei, ED **AEP549**  
Afonso, A AEP174  
Afonso, M AEP911  
Afrasinei Tenu, I **EP213**  
Afshan, K AEP850, AEP822, AEP854 & AEP270  
Agapito, A AEP12, AEP174, AEP912 & EP354  
Agarwal, A EP252  
Agbaje, O OC3.6  
Agea, L EP107 & EP351  
Agersø, H AEP1083  
Aggeli, C OC6.3 & AEP98  
Aghajanova, E **AEP391**  
Aghajanova, Y **AEP406**  
Aghayan, M **EP165**  
Agoncillo, KE EP115  
Agosti, E **OC4.2**, AEP373 & OC3.5  
Agrawal, P **EP566**  
Agrawal, V AEP383  
Ágreda García, J AEP654  
Agretti, P AEP790  
Agudo, A AEP890 & AEP520  
Agudo Tabuenca, A AEP1048  
Aguilar Diosdado, M AEP351 & EP378  
Aguilar-Diosdado, M AEP325, AEP353 & EP296  
Aguilera Hurtado, E AEP328  
Aguillo Gutierrez, E AEP890  
Aguirre Moreno, N AEP488  
Aharaz, A AEP1073  
Aher, A AEP1052  
Ahlqvist, E OC3.3  
Ahmad, M AEP1106  
Ahmad, S **OC8.3**  
Ahmadova, K AEP321 & EP100  
Ahmed, F AEP552  
Ahmed, F AEP1076  
Ahmed, I OC6.5  
Ahmeti, I EP518  
Aicha, H AEP411 & EP240  
Aimaretti, G OC3.5 & OC5.3  
Ainsworth, G AEP130  
Aivalioti, E AEP296  
Ajdzanović, V AEP919  
Ajnetdinova, A AEP213 & AEP165  
Akalin, A EP289  
Akalin, A AEP348, EP119 & EP210  
Akbaba, G AEP173  
Akbas, EM AEP173  
Akcay, S AEP173  
Akdoğan, L AEP235 & EP350  
Åkerman, A-K AEP1  
Akhanli, P AEP770, EP478, AEP188 & AEP33  
Akhobadze, T AEP517 & EP127  
Akira, S OC4.5  
Akkari, I AEP340, AEP380 & EP256  
Akker, S AEP641, EP542 & AEP600  
Akkoc, RF EP560 & AEP262  
Akkus, G **AEP762, EP201 & AEP968**  
Akkus, O AEP968  
Akram, M AEP850, AEP822, AEP854 & AEP270  
Akrim, M EP515  
Aksoy, S AEP768  
Akulevich, N AEP793  
Akyol, B AEP384  
Akyon, Y AEP829  
Al Mukaddam, M AEP1025 & **AEP1019**  
Al Saeed, ZA EP310  
Al Tawil, D AEP906  
Alabdrabalnabi, FM **EP310**  
Alagüney, ES EP119  
Alaya, W AEP234  
Albani, A **AEP1068 & Y14**  
Albu, A EP87  
Alcántara-Laguna, MD **AEP317**  
Alcázar, V AEP863  
Alchujyan, N AEP391  
Alderwick, L OC5.4  
Aldomiro, F EP458  
Alduk, AM AEP42  
Alduk, A-M AEP85  
Alegre-Abarrategui, J AEP709  
Alejo-Ramos, M AEP625  
Aleksandrov, Y EP467  
Aleksandrov, Y **AEP932 & AEP963**  
Aleksenko, T **AEP1047**  
Aleksееva, L AEP497  
Aleric, I AEP731  
Alevizaki, M AEP956  
Alexander, F AEP866  
Alexander, P AEP452, EP219, EP153 & EP218  
Alexander, V OC3.7 & AEP269  
Alexandraki, K **AEP63 & EP126**  
Alexandre, MT EP10  
Alexandrou, A AEP1012, AEP1003, AEP296 & AEP1090  
Alexandru, E **EP87**, EP356 & AEP237  
Alfayate-Guerra, R AEP397  
Alfred, P AEP511  
Alhambra Expósito, MR AEP969 & EP432  
Alhamid, MH EP138  
Ali, S EP63  
Ali, T AEP903  
Ali, UA **AEP1038**  
Alibeyoğlu, A AEP455

- Richardson, S EP425  
Rico, MC AEP658  
Ricotti, R OC3.5 & AEP373  
Riera\_Escamilla, A OC9.5  
Riesco-Montes, B AEP883  
Riester, A AEP565  
Riesz, P AEP46  
Rigla, M EP215 & AEP68  
Rigo, M EP6  
Rigou, A OC8.6 & AEP542  
Rihab, A **EP183, AEP234 & EP15**  
Riis, KR AEP875  
Rim, Y EP557  
Rindi, G AEP662  
Risovic, I EP120 & AEP387  
Riss, P AEP616  
Risso Pariz, J AEP825 & EP379  
Rivas, A EP347  
Rivas Montenegro, AM AEP654  
Rizos, D AEP1003 & AEP1012  
Rizos, D AEP296, AEP344, AEP433 & AEP375  
Rizvi, B EP40  
Rizvi, SSR AEP822, **AEP854**, AEP850 & AEP270  
Rizzo, C AEP971  
Roberto de Souza, M EP380  
Roberts, E AEP56  
Robeva, R AEP821  
Robin, G AEP846  
Robles, JP AEP543  
Robles Lázaro, C AEP103  
Roca, D AEP1037 & AEP1050  
Roca-Rodríguez, MM **EP296**  
Rocha, B AEP739  
Rocha, G EP176  
Rocha, LC AEP477  
Rochira, V AEP921, AEP827, AEP880 & AEP610  
Rodal-Bravo, L AEP780  
Rodari, G AEP1005, **AEP765**, AEP572 & AEP571  
Rodari, M AEP230  
Rodia, C **AEP324**  
Rodic, G AEP534  
Rodicio Miravalles, JL AEP431  
Rodrigues, C **AEP664 & AEP644**  
Rodrigues, D EP60 & AEP93  
Rodrigues, F EP67  
Rodrigues, R AEP251  
Rodrigues, TC AEP449  
Rodríguez, N AEP672  
Rodríguez, P AEP933  
Rodríguez, R OC7.7  
Rodríguez, A AEP361  
Rodríguez Cabezas, MA AEP722  
Rodríguez Escobedo, R AEP466 & **EP217**  
Rodríguez Escobedo, R EP144  
Rodríguez Garcia, JA EP372  
Rodríguez Rodero, S AEP431  
Rodríguez Vera, P AEP993  
Rodríguez-Perálvarez, M Y16  
Rodríguez-Villanueva, J AEP953  
Roell, W OC3.3  
Rogowicz-Frontczak, A EP376  
Rogoza, O AEP248  
Rogozik, N AEP818  
Rogoziński, D AEP629, AEP745, AEP735 & AEP690  
Rojbi, I EP95, EP19, EP39, EP98, EP414, AEP934 & AEP407  
Rojo, J EP351 & EP107  
Rojo-Martinez, G OC8.2 & AEP889  
Roldan, F AEP687  
Rolighed, L AEP153  
Rolla, M AEP692, AEP978 & AEP689  
Romagnoli, P OC1.3  
Roman, G EP213  
Roman, N EP290  
Roman Gimeno, S **AEP890**, AEP520 & **EP205**  
Román Gimeno, S AEP1048 & AEP430  
Romani, F AEP298  
Romanova, N **EP31**  
Romantsova, T AEP311  
Romero, M AEP342  
Romero-Gomez, M AEP350  
Romero-Gómez, M AEP658  
Ronaldson, A OC7.2  
Ronchi, C OC1.6 & Y13  
Ronchi, C AEP5  
Rontogianni, D AEP876  
Ropero-Luis, G **AEP177**  
Roque, C **EP239, EP506, EP465, AEP631 & EP458**  
Roselló, E AEP863  
Rosenberg, A AEP400  
Rosenberg, D AEP132  
Rosenzweig, B AEP363  
Rosinha, P AEP1034  
Roslyakova, A **AEP41**  
Ross, IL **AEP73**  
Ross, R AEP833 & OC1.2  
Ross, RJ AEP37  
Rossato, D AEP50  
Rosset, A AEP741  
Rosu, A EP312, EP11 & EP441  
Rotarescu, A AEP538  
Rotermund, R Y14 & AEP1068  
Rothenbuhler, A OC2.1  
Rotman-Pikielny, P **EP71**  
Rottoli, M **CS1.3**  
Roudaut, N OC5.5  
Rouf, S EP397, AEP958, EP368, EP342 & EP361  
Roumeliotis, A AEP1041 & AEP1032  
Rovere Querini, P AEP1075  
Rovere-Querini, P OC6.7  
Roxana, D EP363  
Rozhinskaya, L AEP761, AEP569 & AEP210  
Rozhinskaya, L AEP1085  
Rozhinskaya, L AEP181  
Rrupulli, A **EP174**  
Rubin, B AEP43  
Rubin, M OC6.5  
Rubino, F AEP374  
Rubio, MA AEP285 & EP103  
Rubio García, R EP92  
Rubion, LE AEP977  
Ruchala, M AEP867, AEP891, EP457, AEP123 & AEP747  
Ruchała, M AEP812, EP13 & AEP573  
Rudkova, E **AEP1016**  
Rudman, Y **AEP696**  
Ruggeri, R **AEP870 & AEP940**  
Ruiz, E AEP361  
Ruiz, J EP281  
Ruiz, T AEP722  
Ruiz de Adana Navas, MS AEP392  
Ruiz de la Parte, A AEP186  
Ruiz de Velasco, E AEP142  
Ruiz Ochoa, D AEP279  
Ruiz Pino, F OC9.1  
Ruiz Sanchez, J EP197  
Ruiz Sánchez, JG **AEP51**  
Ruiz-Cantero, A AEP177  
Ruiz-Castané, E OC9.5  
Rumiantsev, P AEP893  
Rumyantsev, P EP463  
Runkle, I AEP51  
Runkle, I EP281, AEP66 & AEP722  
Runkle, I AEP908  
Rusalenko, M AEP516  
Rusalenko, M EP261, EP258, **AEP878, EP238, AEP263, EP131, EP48 & EP237**  
Rusch, S AEP871  
Russo, L AEP1066  
Rusus, C EP375  
Rutigliano, G **AEP857 & AEP858**  
Rutz, C AEP849  
Rybakova, A **AEP901**  
Rybka, O AEP1030  
Ryhänen, E **OC2.7**  
Rylands, A AEP122  
Rymar, O EP155 & AEP454  
Ryom Riis, K **EP516**  
Ryzhkova, D EP109  
S. Abou-Youssef, H AEP971  
S. Van Santen, S **AEP201**  
Sá, J AEP282 & **AEP484**  
Sá Couto, A AEP258  
Saad, G EP177, AEP506, EP323, EP344, EP536, EP50, EP366, EP386 & EP443  
Saad, M EP434  
Saafi, W **EP97, EP37, EP36 & EP416**  
Saarela, T AEP345  
Saatov, T AEP463, AEP335, AEP448, EP227 & EP148  
Saba, A EP418  
Sabino, T AEP174  
Sabiroy, M **EP359**  
Saboo, B EP161 & AEP1027  
Saboo, B **EP574, AEP307 & AEP299**  
Sabrine, Z EP557  
Sachan, A AEP991 & EP45