

EAA Andrology Training Center
Centre Report

2017



Clinica di Endocrinologia e Malattie del Metabolismo
Università Politecnica delle Marche
Dipartimento di Specialità Mediche e Chirurgiche
Azienda Ospedaliera Ospedali Riuniti
Via Conca 71
60126, Ancona, Italy

Director of the Centre: Prof. Giancarlo Balercia

CENTRE REPORT

History of Centre

Andrology

The history of andrology at Clinic of Endocrinology of Polytechnic University of Marche starts in 1995 with G. Balercia, whose activity of clinical care and research was initially under the direction of M. Boscaro.

From the first years of activity, our Centre showed strong interest in research of pathophysiology of fertility, especially for the effects of oxidative stress and the protective action of coenzyme Q on male fertility. A special attention was also paid to cytogenetics of male infertility (chromosome Y microdeletions, gene polymorphisms).

Later, the andrological ambulatory gained continuous experience in diagnostic and treatment of male sexual health problems (i.e. erectile dysfunction) and in 2002 Prof. Balercia was awarded as 'academicina' by the European Academy of Andrology.

Our Center is awarded as Training Centre in Andrology of the European Academy of Andrology from 2006.

Actually, the Centre is still directed by G. Balercia, who is also the Director of the Division of Endocrinology of the Polytechnic University of Marche (Ospedali Riuniti, Ancona) from 2013.

Organization of Centre

Unit Name Clinica di Endocrinologia e Malattie del Metabolismo Università Politecnica delle Marche Dipartimento di Specialità Mediche e Chirurgiche Azienda Ospedaliera Ospedali Riuniti
Director: Prof. Giancarlo Balercia
Staff Dr. Giorgio Arnaldi Dr. Maurizio Cignitti Dr.ssa Lara Giovannini Dr. Giacomo Tirabassi Dr. Gianmaria Salvio Dr.ssa Melissa Cutini Nicola Delli Muti Polidori Anna Rita Vignini Arianna
Clinical Services Outpatient Clinics for sexual medicine, couple infertility, sexual dysfunction, Scrotal, penile arteries and prostate ultrasound
Diagnosis of infertility Counseling of infertile couple Ultrasound of male genital tract Semen analysis Microdeletions of Y chromosome

Educational activities

The Clinic is associated to the School of Endocrinology of University of Padova for postgraduated in Medicine.

Research activities

Clinical research in hypogonadism, erectile dysfunction and male infertility
 Clinical trials: MBGS205 A Phase IIb multicentre, double-blind, dose-ranging, randomised, placebo-controlled study evaluating safety and efficacy of BGS649 in male obese subjects with hypogonadotrophic hypogonadism

Clinical activities

Outpatients andrology activity
Hospitalization availability
Basic and advanced seminology laboratory (including ultrastructural analysis facility)
Molecular biology laboratory (Y-chromosome microdeletions analysis)
Diagnostic tools for erectile dysfunction
Sexuological counselling

Name and address of Centre

Medical Andrology - Clinic of Endocrinology - Dept of Clinical and Molecular Sciences , Polytechnic University of Marche, Ospedali Riuniti, Ancona, Italy Ph: +39.071.5963738 Fax: +39.071.887.300.

E.mail: g.balercia@ospedaliriuniti.marche.it g.balercia@univpm.it

Type of Centre

University	<input type="checkbox"/>
University Hospital	<input checked="" type="checkbox"/>
Private Centre	<input type="checkbox"/>

Other (please specify)

1. Director

Balercia Giancarlo

Academician Affiliated Member Clinical Andrologist

2a. Clinical responsible

Academician Affiliated Member Clinical Andrologist

2b. Clinical responsible

Academician Affiliated Member Clinical Andrologist

2c. Clinical responsible

Academician Affiliated Member Clinical Andrologist

3. Present Staff (Senior Scientists)

1) Name Balercia Giancarlo
 Degree Medical Head, Professor
 Speciality Endocrinology

Academician Affiliated Member Clinical Andrologist

2) Name Arnaldi Giorgio
 Degree Medical Head, MD
 Speciality Endocrinology

Academician Affiliated Member Clinical Andrologist

3) Name Cignitti Maurizio
 Degree Medical Head, MD
 Speciality Obstetrics and Gynecology

Academician Affiliated Member Clinical Andrologist

Insert any additional staff below (if required)

MD/Biologists/Chemists

1) Name Delli Muti Nicola
 Degree Biologist
 Speciality Biology
 Full time/part time Part time

Academician Affiliated Member Clinical Andrologist

2) Name Salvio Gianmaria
 Degree Medical Doctor
 Speciality Endocrinology
 Full time/part time Part time

Academician Affiliated Member Clinical Andrologist

3) Name Giovannini Lara
 Degree Medical Doctor
 Speciality Endocrinology
 Full time/part time Part time

Academician Affiliated Member Clinical Andrologist

4) Name Cutini Melissa
 Degree Medical Doctor
 Speciality Endocrinology
 Full time/part time Part time

Academician Affiliated Member Clinical Andrologist

5) Name Tirabassi Giacomo
 Degree Medical Doctor
 Speciality Endocrinology
 Full time/part time Part time

Academician Affiliated Member Clinical Andrologist

Insert any additional staff below (*if required*)

PhD Students

1) Name Delli Muti Nicola
 2) Name _____
 3) Name _____

Nurses

1) Name Bozzi Loretta
 2) Name Turco Maria Antonietta
 3) Name _____

Laboratory Technicians

1) Name Delli Muti Nicola
 2) Name Polidori Anna Rita
 3) Name Vignini Arianna

Administrative Personnel

1) Name Luca Micelli
 2) Name _____
 3) Name _____

4. Clinical Activity

A. Outpatients: Consultations per year in the last 3 years

	2013	2014	2015
New patients	853	920	980
Follow-up patients	739	689	800

Type of patients in the last years (%)	2013	2014	2015
Infertility	568	531	600
Erectile dysfunction	140	134	120
Hypogonadotropic Hypogonadism	187	189	200
Klinefelter	34	38	40
Gynaecomastia	33	27	30
Varicocele	140	147	150
Cryptorchidism	16	18	20
Male sex accessory gland infections	7	5	10
Testicular tumours	0	0	0
Disorders of gender identity	2	2	2
Other	111	110	113

B. Ultrasound (testis, penile, prostate)

	2013	2014	2015
Total	361	378	400
Controls	265	244	300

C. Andrological surgery procedures

	2013	2014	2015
Testicular biopsies	32	25	30
Varicocele ligation	63	58	65
Prostate biopsies	38	31	37
BPH	0	0	0
Prostate cancer	0	0	0
Vasectomy	0	0	0
Vaso-vasostomy	0	0	0
Other	0	0	0

5. A. Andrology laboratory activity

	2013	2014	2015
Semen analyses	2256	2302	2332
Sperm antibodies	756	764	785
Seminal markers	43	39	41

5. B. Andrology laboratory activity

Sperm banking donors Yes No Sperm banking cancer patients Yes No **If yes:**

	2013	2014	2015
Number of samples	22	24	32

5. C. Histopathological evaluation of biopsies Yes No 5. D. Reproductive Hormones Assays Yes No

If yes please specify type of assays and number of samples in the last year

Reproductive Hormones Assays

(FSH, LH, testosterone, SHBG, prolactin)

5. E. Y chromosome microdeletions according to EAA/EMQN guidelines Yes No **If yes** number of tests in the past year _____Participation to the EAA quality control scheme? Yes No **If no**, specify if available in another lab of the same hospital Yes No Blood karyotyping Yes No **If no**, specify if available in another lab of the same hospital Yes No

Other genetic tests (please specify)

CFTR, Androgen Receptor

6. Collaborations with other Clinical Units of the University/Hospital

IVF Unit Yes No
If yes please specify: Children, Endocrinology, IVF, Urology, Genetics, Pathology

Urology Clinic Yes No

Endocrine Clinic Yes No

Genetics Lab/Unit Yes No

Paediatric Unit Yes No

Central Hospital Laboratory Yes No

Private Centres Yes No

If yes please specify:

7. Clinical teaching activity

Duration of training (years):

	Number
A: Trainees in the last five years	5
B: Trainees who passed EAA-ESAU\exam for Clinical Andrologist in the last 5 yrs	0
C: Trainees working in the centre preparing to pass the EAA-ESAU examination	0
D: PhD Students	0
E: Medical Students	2
F: Other students (MSc)	

8. Formal Andrology teaching program Yes No

If yes: specify duration (years/months): Years Months

	Hours of formal teaching per year	Professional training (weeks/months)
Medical Students	20	
PhD Students	40	
Post Graduate students	20	
Trainees		
Other degrees (please specify)		

9. Research Funding

Please specify the amount of available funds in the last 3 years and their source (Government, European Union, University, Local Government, Pharmaceutical Industries, Banks, Foundations....)

Year	2014-2016
Total amount (€)	90.000
Funding Source(s)	Italian Ministry of Education; Italian Ministry of Heal; Polytechnic University of Marche

FULL LIST OF PUBLICATIONS (with IF) of staff members from the last 5 years

1. The effect of statin therapy on testosterone levels in subjects consulting for erectile dysfunction. Corona G, Boddi V, Balercia G, Rastrelli G, De Vita G, Sforza A, Forti G, Mannucci E, Maggi M. *J Sex Med.* 2010; 7: 1547-56 (IF 2.978)
2. Defects of steroidogenesis. Biason-Lauber A, Boscaro M, Mantero F, Balercia G. *J Endocrinol Invest.* 2010;33:756-66 (IF 2.633)
3. Psychobiological correlates of women's sexual interest as perceived by patients with erectile dysfunction. Corona G, Bandini E, Fisher A, Elisa M, Boddi V, Balercia G, Sforza A, Forti G, Mannucci E, Maggi M. *J Sex Med.* 2010;7:2174-83 (IF 2.978)
4. Single nucleotide polymorphism (SNP) of the endothelial nitric oxide synthase (eNOS) gene (Glu298Asp variant) in infertile men with asthenozoospermia. Buldreghini E, Mahfouz RZ, Vignini A, Mazzanti L, Ricciardo-Lamonica G, Lenzi A, Agarwal A, Balercia G. *J Androl.* 2010;31:482-8 (IF 3.695)
5. Diagnosis of co-morbid axis-I psychiatric disorders among women with newly diagnosed, untreated endocrine disorders. Fornaro M, Iovieno N, Clementi N, Boscaro M, Paggi F, Balercia G, Fava M, Papakostas GI. *World J Biol Psychiatry.* 2010; 11:991-6 (IF 3.658)
6. Percutaneous biopsy of the testicle: a mini review with a proposal flow chart for non-obstructive azoospermia. Carpi A, Agarwal A, Sabanegh E, Todeschini G, Balercia G. *Ann Med.* 2011; 43:83-9 (IF 3.715)
7. Consensus statement on diagnosis and clinical management of Klinefelter syndrome. Radicioni AF, Ferlin A, Balercia G, Pasquali D, Vignozzi L, Maggi M, Foresta C, Lenzi A. *J Endocrinol Invest.* 2010;33:839-50 (IF 2.633)

8. Perceived reduced sleep-related erections in subjects with erectile dysfunction: psychobiological correlates. Corona G, Rastrelli G, Balercia G, Sforza A, Forti G, Mannucci E, Maggi M. *J Sex Med.* 2011;8:1780-8 (IF 2.978)
9. Growth hormone deficiency in the transition period: body composition and gonad function. Balercia G, Giovannini L, Paggi F, Spaziani M, Tahani N, Boscaro M, Lenzi A, Radicioni A. *J Endocrinol Invest.* 2011;34:709-15 (IF 2.633)
10. Coenzyme Q(10) in male infertility: physiopathology and therapy. Mancini A, Balercia G. *Biofactors.* 2011;37:374-80 (IF 3.236)
11. Testosterone and cardiovascular risk in patients with erectile dysfunction. Corona G, Rastrelli G, Balercia G, Sforza A, Forti G, Maggi M. *J Endocrinol Invest.* 2012;35:809-16 (IF 2.633)
12. Nitric oxide synthase and tyrosine nitration in idiopathic asthenozoospermia: an immunohistochemical study. Salvolini E, Buldreghini E, Lucarini G, Vignini A, Di Primio R, Balercia G. *Fertil Steril.* 2012;97:554-60 (IF 4.447)
13. Sexual dysfunctions in men affected by autoimmune Addison's disease before and after short-term gluco- and mineralocorticoid replacement therapy. Granata A, Tirabassi G, Pagni V, Arnaldi G, Boscaro M, Carani C, Balercia G. *J Sex Med.* 2013;10:2036-43 (IF 2.978)
14. Hormonal association and sexual dysfunction in patients with impaired fasting glucose: a cross-sectional and longitudinal study. Corona G, Rastrelli G, Balercia G, Lotti F, Sforza A, Monami M, Forti G, Mannucci E, Maggi M. *J Sex Med.* 2012;9:1669-80 (IF 2.978)
15. Inhibitors of 5 α -reductase-related side effects in patients seeking medical care for sexual dysfunction. Corona G, Rastrelli G, Maseroli E, Balercia G, Sforza A, Forti G, Mannucci E, Maggi M. *J Endocrinol Invest.* 2012;35:915-20 (IF 2.633)
16. Involvement of sperm plasma membrane and cytoskeletal proteins in human male infertility. Salvolini E, Buldreghini E, Lucarini G, Vignini A, Lenzi A, Di Primio R, Balercia G. *Fertil Steril.* 2013;99:697-704 (IF 4.447)
17. Possible efficacy of Lavender and Tea tree oils in the treatment of young women affected by mild idiopathic hirsutism. Tirabassi G, Giovannini L, Paggi F, Panin G, Panin F, Papa R, Boscaro M, Balercia G. *J Endocrinol Invest.* 2013;36:50-4 (IF 2.633)
18. Does alcohol have any effect on male reproductive function? A review of literature. La Vignera S, Condorelli RA, Balercia G, Vicari E, Calogero AE. *Asian J Androl.* 2013;15:221-5 (IF 2.996)

19. Testosterone and cardiovascular risk. Tirabassi G, Gioia A, Giovannini L, Boscaro M, Corona G, Carpi A, Maggi M, Balercia G. *Intern Emerg Med*. 2013;8:S65-9 (IF 2016 (IF 2.340))
20. Have androgen receptor gene CAG and GGC repeat polymorphisms an effect on sperm motility in infertile men? Delli Muti N, Agarwal A, Buldreghini E, Gioia A, Lenzi A, Boscaro M, Balercia G. *Andrologia*. 2014;46:564-9 (IF 1.458)
21. Results from a prospective observational study of men with premature ejaculation treated with dapoxetine or alternative care: the PAUSE study. Mirone V, Arcaniolo D, Rivas D, Bull S, Aquilina JW, Verze P; PAUSE study team. *Eur Urol*. 2014;65:733-9 (IF 16.265)
22. Y-chromosome microdeletions are not associated with SHOX haploinsufficiency. Chianese C, Lo Giacco D, Tüttelmann F, Ferlin A, Ntostis P, Vinci S, Balercia G, Ars E, Ruiz-Castañé E, Giglio S, Forti G, Kliesch S, Krausz C. *Hum Reprod*. 2013;28:3155-60 (IF 5.020)
23. Frequency of sexual activity and cardiovascular risk in subjects with erectile dysfunction: cross-sectional and longitudinal analyses. Corona G, Rastrelli G, Monami M, Maseroli E, Jannini EA, Balercia G, Sforza A, Forti G, Mannucci E, Maggi M. *Andrology*. 2013;1:864-71 (IF 2.427)
24. Human leucocytes in asthenozoospermic patients: endothelial nitric oxide synthase expression. Buldreghini E, Hamada A, Macrì ML, Amoroso S, Boscaro M, Lenzi A, Agarwal A, Balercia G. *Andrologia*. 2014;46:1176-82 (IF 1.458)
25. Androgen Receptor Gene CAG Repeat Polymorphism Regulates the Metabolic Effects of Testosterone Replacement Therapy in Male Postsurgical Hypogonadotropic Hypogonadism. Tirabassi G, Delli Muti N, Corona G, Maggi M, Balercia G. *Int J Endocrinol*. 2013;2013:816740 (IF 2.510)
26. Effects of testosterone replacement therapy on bone metabolism in male post-surgical hypogonadotropic hypogonadism: focus on the role of androgen receptor CAG polymorphism. Tirabassi G, delli Muti N, Gioia A, Biagioli A, Lenzi A, Balercia G. *J Endocrinol Invest*. 2014;37:393-400 (IF 2.633)
27. Influence of CAG Repeat Polymorphism on the Targets of Testosterone Action. Tirabassi G, Cignarelli A, Perrini S, Delli Muti N, Furlani G, Gallo M, Pallotti F, Paoli D, Giorgino F, Lombardo F, Gandini L, Lenzi A, Balercia G. *Int J Endocrinol*. 2015;2015:298107 (IF 2.510)

28. Impact of adult growth hormone deficiency on metabolic profile and cardiovascular risk [Review]. Giovannini L, Tirabassi G, Muscogiuri G, Di Somma C, Colao A, Balercia G. *Endocr J*. 2015;62:1037-48 (IF 1.837)
29. The impact of vitamin D deficiency on patients undergoing kidney transplantation: focus on cardiovascular, metabolic, and endocrine outcomes. Sarno G, Daniele G, Tirabassi G, Chavez AO, Ojo OO, Orio F, Kahleova H, Balercia G, Grant WB, De Rosa P, Colao A, Muscogiuri G. *Endocrine*. 2015;50:568-74 (IF 3.131)
30. Diabetes Mellitus-Associated Functional Hypercortisolism Impairs Sexual Function in Male Late-Onset Hypogonadism. Tirabassi G, Corona G, Lamonica GR, Lenzi A, Maggi M, Balercia G. *Horm Metab Res*. 2016;48:48-53 (IF 2.268)
31. Bone density assessment in a cohort of pediatric patients affected by 22q11DS. Ficcadenti A, Zallocco F, Neri R, Giovannini L, Tirabassi G, Balercia G. *J Endocrinol Invest*. 2015;38:1093-8 (IF 2.633)
32. Vitamin D and thyroid disease: to D or not to D? Muscogiuri G, Tirabassi G, Bizzaro G, Orio F, Paschou SA, Vryonidou A, Balercia G, Shoenfeld Y, Colao A. *Eur J Clin Nutr*. 2015;69:291-6 (IF 3.057)
33. Influence of androgen receptor CAG polymorphism on sexual function recovery after testosterone therapy in late-onset hypogonadism. Tirabassi G, Corona G, Biagioli A, Buldreghini E, delli Muti N, Maggi M, Balercia G. *J Sex Med*. 2015;12:381-8 (IF 2.978)
34. Outcomes of androgen replacement therapy in adult male hypogonadism: recommendations from the Italian society of endocrinology. Isidori AM, Balercia G, Calogero AE, Corona G, Ferlin A, Francavilla S, Santi D, Maggi M. *J Endocrinol Invest*. 2015;38:103-12 (IF 2.633)
35. Protective effects of coenzyme Q10 and aspartic acid on oxidative stress and DNA damage in subjects affected by idiopathic asthenozoospermia. Tirabassi G, Vignini A, Tiano L, Buldreghini E, Brugè F, Silvestri S, Orlando P, D'Aniello A, Mazzanti L, Lenzi A, Balercia G. *Endocrine*. 2015;49:549-52 (IF 3.131)
36. Vitamin D levels and bone mineral density: are LH levels involved in the pathogenesis of bone impairment in hypogonadal men? Gioia A, Ceccoli L, Ronconi V, Turchi F, Marcheggiani M, Boscaro M, Giacchetti G, Balercia G. *J Endocrinol Invest*. 2014;37:1225-31 (IF 2.633)
37. Diabetes mellitus and late-onset hypogonadism: the role of Glu298Asp endothelial nitric oxide synthase polymorphism. Delli Muti N, Tirabassi G, Lamonica GR, Lenzi A, Balercia G. *Andrologia*. 2015;47:867-71 (IF 1.458)

38. GLP-1: benefits beyond pancreas. Muscogiuri G, Cignarelli A, Giorgino F, Prodam F, Santi D, Tirabassi G, Balercia G, Modica R, Faggiano A, Colao A. *J Endocrinol Invest.* 2014;37:1143-53 (IF 2.633)
39. Bone benefits of testosterone replacement therapy in male hypogonadism. Tirabassi G, Biagioli A, Balercia G. *Panminerva Med.* 2014;56:151-63 (IF 1.698)
40. Interleukin-1 β , cyclooxygenase-2, and hypoxia-inducible factor-1 α in asthenozoospermia. Salvolini E, Buldreghini E, Lucarini G, Vignini A, Giulietti A, Lenzi A, Mazzanti L, Di Primio R, Balercia G. *Histochem Cell Biol.* 2014;142:569-75 (IF 2.553)
41. The SIAMS-ED Trial: A National, Independent, Multicentre Study on Cardiometabolic and Hormonal Impairment of Men with Erectile Dysfunction Treated with Vardenafil. Isidori AM, Corona G, Aversa A, Gianfrilli D, Jannini EA, Foresta C, Maggi M, Lenzi A; SIAMS-ED Study Group. *Int J Endocrinol.* 2014;2014:858715 (IF 2.510)
42. X chromosome-linked CNVs in male infertility: discovery of overall duplication load and recurrent, patient-specific gains with potential clinical relevance. Chianese C, Gunning AC, Giachini C, Daguin F, Balercia G, Ars E, Lo Giacco D, Ruiz-Castañé E, Forti G, Krausz C. *PLoS One.* 2014;9:e97746 (IF 2.806)
43. Central body fat changes in men affected by post-surgical hypogonadotropic hypogonadism undergoing testosterone replacement therapy are modulated by androgen receptor CAG polymorphism. Tirabassi G, delli Muti N, Buldreghini E, Lenzi A, Balercia G. *Nutr Metab Cardiovasc Dis.* 2014;24:908-13 (IF 3.679)
44. Reply: Y-chromosome microdeletions are not associated with SHOX haploinsufficiency. Krausz C, Chianese C, Lo Giacco D, Tüttelmann F, Ferlin A, Ntostis P, Vinci S, Balercia G, Ars E, Ruiz-Castañé E, Giglio S, Kliesch S, Forti G. *Hum Reprod.* 2014;29:1114-5 (IF 5.02)
45. Androgen receptor gene CAG repeat polymorphism independently influences recovery of male sexual function after testosterone replacement therapy in postsurgical hypogonadotropic hypogonadism. Tirabassi G, Delli Muti N, Corona G, Maggi M, Balercia G. *J Sex Med.* 2014;11:1302-8 (IF 2.978)
46. Hypersexuality, Paraphilic Behaviors, and Gender Dysphoria in Individuals with Klinefelter's Syndrome. Fisher AD, Castellini G, Casale H, Fanni E, Bandini E, Campone B, Ferruccio N, Maseroli E, Boddi V, Dèttore D, Pizzocaro A, Balercia G, Oppo A, Ricca V, Maggi M. *J Sex Med.* 2015;12:2413-24 (IF 2.978)

