

EAA Andrology Training Centre
Centre Report

2016



Centre identification

School of Medicine University of Zagreb, Clinical Hospital Centre "Zagreb"

Šalata 3, HR-10000 Zagreb

Phone/Fax.: +385 1 45 90 251

e-mail: davor.jezek@mef.hr

Director of the Centre: Prof. Dr. Davor Ježek

CENTRE REPORT

History of Centre

Although the EAA training centre Zagreb (Croatia) has been certified in 2016, reproductive medicine started to develop almost 60 years ago under the auspices of the School of Medicine University of Zagreb and University Hospital "Zagreb". At the beginning of 1953, at the Clinic for Gynaecology and Obstetrics, the outpatient clinic for the treatment of sterility has been established. It was the first organized activity to investigate and treat infertility in Croatia and in the wider region. With the development of the medical profession and staff, a new department arose: Department of Gynaecological Endocrinology and Sterility (1962) followed by the Centre for Gynaecological Endocrinology and Fertility (1977). Finally, in 1988 (up to the present time) the Centre was transformed into the Department of Human Reproduction. From the very beginning, the Department has a well-established andrology laboratory that is subjected to both internal as well as external quality control. Six years later, the Department becomes a reference centre of the Ministry of Health and Social Welfare of the Republic of Croatia. The EEA training centre Zagreb and Department of Human Reproduction are strictly collaborating and are involved in a series of important activities, some of them listed in a chronological order: children and adolescent andrology and gynaecology (1967-1970); research and treatment of amenorrhoea and intersexualism with the determination of the karyotype; new interpretations of the Morris syndrome, menopause praecox and gonadal dysgenesis (1962-1970); complex corrective surgery of abnormal sexual organs including hypo- and epispadias, vaginal aplasia, uterus duplex (1974); establishment of the Family Planning Centre (1978); foundation of the Centre for IVF and other methods of assisted fertilization (1982); beginnings of in vitro fertilization (IVF) (1982) with the first baby born with IVF (1983) (7th centre in the world); foundation of the outpatient clinic for sexually transmitted diseases (STD) (1986); embryo cryopreservation (1992); first application of intracytoplasmic microinjection of spermatozoa - ICSI (1994); introducing biopsy of the testis/ testicular sperm extraction / TESE / and TESE/ICSI procedure (1996); vitrification of embryos (2005) and oocytes (2009); application of oncofertility procedures (2011); establishing of the first Testicular tissue biobank at the level of Republic of Croatia (2013).

Today, all forms of research, diagnosis and treatment of male infertility are being applied in the EAA Training Centre Zagreb. Advanced methods of diagnosing DNA damage in spermatozoa are applied. The treatment of infertility is additionally accomplished by identifying ovarian reserve, risk of ovulation stimulation, and possible factors that reduce fertility and success of IVF. Modern approaches to andropause, contraception, gynaecological endocrinology, paediatric and adolescent andrology and gynaecology as well as perimenopausal medicine have been introduced. The andrology outpatient clinic takes place at least two times per week in conjunction with the Department of Endocrinology located in the same floor. Two urologists with subspecialty in andrology (Prof. Dr. Željko Kaštelan and Dr. Dinko Hauptman) provide, among other, the treatment of erectile dysfunction, urethoplasty, penoplasty, Peyronie's disease etc. The andrology outpatient clinic also comprises of a newly established Prostate Centre where an extensive examination (including multiple biopsies) of the prostate are performed. Overall, 15 clinical departments/clinics of the University Hospital "Zagreb" are included into the health care of the infertile couple. Leading role play Clinics for Urology and Gynaecology and Obstetrics. EAA Training Centre Zagreb pursues research in the field of genetics and epigenetics of testicular tumours, Leydig cell dysfunction, and the role of interstitium in the normal and

pathologically changed testis. In 2017, the EEA Training Centre Zagreb has been awarded the Centre of Excellence grant from the EU. The Centre is included as a partner in two Horizon 2020 projects, and organized two symposiums (2015 and 2017) in the area of andrology with the participation of prominent academicians from EAA. In September 2017, the Centre organized (together with EAA Centre in Copenhagen as co-organizer) the first international summer school entitled "Testis Histology and Pathology for Clinical Andrologists and Embryologists". Current director of the EAA Training Centre Zagreb is Prof. Dr. Davor Ježek (EAA academician) and the clinical responsible is Prof. Dr. Željko Kaštelan, the Head of Clinic of Urology.

Organization of Centre

UNIT NAME Centre for Reproductive Medicine and Andrology School of Medicine University of Zagreb/University Hospital Centre Zagreb
Director: Prof. Dr. Davor Ježek, M.D.
Staff Prof. Dr. Željko Kaštelan, M.D. Assist. Prof. Nikola Knežević Dinko Hauptman, M.D. Zoran Zimak, M.D. Prof. Dr. Miro Kasum, M.D. Associate Prof. Dr. Dinka Pavičić Baldani, M.D. Associate Prof. Dr. Marina Šprem Goldštajn, M.D. Associate Prof. Dr. Hrvoje Vrčić, M.D. Assist. Prof. Lana Škrgatić, M.D. Maja Banović, M.D., Ph.D. Višnja Hlavati, Biologist Nina Gelo, Biologist Gabrijela Kirinec, Biologist Nurses, administrative staff
Clinical Services Outpatient Clinics for couple infertility, sexual dysfunction, male reproductive tract ultrasound, prostate centre (prostate ultrasound, prostate multiple biopsies), semen analysis (WHO 2010), female sexual dysfunctions, hormonal profiling, karyotyping & chromosome Y-microdeletions, TESE
Contribution to EAA training program Diagnosis of infertility Ultrasound of the male genital tract Counselling of infertile couple Semen analysis Cryopreservation of sperm and testis tissue Genetics of male infertility Testicular biopsy analysis

Educational activities

Since the Centre is a part of the both School of Medicine University of Zagreb as well as its University Hospital, the Centre is involved in postgraduate education in the area of andrology/urology and reproductive medicine & biobanking. The Centre organises regular andrology symposia and andrology summer school with the help of EAA.

Research activities

Main research topics are:

- Leydig cells in infertile men with non-obstructive azoospermia
- Fine morphology of the testis in patients with non-obstructive azoospermia
- Development of human testicular mast cells and their role in male infertility
- Genetics and epigenetics and of male infertility
- Chronic orchitis and male infertility
- Stress and male infertility
- Metabolomics of the human embryo development
- Polycystic ovarian syndrome (PCOS) and its genetic background
- Intrauterine growth restriction and male/female infertility

In addition, the EAA Centre Zagreb has been awarded the grant of EU (K.K. 01.1.1.01.008). The staff of the EAA Zagreb actively participates in the so-called research unit „Biomedical research on reproduction and development“ (BiRR) of the Centre of excellence at the School of Medicine, University of Zagreb. The Centre of excellence enfolds a wide range of collaborating institutions: University Hospital Centre “Zagreb“ (KBC “Zagreb”), The Children's Hospital Zagreb, KBC „Sisters of Mercy“, Clinical Hospital "The Holy Spirit“, IMI (Institute for Medical Research and Occupational Health), Croatian society for clinical genetics, Croatian society for human genetics, Croatian society for human reproduction and gynaecological endocrinology and the Croatian society of andrology. The project tasks/elements of the research unit include basic and translational research, as well as public health actions and education of young researchers.

The Commission has allocated 2.5 mil Euros for the activity on the following projects:

1. Research on epigenetic characteristics in animal reproduction and development
 2. Epigenetics of testicular germ cells
 3. Epigenetics of inborn abnormalities
 4. Biomarkers in pathological pregnancy
 5. Human testis and sperm
-

6. Placenta in pathological pregnancies

All the above listed project tasks are in an intensive realization phase, which is supported by a number of published papers, books and book chapters, books of abstracts, participation in local and international congresses, mentorships, presented doctoral theses, international and local collaboration and many other activities.

The scientific activity of the EAA Centre Zagreb is also supported by 2 grants of Croatian Science Foundation.

The director of the Centre is a partner in 2 Horizon 2020 projects (BIOCHIP and Alliance4Life)

Clinical activities

Male infertility; Other reproductive problems: cryptorchidism, varicocele, sexually transmitted diseases, Diagnosis and treatment of hypogonadism including late-onset hypogonadism; Erectile and sexual dysfunction; Andrological diseases in systemic medical illnesses /diabetes mellitus, metabolic syndrome, obesity/.

The Centre for Reproductive medicine and Andrology is also serving as a seat of EAA training centre "Zagreb", within the University Hospital "Zagreb". University Hospital Zagreb is an umbrella healthcare institution in the Republic of Croatia and bears the highest, "zero category" of the hospital. It has for decades a strong tradition in providing health services in the field of reproductive medicine and andrology. Given the complex nature of diagnostic, therapeutic and diagnostic therapies in the field of reproductive medicine, as many as fifteen clinics and Clinical Institutes KBC "Zagreb" make up a kind of intertwined network that merged into the Centre for Reproductive Medicine and Andrology. The clinics participating in the Centre are as follows:

Urology Clinic

Clinic for Gynaecology and Obstetrics

Department of Internal Diseases

Department of Dermatovenerology

Paediatrics Clinic

Clinic for neurology

Oncology Clinic

Clinic for Heart and Blood Diseases

Clinic for Psychological Medicine

Clinic for anaesthesiology, reanimatology and intensive care

Clinical Institute for Transfusion Medicine and Transplant Biology

Clinical Institute of Pathology and Cytology

Clinical Institute for Laboratory Diagnosis

Clinical Institute for Clinical and Molecular Microbiology

Clinical Institute for Diagnostic and Interventional Radiology

Name and address of Centre

University of Zagreb, School of Medicine, Clinical Hospital Centre "Zagreb"

Kišpatićeva 12

HR-10000 Zagreb, Croatia, EU

Type of CentreUniversity University Hospital Private Centre

Other (please specify) _____

1. Director

Prof. Dr. Davor Ježek, M.D., Ph.D., Full Professor

Academician Affiliated Member Clinical Andrologist **2a. Clinical responsible**

Prof. Dr. Željko Kaštelan, M.D., Ph.D., Associate Professor

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 Željko Kaštelan, M.D., Ph.D.
 Degree Full Professor
 Speciality Urology
- Academician Affiliated Member Clinical Andrologist
- 2) Name Nikola Knežević,
 Degree M.D., Ph.D.
 Speciality Urology
- Academician Affiliated Member Clinical Andrologist
- 3) Name Hrvoje Vrčić
 Degree Associate Professor
 Speciality Gynaecology & Obstetrics, Human
 Reproduction
- Academician Affiliated Member Clinical Andrologist
- 4) Name Dinka Pavičić Baldani
 Degree Associate Professor
 Speciality Gynaecology & Obstetrics, Human
 Reproduction
- Academician Affiliated Member Clinical Andrologist
- 5) Name Marina Šprem Goldštajn
 Degree Associate Professor
 Speciality Gynaecology & Obstetrics, Human
 Reproduction
- Academician Affiliated Member Clinical Andrologist
- 6) Name Miro Kasum
 Degree Associate Professor
 Speciality Gynaecology & Obstetrics, Human
 Reproduction
- Academician Affiliated Member Clinical Andrologist
- 7) Name Maja Banović
 Degree Assistant
 Speciality Gynaecology & Obstetrics, Human
 Reproduction
- Academician Affiliated Member Clinical Andrologist

Insert any additional staff below (if required)

MD/Biologists/Chemists

1) Name Dinko Hauptman
 Degree M.D.
 Speciality Urology
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

2) Name Gabrijela Kirinec
 Degree Ph.D.
 Speciality Biology/Human Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

3) Name Višnja Hvalati
 Degree Master of Biology
 Speciality Biology/Human Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

4) Name Nina Pleša Gelo
 Degree Ph.D.
 Speciality Biology/Human Reproduction
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

5) Name Zoran Zimak
 Degree M.D.
 Speciality Urology
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

6) Name _____
 Degree _____
 Speciality _____
 Full time/part time _____

Academician Affiliated Member Clinical Andrologist

7) Name _____
 Degree _____
 Speciality _____
 Full time/part time _____

Insert any additional staff below *(if required)*

Specialists

- 1) Name _____
2) Name _____
3) Name _____
4) Name _____
5) Name _____

PhD Students

- 1) Name Dinko Hauptman, M.D.
2) Name Zoran Zimak, M.D.
3) Name _____

Nurses

- 1) Name Ivanka Kolačević
2) Name Kruno Pavlinek
3) Name Jadranko Cota

Laboratory Technicians

- 1) Name Marica Horvatinec
2) Name Renata Štengl
3) Name Ljiljana Dobec
4) Name Suzana Orlić

Administrative Personnel

- 1) Name Jadranka Kontent
2) Name Sandra Rođak
3) Name Sonja Štefan

4. Clinical Activity

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

	2013	2014	2015
New patients	410	390	450
Follow-up patients	220	250	215

Type of patients in the last years (%)	2013	2014	2015
Infertility	70	72	69
Erectile dysfunction	20	18	21
Hypogonadotropic Hypogonadism	1	0,5	0
Klinefelter	0,5	0,5	0,5
Gynaecomastia	0	0	0
Varicocele	5	6	6
Cryptorchidism	0,5	0	0
Male sex accessory gland infections	0	0	0
Testicular tumours	3	3	4
Disorders of gender identity	0	0	0
Other	0	0	0

B. Ultrasound (testis, penile, prostate) *

	2013	2014	2015
Total	310	400	350
Controls	50	60	55

* performed at the Department of Radiology

C. Andrological surgery procedures

	2013	2014	2015
Testicular biopsies	2	43	31
Varicocele ligation	26	23	31
Prostate biopsies	350	341	361
BPH	140	120	110
Prostate cancer	65	75	90
Vasectomy	0	0	0
Vaso-vasostomy	0	0	0
Other	0	0	0

5. A. Andrology laboratory activity

	2013	2014	2015
Semen analyses	2210	2075	2010
Sperm antibodies			
Seminal markers			

5. B. Andrology laboratory activity

Sperm banking donors Yes No Sperm banking cancer patients Yes No

<i>If yes:</i>			
	2013	2014	2015
Number of samples	43	45	77

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)

FSH, LH, T, SHBG, DHEA-S, Hcg, prolactin - 24305. E. Y chromosome microdeletions according to EAA/EMQN guidelines Yes No **120***If yes* number of tests in the past yearParticipation 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)

Amniotic fluid karyotyping ✓**FISH sperm ✓** (still not as a routine)

Pre-implantation genetic diagnosis (to be introduced)

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

IVF Unit Yes No

If yes please specify: Children, Endocrinology, IVF, Urology, Genetics, Pathology

IVF, Endocrinology, Children, Urology, Pathology, Gynaecology

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	48
B: Trainees who passed EAA-ESAU\exam for Clinical Andrologist in the last 5 yrs	
C: Trainees working in the centre preparing to pass the EAA-ESAU examination	1
D: PhD Students	2
E: Medical Students	350 per year
F: Other students (MSc)	25-30 postgraduates per year

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	40	2 weeks
PhD Students	290	36
Post Graduate students	290	12 months
Trainees		3 months
Other degrees (please specify)		

9. Research Activity (maximum 1 page)

Please shortly describe the main research topics of the center and list the most relevant papers in peer review journals (with IF) related to these activities.

The full list of publications (years 2010 - 2015) are presented at the end of this report.

Main research topics are:

- Leydig cells in infertile men with non-obstructive azoospermia
- Fine morphology of the testis in patients with non-obstructive azoospermia
- Development of human testicular mast cells and their role in male infertility
- Epigenetics of male infertility
- Chronic orchitis and male infertility
- Stress and male infertility
- Metabolomics of the human embryo development
- Polycystic ovarian syndrome (PCOS) and its genetic background
- Intrauterine growth restriction and male/female infertility

10. 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	2011-2015 EU FP 7 research project BIOCOMET
Total amount (€)	6 mil EUROS/Croatian partner budget: 800.000 EUROS
Funding Source(s)	EU FP 7

Year	2014-2019, School of Medicine University of Zagreb, Centre of Excellence for Reproductive and Regenerative Medicine
Total amount (€)	Croatian Ministry of Science, Research and Sport: 184.210 EUROS/ EU funds: approx. 2.5 mil. EUROS
Funding Source(s)	Croatian Ministry of Science, Research and Sport/ EU funds

Year	2016 - Horizon 2020, research project BIOCHIP
Total amount (€)	5.7 mil. EUROS/Croatian partner budget: 1 mil. EUROS
Funding Source(s)	EU

Insert any additional funding below if required

ORGANIZATION CHARTS

<mailto:ewa.rajpert-de.meyts@regionh.dk>

Organization charts legend: Department / Unit Structure

<p>UNIT NAME Centre for Reproductive Medicine and Andrology School of Medicine University of Zagreb/University Hospital Centre Zagreb</p>
<p>Director: Prof. Dr. Davor Ježek, M.D.</p>
<p>Staff Prof. Dr. Željko Kaštelan, M.D. Assist. Prof. Nikola Knežević Dinko Hauptman, M.D. Zoran Zimak, M.D. Prof. Dr. Miro Kasum, M.D. Associate Prof. Dr. Dinka Pavičić Baldani, M.D. Associate Prof. Dr. Marina Šprem Goldštajn, M.D. Associate Prof. Dr. Hrvoje Vrčić, M.D. Assist. Prof. Lana Škrgatić, M.D. Maja Banović, M.D., Ph.D. Višnja Hlavati, Biologist Nina Gelo, Biologist Gabrijela Kirinec, Biologist Nurses, administrative staff</p>
<p>Clinical Services Outpatient Clinics for couple infertility, sexual dysfunction, male reproductive tract ultrasound, prostate centre (prostate ultrasound, prostate multiple biopsies), semen analysis (WHO 2010), female sexual dysfunctions, hormonal profiling, karyotyping & chromosome Y-microdeletions, TESE</p>
<p>Contribution to EAA training program Diagnosis of infertility Ultrasound of the male genital tract Counselling of infertile couple Semen analysis Cryopreservation of sperm and testis tissue Genetics of male infertility Testicular biopsy analysis</p>

CENTRE PHOTOS









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

Ježek D. (ed.): Atlas on the human testis: Normal morphology and pathology. Springer Verlag London, 285 pgs., London, 2013 (ISBN 987-1-4471-2763-5; DOI 10.1007/978-1-4471-2763-5)

Goluža T, Boscanin A, Cvetko J, Kozina V, Kosović M, Bernat MM, Kasum M, Kaštelan Z, Ježek D. Macrophages and Leydig cells in testicular biopsies of azoospermic men. *Biomed Res Int.* 2014;2014:828697. doi: 10.1155/2014/828697. (IF = 1.579)

Borovečki A, Caenazzo L, Ježek D, Karija-Vlahović M, Golubić B. Croatian National Centre for Biobanking - a new perspective in biobanks governance? *Croat Med J.* 2014 Aug 28;55(4):416-22 (IF = 1.305)

Kulis T, Knezevic M, Karlovic K, Kolaric D, Antonini S, Kastelan Z. Infrared digital thermography of scrotum in early selection of progressive varicocele. *Med Hypotheses.* 2013 Oct;81(4):544-6. doi: 10.1016/j.mehy.2013.06.028. (IF = 1.152)

Hudolin T, Kastelan Z, Ilic I, Levarda-Hudolin K, Basic-Jukic N, Rieken M, Spagnoli GC, Juretic A, Mengus C. Immunohistochemical analysis of the expression of MAGE-A and NY-ESO-1 cancer/testis antigens in diffuse large B-cell testicular lymphoma. *J Transl Med.* 2013 May 16;11:123. doi: 10.1186/1479-5876-11-123 (IF = 3.991)

Tandara M, Bajić A, Tandara L, Bilić-Zulle L, Šunj M, Kozina V, Goluža T, Jukić M. Sperm DNA integrity testing: big halo is a good predictor of embryo quality and pregnancy after conventional IVF. *Andrology.* 2014 Sep;2(5):678-86. doi: 10.1111/j.2047-2927.2014.00234.x.

Kasum M, Oresković S, Ježek D. Spontaneous ovarian hyperstimulation syndrome. *Coll Antropol.* 2013 Jun;37(2):653-6. (CC) ((IF = 0.609)

Kasum M, Danolić D, Orešković S, Ježek D, Beketić-Orešković L, Pekez M. Thrombosis following ovarian hyperstimulation syndrome. *Gynecol Endocrinol.* 2014 Jul 11:1-5. ((IF = 1.333)

Kasum M, Vrčić H, Stanić P, Ježek D, Orešković S, Beketić-Orešković L, Pekez M. Dopamine agonists in prevention of ovarian hyperstimulation syndrome. *Gynecol Endocrinol.* 2014 Aug 5:1-5 (IF = 1.333)

Kasum M, Pavičić-Baldani D, Stanić P, Orešković S, Sarić JM, Blajić J, Juras J. Importance of macroprolactinemia in hyperprolactinemia. *Eur J Obstet Gynecol Reprod Biol.* 2014 Dec;183:28-32. doi: 10.1016/j.ejogrb.2014.10.013. (IF = 1.695)

Pavičić Baldani D, Škrgatić L, Bukvić Mokos Z, Trgovčić I. Hyperandrogenemia association with acne and hirsutism severity in Croatian women with polycystic ovary syndrome. *Acta Dermatovenerol Croat.* 2013 Aug;21(2):105-12. (IF = 0.581)

Pavičić Baldani D, Skrgatić L, Simunić V, Elvedi Gasparović V, Geršak B. Hormone replacement therapy and venous thromboembolism. *Lijec Vjesn.* 2015 Jan-Feb;137(1-2):34-40.

Baldani DP, Skrgatic L, Ougouag R. Polycystic Ovary Syndrome: Important Underrecognised Cardiometabolic Risk Factor in Reproductive-Age Women. *Int J Endocrinol.* 2015;2015:786362. doi: 10.1155/2015/786362. (IF = 1.978)

Baldani DP, Skrgatic L, Cerne JZ, Oguic SK, Gersak BM, Gersak K. Association between serum levels and pentanucleotide polymorphism in the sex hormone binding globulin gene and cardiovascular risk factors in females with polycystic ovary syndrome. *Mol Med Rep.* 2015 May;11(5):3941-7. doi: 10.3892/mmr.2014.3117 (IF = 1.559)

Kasum M, Radakovic B, Simunic V, Oreškovic S. Preovulatory progesterone rise during ovarian stimulation for IVF. *Gynecol Endocrinol.* 2013 Aug;29(8):744-8. doi: 10.3109/09513590.2013.798280. (IF = 1.136)

Goldstajn MS, Baldani DP, Skrgatić L, Radaković B, Vrbić H, Canić T. Ulipristal acetate in emergency contraception. *Coll Antropol.* 2014 Mar;38(1):379-84.

Baldani DP, Skrgatic L, Cerne JZ, Ferik P, Simunic V, Gersak K. Association of PPARG Pro12Ala polymorphism with insulin sensitivity and body mass index in patients with polycystic ovary syndrome. *Biomed Rep.* 2014 Mar;2(2):199-206.

Baldani DP, Skrgatić L, Simunić V, Zlopasa G, Canić T, Trgovčić I. Characteristics of different phenotypes of polycystic ovary syndrome based on the Rotterdam criteria in the Croatian population. *Coll Antropol.* 2013 Jun;37(2):477-82. (IF = 0.609)

Baldani DP, Skrgatić L, Goldstajn MS, Vrcić H, Canić T, Strelec M. Clinical, hormonal and metabolic characteristics of polycystic ovary syndrome among obese and nonobese women in the Croatian population. *Coll Antropol.* 2013 Jun;37(2):465-70. (IF = 0.609)

Skrgatić L, Baldani DP, Gersak K, Cerne JZ, Ferik P, Corić M. Genetic polymorphisms of INS, INSR and IRS-1 genes are not associated with polycystic ovary syndrome in Croatian women. *Coll Antropol.* 2013 Mar;37(1):141-6. (IF = 0.609)

von Kopylow K, Kirchoff C, Jezek D, Schulze W, Feig C, Primig M, Steinkraus V, Spiess AN. Screening for biomarkers of spermatogonia within the human testis: a whole genome approach. *Hum Reprod.* 2010 May;25(5):1104-12. (IF = 4.357)

Kozina V, Geist D, Kubinová L, Bilić E, Karnthaler HP, Waitz T, Janáček J, Chernyavskiy O, Krhen I, Ježek D. Visualization of Reinke's crystals in normal and cryptorchid testis. *Histochem Cell Biol.* 2011 Feb;135(2):215-28. (IF = 2.588)

Vlaisavljević V, Borko E, Radaković B, Zazula D, Dosen M. Changes in perifollicular vascularity after administration of human chorionic gonadotropin measured by quantitative three-dimensional power Doppler ultrasound. *Wien Klin Wochenschr.* 2010 May;122 Suppl 2:85-90. (IF = 0.747)

Augustin G, Vrcic H, Zupancic B. Laparoscopic cholecystectomy due to acute calculous cholecystitis in 16 weeks' in vitro fertilization and embryo transfer pregnancy: report of the first case. *J Postgrad Med.* 2012 Oct-Dec;58(4):298-300. (IF = 1.078)

Kozina V, Cappallo-Obermann H, Gromoll J, Spiess AN. A one-step real-time multiplex PCR for screening Y-chromosomal microdeletions without downstream amplicon size analysis. *PLoS One.* 2011;6(8), (IF = 4.092)

Mengus C, Schultz-Thater E, Coulot J, Kastelan Z, Goluzza E, Coric M, Spagnoli GC, Hudolin T. MAGE-A10 cancer/testis antigen is highly expressed in high-grade non-muscle-invasive bladder carcinomas. *Int J Cancer.* 2013 May 15;132(10):2459-63. (IF = 5.007)

Lessel D, Gamulin M, Kulis T, Toliat MR, Grgic M, Friedrich K, Zunec R, Balija M, Nürnberg P, Kastelan Z, Högel J, Kubisch C. Replication of genetic susceptibility loci for testicular germ cell cancer in the Croatian population. *Carcinogenesis.* 2012 Aug;33(8):1548-52. (IF = 5.635)

Mokos I, Kastelan Z, Basić-Jukić N, Kes P, Pasini J. Transurethral incision/resection of the prostate (TUIP/TURP) in operative treatment of repeated bladder outlet obstruction early after kidney transplantation. *Acta Clin Croat.* 2011 Sep;50(3):381-4. (IF = 0.254)

Hudolin T, Kastelan Z, Knezevic N, Goluzza E, Tomas D, Coric M. Correlation between retroperitoneal lymph node size and presence of metastases in nonseminomatous germ cell tumors. *Int J Surg Pathol.* 2012 Feb;20(1):15-8. (IF = 0.756)

Gotovac K, Grubic Z, Kastelan Z, Stingl K, Kulis T, Krhen I, Hudolin T, Kastelan M, Zunec R. Pilot study of the association between the HLA region and testicular carcinoma among Croatian patients. *Urol Int.* 2011;87(3):288-92. (IF = 0.992)