

EAA Andrology Training Center
Centre Report

2019



University of Leipzig
Ph.-Rosenthal-Str. 23
04103 Leipzig Germany

CENTRE REPORT

History of Centre

The Andrological Unit in the Clinic of Dermatology was formed in 1949 when Professor Gertler had the chair of Dermatology. At present Univ.-Professor Dr. med. habil. Simon is the director in charge of the clinic. The first andrological activities of the Centre were clinical activities and teaching. The research activities have increased gradually since 1972 and the andrology laboratory was officially recognised as the reference laboratory for semen analysis in the former GDR. In 1974 Dr. H.-J. Glander became the head of the andrological unit in the Dermatological Clinic until his retirement in 2010. Professor Uwe Paasch was appointed as the director of the unit. Prof. Dr. Sonja Grunewald has been appointed as vice director. Since 2018 Dr. Mittank-Weidner joins the team as junior house officer.

The chair of Urology was officially instituted in Leipzig in 1976. Professor Dieterich was the first full Professor of Urology. Since this time the operative Andrology was intensively developed. In 1996 the chair has changed to Professor Dorschner. In 2009 Professor Jens-Uwe Stolzenburg took over this position. Dr. Christian Kriegel, board certified Urologist completes the team and oversees all activities regarding erectile dysfunction and testicular biopsies.

Organization of Centre

The present Director of the Centre is Professor Dr. med. habil. Uwe Paasch, who was certified as a Clinical Andrologist by the EAA in 1999. Additionally, the staff comprises the director of Urological Clinic, Univ.-Professor Dr. med. habil. Jens-Uwe Stolzenburg (Urol. Clinic) as well as Dr. Seikowski as psychologist and sexologist (Department of Psychology) and Prof. Jürgen Kratzsch as biochemist (Dept. of Biochemistry). On demand colleagues from childrens department, endocrine unit and pathology may be involved. Altogether there are staff members according to appendix 1.

Professor Uwe Paasch and his co-workers participate in a project on lipids of sperm, supported by the German Research Council (DFG). Prof. Uwe Paasch belonged to the executive councils of scientific societies as follows German Andrological Society since 2001.

Appendix 1

Director

Professor Dr. med. Uwe Paasch

Senior physician and scientists

Prof. Dr. med. Jens-Uwe Stolzenburg

Prof. Dr.med. Sonja Grunewald

Dr. rer. nat. Kathrin Engel

Psychologist and sexologist

PD Dr. rer. nat. habil. K. Seikowski

Clinical-andrology

Professor Dr. med. Uwe Paasch

Professor Dr. med. Jens-Uwe Stolzenburg

Professor Dr.med. Sonja Grunewald

Dr. Mittank-Weidner

Dr. Christian Kriegel

Laboratory of semen analysis and sperm function diagnosis

Professor Dr. med. Uwe Paasch

Gabriele Kersten, technical assistant

Cornelia Schneider

Andrological surgery

Professor Dr. med. Jens-Uwe Stolzenburg

Dr. Christian Kriegel

Secretary

Mrs. Regina Blumrich (Dermatol. Clinic).

Educational activities

There is an existing training programme for physicians as dermatologists, urologists and gynaecologists. Once a year a three-day andrological course for andrologists of the regional Saxon area is organised. About 20 colleagues take part every year. In addition, all medical students receive 8 hours of teaching in andrology in the fourth year.

Research activities

Since January 1992 research projects have been continuously funded by the German Research Council (DFG). The most recent research focuses on sperm lipids and the sperm metabolome. Next to this there are research activities aiming on automated software algorithms of sperm analysis, andrological support of remote areas and tele-andrology. In the Department of Urology andrological research focuses on erectile function and robotic assisted surgery / prostate cancer. Male sexual problems as well as transsexual patients are main research projects of our psychologist Dr. Seikowski.

Name and address of Centre

Universitätsklinikum Leipzig AöR

EAA Training Centre / Andrology Unit

Ph.-Rosenthal-Str. 23

D - 04103 Leipzig

Germany

Tel: + 341- 97 18740 (Professor Paasch)

+ 341- 97 19000 (Professor Stolzenburg)

Fax: + 341- 97 18649 (Professor Paasch)

+ 341- 97 19009 (Professor Stolzenburg)

Type of Centre

University

University Hospital

Private Centre

Other (please specify) _____

1. Director

Prof. Dr. med. habil. Uwe Paasch

Academician Affiliated Member Clinical Andrologist

2a. Clinical responsible

Prof. Dr.med.habil. Uwe Paasch

Academician Affiliated Member Clinical Andrologist

2b. Clinical responsible

Prof. Dr.med.habil. Sonja Grunewald

Academician Affiliated Member Clinical Andrologist

2c. Clinical responsible

Prof. Dr.med.habil. Jens-Uwe Stolzenburg

Academician Affiliated Member Clinical Andrologist

3. Present Staff (Senior Scientists)

1) Name Kathrin Engel
 Degree Dr. rer. nat.
 Speciality Biology

Academician Affiliated Member Clinical Andrologist

2) Name Till Mittank-Weidner
 Degree MD
 Speciality Dermatology/ Andrology Trainee

Academician Affiliated Member Clinical Andrologist

Insert any additional staff below (if required)

MD/Biologists/Chemists

1) Name Christian Kriegel
 Degree MD
 Speciality Urology
 Full time/part time Part time

Academician Affiliated Member Clinical Andrologist

Psychologist/Sexologist

2) Name Kurt Seikowski
 Degree PhD
 Speciality Psychology, sexology
 Full time/part time Full time

Academician Affiliated Member Clinical Andrologist

Insert any additional staff below (if required)**Specialists**

1) Name _____
 2) Name _____

PhD Students

1) Name _____
 2) Name _____
 3) Name _____

Nurses

1) Name _____
 2) Name _____
 3) Name _____

Laboratory Technicians

1) Name Mrs. Cornelia Schneider
 2) Name Mrs. Gabriele Kersten
 3) Name _____

Administrative Personnel

1) Name Mrs. Regina Blumrich
 2) Name _____
 3) Name _____

4. Clinical Activity

A. Outpatients: Cumulating number of patients and consultations per year in the last 3 years

	2014	2015	2016	2017	2018	2019
New admissions	391	357	367	422	448	431
Follow-up patients	1496	1424	1281	1385	1407	1410
Spermatology	1189	1023	1019	1210	1204	1174
Hormones	661	502	441	524	509	507
Microbiology	239	258	322	454	556	536

Type of patients in the last years (%) Estimations	2015	2016	2017	2018
Infertility	62	65	66	60
Erectile dysfunction	8	5	4	5
Hypogonadotropic Hypogonadism	11	10	10	10
Mb. Klinefelter	1	1	1	1
Gynaecomastia	1	1	1	1
Varicocele	2	2	3	4
Cryptorchidism	10	13	11	10
Testicular tumors	5	3	4	6
Disorders of gender identity	<1	<1	<1	<1
Other				

B. Ultrasound (testis, penile, prostate) *

	2015	2016	2017	2018
Total estimated in house	123	128	131	100
Controls				

* remaining performed at the Department of Radiology

C. Andrological surgery procedures

	2015	2016	2017	2018
Testicular biopsies / TESE	5 / 3	6 / 3	7 / 3	3 / 3
Varicocele ligation	13	9	10	8
Prostate biopsies	132	119	109	129
BPH	192	170	185	194
Prostate cancer	350	375	384	425
Vasectomy	6	6	8	10
Vaso-vasostomy	0	0	0	0
Penile prosthesis	1	5	4	3

5. A. Andrology laboratory activity

	2015	2016	2017	2018	2019
Semen analyses	1190	1019	1210	1204	1160
Sperm antibodies	51	16	20/32	12	20
Seminal markers					20

5. B. Andrology laboratory activity

Sperm banking donors Yes No Sperm banking cancer and infertility patients Yes No

If yes:

	2015	2016	2017	2018	2019
Number of samples	215	196	212	242	215

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)

	2015	2016	2017	2018	2019
FSH	502	441	524	509	458
LH	502	441	524	507	459
Testosteron	502	441	524	529	478
Inhibin B	502	441	524	491	441
SHBG	502	441	524	77	90
PRL	25	31	28	24	24

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)

FISH sperm

Pre-implantation genetic diagnosis

Amniotic fluid karyotyping

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

IVF Unit

 Yes No

If yes please specify: (IVF Unit of the University hospital is temporarily closed, however, there is a close collaboration with the infertility clinic in the Department of Gynecology)

Urology Clinic	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Endocrine Clinic	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Genetics Lab/Unit	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Paediatric Unit	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Central Hospital Laboratory	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Private Centres	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

If yes please specify:

7. Clinical teaching activity

Duration of training (years):

	Number
A: Trainees in the last five years	1
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	1
D: PhD Students	3
E: Medical Students	2
F: Other students (MSc)	1

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	8	
PhD Students		
Post Graduate students		
Trainees		Full time 18 month
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.

Since January 1992 research projects have been continuously funded by the German Research Council (DFG). The most recent research focuses on sperm lipids and the sperm metabolome. Next to this there are research activities aiming on automated software algorithms of sperm analysis, andrological support of remote areas and tele-andrology. In the Department of Urology andrological research focuses on erectile function and robotic assisted surgery / prostate cancer. Male sexual problems as well as transsexual patients are main research projects of our psychologist Dr. Seikowski.

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	<u>2010-2019</u>
Total amount (€)	<u>App. 400.000</u>
Funding Source(s)	<u>German Research Council (Government)</u>

Insert any additional funding below if required

ORGANIZATION CHARTS

Organization charts legend: Department / Unit Structure

Unit Name		EAA Center of Andrology Leipzig
Head		Prof. Dr.med.habil. Uwe Paasch
Staff member 1		Prof. Dr. Jens-Uwe Stolzenburg
Staff member 2		Prof. Dr.med. Sonja Grunewald
Staff member 3		Dr. med. Christian Kriegel
Staff member 4		Dr.rer.nat. Kathrin Engel
Outpatient Clinics Embryology Ovarian stimulation Ultrasound Oocyte retrieval Embryo transfer FNA / TESE		Dr. med. Alexander Jank, Dept. of Gynecology Dr. med. Christian Kriegel (TESE)
Diagnosis of infertility Counseling of infertile couple Cryopreservation of sperm Ethics in Andrology		Prof. Dr.med.habil. Uwe Paasch Prof. Dr. med. habil. Sonja Grunewald PD Dr. rer. nat. habil. Kurt Seikowski (sexology)

CENTRE PHOTOS



Mrs. Gabriele Kersten, Mrs Cornelia Schneider (technical assistants) and Prof. Uwe Paasch



PhD Students Christopher Springguth, Susanne Pyttel and Stephanie Thomas (all successfully accomplished their PhD Thesis at our lab between 2012 and 2016)

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

- 1 Engel KM, Baumann S, Rolle-Kampczyk U, Schiller J, von Bergen M, Grunewald S. Metabolomic profiling reveals correlations between spermogram parameters and the metabolites present in human spermatozoa and seminal plasma. *PLoS One*. 2019 Feb 20;14(2):e0211679.
- 2 Engel KM, Grunewald S, Schiller J, Paasch U. Automated semen analysis by SQA Vision® versus the manual approach-A prospective double-blind study. *Andrologia*. 2019; 51: e13149.
- 3 Mittank-Weidner T, Paasch U, Grunewald S. Zu krank für eine Vaterschaft? Andrologische Beratung bei (neuen) onkologischen Systemtherapien. *Gynäkologische Endokrinologie* 2019, 17(4), pp 245–249.
- 4 Weidner T, Paasch U, Grunewald S. [Andrological consultation in new systemic oncological therapies with small molecules]. *Hautarzt*. 2018; 69: 984-990.
- 5 Engel KM, Springsguth CH, Grunewald S. What happens to the unsuccessful spermatozoa? *Andrology*. 2018 Mar;6(2):335-344.
- 6 Weberschock T, Grunewald S, Ochsendorf F [Andrology in oncological diseases]. *Hautarzt*. 2018 Dec;69(12):977-983.
- 7 Grunewald S, Fitzl G, Springsguth C. Induction of ultra-morphological features of apoptosis in mature and immature sperm. *Asian J Androl*. 2017 Sep-Oct;19(5):533-537.
- 8 Nenoff P, Manos A, Ehrhard I et al. [Nonviral sexually transmitted infections-epidemiology, clinical manifestations, diagnostic workup, therapy : Part 3: Treponemes, Gardnerella and trichomonads]. *Hautarzt*. 2017; 68: 136-148.
- 9 Nenoff P, Manos A, Ehrhard I et al. [Non-viral sexually transmitted infections - Epidemiology, clinical manifestations, diagnostics and therapy : Part 2: Chlamydia and mycoplasma]. *Hautarzt*. 2017; 68: 50-58.
- 10 Nenoff P, Manos A, Ehrhard I et al. [Non-viral sexually transmitted infections - Epidemiology, clinical manifestations, diagnostics and therapy : Part 1: Gonococci]. *Hautarzt*. 2017; 68: 43-49.
- 11 Seikowski K. Sexuelle Gesundheit im Alter - Beratung und Therapie. In: Stiftung Männergesundheit (Hrsg.), *Sexualität von Männern. Dritter Deutscher Männergesundheitsbericht*. 2017 (pp 199-207), Gießen: Psychosozial-Verlag.
- 12 Riammer S, Garten A, Schaab M et al. Nicotinamide phosphoribosyltransferase production in human spermatozoa is influenced by maturation stage. *Andrology*. 2016; 4: 1045-1053.
- 13 Jorgensen N, Joensen UN, Toppari J et al. Compensated reduction in Leydig cell function is associated with lower semen quality variables: a study of 8182 European young men. *Hum. Reprod*. 2016; 31: 947-957.
- 14 Richter D, Geue K, Sender A et al. Medical consultations about fertility preservation with haematological patients of childbearing age: A qualitative study. *Eur. J. Oncol. Nurs*. 2016; 21: 146-152.

- 15 Seikowski K. S3-Leitlinienentwicklung "Geschlechtsdysphorie" - Gibt es eine positive Gesundheitsversorgung? In: Naß A, Rentzsch S, Rödenbeck J, Deinbeck M (Hrsg.), *Geschlechtliche Vielfalt (er)leben*. 2016 (pp. 93-112), Gießen: Psychosozial-Verlag.
- 16 Seikowski K. Die Problematik der Psychopathologisierung von Transsexualität. In: Schreiber G (Hrsg.), *Transsexualität in Theologie und Neurowissenschaften. Ergebnisse, Kontroversen, Perspektiven*. 2016 (pp. 295-309), Berlin: De Gruyter.
- 17 Grunewald S, Jank A. New systemic agents in dermatology with respect to fertility, pregnancy, and lactation. *J Dtsch Dermatol Ges*. 2015 Apr;13(4):277-89
- 18 Grunewald S, and Paasch U. [Drug treatment of dermatological disorders. Aspects to consider from an andrological perspective]. *Hautarzt*. 2015; 66: 913-918
- 19 Stolzenburg JU, Graefen M, Kriegel C et al. Effect of surgical approach on erectile function recovery following bilateral nerve-sparing radical prostatectomy: an evaluation utilising data from a randomised, double-blind, double-dummy multicentre trial of tadalafil vs placebo. *BJU Int*. 2015 Aug;116(2):241-51.
- 20 Seikowski K. Der altende Mann. *Gesund bleibt, wer schwach sein kann*. *Uronews*, 2015: 19(6), 28-33.
- 21 Seikowski K. Aging-Male-Syndrom. In: Brähler E, Hoefert HW (Hrsg.), *Lexikon der modernen Krankheiten*. 2015 (pp. 14-16), Berlin: Medizinisch-Wissenschaftliche Verlagsgesellschaft.
- 22 Seikowski K. Asexualität. In: Brähler E, Hoefert HW (Hrsg.), *Lexikon der modernen Krankheiten*. 2015 (pp. 38-39), Berlin: Medizinisch-Wissenschaftliche Verlagsgesellschaft.
- 23 Seikowski K. Dyspareunie. In: Brähler E, Hoefert HW (Hrsg.), *Lexikon der modernen Krankheiten*. 2015 (pp. 138-139), Berlin: Medizinisch-Wissenschaftliche Verlagsgesellschaft.
- 24 Seikowski K. Sexuelle Appetenzstörungen. In: Brähler E, Hoefert HW (Hrsg.), *Lexikon der modernen Krankheiten*. 2015 (pp. 462-463), Berlin: Medizinisch-Wissenschaftliche Verlagsgesellschaft.
- 25 Seikowski K, Kunz F. Sexualdelinquenz älterer Menschen. In: Kunz F, Gertz HJ (Hrsg.), *Straffälligkeit älterer Menschen. Interdisziplinäre Befunde aus Forschung & Praxis*. 2015 (pp. 145-166), Berlin: Springer.
- 26 Jensen TK, Swan S, Jorgensen N et al. Alcohol and male reproductive health: a cross-sectional study of 8344 healthy men from Europe and the USA. *Hum. Reprod*. 2014; 29: 1801-1809.
- 27 Pyttel S, Nimptsch A, Bottger J et al. Changes of murine sperm phospholipid composition during epididymal maturation determined by MALDI-TOF mass spectrometry. *Theriogenology*. 2014; 82: 396-402.
- 28 Nimptsch A, Pyttel S, Paasch U et al. A MALDI MS investigation of the lysophosphatidylcholine/phosphatidylcholine ratio in human spermatozoa and erythrocytes as a useful fertility marker. *Lipids*. 2014; 49: 287-293.
- 29 Seikowski K. Verminderte sexuelle Wünsche. In: Blitzer J, Hoefert HW (Hrsg.), *Psychologie in der Gynäkologie*. 2014 (pp. 41-51), Lengerich: Pabst.

- 30 Seikowski K, Taube KM. Dyspareunie, Vaginismus und Vulvodynie. In: Blitzer J, Hoefert HW (Hrsg.), *Psychologie in der Gynäkologie*. 2014 (pp. 259-265), Lengerich: Pabst.
- 31 Grunewald S, and Paasch U. *Basic diagnostics in andrology*. *J. Dtsch Dermatol Ges.* 2013; 11: 799-814.
- 32 Neuhaus J, Schiffer E, von WP et al. *Seminal plasma as a source of prostate cancer peptide biomarker candidates for detection of indolent and advanced disease*. *PLoS. One.* 2013; 8: e67514.
- 33 Thomas S, Kratzsch D, Schaab M et al. *Seminal plasma adipokine levels are correlated with functional characteristics of spermatozoa*. *Fertil. Steril.* 2013; 99: 1256-1263.
- 34 Grunewald S, Glander HJ, Paasch U, Kratzsch J. *Age-dependent inhibin B concentration in relation to FSH and semen sample qualities: a study in 2448 men*. *Reproduction.* 2013; 145: 237-244.
- 35 Seikowski K. *Sexualität und Partnerschaft betreffende Aspekte bei Psoriasis*. *Wirtschaftsmagazin für den Hautarzt*, 2013; 18(3), 43-44.
- 36 Seikowski K. *Gemeinsam oder einsam? Sexualität und Partnerschaft bei Psoriasis*. *Haut*, 2013; 24, 18-21.
- 37 Seikowski K. *Sexualstörungen und Psychotherapie*. *Ärztliche Psychotherapie*, 2013; 8, 104-108.
- 38 Seikowski K. *Psychische Gesundheit des alternden Mannes*. In: Weißbach L, Stieler M (Hrsg.), *Männergesundheitsbericht 2013*. (S. 197-208), Bern: Huber, Hogrefe AG.
- 39 Stiehler M, Tüffers U, Seikowski K. *Männer in Beziehungen*. In: Weißbach L, Stieler M (Hrsg.), *Männergesundheitsbericht 2013*. (S. 173-196), Bern: Huber, Hogrefe AG.
- 40 Pyttel S, Zschornig K, Nimptsch A et al. *Enhanced lysophosphatidylcholine and sphingomyelin contents are characteristic of spermatozoa from obese men-A MALDI mass spectrometric study*. *Chem. Phys. Lipids.* 2012; 165: 861-865.
- 41 Grunewald S, and Paasch U. *Sperm selection for ICSI using annexin V*. *Methods Mol. Biol.* 2013; 927: 257-262.
- 42 Roessner C, Paasch U, Kratzsch J et al. *Sperm apoptosis signalling in diabetic men*. *Reprod. Biomed. Online.* 2012; 25: 292-299.
- 43 Schill WB, and Paasch U. *Carl Schirren--in honour of his 90th birthday*. *Andrologia.* 2012; 44: 288.
- 44 Fuchs B, Muller K, Paasch U, Schiller J. *Lysophospholipids: potential markers of diseases and infertility?* *Mini. Rev. Med. Chem.* 2012; 12: 74-86.