EAA Andrology Training Center

Centre Report

2017

[2014-2016]

CENTRE REPORT

History of Centre

The history of andrology at the University of Giessen goes back to 1951, when a working group for the study of male hypogonadism was founded by members of the Department of Internal Medicine, the Outpatient Clinic of Internal Medicine, the Clinic of Dermatology, and the Institute of Anatomy. A Department of Andrology at the Clinic of Dermatology at Giessen University was founded in 1968 and was changed into a Chair of Andrology and Venereology in 1980. In 1989 a new Chair of Dermatology and Andrology at the Clinic of Dermatology was taken over by W. B. Schill.

At the same time, a Study Group for Reproductive Medicine was established, consisting of additional members of the Department of Obstetrics and Gynaecology, a Working Group of Endocrinology, and the Veterinary Clinic.

With the appointment of W. Weidner as Chairman of the Clinic of Urology in 1993, the Department of Urology joined the Study Group for Reproductive Medicine. In 1999, this network of collaborations was formally established as Hessian Centre of Reproductive Medicine. Moreover, both research and training activities were intensified in 1998, when the universities of Giessen and Marburg became hosts of a graduate research training group of the Deutsche Forschungsgemeinschaft (DFG) entitled “Cell-Cell-Interaction in Reproduction“.

This programme was extended until 2005. In view of growing interest in clinical andrology and related basic research, the Andrology Centre has been extended to include the Medical Department and Policlinic III (Endocrinology), a certified European Training Centre for Endocrinology (U.E.M.S.), headed by Prof. Schaeffler, and the Unit of Reproductive Biology in the Department of Anatomy and Cell Biology, headed by Prof. A. Meinhardt.

These structural changes of the centre were part of the re-evaluation process in 2003. Beginning in 2009, the faculty of the Justus-Liebig-University Giessen and the UKGM GmbH decided to transfer the whole scientific and clinical andrological activities of the Department of Dermatology and Andrology to the Department of Urology, Pediatric Urology and Andrology.

With this consented decision, the new Department of Dermatology stopped the historical tradition to diagnose and to treat andrological patients. In detail, the clinical andrological outpatient department (Prof. Dr. H.-C. Schuppe), including the andrological laboratory, and the cryobanking facilities have been transferred, histopatholgical work-up and the resp. collections of testicular biopsies are now integrated in the Giessen testicular biopsy repository (until Sept. 2018: Prof. M. Bergmann, since Oct. 2018: PD Dr. D. Fietz).

Organization of Centre

The EAA training centre Giessen consists of the following units:

- Department of Urology, Paediatric Urology and Andrology
  (Head: Prof. F. Wagenlehner)

- Medical Department and Policlinic III –Endocrinology-
  (Head: Prof. Schäffler, cooperating partner: Prof. T. Linn)

- Department of Anatomy and Cell Biology, Unit for Reproductive Biology
  (Head: Prof. A. Meinhardt)

- Testicular Biopsy Repository, Department of Veterinary Anatomy, Histology and Embryology
  (Head: PD Dr. D. Fietz) (together with Prof. HC. Schuppe)

- Section Molecular Andrology
  (Head: Prof. Dr. K. Steger)

Unit Name: EAA Andrology Centre Giessen
Head: PD Dr. Thorsten Diemer / Prof. Dr. Andreas Meinhardt

Please find the ORGANIZATIONAL CHART at page 19

Educational activities

- 8th EPIDIDYMIS Workshop 2022, Gießen
- International Workshop on Molecular Andrology 2019 (24 – 26 Sept. 2019), Gießen
- 30th Annual Meeting of the German Society of Andrology - *Deutsche Gesellschaft für Andrologie (DGA)* 2018 in Gießen, Tagungspräsident und wissenschaftlicher Leiter: PD Dr. Th. Diemer
- Andrological Summer School 2014 on 'Male Infertility' – „Microbiology and Inflammation in Urogenital Infections (MIBIE)", Tagungsleitung: Prof. F. Wagenlehner, Giessen, 2014
- 26th Annual Meeting of the *German Society of Andrology - Jahrestagung der Deutschen Gesellschaft für Andrologie (DGA)* 2014 in Gießen, Tagungspräsident: Prof. Dr. K. Steger
- Reproductive medical Colloquium of the Hessian Centre of Reproductive Medicine (HZRM), the Clinical Research Unit 181 (Mechanisms of male factor infertility) and the International Research Training Group 1871 ‚Molecular Pathogenesis of Male Reproductive Disorders' (IRTG), monthly since 2007
- Practical Courses within the Giessen Graduate Centre for the Life Sciences (GGL, section 6). GGL-programs WS 2013/2014 – WS 2015/2016

  → see following pages

GGL courses WS 2013/2014 – SS 2014

16.10.13	The CatSper channel: a polymodal chemosensor in human sperm.	Dr. Timo Strünker
30.10.13	DFG Research Group "Sulfated Steroids in reproduction"	Prof. Martin Bergmann
06.11.13	Assistend reproduction in exotic bird species - Opportunities for species conservation	Dominik Fischer
13.11.13	From spermatogonia to mature sperm: gene expression changes that define the fate and function of mature germ cells.	Dr. André Spiess (Hamburg)
20.11.13	Membrane transporters for sulfated steroid hormones in the testis: gatekeepers of the sulfatase pathway.	Dr. Daniela Fietz
27.11.13	Actual DFG-Activities in Germany.	Prof. Klaus Steger
04.12.13	The activin and follistatin system.	Dr. Vera Michel
11.12.13	Pairing, synapsis and recombination of meiotic chromosomes.	Prof. Dr. Ricardo Benavente
15.01.14	Cooperation between CREM and GCNF as a master switch in regulating male haploid gene expression.	PD Dr. Joachim Weitzel (Dummerstorf)
22.01.14	Membrane transporters for hormons and xenobiotics.	Prof. J. Geyer, Giessen
05.02.14	Comparative Gross Anatomy of the Reproductive Tract. (Includes Practical Course)	Prof. Martin Bergmann (Giessen)
06.02.14	Histology of the male reproductive tract. (Includes Practical Course)	Prof. R.Middendorff Prof. A.Meinhardt
12.02.14	Androgens - master regulators of male health	Prof. Dr. P.Saunders (Edinburgh, UK)
06.02.14	Histology of the male reproductive tract (see above)	Prof. R. Middendorff Prof. A. Meinhardt
23.04.14	The Testosterone Problem in Testis	PD Dr. L. Konrad
21.05.14	Histology of the male reproductive tract, Part II (Includes Practical Course)	Prof. Dr. R. Middendorff (Giessen)
	Presentation / GGL-Retreat (16:30 h)	M. Shihan (Giessen)
28.05.14	The importance of the somatic Sertoli cell for spermatogenesis (KFO 181/1 Project 6)	Prof. Dr. R. Brehm (Hannover)
04.06.14	Androgen regulation of epididymal function and sperm maturation	Prof. Dr. P. Sipilä (Finnland)
11.06.14	Endocrine Regulation and Disease	Prof. Dr. Th. Linn
12.06.14	Laser Microdissection	C. Feuerstacke
18.06.14	Clinical and molecular genetic aspects of androgen action	Profs. A. & Y Giwercman (Sweden)
25.06.14	Leydig cell culture	Dr. Y. Dezhkam
02.07.14	Electron Microscopy: Principles and Fundamentals	PD Dr. U. Gärtner
09.07.14	TET activity and DNA methylation during normal and malignant germ cell activity	Prof. Dr. H. Schorle (Bonn)
16.07.14	KFO-Meeting SS14, Six years after start, Projects 1-5	

GGL WS 2014/2015 – WS 2015/2016

29.10.2014, Dr. Agnieszka Paradowska: KFO-Meeting SS14, Six years after start, Projects 1-5
06.11.2014, Prof. Dr. Martin Michel (DGA)- structure, goals and benefits for young andrology researchers
27.11.2014, Prof. Dr. Joachim Geyer: Ageing Ovaries
26.11.2014, Prof. Dr. Christine Wrenzycki: TRR81 & Chromatin remodelling mechanisms
03.12.2014, Prof. Dr. Klaudia Giehl: FOR Meeting Section 6
10.12.2014, Dr. Karin Müller: Tumorgenesis: Ras and Epithelial to Mesenchymal Transition
09.01.2015, Dr. Ferial Aslani, Dr. Suhanshu Bhushan: Lipidomica and sperm function
14.01.2015, Dr. Angelika Stammler: Isolation and Culture of Testicular Cells with theoretical introduction
15.01.2015, Prof. Dr. Katja Sträßer: Barriers in the Male Reproductive System: Blood-Testis-Barrier, Blood-Epididymal-Barrier & beyond
22.01.2015, Prof. Dr. Joachim Geyer: Coupling RNA polymerase II transcription to nuclear messenger ribonucleoprotein complex (mRNP) biogenesis
27.01.2015, Prof. Dr. Ralf Middendorff: FOR Meeting Section 6
28.01.2015, Dr. Monika Fijak: Histology of the Female Reproductive Tract
04.02.2015, PD Dr. Jan Postberg (W): Testosterone and Inflammation
06.02.2015, Ferial Aslani, Dr. Suhanshu Bhushan: Implication of Testis-specific Histone Variants in Disease
11.02.2015, PD Dr. Adrian Pilatz: Isolation and Culture of Testicular Cells with theoretical introduction
05.03.2015, Prof. Dr. Joachim Geyer: Insert into calendar app (e.g. outlook) Epididymits
29.04.2015, Prof. Dr. Peter Becker (M): Retreat of Section 6
06.05.2015, Prof. Dr. Chr. Barratt (Dundee, UK): Role for nucleosome remodeling factor ACF in Drosophila oogenesis
20.05.2015, Ms. Elham Savadi-Shiraz: Characteristics of functional sperm
20.05.2015, Prof. Dr. Martin Bergmann, Prof. Dr. Andreas Meinhardt
Testicular interstitial fluid proteomics as a means to monitor fertility status in azoospermic men
27.05.2015, PD Dr. Diemer: Electron Microscopy Analysis
28.05.2015, Klaudia Giehl, Gießen, AG: Onkologische Signaltransduktion Varicocele
02.06.2015, Dr. Vera Michel: Oncogenic Ras proteins in tumor cell migration and invasion
03.06.2015, Prof. Dr. Eugen Domann: Confocal Microscopy
11.06.2015, L. Randau, MPI MR: Epigenetic control of mouse germ cell a. early embryonic development
12.06.2015, Dr. Katja Hartmann: DNA interference mechanisms and applications of the CRISPR-Cas immune systems
15.06.2015, Dr. Katja Hartmann: In situ Hybridisation
17.06.2015, Dr. Agnieszka Paradowska: In situ Hybridisation
24.06.2015, Prof. Dr. Adam Ziecik, PL: Epigenetic Editing": An innovative perspective for treatment of many diseases
01.07.2015, Prof. Dr. Burkhard Brosig - Corpus Luteum Regression and Rescue in the Pig – Lessons Learned from Gene Expression, in-vivo and in-vitro Studies
08.07.2015, Prof. Dr. M. Alsheimer (Würzburg): Infertility: A Psychosomatic Approach
09.07.2015, Claudia Colasante: On the role of the nuclear envelope in meiosis and postmeiotic differentiation
15.07.2015, Dr. Joachim Wistuba (MS): Mitochondrial carrier family proteins of Trypanosoma brucei: sentinels of the mitochondrial inner membrane
17.07.2015, Prof. Dr. Hans-Christian Schuppe & Lab Team: Clinical Andrology Lab (practical course)
04.11.2015, PD. Dr. Lutz Konrad: Staging of Spermatogenesis
09.12.2015, Prof. Dr. Sheena Lewis, UK: Electron microscopy - Seeing is believing?
14.12.2015, Dr. E. – J. Vogt (Bethesda, MD, USA), Sperm DNA fragmentation and male (in)fertility
16.12.2015, G. Schuler: From egg to embryo: Maternal a. paternal contributions to early development

GGL SS2016

12.04.16, HMGA2: old and new faces of an oncofetal protein,Prof. Dr. S. Hombach(Manitoba,C
20.04.16, Sperm function and sperm selection,Prof. Dr. H. – Chr. Schuppe
26.04.16, GGL Retreat (Including election of new student speaker)
27.04.16, Mammalian gamete membrane biology before and after fertilization event, Prof. Dr. B. Gadella (Utrecht, NL)
11.05.16, General immunology, as an overview of immune cell types and CD proteins in testis,Dr. S. Bhushan (Giessen)
18.05.16, Time-Lapse-Imaging" in reproductive medicine - Facts and Fiction,PD Dr. V. Ziller (Marburg)
01.06.16, On the role of the nuclear envelope in meiosis and postmeiotic differentiation,Prof. Dr. M. Alsheimer (Würzburg)
08.06.16, Examination of human testicular biopsies – possibilities and problems,Dr. D. Fietz (Giessen)
16.06.16, Epigenetic programming in the germline:„Dr. P. Western setting the foundation for the next generation.„(Melbourne, Australia)
22.06.16, An examples-based attempt to visualize the capability of multivariate analyses over the combinations of several univariate analyses, Dr. G. Eichner (Giessen)
29.06.16, TIN + GGL-Retreat-Presentation (Dana Püschl),Prof. Dr. M. Bergmann (Giessen)
06.07.16, Mast cells and implications in disease, Prof. Dr. F. Wagenlehner (Giessen)
13.07.16, Epigenomics of prostate cancer,Prof. Dr. A. Perry (Dublin, Ireland)
02.05. – 04.05.2016 Course Epigenetics, PD Dr. U. Schagdarsurengin
17.05. – 27.05.2016 Course Proteome Analysis, Prof. Dr. G. Lochnit

GGL WS 2016/2017

26.10.16, Women in the Life Sciences, PD Dr. Dagmar Wachten (Bonn)
26.10.16, Controlling ciliary function by light, PD Dr. Dagmar Wachten (Bonn)
02.11.16, Epididymis update, Thorben Hau (Giessen)
09.11.16, How do sertoli cells survive? The role of autophagy and apoptosis, Dr. Ferial Aslani
23.11.16, Women in the Life Sciences, Prof. Dr. Helene Kiefer, Prof. Dr. Helene Jammes (France)
23.11.16, Bull spermatozoa DNA methylation landscape displays unique features revealed by a multiscale analysis, Prof. Dr. Helene Kiefer (France)
Fine tuning of bovine monocytes methylome in response to environmental conditions, Prof. Dr. Helene Jammes (France)
30.11.16, Balancing work and family, Brief introduction, Prof. Dr. Andreas Meinhardt
Experiences from a mother: From investigator's perspective, PD Dr. Undraga Schagdarsurengin
Experiences from a father: From doctoral/student's perspective, Robert Kügler
07.12.16, Loss of imprinting in prostate carcinogenesis, Dr. Temuujin Dansranjav
14.12.16, Women in the Life Sciences, Prof. Dr. Noora Kotaja (Finland)
Germ granule-mediated RNA regulation in male germ cells, Prof. Dr. Noora Kotaja
21.12.16, Effect of paternal diet on sperm quality and offspring health, Prof. Dr. Klaus Steger
11.01.17, Lessons from mice models in metabolic research, Prof. Dr. Thomas Linn
18.01.17, Sperm DNA damage assays, Dr. Petr Houska (Giessen)
25.01.17, Alternative dry storage bio-banking of cells, gametes and embryos,Prof. Dr. Pasqualino Loi (Italy)
01.02.17, In-vitro production of embryos: similarities and differences between species, Prof. Dr. Christine Wrenzycki (Giessen)
08.02.17, One carbon metabolism: Linking nutritional biochemistry to epigenetic programming of long-term development, Prof. Dr. Kevin Sinclair (UK)

Research activities

- The DFG Research Unit Sulfated Steroids in Reproduction (FOR 1369/ 7 projects 2013 – 2016 / Speaker: Prof. Dr. Martin Bergmann; Coordinator: Prof. Dr. Joachim Geyer) has been established in 2010. Participants are members of the Faculties of Veterinary Medicine and Medicine of the Justus Liebig University Giessen and the Institute of Biochemistry of the Universität des Saarlandes.
  As sulphated steroids have for a long time thought to represent inactive metabolic products, this project aims to investigate uptake of sulphated steroids in cells of the male and female reproductive tract and transfer into active hormones.

- DFG International Research Training Group (IRTG) between Giessen and Monash University, Melbourne, Australia on "Male Reproductive Health and Disease" (German Speaker: Prof. Meinhardt) is established since 2013 and receives funds until 2017. An extension for a further 4.5 years has been granted for the period 2017 – 2022 (11 projects).
  The aim of the IRTG is to train doctoral and postdoctoral students within the framework of an interdisciplinary research programme and to provide structures for cooperation through an accompanying study programme.

- The DFG funded Clinical Research Unit KFO 181 "Male factor infertility due to impaired spermatogenesis" (coordinator: Prof. Dr. Wolfgang Weidner; head: Prof. Dr. Klaus Steger, Department of Urology, Pediatric Urology and Andrology) has been established in 2008 and received funds until 2011 (KFO 181/1). An extension for another three years (2011 – 2014) has been granted (KFO 181/2).
  The aim of the research group is to improve the diagnosis of male infertility by investigating the molecular causes of impaired testicular sperm cell formation.

- The LOEWE Focus Group MIBIE "Male Infertility and Urogenital Infections" (Spokesman: Prof. Dr. W. Weidner) is being funded from 2011-2014 with approx. 4.3 million Euros by the State of Hessen. Justus Liebig University Giessen is spearheading the group and is in cooperation with the Philipps University Marburg and the University of Applied Sciences Giessen-Friedberg. Associated partners of the focus group are the Child Wish Center of Middle Hessen, the School of Veterinary Medicine Pennsylvania (USA), the Rhineland-Westphalia Technical College Aachen, and the Veterinary College Hannover.
  The focus is on infectious and inflammatory diseases of the male reproductive tract that lead to fertility disorders. In a cooperative approach, this central topic is dealt with comprehensively in two areas: scientifically and clinically. The overriding goal of this translational focus is, to combine basic research with disease-oriented research to develop improved diagnostic and therapeutic concepts for male infertility.

Clinical activities
The Department of Urology, Pediatric Urology and Andrology has 47 regular beds (inpatient care) and offers the entire conservative and surgical treatment spectrum of Urology, Pediatric urology and Andrology. Every year, our team treats more than 2.300 inpatients and more than 13.000 outpatients. The department currently employs 15 physicians with state-of-the-art technology to ensure optimal patient care. The Urological department is a certified training center of the EBU (European Board of Urology) for the acquisition of the European board-certified specialist in urology (FEBU) and the EAA (European Academy of Andrology) for the acquisition of the qualification "Clinical Andrologist". In Andrology, clinical sections on surgical, conservative, and molecular andrology have been established. A cryobank is available. In addition, the clinic is a central component of the Hessian Center for Reproductive Medicine and the second opinion center for testicular tumors (Deutsche Krebsgesellschaft, DKG).
The Department of Urology, Pediatric Urology and Andrology offers a broad range of andrological in- and outpatient services as well as laboratory facilities: In 2015 approx. 1.500 andrological patients attended our centre as outpatients and approx. 300 patients as inpatients for andrological surgery.

Name and address of Centre

EAA Andrology Centre Giessen
Justus-Liebig-University Giessen
Ludwigstraße 23, 35390 Gießen

Type of Centre

University	X
University Hospital	X
Private Centre	
Other (please specify)	

Type of Centre	
University Hospital	X

1. Director	PD Dr. Thorsten Diemer				
Academician	X	Affiliated Member		Clinical Andrologist	X
1a. Director (if more institutions)	Prof. Dr. Andreas Meinhardt				
Academician	X	Affiliated Member		Clinical Andrologist	
2a. Clinically responsible	Prof. Dr. Hans-Christian Schuppe				
Academician	X	Affiliated Member		Clinical Andrologist	X
3. Present Staff *(Senior Scientists)*					
1)	Name	Prof. Dr. Florian Wagenlehner			
	Degree	MD			
	Speciality	Urologist			
Academician		Affiliated Member	X	Clinical Andrologist	
2)	Name	PD Dr. Adrian Pilatz			
	Degree	MD			
	Speciality	Urologist			
Academician		Affiliated Member		Clinical Andrologist	X

3)	Name	PD Dr. Monika Fijak				
	Degree	Dr. rer. physio.l				
	Speciality	Biology				
Academician		Affiliated Member		Clinical Andrologist		
4)	Name	Dr. Sudhanshu Bhushan				
	Degree	Dr. hum. biol.				
	Speciality	Biology				
Academician		Affiliated Member		Clinical Andrologist		
5)	Name	Dr. Jörg Klug				
	Degree	Dr. rer. nat.				
	Speciality	Biology				
Academician		Affiliated Member		Clinical Andrologist		
6)	Name	Dr. Britta Klein				
	Degree	Dr. med. vet.				
	Speciality	Veterinarian				
Academician		Affiliated Member		Clinical Andrologist		
7)	Name	Prof. Dr. Klaus Steger				
	Degree	Dr. rer. nat.				
	Speciality	Biology				
	Full time/part time	Full time				
Academician		Affiliated Member	X	Clinical Andrologist		
8)	Name	Prof. Dr. Undarga Schagdarsurengin				
	Degree	Dr. rer. nat. habil.				
	Speciality	Biology, Genetics				
	Full time/part time	Full time				
Academician		Affiliated Member		Clinical Andrologist		
9)	Name	Dr. Temujin Dansranjavin				
	Degree	Dr. rer. nat.				
	Speciality	Biology				
	Full time/part time	Fulltime				
Academician		Affiliated Member		Clinical Andrologist		
10)	Name	Dr. Arne Hauptmann				
	Degree	MD				
	Speciality	Urologist				
	Full time/part time	Full time				
Academician		Affiliated Member	X	Clinical Andrologist	X	
11)	Name	PD Dr. Agnieszka Paradowska				
	Degree	Dr. rer. physiol.				
	Speciality	Reproductive Biology				
	Full time/part time	Full time				

Academician		Affiliated Member	X	Clinical Andrologist	
12)	Name	Dr. Constanze Maresch (since 7/2017)			
	Degree	Dr. biol. hom.			
	Speciality	Biology, Molecular Andrology			
	Full time/part time	Fulltime			
Academician		Affiliated Member		Clinical Andrologist	
MD/Biologists/ Chemists:					
1)	Name	Yalong Yang			
	Degree				
	Speciality	physician			
	Full time/part time	Fulltime			
Academician		Affiliated Member		Clinical Andrologist	
2)	Name	Julia Bender			
	Degree	Master			
	Speciality	Biology			
	Full time/part time	Fulltime			
Academician		Affiliated Member		Clinical Andrologist	
3)	Name	Tao Lei			
	Degree	PhD			
	Speciality	Physician			
	Full time/part time	Fulltime			
Academician		Affiliated Member		Clinical Andrologist	
4)	Name	Christine Kleinert			
	Degree	Master			
	Speciality	Biology			
	Full time/part time	Fulltime			
Academician		Affiliated Member		Clinical Andrologist	
5)	Name	Dr. Christine Pleuger			
	Degree	Dr. rer. nat.			
	Speciality	Molecular Biology			
	Full time/part time	Fulltime			
Academician		Affiliated Member		Clinical Andrologist	

PhD Students	**and andrological trainees**
1) Name	Sabrina Gies, Giessen, Germany (since 2015)
2) Name	Nils Nesheim, Giessen, Germany (2013-2014 and since 2015)
3) Name	Jakhongir Alidjanov, Tashkent, Uzbekistan (2013-2014)
4) Name	Ricardo Hartley, Santiago, Chile (2013-2014)
5) Name	Vivianna Menzel, Giessen, Germany (2013-2014)
6) Name	Elham Savadi Shiraz, Iran (2013-2018)
7) Name	Kai Tina Steinfeld, Giessen, Germany (2010-2014)
8) Name	Siva Velagala, India (2013-2015)
9) Name	Sarode Gaurav, India (2011-2014)
10) Name	Andreas Benelli, Genua (2014-2015)
11) Name	Kai Ni, Shanghai (2013-2016)
12) Name	Lisa Teuchert, Giessen (2014)
13) Name	Draga Asmarinah, Jakarta, Indonesia (2014)
14) Name	Julia Bender
15) Name	Christine Kleinert
16) Name	Yalong Yang (since 2017)
17) Name	Tao Lei (2015-2019)
18) Name	Britta Klein (2013-2016)
19) Name	Dana Püschl (2016-2018)
20) Name	Juliette Borderies (since 2017)
Nurses	Nurses from the Dept. of Urology are also engaged in the
	andrological work-up, not separated for Andrology
Laboratory Technicians	G. Hecker
1) Name	S. Pinkl
2) Name	B. Schuster
3) Name	B. Fröhlich
4) Name	T. Bloch
5) Name	K. Wilhem
6) Name	S. Fröhlich
7) Name	E. Wahle
8) Name	Miguel Keidel (2015-2018)
9) Name	
Administrative Personnel	Katharina Endres
1) Name	Eva Wewel
2) Name	Monika Conrad
3) Name	Julia Wolf (2013-2017)
4) Name	M. Blazevic
5) Name	Pia Jürgens

4. Clinical Activity

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

	2014	2015	2016
New patients	1217	1169	1310
Follow-up patients	1054	1015	995

Type of patients in the last years (%)	2014	2015	2016
Infertility	40%	40 %	40%
Erectile dysfunction	20%	20 %	20%
Hypogonadotropic Hypogonadism	5%	5 %	3%
Klinefelter	1%	1 %	3%
Gynaecomastia	--	below 1 %	1%
Varicocele	7%	8%	8%
Cryptorchidism	4%	5%	4%
Male sex accessory gland infections	10%	1%	8%
Testicular tumours	3%	2%	4%
Disorders of gender identity	1%	below 1 %	0%
Other	"	16 %	12%

B. Ultrasound (testis, penile, prostate) approx. 4500 (Andrological Invest.)

	2013	2014	2015
Total	about 8.000	about 8.000	about 8.000
Controls	---	---	---

** performed at the Dept. of Urology, Pediatric Urology and Andrology*

C. Andrological surgery procedures

	2014	2015	2016
Testicular biopsies/units	138	143	139
Varicocele ligation	19	38	25
Prostate biopsies	more than 300	more than 300	more than 300
BPH	more than 130	more than 120	more than 140
Prostate cancer	35	39	29
Vasectomy	18	18	14
Vaso-vasostomy	38	40	36

5. A. Andrology laboratory activity

	2014	2015	2016
Semen analyses	1314	1434	1487
Sperm antibodies	632	643	677
Seminal markers	3591	3368	3579

5. B. Andrology laboratory activity

Sperm banking donors	Yes		No	X
Sperm banking cancer patients	Yes	X	No	

If yes:

	2014	2015	2016
Number of samples	124	103	106

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

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

Reproductive Hormones Assays (FSH, LH, testosterone, SHBG, prolactin)	See summary
All infertility pat.: Testosterone, FSH, LH, Prolactin	
All pat. with sexual dysfunction: Testosteron, f-T, Estradiol, Prolactin	
Special indications: T3, T4, TSH, inhibin, cortisol	
approx. 15.000 tests per year	

5. E. Y chromosome microdeletions according to EAA/EMQN guidelines	Yes		No	X
If yes number of tests in the past year	In collaboration **approx. 120**			
Participation to the EAA quality control scheme?	Yes		No	X
If no, specify if available in another lab of the same hospital/**outside Giessen hospital**	Yes		No	X
University Genetic Institute				
Blood karyotyping	Yes	X	No	
If no, specify if available in another lab of the same hospital	Yes		No	

Other genetic tests (please specify)	Y chromosome deletions (AZF)
FISH sperm	not performed
Pre-implantation genetic diagnosis	not performed
Amniotic fluid karyotyping	not performed

6. Collaborations with other Clinical Units of the University/Hospital				
IVF Unit	Yes	X	No	
If yes please specify: Children, Endocrinology, IVF, Urology, Genetics, Pathology				
Urology Clinic (we are the Urology Clinic)	Yes	X	No	
Endocrine Clinic	Yes	X	No	
Genetics Lab/Unit	Yes	X	No	
Paediatric Unit	Yes	X	No	
Central Hospital Laboratory	Yes	X	No	
Private Centres	Yes	X	No	
If yes please specify:				
Private Centres for IVF: Wetzlar, Marburg, Wiesbaden, Offenbach, Darmstadt, Frankfurt, Wuerzburg, Kassel, Göttingen (and beyond)				

7. Clinical teaching activity	
Duration of training (years):	2

	Number
A: Trainees in the last five years (Urology)	9
B: Trainees who passed EAA-ESAU\exam for Clinical Andrologist in the last 5 yrs.	1
C: Trainees working in the centre preparing to pass the EAA-ESAU examination	1
D: PhD Students	20
E: Medical Students	12
F: Other students (MSc): not applicable	---

8. Formal Andrology teaching program	Yes	X	No	
If yes: specify duration (years/months):	Years		Months	18

	Hours of formal teaching per year	Professional training (weeks/months)
Medical Students	Urological Clinic: 2 hours daily (not Friday) Special consultation hours(general andrology, andrology surgery, hypogonadism, sexual disfunction, Pyronie's disease, operative theatre, ejaculate lab, cryobanking, testicular histology, sonocourses, IVF center, endocrinology	Special program in English, integrated into the section – impaired fertility in men and animals- GGL – Giessen Graduate School of the University (theoretical and scientific background of infertililty (about 4-6 hours per week)
PhD Students	same	same
Post Graduate students	same	same
Trainees	same	same

9. Research Activity (maximum 1 page)

Main research topics:

- Human spermatogenic disorders
- Role of sulfated steroids in reproduction
- Immune / Infection related male infertility
- Testicular cancer immune interaction

Most relevant papers in peer review journals (with IF) related to these activities:

A. Meinhardt (Top 4):

Bhushan S, Tchatalbachev T, Lu Y, Fijak M, Chakraborty T, **Meinhardt A.** (2015). Differential activation of inflammatory pathways in testicular macrophages provides a rationale for their subdued inflammatory capacity. J Immunol 194:5455-5464. **IF: 4,99**

Michel V, Duan Y, Stoschek E, Bhushan S, Middendorff M, Young JM, Loveland KA, De Kretser DM, Hedger MP, **Meinhardt A**. (2016). Uropathogenic Escherichia coli cause fibrotic remodelling of the epididymis. J Pathol 240 (1):15-24. **IF: 6,89**

Khosravi F, Michel V, Bhushan S, Galuska CE, Schuppe H-C, Pilatz A, Galuska SP, **Meinhardt A**. (2016). Desialylation of spermatozoa and epithelial cell glycocalyx is a consequence of bacterial infection of the epididymis. J Biol Chem, 291(34):17717-17726. **IF: 4,13**

Fijak M, Pilatz A, Hedger MP, Nicolas N, Bhushan S, Michel V, Tung KSK, Schuppe H-C, **Meinhardt A**. (2018). Infectious, inflammatory and "autoimmune" male factor infertility: how do rodent models inform clinical practice? Human Rep Update, 24(4):416-441. **IF: 11,85**

M. Bergmann (TOP 4):

Pleuger C, Fietz D, Hartmann K, Weidner W, Kliesch S, O'Bryan MK, Dorresteijn A, **Bergmann M**. (2016) Expression of katanin p80 in human spermatogenesis. Fertil Steril. Oct 4. pii: S0015-0282(16)62769-3. doi: 10.1016/j.fertnstert.2016.08.043. [Epub ahead of print] **IF: 4,23**

Klein B, Schuppe HC, **Bergmann M,** Hedger MP, Loveland BE, Loveland KL (2017)
An in vitro model demonstrates the potential of neoplastic human germ cells to influence the tumour microenvironment. Andrology 5(4):763-770 **IF: 2,47**

Pleuger C, Fietz D, Hartmann K, Schuppe HC, Weidner W, Kliesch S, Baker M, O'Bryan MK, **Bergmann M** (2017) Expression of ciliated bronchial epithelium 1 during human spermatogenesis. Fertil. Steril. 108(1): 47-54. **IF: 4,37**

Dunleavy JEM, Okuda H, O'Connor AE, Merriner DJ, O'Donnell L, Jamsai D, **Bergmann M**, O'Bryan MK (2017) Katanin-like 2 (KATNAL2) functions in multiple aspects of haploid male germ cell development in the mouse. PLoS Genet. 13(11): e1007078 **IF: 6,1**

The National Offensive for the Development of Scientific and Economic Excellence © Hessian Ministry for Science and Art (LOEWE) (Coordinators: Prof. Dr. Wolfgang Weidner, Prof. Dr. Trinad Chakraborty; Prof. Dr. Andreas Meinhardt, Prof. Dr. Axel Wehrend, Prof. Dr. Harald Renz, Dr. Monika Fijak and Dr. Hamid Hossain as administrative coordinator). This scheme was initiated by the state government of Hesse to support strategic research foci of the Hessian universities by funding scientific excellent cooperative research programs. The program grant "Male infertility due to infection and inflammation" has a clear focus on infection / inflammation in testis / epididymis and aims at identifying disease relevant molecular pathways important for better understanding, diagnosis and treatment of orchitis, epididymitis and combined epididymo-orchitis on the molecular, cell biological, system biological and clinical level.

The Medical Faculty of the JLU Giessen is supporting the MIBIE program with the establishment of a Junior Research Group (Head: Dr. Monika Fijak, 1 PostDoc, 1 technician) to generate long lasting research structures in reproductive medicine/biology.

The DFG Clinical Research Unit 181 Male factor infertility due to impaired spermatogenesis was established by the German Research Foundation (DFG) in 2008. The DFG clinical research unit consists of 6 individual projects and core facilities. An extension for a further 3 year period (2011-2014) was granted with 8 individual projects.

A DFG International Research Training Group (IRTG) between Giessen and Monash University, Melbourne, Australia on "Male Reproductive Health and Disease" (German Speaker: Prof. Meinhardt) is established since 2013. The aim of the IRTG is to train doctoral and postdoctoral students within the framework of an interdisciplinary research programme and to provide structures for cooperation through an accompanying study programme.

DFG Juniorschool on urogenital infections (Speaker: Prof. Dr. F. Wagenlehner) has been established in 2014 for two years and is focussed on the consequences of urogenital infections for the anatomy and the function of the urogenital tract.

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	2011-2016
Total amount (€)	2.739.082 € (DFG-KFO)
Funding Source(s)	German Research Foundation (Deutsche Forschungsgemeinschaft-DFG)
Year	2011-2014
Total amount (€)	1.061.700 € (LOEWE)
Funding Source(s)	Hessen State Ministry for Higher Education, Research and the Arts
Year	2014
Total amount (€)	3.000 €
Funding Source(s)	European Academy of Andrology
Year	2013-2014
Total amount (€)	83.000 €
Funding Source(s)	Von Behring-Röntgen-Foundation, Giessen-Marburg
Year	2011-2013
Total amount (€)	35.000 €
Funding Source(s)	Start-up financing for junior scientists of FB 11, JLU Giessen
Year	2011-2017
Total amount (€)	296.500
Funding Source(s)	Research funding cooperation agreement UKGM
Year	2013-2016

Total amount (€)	120.000 €
Funding Source(s)	Pharmaceutical Indutries
Year	2014
Total amount (€)	4.750 €
Funding Source(s)	German Academic Exchange Service (DAAD)
Year	2013-2022
Total amount (€)	10.425.600 € (DFG + Monash University, Melbourne)
Funding Source(s)	German Research Foundation (Deutsche Forschungsgemeinschaft-DFG)
Year	2014-2017
Total amount (€)	308.500 € (Immunpriv. Bhushan)
Funding Source(s)	German Research Foundation (Deutsche Forschungsgemeinschaft-DFG)
Year	2014-2017
Total amount (€)	439.605 € (Hedger, de Kretser, Meinhardt, Loveland)
Funding Source(s)	Nat. Health Medical Research Council Australia
Year	2014-2015
Total amount (€)	7.600 €
Funding Source(s)	DFG and Acad. of Sciences for Dev World (TWAS) Cooper.Nigeria
Year	2014-2016
Total amount (€)	42.000 € (Meinhardt)
Funding Source(s)	Von Behring-Röntgen-Foundation, Giessen-Marburg
Year	2015-2016
Total amount (€)	1.200 € (Travel funds Meinhardt)
Funding Source(s)	Von Behring-Röntgen-Foundation, Giessen-Marburg
Year	2016
Total amount (€)	1.500 € (Travel grant Meinhardt)
Funding Source(s)	German Academic Exchange Service (DAAD)
Year	2011-2014
Total amount (€)	1.141.840 € (KFO)
Funding Source(s)	German Research Foundation (Deutsche Forschungsgemeinschaft-DFG)
Year	2013-2016
Total amount (€)	32.754 € (IRTG P4 + P5)
Funding Source(s)	German Research Foundation (Deutsche Forschungsgemeinschaft-DFG)

ORGANIZATION CHARTS

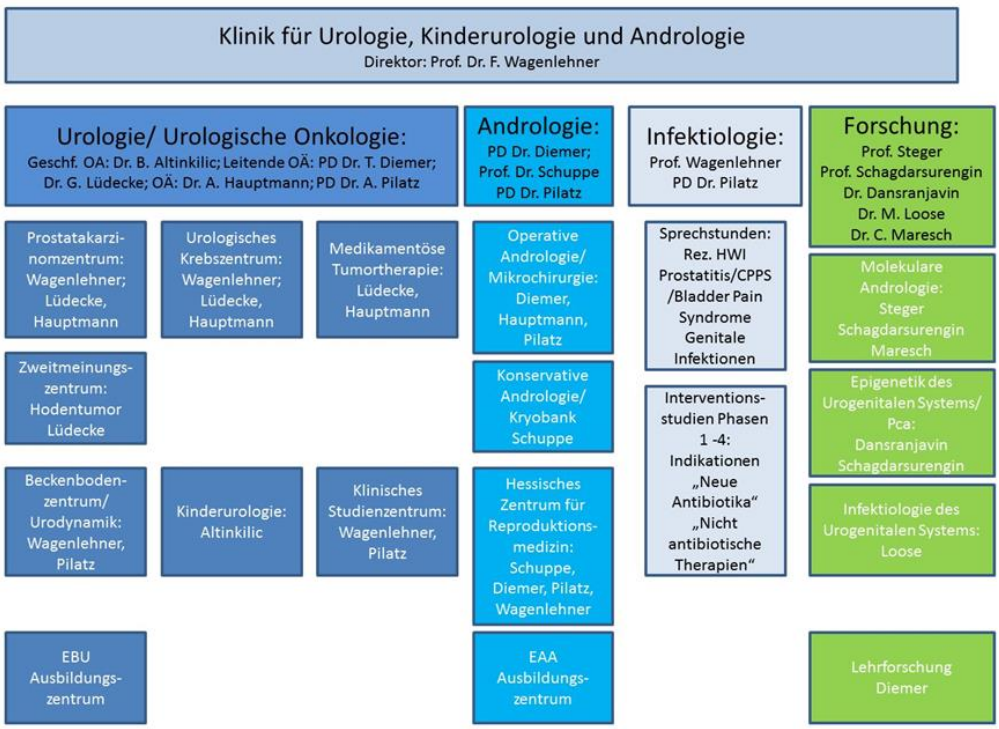
EAA Andrology Centre Giessen	***Unit name***
PD Dr. Thorsten Diemer **Prof. Dr. Andreas Meinhardt**	**Head**
<u>Staff member 1:</u> **(Institute of Anatomy and Cell Biology)** J. Bender Dr. S. Bhushan Dr. M. Fijak S. Fröhlich P. Jürgens M. Keidel Dr. B. Klein Chr. Kleinert Dr. J. Klug T. Lei E. Wahle E. Wewel Y. Yang **<u>Staff member 2:</u>** **(Clinic of Urology Pediatric Urology and Andrology)** Prof. Dr. F. Wagenlehner (Chair of Urology) Prof. Dr. HC Schuppe PD Dr. B. Altinkilic Dr. A. Hauptmann PD Dr. A. Pilatz Dr. G. Lüdecke Dr. F. Dittmar Dr. C. Hein Dr. I. Hoffmann Dr. I. Kilb A. Köklü N. Mirsaidov B. Ternes T. Weber **<u>Staff member 3:</u>** **(Section Molecular Andrology)** Prof. Dr. K. Steger (Head) Dr. T. Dansranjavin Dr. C. Maressch N. Nesheim K. Ni E. Savadi-Shiraz PD Dr. U. Shagdarsurengin	**Staff members**
Outpatient Clinics Embryology Ovarian stimulation Ultrasound Oocyte retrieval Embryo transfer FNA / TESE IUI	**Clinical services**
Diagnosis of infertility Counseling of infertile couple Cryopreservation of sperm Ethics in Andrology	**Contribution to EAA training**

CENTRE PHOTOS





Organization chart Department of Urology, Paediatric Urology and Andrology



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

M. Bergmann (2013-2017)

Fietz D, Bakhaus K, Wapelhorst B, Grosser G, Günther S, Alber J, Döring B, Kliesch S, Weidner W, Galuska CE, Hartmann MF, Wudy SA, Bergmann M, Geyer (2013) Membrane transporters for sulfated steroids in the human testis--cellular localization, expression pattern and functional analysis. PLoS One. 2013 May 8;8(5):e62638. doi: 10.1371/ journal.pone. 0062638 IF: 4,49

Günther S, Fietz D, Weider K, Bergmann M, Brehm R. (2013) Effects of a murine germ cell-specific knockout of Connexin 43 on Connexin expression in testis and fertility. Transgenic Res. 22(3):631-641 IF:2,56

Grosser G, Fietz D, Günther S, Bakhaus K, Schweigmann H, Ugele B, Brehm R, Petzinger E, Bergmann M, Geyer J. (2013) Cloning and functional characterization of the mouse sodium-dependent organic anion transporter Soat (Slc10a6). J Steroid Biochem Mol Biol. 138:90-99 IF:3,67

Pfaff T, Rhodes J, Bergmann M, Weinbauer GF (2013) Inhibin B as a marker of sertoli cell damage and spermatogenic disturbance in the rat. Birth Defects Res B Dev Reprod Toxicol. 98(1):91-103. IF: 5,30

Lu Y, Bhushan S, Tchatalbachev S, Marconi M, Bergmann M, Weidner W, Chakraborty T, Meinhardt (2013) Necrosis is the dominant cell death pathway in uropathogenic Escherichia coli elicited epididymo-orchitis and is responsible for damage of rat testis. PLoS One. 8(1):e52919. doi: 10.1371/journal.pone.0052919 IF: 4,49

Dottermusch-Heidel C, Klaus ES, Gonzalez NH, Bhushan S, Meinhardt A, Bergmann M, Renkawitz-Pohl R, Rathke C, Steger K (2014) H3K79 methylation directly precedes the histone-to-protamine transition in mammalian spermatids and is sensitive to bacterial infections. Andrology. 2(5):655-665 IF: 2,42

Borgers M, Wolter M, Hentrich A, Bergmann M, Stammler A, Konrad L (2014) Role of compensatory meiosis mechanisms in human spermatogenesis. Reproduction. 148:315-320 IF: 3,75

Schweigmann H, Sánchez-Guijo A, Ugele B, Hartmann K, Hartmann MF, Bergmann M, Pfarrer C, Döring B, Wudy SA, Petzinger E, Geyer J, Grosser G (2014) Transport of the placental estriol precursor 16α-hydroxy-dehydroepiandrosterone sulfate (16α-OH-DHEAS) by stably transfected OAT4-, SOAT-, and NTCP-HEK293 cells. J Steroid Biochem Mol Biol 143:259-65 IF: 3,77

Paradowska-Dogan A1, Fernandez A, Bergmann M, Kretzer K, Mallidis C, Vieweg M, Waliszewski P, Zitzmann M, Weidner W, Steger K, Kliesch S (2014) Protamine mRNA ratio in stallion spermatozoa correlates with mare fecundity. Andrology. 2:521-30 IF: 2,42

Fietz D, Ratzenböck C, Hartmann K, Raabe O, Kliesch S, Weidner W, Klug J, Bergmann M (2014) Expression pattern of estrogen receptors α and β and G-protein-coupled estrogen receptor 1 in the human testis. Histochem Cell Biol 142:421-32 IF: 2,92

Dottermusch-Heidel C, Klaus ES, Gonzalez NH, Bhushan S, Meinhardt A, Bergmann M, Renkawitz-Pohl R, Rathke C, Steger K. (2014) H3K79 methylation directly precedes the histone-to-protamine transition in mammalian spermatids and is sensitive to bacterial infections. Andrology. 2(5):655-65. .2047-2927.2014.00248.x. Epub 2014 Jul 30. IF: 2,42

Pilatz A, Ceylan I, Schuppe HC, Ludwig M, Fijak M, Chakraborty T, Weidner W, Bergmann M, Wagenlehner F (2105) Experimental Escherichia coli epididymitis in rats: assessment of testicular involvement in a long-term follow-up. Andrologia 47(2):160-7. doi: 10.1111/and.12239. Epub 2014 Feb 16. IF:1,17

De Spiegelaere W, Dern-Wieloch J, Weigel R, Schumacher V, Schorle H, Nettersheim D, Bergmann M, Brehm R, Kliesch S, Vandekerckhove L, Fink C (2015) Reference Gene Validation for RT-qPCR, a Note on Different Available Software Packages. PLoS ONE 10(3): e0122515. doi:10.1371/journal.pone.0122515 IF: 3,54

Goericke-Pesch S, Hauck S, Bergmann M, Wehrend A. (2015) Morphological characterisation of vesicular structures in the canine ejaculate. Micron. 30;77:66-73. doi: 10.1016/j.micron.2015.05.017. [Epub ahead of print] PMID: 26142562 IF: 1,83

Lim S, Peng Qu Z, Kortschak RD, Lawrence DM, Geoghegan J, Hempfling A-L, Bergmann M, Goodnow CC, Ormandy CJ, Womg L, Mann J, Scott HS, Jamasal D, Adelson D, O´Bryan MK (2015) HENMT1 and piRNA stability are required for adult male germ cell transposon repression and to define the spermatogenic program in the mouse. PLoS Genet. 11(12): e1005782. doi: 10.1371/journal.pgen.1005782. eCollection IF: 6,66

Fietz D, Markmann M, Lang D, Konrad L, Kliesch S, Chakraborty T, Hossain H, Bergmann M (2015) Transfection of Sertoli cells with Androgen Receptor alters gene expression without androgen stimulation. BMC Mol Biol. 29;16(1):23. doi: 10.1186/s12867-015-0051-7. IF: 2,5

Klaus ES, Gonzalez NH, Bergmann M, Bartkuhn M, Weidner W, Kliesch S, Rathke C (2016) Murine and human spermatids are characterized by numerous, newly synthesized and differentially expressed transcription factors and bromodomain-containing proteins BIOR DOI:10.1095/biolreprod.115.137620. IF: 3,47

Pleuger C, Fietz D, Hartmann K, Weidner W, Kliesch S, O'Bryan MK, Dorresteijn A, Bergmann M. (2016) Expression of katanin p80 in human spermatogenesis. Fertil Steril. Oct 4. pii: S0015-0282(16)62769-3. doi: 10.1016/j.fertnstert.2016.08.043. [Epub ahead of print] IF: 4,23

Stammler A, Lüftner BU, Kliesch S, Weidner W, Bergmann M, Middendorff R, Konrad L. (2016) Highly Conserved Testicular Localization of Claudin-11 in Normal and Impaired Spermatogenesis. PLoS One. 11(8):e0160349. doi: 10.1371/journal.pone.0160349. IF: 2,86

Klein B, Haggeney T, Fietz D, Indumathy S, Loveland KL, Hedger M, Kliesch S, Weidner W, Bergmann M, Schuppe HC (2016) Specific immune cell and cytokine characteristics of human testicular germ cell neoplasia. Hum Reprod.31(10):2192-202. doi: 10.1093/humrep/ dew211. IF: 5,02

Hartmann K, Bennien J, Wapelhorst B, Bakhaus K, Schumacher V, Kliesch S, Weidner W, Bergmann M, Geyer J, Fietz D (2016) Current insights into the sulfatase pathway in human testis and cultured Sertoli cells. Histochem Cell Biol.146(6):737-748. IF: 2,55

Schneider S, Balbach M, JF, Fietz D, Nettersheim D, Jostes S, Schmidt R, Kressin M, Bergmann M, Wachten D, Steger K, Schorle H (2016) Re-visiting the Protamine-2 locus: deletion, but not haploinsufficiency, renders male mice infertile. Sci Rep. 2016 Nov 11;6:36764. doi: 10.1038/srep36764. IF: 4,25

Aslani F, Sebastian T, Keidel M, Fröhlich S, Elsässer HP, Schuppe HC, Klug J, Mahavadi P, Fijak M, Bergmann M, Meinhardt A, Bhushan S (2017) Resistance to apoptosis and autophagy leads to enhanced survival in Sertoli cells. Mol. Hum. Reprod. 63(6): 370-380 IF: 3,58

Klein B, Schuppe HC, Bergmann M, Hedger MP, Loveland BE, Loveland KL (2017)
An in vitro model demonstrates the potential of neoplastic human germ cells to influence the tumour microenvironment. Andrology 5(4):763-770 IF: 2,47

Pleuger C, Fietz D, Hartmann K, Schuppe HC, Weidner W, Kliesch S, Baker M, O'Bryan MK, Bergmann M (2017) Expression of ciliated bronchial epithelium 1 during human spermatogenesis. Fertil. Steril. 108(1): 47-54. IF: 4,37

Hempfling AL, Lim SL, Adelson D, Evans J, O'Connor AE, Qu Z, Kliesch S, Weidner W, O'Bryan MK, Bergmann M (2017) Expression patterns of HENMT1 and PIWIL1 in human testis - Implications for transposon expression. Reproduction 154(4): 363-374 IF: 3,1

Dunleavy JEM, Okuda H, O'Connor AE, Merriner DJ, O'Donnell L, Jamsai D, Bergmann M, O'Bryan MK (2017) Katanin-like 2 (KATNAL2) functions in multiple aspects of haploid male germ cell development in the mouse. PLoS Genet. 13(11): e1007078 IF: 6,1

Bakhaus K, Fietz D, Kliesch S, Weidner W, Bergmann M, Geyer J (2017) The polymorphism L204F affects transport and membrane expression of the sodium-dependent organic anion transporter SOAT (SLC10A6). J. Steroid Biochem. Mol. Biol. pii: S0960-0760(17)30265-0 IF: 4,56

Geyer J, Bakhaus K, Bernhardt R, Blaschka C, Dezhkam Y, Fietz D, Grosser G, Hartmann K, Hartmann MF, Neunzig J, Papadopoulos D, Sánchez-Guijo A, Scheiner-Bobis G, Schuler G, Shihan M, Wrenzycki C, Wudy SA, Bergmann M (2017) The role of sulfated steroid hormones in reproductive processes. J. Steroid Biochem. Mol. Biol. 172: 207-221 IF: 4,56

Bakhaus K, Bennien J, Fietz D, Sánchez-Guijo A, Hartmann M, Serafini R, Love CC, Golovko A, Wudy SA, Bergmann M, Geyer J (2017) Sodium-dependent organic anion transporter (Slc10a6-/-) knockout mice show normal spermatogenesis and reproduction, but elevated serum levels for cholesterol sulfate. J. Steroid Biochem. Mol. Biol. pii: S0960-0760(17)30184-X IF: 4,56

A. Meinhardt (2013-2017)

Lu Y, Bhushan B, Tchatalbachev T, Marconi M, Bergmann M, Weidner W, Chakraborty T, Meinhardt A. (2013). Necrosis is the dominant cell death pathway in uropathogenic Escherichia coli elicited epididymo-orchitis and is responsible for damage of rat testis. Plos One 8:e52919. IF: 3,53

Lv J, Huang XR, Klug J, Fröhlich S, Lacher P, Meinhardt A, Lan HY. (2013). Ribosomal Protein S19 is a novel therapeutic agent in inflammatory kidney disease. Clinical Chem 124:627-637. IF: 7,77

Lang T, Dechant M, Sanchez V, Wistuba J, Boiani M, Pilatz A, Stammler A, Middendorff A, Schuler G, Bhushan S, Tchatalbachev S, Wübbeling F, Burger M, Chakraborty T, Mallidis C, Meinhardt A. (2013). Structural and functional integrity of spermatozoa is compromised as a consequence of acute uropathogenic E. coli associated epididymitis. Biol Reprod 89(3):59. IF: 3,45

Assis DN, Leng L, Zhang CK, Grieb G, Merk M, Baez AG, McCran C, Du X, Chapiro J, Meinhardt A, Mizue Y, Nikolic-Paterson DJ, Bernhagen J, Kaplan MM, Zhao H, Boyer JL, Bucala R. (2013). The role of macrophage migration inhibitory factor (MIF) in autoimmune liver disease. Hepatology 59:580-591. IF: 11,19

Lang T, Hudemann C, Tchatalbachev T, Stammler A, Michel V, Aslani F, Bhushan S, Chakraborty T, Renz H, Meinhardt A. (2013). Uropathogenic Escherichia coli modulate innate immunity to suppress Th1-mediated inflammatory responses during infectious epididymitis. Infect Immun 82:1104-1111. IF: 4,16

Dottermusch-Heidel C, Gärtner S, Tegeder S, Rathke C, Barckmann B, Bartkuhn M, Bhushan S, Klaus Steger K, Meinhardt A, Renkawitz-Pohl R. (2014). H3K79 methylation: a new conserved mark that accompanies H4 hyperacetylation prior to histone-to- protamine transition in Drosophila and rat. Biol Open 3:444-452. IF: 2,42

Hou M, Eriksson E, Svechnikov K, Jahnukainen K, Söder O, Meinhardt A, Sävendahl L. (2014). Bortezomib causes long-term testicular dysfunction in young male mice. Mol Cancer 13:155-162. IF: 4,26

Yang K, Grzmil P, Meinhardt A, Adham IM, Hoyer-Fender S. (2014). Impaired male fertility in isogenic mice heterozygous for Odf1-deficiency: A paradigm for idiopathic infertility in men? Reproduction 48:499-506. IF: 3,17

Dottermusch-Heidel C, Klaus ES, Gonzalez NH, Bhushan S, Meinhardt A, Bergmann M, Renkawitz-Pohl R, Rathke C, Steger K (2014). H3K79 methylation directly precedes the histone-to-protamine transition in mammalian spermatids and is sensitive to bacterial infections. Andrology 2:655-665. IF: 2,30

Fijak M, Zeller T, Huys T, Klug J, Wahle E, Linder M, Haidl G, Allam JP, Pilatz A, Weidner W, Schuppe H-C, Meinhardt A. (2014). Autoantibodies against protein disulfide isomerase ER-60 are a diagnostic marker for low-grade testicular inflammation. Hum Reprod 29:2382-2392.
IF: 4,57

Aslani F, Schuppe H-C, Guazzone VA, Bhushan S, Wahle E, Lochnit G, Lustig L, Meinhardt A, Fijak F. (2015). Targeting high mobility group box protein 1 ameliorates testicular inflammation in experimental autoimmune orchitis. Hum Reprod 30:417-431. IF: 4,62

Biswas B, Bhushan S, Kumar S, Lu Y, Meinhardt A, Yenugu S. (2015). Uropathogenic Escherichia coli (UPEC) induce antimicrobial gene expression in the male reproductive tract of rat: evaluation of the potential of Defensin 21 to limit infection. Andrology 3: 368-376. IF: 2,52

Fijak M, Damm LJ, Wenzel JP, Aslani F, Walecki M, Wahle E, Eisel F, Bhushan S, Hackstein H, Baal N, Schuler G, Konrad L, Rafiq A, O'Hara L, Smith LB, Meinhardt A. (2015). Influence of Testosterone on Inflammatory Response in Testicular Cells and Expression of Transcription Factor Foxp3 in T Cells. Am J Reprod Immunol. 74:12-25. IF: 2,92

Bhushan S*, Tchatalbachev T, Lu Y, Fijak M, Chakraborty T, Meinhardt A. (2015). Differential activation of inflammatory pathways in testicular macrophages provides a rationale for their subdued inflammatory capacity. J Immunol 194:5455-5464. IF: 4,99

Stammler A, Hau T, Bhushan S, Meinhardt A, Jonigk D, Lippmann T, Pilatz A, Schneider-Hüther I, Middendorff R. (2015). Epididymitis: ascending infection restricted by segmental boundaries. Human Reprod 30:1557-1565. IF: 4,62

Walecki M, Eisel F, Klug J, Baal N, Paradowska-Dogan A, Wahle E, Hackstein H, Meinhardt A, Fijak M. (2015). Androgen receptor regulates CD4+CD25+Foxp3+ regulatory T cell differentiation through binding to the foxp3 locus. Mol Cell Biol 26:2845-2857. IF: 4,43

Zhang Z, Wang M, Eisel F, Tchatalbachev S, Chakraborty T, Meinhardt A, Bhushan S. (2016). Uropathogenic Escherichia coli epigenetically manipulate host cell death pathways. J Infect Dis 213(7):1198-1207. IF: 6,27

Michel V, Duan Y, Stoschek E, Bhushan S, Middendorff M, Young JM, Loveland KA, De Kretser DM, Hedger MP, Meinhardt A. (2016). Uropathogenic Escherichia coli cause fibrotic remodelling of the epididymis. J Pathol 240 (1):15-24. IF: 6,89

Khosravi F, Michel V, Bhushan S, Galuska CE, Schuppe H-C, Pilatz A, Galuska SP, Meinhardt A. (2016). Desialylation of spermatozoa and epithelial cell glycocalyx is a consequence of bacterial infection of the epididymis. J Biol Chem, 291(34):17717-17726. IF: 4,13

Nicolas N, Muir JA, Hayward S, Chen JL, Stanton PG, de Kretser DM, Loveland KL, Ludlow H, Bhushan S, Meinhardt A, Fijak M, Hedger MP. (2017). Testicular activin and follistatin levels are elevated during the course of experimental autoimmune epididymo-orchitis in mice. Sci Rep, 7:42391. IF: 4,12

Wijayarathna R, Sarraj MA, Genovese R, Girling JE, Michel V, Ludlow H, Loveland KL, Meinhardt A, de Kretser DM, Hedger MP. (2017). Activin and follistatin interactions in the male reproductive tract: activing expression and morphological abnormalities in mice lacking follistatin 288. Andrology, 5(3):578-588. IF: 2,73

Aslani F, Sebastian T, Keidel M, Fröhlich S, Elsässer HP, Schuppe H-C, Klug J, Mahavadi P, Fijak M, Bergmann M, Meinhardt A, Bhushan S. (2017). Resistance to apoptosis and autophagy leads to enhanced survival in Sertoli cells. Mol Human Reprod, 23(6):370-380. IF: 3,45

Wang M, Fijak M, Hossain H, Markmann M, Nüsing RM, Lochnit G, Hartmann MF, Wudy SA, Zhang L, Gu H, Konrad L, Chakraborty T, Meinhardt A, Bhushan S. (2017). Characterization of the micro-environment of the testis that shapes the phenotype and function of testicular macrophages. J Immunol, 98(11):4327-4340. IF: 4,54

Nicolas N, Muir JA, Hayward S, Chen JL, Stanton PG, Gregorevic P, de Kretser DM, Loveland KL, Bhushan S, Meinhardt A, Fijak M, Hedger MP. (2017). Induction of EAO in mice: responses to elevated circulating levels of the follistatin. Reproduction, 154(3):193-205. IF: 3,09

Urology

Weidner W, Wagenlehner FM: Words of wisdom: Procalcitonin as a diagnostic marker for sepsis: A systematic review and meta-analysis. Eur Urol: 66:178 (2014) 13,938

Dottermusch-Heidel C, Klaus ES, Gonzalez NH, Bhushan S, Meinhardt A, Bergmann M, Renkawitz-Pohl R, Rathke C, Steger K: H3K79 methylation directly precedes the histone-to-protamine transition in mammalian spermatids and is sensitive to bacterial infections. Andrology. 2:655-665 (2014) 2,298

Fathy A, Chen SJ, Novak N, Schuppe HC, Haidl G, Allam JP:Differential leucocyte detection by flow cytometry improves the diagnosis of genital tract inflammation and identifies macrophages as proinflammatory cytokine-producing cells in human semen. Andrologia 46:1004-12 (2014) 1,630

Weidner W, Schuppe HC, Pilatz A, Altinkilic B, Diemer T: Sperm cells for artificial reproduction and germ cell transplantation. Eur Urol Suppl 13:83-88 (2014)

Paradowska-Dogan A, Fernandez A, Bergmann M, Kretzer K, Mallidis C, Vieweg M, Waliszewski P, Zitzmann M, Weidner W, Steger K, Kliesch S: Protamine mRNA ratio stallion spermatozoa correlates with mare fecundity. Andrology 2:521-530 (2014) 2,298

Samans B, Yang Y, Krebs St, Gaurav S, Blum H, Reichenbach M, Wolf E, Steger K, Dansranjavin T, Schagdarsurengin U: Uniformity of nucleosome preservation pattern in mammalian sperm and its connection to repetitive DNA elements. Dev Cell 30:23-35 (2014) 9,708

Günther K, Paradowska-Dogan A, Klein H, Eichel-Streiber C, Bärmann B, Hartley R, Weidner W, Behr R, Steger K: Expression of sperm-specific protamines impairs bacterial and eukaryotic cell proliferation. Histochem Cell Biol 143:599-609 (2015) 2,780

Aslani F, Schuppe HC, Guazzone VA, Bhsushan S, Wahle E, Lochnit G, Lustig L, Meinhardt A, Fijak M: Targeting high mobility group box protein 1 ameliorates testicular inflammation in experimental autoimmune orchitis. Hum Reprod 30:417-431 (2015) 4,621

Savadi-Shiraz E., Edalatkhah H, Talebi S, Heidari-Vala, Paradowska-Dogan A, Mahdi Zandemami H,, Pahlavan S, Modarressi MH, Akhondi M.M, Sadeghi M-R. Quantification of sperm specific mRNA transcripts (PRM1, PRM2 & TNP2) in teratozoospermia and normozoospermia; new considerable correlations between mRNA content and morphology of sperm. Mol Reprod Develop 82:26-32(2015)

Schuppe HC, Haidl G, Ochsendorf F: Andrologie in der Dermatologie-wozu? Hautarzt 66:890-891 (2015)

Köhn FM, Schuppe HC, Beier KM: Dermatological diseases and sexuality. How to proceed? Hautarzt 66:907-912 0,564

Steger K: Was zeichnet einen Winner-Typ aus? Auf der Suche nach Qualitätskriterien für ein erfolgreiches Spermium. Labor & More 3:16-21 (2015)

Steger K, Brady J, Wang W, Duskin M, Donato K, Peshwa M: CHO-S Antibody Titers >1 Gram/Liter Using Flow Electroporation-Mediated Transient Gene Expression followed by Rapid Migration to High-Yield Stable Cell Lines. J Biomol Screen 20:545-551 (2015)

Brobeil A, Kämmerer F, Tag C, Steger K, Gattenlöhner S, Wimmer M: PTPIP51-A new relationship with the NFkB signaling Pathway. Biomolecules 5:485-504 (2015)

Vieweg M, Dvorakova-Hortova K, Dudkova B, Waliszewski P, Otte M, Oels B, Hajimohammad A, Turley H, Schorsch M, Schuppe HC, Weidner W, Steger K, Paradowska-Dogan A: Methylation analysis of histone H4K12ac associated promoters in sperm of healthy donors and subfertile patients. Clinical Epigenetic 7:31 (2015)

Dansranjavin T, Schagdarsurengin U: The rationale of the inevitable, or why is the consideration of repetitive DNA elements indispensable in studies of sperm nucleosomes. Dev Cell 4: 13-14 (2016) 9,174

Schagdarsurengin U, Steger K: Epigenetics in male reproduction: effect of paternal diet on sperm quality and offspring health. Nat Rev Urol 13:584-595 (2016) 7,735

Schagdarsurengin U, Western P, Steger K, Meinhardt A: Developmental origins of male subfertility: role of infection, inflammation, and environmental factors. Semin Immunopathol 38:765-781 (2016) 5,296

Ni K, Dansranjavin T, Rogenhofer N, Oeztuerk N, Deuker J, Bergmann M, Schuppe HC, Wagenlehner F, Weidner W, Steger K, Schagdarsurengin U: Ten-Eleven-Translocation (TET) enzymes are successively expressed during human spermatogenesis and their expression level is pivotal for male fertility. Hum Reprod 31:1411-1424 (2016) 5,020

Klein B, Haggeney T, Fietz D, Indumathy S, Loveland K, Hedger M, Kliesch S, Weidner W, Bergmann M, Schuppe H-C (2016) Specific immune cell and cytokine characteristics of human testicular germ cell neoplasia. Hum Reprod 31(10):2192-202 (2016) 5,020

Schneider S, Balbach M, Jan F Jikeli, Fietz D, Nettersheim D, Jostes S, Schmidt R, Kressin M, Bergmann M, Wachten D, Steger K, Schorle H: Re-visiting the Protamine-2 locus: deletion, but not haploinsufficiency, renders male mice infertile. Sci Rep 13:584-595 (2016) 4,259

Wagenlehner FM, Brockmeyer NH, Discher T, Friese K, Wichelhaus TA: The Presentation, Diagnosis, and Treatment of Sexually Transmitted Infections. Dtsch Arztebl Int 113:11-22 (2016) 4,257

Khosravi F, Michel V, Galuska CE, Bhushan S, Christian P, Schuppe HC, Pilatz A, Galuska SP, Meinhardt A: Desialylation of Spermatozoa and Epithelial Cell Glycocalyx Is a Consequence of Bacterial Infection of the Epididymis. J Biol Chem 291:17717-26 (2016) 4,125

Ozturk N, Steger K, Schagdarsurengin U: The impact of autophagy in spermiogenesis. Asian J Androl 19: 1-2 (2016)

Ni K, Spiess AN, Schuppe HC, Steger K: The impact of sperm protamine deficiency and sperm DNA damage on human male fertility: a systematic review and meta-analysis. Andrology 4:789-799 (2016) 2,427

Ni K, Steger K, Yang H, Wang H, Hu K, Zhang T, Chen B: A comprehensive investigation of sperm DNA damage and oxidative stress injury in infertile patients with subclinical, normozoospermic, and astheno/oligozoospermic clinical varicocoele. Andrology 4:816-824 (2016) 2,427

Steger K, Baumgart-Vogt E, Bergmann M, Brehm R, Chakraborty T, Konrad L, Linn T , Meinhardt A, Middendorff R, Paradowska-Dogan A, Rathke C, Renkawitz-Pohl R, Schagdarsurengin U, Weidner W. Forschungsbericht: Molekulare Mechanismen männlicher Infertilität – Ergebnisse der Klinischen Forschergruppe KFO 181 (Leiter: K. Steger, Sprecher: W. Weidner) //Mechanisms of Male Factor Infertility – Data from the Clinical Research Unit KFO 181. J Reprod Med Endokrinol 4:138-147 0,848

Pilatz A, Boecker M, Schuppe HC, Wagenlehner F: Current Aspects of Epididymo-orchitis. Aktuel Urol 3:237-42 (2016) 0,306

Diemer T, Hauptmann A, Wagenlehner FM: Testosterone therapy. Urologe 55:454-459 (2016) 0,289

Pilatz A, Boecker M, Schuppe HC, Diemer T, Wagenlehner F: Infection and infertility. Urologe 55:883-9 (2016)

Köhn FM, Schuppe HC: Environmental factors and male fertility. Umweltfaktoren und männliche Fertilität. Urologe 55:877-82 (2016) 0,289

Fode M, Fusco F, Lipshultz L, Weidner w: Sexually transmitted disease and male infertility: A systematic review. Eur Urol Focus 2:383-393 (2016) 0,00

Rogenhofer N, Ott J, Pilatz A, Wolf J, Thaler CJ, Windischbauer L, Schagdarsurengin U, Steger K, von Schönfeldt V: Unexplained recurrent miscarriages are associated with an aberrant sperm protamine mRNA content. Hum Reprod 32:1574-1582 (2017) 5,020

Pleuger C, Fietz D, Hartmann K, Schuppe HC, Weidner W, Kliesch S, Baker M, O'Bryan MK, Bergmann M: Expression of ciliated bronchial epithelium 1 during human spermatogenesis. Fertil Steril 108(47-54 (2017) 4,373

Nicolas N, Michel V, Bhushan S, Wahle E, Hayward S, Ludlow H, de Kretser DM, Loveland KL, Schuppe HC, Meinhardt A, Hedger MP, Fijak M: Testicular activin and follistatin levels are elevated during the course of experimental autoimmune epididymo-orchitis in mice. Sci Rep 13:42391 (2017) 4,259

Schuppe HC, Pilatz A, Hossain H, Diemer T, Wagenlehner F, Weidner W: Urogenital Infection as a Risk Factor for Male Infertility. Dtsch Arztebl Int 12:339-346 (2017) 4,257

Loveland KL, Klein B, Pueschl D, Indumathy S, Bergmann M, Loveland BE, Hedger MP, Schuppe HC: Cytokines in Male Fertility and Reproductive Pathologies: Immunoregulation and Beyond. Front Endocrinol (Lausanne). 8:307 (2017) 3,675

Aslani F, Sebastian T, Keidel M, Fröhlich S, Elsässer HP, Schuppe HC, Klug J, Mahavadi P, Fijak M, Bergmann M, Meinhardt A, Bhushan S: Resistance to apoptosis and autophagy leads to enhanced survival in Sertoli cells. Mol Hum Reprod 23:370-380 (2017) 3,585

Ozturk N, Steger K, Schagdarsurengin U: The impact of autophagy in spermiogenesis. Asian J Androl. 19:617-618

Altinkilic B, Pilatz A, Diemer T, Wolf J, Bergmann M, Schönbrunn S, Ligges U, Schuppe HC, Weidner W: Prospective evaluation of scrotal ultrasound and intratesticular perfusion by color-coded duplex sonography (CCDS) in TESE patients with azoospermia. World J Urol. 2018 Jan;36(1):125-133. doi: 10.1007/s00345-017-2039-z. Epub 2017 Apr 20. 2,743

Steger K: Lessons learned in Andrology: Editorial: Occupy a scientific niche, be proactive, and stay visible for the scientific community. Andrology 5:200-203 (2017) 2,427

Pilatz A, Hudemann C, Wolf J, Halefeld C, Paradowska-Dogan A, Schuppe HC, Hossain H, Schultheiss D, Renz H, Weidner W, Wagenlehner F, Linn T: Metabolic syndrome and the seminal cytokine network in morbidly obese males. Andrology 5:23-30 (2017) 2,427

Klein B, Schuppe HC, Bergmann M, Hedger MP, Loveland BE, Loveland KL: An in vitro model demonstrates the potential of neoplastic human germ cells to influence the tumour microenvironment. Andrology 5:763-770 (2017)

Köhn FM, Schuppe HC: When is determination of serum testosterone levels in men indicated? MMW Fortschr Med 159:42-46 (2017)

Köhn FM, Schuppe HC: Life style and male fertility. MMW Fortschr Med 159:50-54 (2017)