



22nd European Testis Workshop (ETW2023)

June 18–22, 2023

Palace de Caux, Switzerland

v. 16.06.2023

Symposium and Plenary Speakers

- SYMPOSIUM 1** – Gonadal sex determination and early testis development
Humphrey Yao (National Institute of Environmental Health Sciences, USA)
- SYMPOSIUM 2** – Somatic cells
Sue Hammoud (University of Michigan, USA)
- SYMPOSIUM 3** – Spermatogonia and stem cells
Dónal O'Carroll (University of Edinburgh, UK)
- SYMPOSIUM 4** – In vitro spermatogenesis
Jan-Bernd Stukenborg (Karolinska Institute, Sweden)
- SYMPOSIUM 5** – Epigenetic regulation of spermatogenesis
Juanma Vaquerizas (MRC London Institute of Medical Sciences, UK and Max Planck Institute for Molecular Biomedicine, Germany)
- SYMPOSIUM 6** – Meiosis and spermatogenesis
Stephen Gray (University of Nottingham, England)
- SYMPOSIUM 7** – Sperm and ART
Pablo Visconti (University of Massachusetts, Amherst, USA)
- SYMPOSIUM 8** – Male reproductive tract, ducts and accessory glands
Brett Nixon (University of Newcastle, Australia)
- SYMPOSIUM 9** – Endocrine disruptors and toxicity
Rod Mitchell (University of Edinburgh, UK)
- SYMPOSIUM 10** – Sperm and paternal programming
Katharina Gapp (ETH Zürich, Switzerland)
- SYMPOSIUM 11** – Lifestyle, environment and reproductive epidemiology
Laerke Priskorn (Copenhagen University Hospital - Rigshospitalet, Denmark)
- SYMPOSIUM 12** – Human genetics and infertility
Christophe Arnoult (University of Grenoble Alpes, France)

ETW2023 Scientific Program

Sunday, 18th June 2023

- 13:00 – 13:15** Welcome remarks
Pei-Hsuan Wu, Rafael Oliva, Serge Nef
- 13:15 – 13:30** *Funding in male reproductive biology, andrology and contraception by the National Institutes of Health*
Daniel Johnston (Eunice Kennedy Shriver National Institute of Child Health and Human Development, USA) – **P1**
- Combined with
- Biological Testing Facility*
Kent Travis (Eunice Kennedy Shriver National Institute of Child Health and Human Development; National Institutes of Health, USA) – **P2**

SYMPOSIUM 1 – Gonadal sex determination and early testis development

Chairpersons: Sue Hammoud and Antoine Rolland

- 13:30 – 14:15** Plenary lecture
- New Insights into fate determination and maintenance of Sertoli cells*
Humphrey Yao (National Institute of Environmental Health Sciences, USA)
– **A1**
- 14:15 – 14:45** 10' Short talks
- 14:15 – 14:30** *Retrospective gene expression analysis during mouse embryonic development for optimization of in vitro Sertoli cell differentiation*
Arina Puchkina (Erasmus Medical Center, Netherlands) – **P3**
- 14:30 – 14:45** *PAX8 is necessary for rete testis formation and supporting-like cells (SLCs) specification*
Violaine Regard (University of Geneva, Switzerland) – **P4**
- 14:45 – 15:00** 3' Miniposter short talks
- 14:45 – 14:50** *Spatial mapping of human fetal gonadal cells using automated cyclic fluorescence imaging*
Antoine Rolland (University of Rennes, France) – **P5**
- 14:50 – 14:55** *Exploiting multi-omics to map the fertility potential of prepubertal testicular tissues*
Shiyan Tang (University of Oxford, UK) – **P6**
- 14:55 – 15:00** *Single-cell transcriptomic profiling redefines the origin and specification of early adrenogonadal progenitors*
Chloé Mayere (University of Geneva, Switzerland) – **P7**
- 15:00 – 15:30** Coffee break “Meet the speakers”

- 15:30 – 15:50** 3' Miniposter short talks (continued)
- 15:30 – 15:35** *Testis exposure to elevated activin A in utero affects somatic and germ cells and alters steroid levels, mimicking phthalate exposure in mouse*
Kate Loveland (Monash University, Australia) – **P8**
- 15:35 – 15:40** *Gonadal development in the small-spotted catshark (*Scyliorhinus canicula*)*
Indranath Ghosal (University of Caen Normandy, France) – **P9**
- 15:40 – 15:45** *Twenty years' experience of immature testicular tissue cryopreservation: results from international ORCHID-NET survey*
Kathleen Duffin (University of Edinburgh, UK) – **P10**

SYMPOSIUM 2 – Somatic cells

Chairpersons: Katja Teerds and Kate Loveland

- 15:50 – 16:25** Plenary lecture
- Revisiting unsolved mysteries of the spermatogenesis program using new approaches*
Sue Hammoud (University of Michigan, USA) – **A2**
- 16:25 – 16:55** 10' Short talks
- 16:25 – 16:40** *ScRNA-seq unravels the testicular immune cell landscape in germ cell (dys)function*
Sara Di Persio (University of Münster, Germany) – **P12**
- 16:40 – 16:55** *Uncovering the biological signal in rhesus macaque testis: a comparative analysis of FFPE probe-based and frozen poly-A-mRNA spatial-omics technologies*
Eisa Mahyari (Oregon Health and Science University, USA) – **P13**
- 16:55 – 17:40** 3' Miniposter short talks
- 16:55 – 17:00** *The immune landscape of testicular germ cell tumors: deciphering immune cell subsets*
Hans-Christian Schuppe (Justus-Liebig-Univ. Giessen, Germany) – **P22**
- 17:00 – 17:05** *Single cell or single nuclei sequencing as potential tools to study Sertoli cells*
Iris Sanou (Amsterdam University Medical Centers, Netherlands) – **P15**
- 17:05 – 17:10** *Retinoic acid receptor alpha is essential in postnatal Sertoli cells, but not in germ cells*
Nadège Vernet (University of Strasbourg, France) – **P16**
- 17:10 – 17:15** *Sertoli cells transdifferentiate into Leydig-like cells during in vitro organotypic immature testicular tissue culture*
Marc Kanbar (Catholic University of Louvain, Belgium) – **P17**
- 17:15 – 17:20** *Spatial dynamics of protein translation in Sertoli cells*
Ana Cristina Lima (Oregon Health and Science University, USA) – **P18**
- 17:20 – 17:25** *Deciphering the fate of Pax8+ supporting-like cells in the postnatal mouse testis*
Coralie Gobbo (University of Geneva, Switzerland) – **P19**

- 17:25 – 17:30** *CCR2, Activin A and macrophages regulate the testicular inflammatory response and fibrotic remodeling in experimental autoimmune orchitis*
Monika Fijak (Justus-Liebig-University Giessen, Germany) – **P20**
- 17:30 – 17:35** *Single-cell RNA sequencing reveals heterogeneity of testicular macrophages*
Sudhanshu Bhushan (Justus-Liebig-University Giessen, Germany) – **P21**
- 17:35 – 17:40** *Deep learning pipeline for in vivo calcium analysis during spermatogenesis*
David Fleck (RWTH Aachen University, Germany) – **P33**
- 17:40 – 18:10** Coffee break “Meet the speakers”
- 18:10 – 19:05** 3' Miniposter short talks (continued)
- 18:10 – 18:15** *Unrepressed PKA activity promotes proliferation across the Leydig cell lineage in Carney complex testicular tumors*
Cyril Djari (University of Geneva, Switzerland) – **P23**
- 18:15 – 18:20** *Neuroendocrine properties of human fetal Leydig cells*
Davor Jezek (University of Zagreb, Croatia) – **P24**
- 18:20 – 18:25** *In vitro generation of functional Leydig-like cells starting from gubernaculum testis biopsies of cryptorchid patients*
Sara Vinco (University of Verona, Italy) – **P25**
- 18:25 – 18:30** *SARS-CoV-2 replicates in the human testis ex vivo and infects Leydig and Sertoli cells*
Nathalie Dejuq-Rainsford (University of Rennes, France) – **P26**
- 18:30 – 18:35** *Kinetics profiling of purinergic calcium signals in mouse testicular peritubular cells*
Ilian Schröder (RWTH Aachen University, Germany) – **P27**
- 18:35 – 18:40** *In vitro culture of gubernacular cells: a model to predict the best adjuvant therapeutic approach for cryptorchid patients*
Andrea Errico (University of Verona, Italy) – **P28**
- 18:40 – 18:45** *Germline protein DDX4 promotes tumor growth*
Opeyemi Olotu (University of Turku, Finland) – **P29**
- 18:45 – 18:50** *Novel in vivo and ex vivo methods to investigate testicular physiology*
Jerome Schröder (RWTH Aachen University, Germany) – **P30**
- 18:50 – 18:55** *Expression of GPER in whole testicular tissue and laser capture microdissected testicular compartments of men with normal and aberrant spermatogenesis*
Renata Walczak-Jędrzejowska (Medical University of Lodz, Poland) – **P31**
- 18:55 – 19:00** *ATP sniffer cells - proof of principle*
Michelle Nowara (RWTH Aachen University, Germany) – **P32**
- 19:00 – 19:05** *Expression of OPG in Sertoli cells is linked with aberrant cell function and the effect of RANKL inhibition on germ cell survival*
Christine Hjorth Andreassen (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P14**

SYMPOSIUM 3 – Spermatogonia and stem cells

Chairpersons: Elena Vicini and Ramesh Pillai

- 19:05 – 19:50** Plenary lecture
piRNA-directed DNA methylation
Dónal O'Carroll (University of Edinburgh, UK) – **A3**
- 20:00** Welcome party & dinner

Monday, 19th June 2023

SYMPOSIUM 3 – Spermatogonia and stem cells

Chairpersons: Elena Vicini and Ramesh Pillai

- 8:30 – 9:00** 10' Short talks
- 8:30 – 8:45** *The marmoset spermatogonial compartment during development at single-cell RNA and protein level*
Juan Manuel Paturlanne (University of Münster, Germany) – **P34**
- 8:45 – 09:00** *Single channel electrophysiology of spermatogonia and Sertoli cells from juvenile mice*
Lina Kenzler (RWTH Aachen University, Germany) – **P35**
- 09:00 – 09:30** 3' Miniposter short talks
- 09:00 – 09:05** *Characterisation of the human spermatogonial stem cell compartment during ageing*
Anna Henrich (University Hospital Münster, Germany) – **P36**
- 09:05 – 09:10** *A multi-faceted approach to differentiation of male germ cells from primates*
Pauline Wanjiku Kibui (University of Münster, Germany) – **P37**
- 09:10 – 09:15** *Distribution of the spermatogonial subpopulations during the stages of the epithelial cycle and their relative position along the basal membrane*
Martina Palazzoli (Sapienza University of Rome, Italy) – **P38**
- 09:15 – 09:20** *Intrinsic factors influencing spermatogonial stem cell density*
Dale Maxwell (University of Oxford, UK) – **P39**
- 09:20 – 09:25** *A spatio-temporal single-cell type map of adult human testis*
Cecilia Lindskog (Uppsala University, Sweden) – **P40**
- 09:25 – 09:30** *Cimetidine as a fertility protectant in mouse spermatogonia*
Grace Forsyth (University of Edinburgh, UK) – **P41**
- 09:30 – 10:00** Coffee break “Meet the speakers”
- 10:00 – 10:55** 3' Miniposter short talks (continued)
- 10:00 – 10:05** *The effect of culture conditions on non-human primate and human spermatogonial stem cell propagation in vitro: a systematic review and meta-analysis*
Jillis Van Maaren (Amsterdam University Medical Centers, Netherlands) – **P42**
- 10:05 – 10:10** *Experimental platforms for male differentiation of human iPSC derived germ cells*
Stefan Schlatt (University Hospital Münster, Germany) – **P43**
- 10:10 – 10:15** *L-carnitine (LC) and N-acetyl cysteine (NAC) supplementation to enhance in vitro testis tissue cell survival and recovery for prepubertal males under cyclophosphamide (CPA) exposure*
Amirhesam Eskafinoghani (Karolinska Institute, Sweden) – **P44**

- 10:15 – 10:20** *Testicular germ cell tumor and familial history of cancer: the role of DNA repair genes*
Csilla Krausz (University of Florence, Italy) – **P45**
- 10:20 – 10:25** *Evaluation of sperm DNA fragmentation in patients with testicular cancer or Hodgkin lymphoma*
Ginevra Farnetani (University of Florence, Italy) – **P46**
- 10:25 – 10:30** *Pre-diagnostic circulating RNAs networks identify testicular germ cell tumour susceptibility genes*
Marcin Wojewodzic (Cancer Registry of Norway, Norway) – **P47**
- 10:30 – 10:35** *BRD9 inhibition as potential treatment option for testicular germ cell tumors*
Aylin Hansen (University Hospital Bonn, Germany) – **P48**
- 10:35 – 10:40** *Influence of CaSR in testicular germ cell tumors*
Jasmin Hjerresen (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P49**
- 10:40 – 10:45** *The effects of germ cell gene expression in cancer*
Wenqing Liu (Amsterdam University Medical Centers, Netherlands) – **P50**
- 10:45 – 10:50** *Pathophysiology and molecular insight of testicular germ cell tumour and sperm*
Katerina Komrskova (Czech Academy of Sciences, Czech Republic) – **P51**
- 10:50 – 10:55** *Microgravity exposure induces antioxidant barrier deregulation and mitochondria structure alterations in TCam-2 cells*
Marika Berardini (Sapienza University of Rome, Italy) – **P52**
- 10:55 – 11:00** *Human iPSC- derived spermatogonial stem cells express cannabinoid receptors*
Merve Gizer (Middle East Technical University, Turkey) – **P53**

SYMPOSIUM 4 – In vitro spermatogenesis

Chairpersons: João Ramalho-Santos and Humphrey Yao

- 11:00 – 11:45** Plenary lecture

Mini-testes in a dish – Can we create a functional male gonad in vitro?
Jan-Bernd Stukenborg (Karolinska Institute, Sweden) – **A4**
Supported by the European Academy of Andrology
- 11:45 – 12:00** 10' Short talks
- 11:45 – 12:00** *Multiple tissue processing approaches for 3D imaging of cleared seminiferous tubules*
Ondrej Sanovec (Czech Academy of Sciences, Czech Republic) – **P54**
- 12:00 – 13:30** Lunch
- 13:30 – 13:45** 10' Short talks (continued)
- 13:30 – 13:45** *Completion of meiosis in mouse testicular organoids with improved germ cell survival, steroidogenesis, and restoration of a tissue-specific architecture*
Guillaume Richer (Free University of Brussels, Belgium) – **P55**

- 13:45 – 14:50** 3' Miniposter short talks
- 13:45 – 13:50** *3D cell-laden hydrogel microspheres on microfluidic chip*
Jishnu Padacherri Vethil (University of Limerick, Ireland) – **P56**
- 13:50 – 13:55** *Effect of temperature on the development of haploid cells, in 3D in vitro culture system*
Mahmoud Huleihel (Ben-Gurion University of the Negev, Israel) – **P57**
- 13:55 – 14:00** *Establishment of an in vitro 3D system for rat testicular tissue culture*
Dajana Krsnik (University of Zagreb, Croatia) – **P58**
- 14:00 – 14:05** *Steroidogenesis and androgen/estrogen signaling in in vitro matured testicular tissues of prepubertal mice*
Laura Moutard (Rouen University Hospital, France) – **P59**
- 14:05 – 14:10** *Human testicular organoids in high throughput applications: which is the ideal tissue source?*
Samuel Silva (Free University of Brussels, Belgium) – **P60**
- 14:10 – 14:15** *Generation of testicular organoids from Klinefelter Syndrome patient testis*
Myriam Martin Inaraja (Biocruces Bizkaia Health Research Institute, Spain) – **P61**
- 14:15 – 14:20** *Prepubertal patient-derived testicular organoids*
Cui Yanhua (Karolinska Institute, Sweden) – **P62**
- 14:20 – 14:25** *Establishing an iPSC derived in vitro culture system for human male gametogenesis: modeling the testis niche environment*
Madalena Vaz Santos (Amsterdam University Medical Centers, Netherlands) – **P63**
- 14:25 – 14:30** *The importance of histological analysis of testicular samples from sex reassignment surgery (SRS) patients before cell isolation and culture*
Nasrin Ghanami Gashti (University of Limerick, Ireland) – **P64**
- 14:30 – 14:35** *Uncovering the role of tissue stiffness in male infertility a nanoindentation study of human testes*
Isabel Andersson (University of Limerick, Ireland) – **P65**
- 14:35 – 14:40** *Testicular histology meets computer vision and machine learning*
Jacqueline Kockwelp (University of Münster, Germany) – **P66**
- 14:40 – 14:45** *3D massive parallel analysis of seminiferous tubules volume imaging data*
Lukas Ded (Czech Academy of Sciences, Czech Republic) – **P67**

14:45 – 15:15 Coffee break “Meet the speakers”

SYMPOSIUM 5 – Epigenetic regulation of spermatogenesis

Chairpersons: Noora Kotaja and Jörg Gromoll

15:15 – 16:00 Plenary lecture

Regulation of human spermatogenesis at single-cell resolution
Juanma Vaquerizas (Medical Research Council London Institute of Medical Sciences, UK and Max Planck Institute for Molecular Biomedicine, Germany) – **A5**

- 16:00 – 16:30** 10' Short talks
- 16:00 – 16:15** *Sex-specific erasure of DNA methylation and its lifelong dynamic in male rat germ cells*
Geraldine Delbes (National Institute of Scientific Research - INRS, Canada) – **P68**
- 16:15 – 16:30** *Sex chromosome gene regulation in the male germline*
Julie Cocquet (Institut Cochin, France) – **P69**
- 16:30 – 16:55** 3' Miniposter short talks
- 16:30 – 16:35** *EM-seq of human testicular germ cell fractions points to global decline in DNA methylation during meiosis*
Lara Siebert-Kuss (University Hospital Münster, Germany) – **P70**
- 16:35 – 16:40** *Potential new regulatory roles of SRPK1 and PP1 γ in sperm chromatin compaction*
Alberto de la Iglesia (Institut Cochin, France) – **P71**
- 16:40 – 16:45** *The transcription factor NFYA elaborates pachytene piRNA production in mice*
Atiyeh Eghbali (Stockholm University, Sweden) – **P72**
- 16:45 – 16:50** *Co-operation of the NMD endonuclease SMG6 and piRNA-interacting protein PIWIL1 in the transcriptome regulation in male germ cells*
Ammar Ahmedani (University of Turku, Finland) – **P73**
- 16:50 – 16:55** *piRNA cluster expression in mice and other rodents*
Tanya Vavouri (Josep Carreras Leukemia Research Institute, Spain) – **P74**
- 16:55 – 17:25** Coffee break “Meet the speakers”

SYMPOSIUM 6 – Meiosis and spermatogenesis

Chairpersons: Gabriel Livera and Sandra Laurentino

- 17:25 – 18:10** Plenary lecture
- Post-translational modification drives crossover formation in male mice*
Stephen Gray (University of Nottingham, England) – **A6**
- 18:10 – 18:40** 10' Short talks
- 18:10 – 18:25** *Spatial total RNA-sequencing of mammalian testis*
Jelena Lujic (Cornell University, USA) – **P75**
- 18:25 – 18:40** *Finding the missing katanin in meiosis - KATNA1 and KATNAL1 act cooperatively to achieve male fertility*
Jessica Dunleavy (University of Melbourne, Australia) – **P76**

SYMPOSIUM 7 – Sperm and ART

Chairperson: Timo Strünker

18:40 – 19:25 Plenary lecture

Sperm capacitation pathways in ART and Science

Pablo Visconti (University of Massachusetts, Amherst, USA) – **A7**

Supported by the European Academy of Andrology

19:25 – 19:55 10' Short talks

19:25 – 19:40 *Metabolic characterization of human sperm cells using the Seahorse metabolic flux analyzer*

Maria Inês Cristo (University of Coimbra, Portugal) – **P77**

19:40 – 19:55 *Subcellular localization, function and interplay of CatSper and Slo3*

Jannika Patz (University Hospital Münster, Germany) – **P78**

20:00 Dinner

Tuesday, 20th June 2023

SYMPOSIUM 6 – Meiosis and spermatogenesis (parallel session I)

Chairpersons: Gabriel Livera and Sandra Laurentino

- 8:30 – 10:00** 3' Miniposters short talks
- 8:30 – 8:35** *MEIOD: a novel meiotic actor, required yet non-essential*
Pauline Moison (French Alternative Energies and Atomic Energy Commission, France) – **P79**
- 8:35 – 8:40** *Single-nucleus transcription is a suitable proxy for single-whole cell transcription in the chimpanzee testis*
Maria Lykkegaard Nicolaisen (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P80**
- 8:40 – 8:45** *MRNIP interacts with sex body chromatin to support meiotic progression, spermatogenesis, and male fertility in mice*
Samina Kazi-Prat (University of Oulu, Finland) – **P81**
- 8:45 – 8:50** *The role of Cyp26b1 in meiotic quiescence in male testis*
Giulia Perrotta (University of Strasbourg, France) – **P82**
- 8:50 – 8:55** *Evaluation of the role of Arpm1 on spermatogenesis and male fertility*
Sara Suvilla (University Hospital Bonn, Germany) – **P83**
- 8:55 – 9:00** *Altered steroidogenesis and spermatogenesis in mice model lacking of d-aspartate*
Sara Falvo (University of Campania Luigi Vanvitelli, Italy) – **P84**
- 9:00 – 9:05** *Examining contributions of the phospholipidome to stage-specific oxidative stress sensitivity in developing germ cells*
Elizabeth G Bromfield (University of Newcastle, Australia) – **P85**
- 9:05 – 9:10** *Adiponectin and leptin signaling in human and animal testes*
Malgorzata Kotula-Balak (University of Agriculture in Krakow, Poland) – **P86**
- 9:10 – 9:15** *The RNA-binding protein RBMXL3 as the new upstream regulator of RNA metabolism in human spermatogenesis*
Agata Barszcz (Polish Academy of Sciences, Poland) – **P87**
- 9:15 – 9:20** *M1AP - a novel human ZZS complex component?*
Nadja Rotte (University of Münster, Germany) – **P88**
- 9:20 – 9:25** *Novel protamine fusion allele sheds light on protamine function*
Ilse Hamers (University Hospital Bonn, Germany) – **P89**
- 9:25 – 9:30** *Fructose transporter disruption perturbs spermatogenesis and steroidogenesis*
Aikaterini Kallianioti (French National Research Institute for Agriculture, Food, and Environment, France) – **P90**
- 9:30 – 9:35** *Providing functional evidence for SYCP2 related spermatogenic failure*
Corinna Friedrich (University of Münster, Germany) – **P91**
- 9:35 – 9:40** *Calling de novo mutation in primate testis*
Peter Porsborg (Aarhus University, Denmark) – **P92**

- 9:40 – 9:45** *Testicular and clinical profiles of men with impaired spermatogenesis*
Gülizar Saritas (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P93**
- 9:45 – 9:50** *In-depth spermatogenesis progression analysis in men that underwent testicular sperm extraction for medically assisted reproduction*
Kaylee Holleman (Erasmus Medical Center, Netherlands) – **P94**
- 9:50 – 9:55** *An immunofluorescence tool to recognize stages and cell types of the mouse seminiferous epithelium*
Joëlle De Visser (Amsterdam University Medical Centers, Netherlands) – **P95**
- 9:55 – 10:00** *Testicular tissue section integrity assessment through automated neural network-based analysis*
Fritzie Celino-Brady (Oregon Health and Science University, US) – **P96**

SYMPOSIUM 7 – Sperm and ART (parallel session II)

Chairpersons: Pablo Visconti and Timo Strünker

- 8:30 – 09:55** 3' Miniposters short talks
- 8:30 – 8:35** *Direct visualization of DNA breaks in human sperm using an in situ DNA end-labelling approach*
Ingvild Aas (Oslo Metropolitan University, Norway) – **P97**
- 8:35 – 8:40** *No loss, no gain: Cholesterol efflux and sperm function deficit after capacitation in overweight and obese men*
Maria Alfaiate (University of Coimbra, Portugal) – **P98**
- 8:40 – 8:45** *Impact of endogenous L-carnitine on semen quality in post-thaw human semen samples*
Jorunn Marie Andersen (Oslo Metropolitan University, Norway) – **P99**
- 8:45 – 8:50** *Assisted reproductive technology is a ray of hope for the infertile couple with segmental and chromosomal aneuploidies of sex chromosomes*
Shiva Shankaran Chettiar (Gujarat University, India) – **P100**
- 8:50 – 8:55** *Utilizing mass spectrometry to identify proteomic changes in human sperm with abnormal morphology and motility*
Daniela Fietz (Justus-Liebig-University Giessen, Germany) – **P101**
- 8:55 – 9:00** *PDCL2 is essential for sperm acrosome formation and male fertility in mice*
Yoshitaka Fujihara (National Cerebral and Cardiovascular Center, Japan) – **P102**
- 9:00 – 9:05** *Sperm motility assessed by deep convolutional neural networks*
Trine B. Haugen (Oslo Metropolitan University, Norway) – **P103**
- 9:05 – 9:10** *EtOH or DMSO? Choosing the best solvent for sperm function assays*
Elise Hennebert (University of Mons, Belgium) – **P104**
- 9:10 – 9:15** *Oxidative DNA damage permanently impairs gametogenesis and fertility in mice*
Amandine Jampy (University of Paris Cité, France) – **P105**
- 9:15 – 9:20** *Is the Sperm PKA Interacting factor (SPIF) a cause of male infertility?*
Ugochukwu Samuel Okafor (Ninewells Hospital, UK) – **P106**

- 9:20 – 9:25** *TSKS-derived nuage regulates the elimination of sperm cytoplasm during spermiation*
Keisuke Shimada (Osaka University, Japan) – **P107**
- 9:25 – 9:30** *A workflow to study mammalian spermatids with cryogenic electron tomography*
Jo Judernatz (Utrecht University, Netherlands) – **P108**
- 9:30 – 9:35** *The remarkable sperm mitochondrial sheath: insights from cryo-electron tomography*
Tzviya Zeev-Ben-Mordehai (Utrecht University, Netherlands) – **P109**
- 9:35 – 9:40** *Generalization of machine learning models for automatic semen quality assessment*
Steven Hicks (SimulaMet, Norway) – **P110**
- 9:40 – 9:45** *Medico multimedia task at MedialEval: transparent tracking of spermatozoa*
Thu Nguyen (SimuMet, Norway) – **P111**
- 9:45 – 9:50** *Effect of SARS-CoV-2 infection on sperm parameters: a north-east Spanish multicentric retrospective study*
Meritxell Jodar (University of Barcelona, Spain) – **P112**
- 9:50 – 09:55** *ORCHID-NET: Optimising male reproductive potential after childhood disease*
Callista Mulder (Amsterdam University Medical Centers, Netherlands) - **P11**

10:00 – 10:30 Coffee break “Meet the speakers”

SYMPOSIUM 8 – Male reproductive tract, ducts and accessory glands

Chairpersons: Andreas Meinhardt and Stephen Gray

- 10:30 – 11:15** Plenary lecture
The evolution of reproductive strategies: new insights into the complexity and functional significance of post-testicular sperm maturation
Brett Nixon (University of Newcastle, Australia) – **A8**
- 11:15 – 11:45** 10' Short talks
- 11:15 – 11:30** *The regional distribution of resident immune cells shapes distinct immunological environments along the murine epididymis*
Christiane Pleuger (Justus-Liebig-University Giessen, Germany) – **P113**
- 11:30 – 11:45** *SUMOylation regulates mouse epididymal androgen receptor protein interaction networks at androgen receptor-binding sites in a segment-specific manner*
Guillermo Martinez-Nieto (University of Turku, Finland) – **P114**
- 11:45 – 12:25** 3' Miniposter short talks
- 11:45 – 11:50** *Analysis of the pathomechanisms of regionalized immune response in bacterial epididymitis*
Dingding Ai (Justus-Liebig-University Giessen, Germany) – **P115**
- 11:50 – 11:55** *Macrophages expressing activin A and CCR2 are implicated in testicular inflammation*

- Hiba Hasan (Justus-Liebig-University Giessen, Germany) – **P116**
- 11:55 – 12:00** *LDHC in prostate cancer*
Erwin Goldberg (Northwestern University, USA) – **P117**
- 12:00 – 12:05** *Distribution of CD9, CD81 tetraspanins, and αV integrin within the bull testis*
Jana Antalikova (Slovak Academy of Sciences, Slovakia) – **P118**
- 12:05 – 12:10** *Detection of CD63-extracellular vesicles in bull testes*
Jana Jankovicova (Slovak Academy of Sciences, Slovakia) – **P119**
- 12:10 – 12:15** *Effects of the bitter substance denatonium benzoate on contractions in the most distal sperm-releasing part of the epididymal duct shown by a new live-imaging analysis method*
Clara Morawski (Justus-Liebig-University Giessen, Germany) – **P120**
- 12:15 – 12:20** The effect of semen processing on the seminal plasma small RNA profile
Nina Mørup Nygaard (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P121**
- 12:20 – 12:25** *Expression of androgen and estrogen receptors in the human lacrimal gland*
Ana Planinic (University of Zagreb, Croatia) – **P122**
- 12:25 – 13:30** Lunch box
- 13:30 – 18:30** Convivium:
 - Excursion to Rochers-de-Naye
 - Visit the Chillon castle
 - Visit the city of Montreux
- 18:30 – 19:45** Private: MC meeting ANDRONET
- 20:00** Dinner
(Private: ETW permanent scientific committee meeting)

Wednesday, 21st June 2023

SYMPOSIUM 9 – Endocrine disruptors and toxicity

Chairpersons: Frédéric Chalmel and Terje Svingen

- 8:30 – 9:15** Plenary lecture
- Pharmaceuticals as mediators of testicular endocrine disruption and male infertility*
Rod Mitchell (University of Edinburgh, UK) – **A9**
- 9:15 – 9:45** 10' Short talks
- 9:15 – 9:30** *Development of the human fetal testis: from endo- to exo-cannabinoids*
Aurore Gely-Pernot (École des Hautes Études en Santé Publique - EHESP, France) – **P123**
- combined with
- Delta-9-THC interferes with sperm physiology through sperm-specific calcium channel CatSper*
Lydia Wehrli (University of Geneva, Switzerland) – **P124**
- 9:30 – 9:45** *Imatinib decreases DNA synthesis, germ cell survival, and stem cell proliferation and differentiation in rodent testis*
Anna Eggert (University of Turku, Finland) – **P125**
- 9:45 – 10:00** 3' Miniposter short talks
- 9:45 – 9:50** *The impact of antidepressants on male fertility: evidence from an in vitro study*
Rita Santos (University of Coimbra, Portugal) – **P126**
- 9:50 – 9:55** *The putative ameliorative effect of apocynin on androgen receptors in monosodium glutamate-induced testicular damage*
Merve Acikel Elmas (Acibadem University, Turkey) – **P127**
- 9:55 – 10:00** *Evaluation of the endocrine disruption potential of trace elements associated with unconventional natural gas (UNG) exploitation on steroidogenesis and testicular development in vitro*
Ghida Baalbaki (National Institute of Scientific Research - INRS, Canada) – **P128**
- 10:00 – 10:30** Coffee break “Meet the speakers”
- 10:30 – 11:30** 3' Miniposter short talks (continued)
- 10:30 – 10:35** *Development exposure to endocrine activating compound affects male reproductive function by altering testicular PUFA composition*
Saikanth Varma (Indian Council of Medical Research - National Institute of Nutrition, India) – **P129**
- 10:35 – 10:40** *Thyroid hormone disruptors methimazole and amitrole perturb testis development in rats*
Monica Draskau (Technical University of Denmark, Denmark) – **P130**

- 10:40 – 10:45** *Ex vivo effects of bisphenol A and zearalenone on spermatogenesis in prepubertal rat testis*
Maëva Drouault (University of Grenoble Alpes, France) – **P131**
- 10:45 – 10:50** *Transcriptomics of immature rat testes from chemically induced hypothyroid rats reveal shared and compound-specific effects*
Ida Sofie Weber Strand (Technical University of Denmark, Denmark) – **P132**
- 10:50 – 10:55** *A rat toxicity study to characterize temporal transcriptome changes underpinning genital malformations caused by fetal endocrine disruption*
Emilie Elmelund (Technical University of Denmark Denmark) – **P133**
- 10:55 – 11:00** *Chemotherapy alters the proteome of the human immature testis in an in vitro model*
Tara Layden (University of Dundee, UK) – **P134**
- 11:00 – 11:05** *Novel impacts of extracellular vesicles in the prepubertal testis in response to chemotherapy*
Michael Rimmer (University of Edinburgh, UK) – **P135**
- 11:05 – 11:10** *Spermatogenesis after gonadotoxic childhood treatment*
Emily Delgouffe (Free University of Brussels (Vrije Universiteit Brussel), Belgium) – **P136**
- 11:10 – 11:15** *The action of physiological and synthetic steroids on the calcium channel CatSper in human sperm*
Lydia Wehrli (University of Geneva, Switzerland) – **P137**
- 11:15 – 11:20** *Phytochemicals to induce sex reversal in Nile tilapia: chromatographic and in silico analysis*
Debosree Mukherjee (University of Calcutta, India) – **P138**
- 11:20 – 11:25** *A double-blind randomized placebo-controlled clinical study to verify the efficacy of the antioxidant TetraSOD® in the improvement of semen quality in patients with idiopathic infertility*
Marina Leiva (University of Barcelona, Spain) – **P139**
- 11:25 – 11:30** *The effects of the rubber tire antioxidant (6PPD) and its transformation product (6PPD-quinone) on sperm motility parameters using a zebrafish (Danio rerio) in vitro toxicology test system*
Amin Sayyari (NMBU, Norway) – **P140**
- 11:30 – 11:35** *D-aspartic acid counteracts/prevents cadmium effects on rat testis: an insight into steroidogenesis, spermatogenesis, oxidative stress and apoptosis*
Massimo Venditti (University of Campania Luigi Vanvitelli, Italy) – **P141**
- 11:35 – 13:00** Lunch

SYMPOSIUM 10 – Sperm and paternal programming

Chairpersons: Pei-Hsuan Wu and Ewa Rajpert-De Meyts

13:00 – 13:45 Plenary lecture

Stressful messages from father to son - epigenetic inheritance through the male germline

Katharina Gapp (ETH Zürich, Switzerland) – **A10**

- 13:45 – 14:15** 10' Short talks
- 13:45 – 14:00** *Intergenerational effects of HFD-induced obesity on offspring germline*
Ma Lin (University of Turku, Finland) – **P142**
- 14:00 – 14:15** *Ancestral environmental exposures and offspring health – a multigenerational epidemiologic cohort study across 3 generations*
Matthieu Bourgery (University of Turku, Finland) – **P143**
- 14:15 – 14:40** 3' Miniposter short talks
- 14:15 – 14:20** *Characterizing paternal piRNAs in early mouse embryogenesis*
Giulia Perillo (University of Geneva, Switzerland)
– **P144**
- 14:20 – 14:25** *Paternal influence of PIWI-Interacting RNAs on embryogenesis*
Keigo Shibata (University of Geneva, Switzerland)
– **P145**
- 14:25 – 14:30** *Does sperm get old? Sperm miRNA fingerprint of men with advanced age*
Joana Santiago (University of Aveiro, Portugal) – **P146**
- 14:30 – 14:35** *Age-associated epigenetic changes in mammalian sperm: implications for offspring health and developments*
Oleg Sergeyev (Lomonosov Moscow State University, Russia) – **P147**
- 14:35 – 14:40** *Ancestral gestational exposure to widely used neonicotinoid thiacloprid leads to global DNA methylation alterations in spermatozoa in three generations of male mice*
Ouzna Dali (University of Rennes, France) – **P148**

14:40 – 15:10 Coffee break “Meet the speakers”

SYMPOSIUM 11 – Lifestyle, environment and reproductive epidemiology

Chairpersons: Rafael Oliva and Rita Rahban

- 15:10 – 15:55** Plenary lecture
- Semen quality, lifestyle factors and long-term health*
Laerke Priskorn (Copenhagen University Hospital - Rigshospitalet, Denmark) – **A11**
- 15:55 – 16:25** 10' Short talks
- 15:55 – 16:10** *Environmental contaminants and male reproductive health: “land of fires” as a new study case*
Rosanna Chianese (University of Campania Luigi Vanvitelli, Italy) – **P149**
- 16:10 – 16:25** *Spatial semen quality in Switzerland*
Rita Rahban (University of Geneva, Switzerland) – **P150**
- 16:25 – 17:00** 3' Miniposter short talks
- 16:25 – 16:30** *Short-term cohort study of remanent pollution-related male infertility in central-north Romania*
Bianca-Astrid Andone-Rotaru (Babes-Bolyai University, Romania) – **P151**

- 16:30 – 16:35** *Associations between semen microbiota and local immune response in fertile and infertile men*
Monika Fraczek (Polish Academy of Sciences, Poland) – **P152**
- 16:35 – 16:40** *COVID-19 compromises spermatogenesis even after recovery*
Maria López-Panadés (Autonomous University of Barcelona, Spain) – **P153**
- 16:40 – 16:45** *A novel role for interferon epsilon in testicular anti-viral defense*
Rukmali Wijayarathna (Hudson Institute of Medical Research, Australia) – **P154**
- 16:45 – 16:50** *Evaluation of semen parameters and sperm morphology in individuals with different body mass index (BMI)*
Süheyla Esra Özkoçer (Gazi University, Turkey) – **P155**
- 16:50 – 16:55** *Evaluation of dietary supplements of Albanian pharmaceutical market for male infertility*
Enkelejda Goci (Aldent University, Albania) – **P156**
- 16:55 – 17:00** *Does the vitamin D metabolite 24,25(OH)2D3 regulate male reproductive function?*
Ireen Kooij (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P157**

17:00 – 17:30 Coffee break “Meet the speakers”

SYMPOSIUM ANDRONET (COST Action CA20119) – European Andrology Network – Research coordination, education, and public awareness

Chairpersons: Rafael Oliva and Csilla Krausz

- 17:30 – 18:45** 10' Short talks
- 17:30 – 17:45** *European Andrology Network: research coordination, education, and public awareness in the field of andrology (COST Action CA20119)*
Rafael Oliva (University of Barcelona, Spain) – **P158**
- 17:45 – 18:00** *ANDRONET: Science communication and dissemination*
Ewa Rajpert-De Meyts (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P159**
- 18:00 – 18:15** *ANDRONET: Activity of the grant awarding committee*
Davor Jezek (University of Zagreb, Croatia) – **P160**
- 18:15 – 18:30** *WG1 Research coordination within European Andrology Network COST Action CA20119*
Ana Katusic Bojanac (University of Zagreb, Croatia) – **P161**
- 18:30 – 18:45** *European Andrology Network: Working Group 2: Improving professional education in andrology (COST Action CA20119)*
Csilla Krausz (University of Florence, Italy) – **P162**
- 20:00** Gala dinner and entertainment

Thursday, 22nd June 2023

SYMPOSIUM 12 – Human genetics and infertility

Chairpersons: Corinna Friedrich and Csilla Krausz

09:00 – 09:45 Plenary lecture

CCDC146, a centriole-associated protein involved in flagellum biogenesis
Christophe Arnout (University of Grenoble Alpes, France) – **A12**

09:45 – 10:15 10' Short talks

09:45 – 10:00 *Investigating the role of GLUD2 in male infertility using Drosophila melanogaster as a model system*
Avinash Gaikwad (University of Münster, Germany) – **P163**

10:00 – 10:15 *Cylicins: a structural component of the sperm calyx indispensable for male fertility in mice and human*
Andjela Kovacevic (University of Bonn, Germany) – **P164**

10:15 – 10:25 3' Miniposter short talks

10:15 – 10:20 *Identification of IQX as a Calmodulin-associated protein required for sperm motility and capacitation in humans and mice*
Emma Cavarocchi (University of Grenoble Alpes, France) – **P165**

10:20 – 10:25 *Azoospermia candidate gene NXT2 - key player in testicular nuclear RNA export?*
Ann-Kristin Dicke (University of Münster, Germany) – **P166**

10:25 – 10:55 **Coffee break “Meet the speakers”**

10:55 – 11:45 3' Miniposter short talks (continued)

10:55 – 11:00 *Evolutionary impact of transcriptomic differences in X and Y carrying gametes*
Meritxell Riera (Aarhus University, Denmark) – **P167**

11:00 – 11:05 *Malate dehydrogenase 1B is a testis-enriched energy protein required for progressive sperm motility and male fertility*
Brendan Houston (University of Melbourne, Australia) – **P168**

11:05 – 11:10 *Impact of the human piRNA pathway on inherited spermatogenic failure*
Birgit Stallmeyer (University of Münster, Germany) – **P169**

11:10 – 11:15 *Association between higher 18s rDNA copy numbers in blood and lower total sperm count in normozoospermic and oligozoospermic male*
Marija Lazovska (Riga Stradins University, Latvia) – **P170**

11:15 – 11:20 *Sertoli cell maturation and spermatogenesis are incompatible with two X-chromosomes: lessons from 47,XXY Klinefelter syndrome*
Sofia Winge (Copenhagen University Hospital - Rigshospitalet, Denmark) – **P171**

- 11:20 – 11:25** *The role of CatSper in progesterone-induced Ca²⁺ oscillation in human sperm*
Anton Potapenko (University of Münster, Germany) – **P172**
- 11:25 – 11:30** *Chromatoid body architect TDRD6 - impact on spermatogenesis and male infertility*
Erik Schüftan (University of Münster, Germany) – **P173**
- 11:30 – 11:35** *Investigating cilia-related causes of male infertility*
Anu Sironen (UCL, UK) – **P174**
- 11:35 – 11:40** *Age-associated alterations to the human testicular transcriptome*
Yihan Wang (University Hospital Münster, Germany) – **P175**
- 11:40 – 11:45** *Activation of ESX1 gene using CRISPR technology in human male germ cells*
Agnieszka Malcher (Polish Academy of Sciences, Poland) – **P176**
- 12:00 – 12:15** Closing remarks
Pei-Hsuan Wu, Rafael Oliva, Serge Nef