



ETW2021
Program

Sunday, 30th May 2021

15.00h (CEST) Welcome

Rafael Oliva and Judit Castillo

Symposium 1 - *Endocrinology, gonad differentiation and sexual development*

15.15 - 15.45 Plenary lecture

Chairpersons: Judit Castillo and Serge Nef

The battle of sexes: studying the regulation of mammalian sex determination

Nitzan Gonen (Israel)

15.45 - 16.00 Break

16.00 - 16.45 Selected miniposters

Chairpersons: Judit Castillo and Serge Nef

- *Leydig cell glucocorticoid receptor is required to maintain steroidogenesis in adulthood*
Gannon, Anne-Louise; Darbey, Annalucia, Chensee, Grace, Smith, Lee B, Rebourcet, Diane (Australia)
- *Single-cell transcriptomics reveals lineage progression during human fetal gonad development*
Lardenois, Aurélie; Evrard, Bertrand; Suglia, Antonio; Léonard, Simon; Lesné, Laurianne; Coiffec, Isabelle; Jégou, Bernard; Mazaud-Guittot, Séverine; Chalmel, Frédéric; Rolland, Antoine D (France)
- *A single cell atlas of mouse sex determination*
Mayère, Chloé; Neirijnck, Yasmine; Sararols, Paune; Stévant, Isabelle; Kühne, Françoise; Dermitzakis, Emmanouil T; Nef, Serge (Switzerland)

16.45 - 17:15 Break

17.15 - 18:00 Short miniposters talks

Chairpersons: Noora Kotaja and Davor Ježek

- *SOX9 upstream duplication in SRY-negative 46,XX DSD male patient with gonadal mosaicism*
Chernykh, Vyacheslav; Oparina NV; Shtaut MI; Solovova OA; Demina NA; Beskorovaynaya TS; Polyakov AV (Russia)
- *HSD17B3 KO mice serve as a model of the altered endocrine phenotype of patients with HSD17B3 deficiency*
Junnila, Arttu; Hakkarainen, Janne; Zhang, Fu-Ping; Strauss, Leena; Kotaja, Noora; Ohlsson, Claes; Huhtaniemi, Ilpo; Sipilä Petra; Poutanen, Matti (Finland)

- *The role of testosterone in spermatogenesis: lessons from proteome profiling of human spermatozoa in testosterone deficiency*
Grande, Giuseppe; Barrachina, Ferran; Soler-Ventura, Ada; Jodar, Meritxell; Mancini, Francesca; Marana, Riccardo; Bianchi, Antonio; Pontecorvi, Alfredo; Oliva, Rafael; Milardi, Domenico (Italy)
- *D-Aspartate increases DAAM1 expression in rat testis and induces its nuclear shuttling in spermatogonia*
Venditti, Massimo; Santillo, Alessandra; Di Matei, Loredana; Minuci, Sergio (Italy)
- *Can the fungicide itraconazole disrupt Hedgehog-mediated regulation of testis development?*
Johansson, Hanna KL; Taxvig, Camilla; Johansen, Mathias; Olsen, Gustav PM; Nielsen, Camilla; Svingen, Terje (Denmark)
- *Machine learning applications in the domain of male infertility: prediction model for Klinefelter Syndrome in azoospermic men*
Krenz, Henrike; Sansone, Andrea; Krallmann, Claudia; Zitzmann, Michael; Dugas, Martin; Kliesch, Sabine; Tüttelmann, Frank; Gromoll, Jörg (Germany)
- *An involvement of G-protein-coupled membrane estrogen receptor and peroxisome proliferator-activated receptor in regulation of steroidogenic function in MA-10 Leydig cells*
Bilinska, Barbara; Gorowska-Wojtowicz, Ewelina; Milon, Agnieszka; Pawlicki, Piotr; Kotula-Balak, Malgorzata; Wolski, Jan Karol; Hejmej, Anna (Poland)

18.00 - 18.30 Welcoming cheers!

Monday, 31st May 2021

Symposium 2 - *Lifestyle, toxicity and cancer*

09.00 - 09.30 Plenary Lecture

Chairpersons: Ewa Rajpert-De-Meytz and Lee Smith

Non-coding RNAs in testicular cancer and reproductive disorders
Kristian Almstrup (Denmark)

09.30 - 09.45 Break

09.45 - 10.30 Selected miniposters

Chairpersons: Ewa Rajpert-De-Meytz and Lee Smith

- *The SSRI antidepressant Sertraline inhibits CatSper Ca²⁺ channels in human sperm*
Rahban, Rita; Rehfeld, Anders ; Schiffer, Christian; Brenker, Christoph; Louise Egeberg Palme, Dorte; Wang, Tao; Lorenz, Johannes; Almstrup, Kristian; Skakkebaek, Niels E.; Strünker, Timo; Nef, Serge (Switzerland)
- *Seminiferous tubules of testicular cancer patients present drastically disrupted histone H4 acetylation levels*
de la Iglesia, Alberto; Barrachina, Ferran; Jodar, Meritxell; Soler-Ventura, Ada; Mallofré, Carme; Rodríguez-Carunchio, Leonardo; Goudarzi, Afsaneh; Corral, Juan Manuel; Ballescà, José Luis; Castillo, Judit; Oliva, Rafael (Spain)
- *Tumour infiltrating T lymphocytes in human testis cancer - identification and functional analysis*
Islam, Rashidul; Heyer, Jannis; Indumathy, Sivanjah; Hartmann, Katja; Pleuger, Christiane; Fijak, Monika; Kliesch, Sabine; Dittmar, Florian ; Wagenlehner, Florian; Herold, Susanne; Heiner, Monika; Hedger, Mark; Loveland, Bruce; Loveland, Kate; Schuppe, Hans-Christian; Fietz, Daniela (Germany)

10.30 - 11.00 Break

11.00 - 12.00 Short miniposters talks (Session I)

Chairpersons: Ewa Rajpert-De-Meytz and Katja Teerds

- *Unravelling the molecular mechanisms underlying the lifestyle-associated decline in human fertility*
Henriques, Magda Carvalho; Herdeiro, Maria Teresa; Bento, Filipa; Oliveira, Mário; Patrício, António; Loureiro, Susana; **Fardilha, Margarida** (Portugal)
- *The two main components of cannabis, thc and cbd, constitute endocrine disruptors for embryonic human testis*
Dochez-Arnault, Juliette; Desdoits-Lethimonier, Christèle; Mazaud-Guittot, Séverine; Dejuçq Rainsford, Nathalie; **Gely-Pernot, Aurore** (France)

- *Fertility restoration by tuning the stochastic fate of transplanted spermatogonial stem cells in mouse*
Nakamura, Yoshiaki; Jörg, David; Kon, Yayoi; Simons, Benjamin; Yoshida, Shosei (Japan)
- *Effect of pharmacological inhibition of Arachidonate 15-lipoxygenase (ALOX15) enzyme during human semen cryopreservation*
Kavya, Rayalla; Uppangala, Shubhashree; Meitei, Huidrom Yaiphaba; Adiga, Satish Kumar (India)
- *Effects of EDCs on macrophage and spermatogonia cells*
Brouard, Vanessa; Cui, Haoyi; Mahin, Samiha; Culty, Martine (Sweden)
- *Effects of heavy metal contamination in male reproductive status - a preliminary study*
Alfaiate, Maria Inês; Santos, Rita; Carola, Carolina; Sousa, Ana Paula; Almeida-Santos, Teresa; Ramalho-Santos, João; Tavares, Renata (Portugal)
- *Are alternative bisphenols safer than bisphenol A for human spermatozoa? An in vitro study*
Castellini, Chiara; D'Andrea, Settimio; Totaro, Maria; Parisi, Antonio; Di Emidio, Giovanna; Tatone, Carla; Francavilla, Sandro; Francavilla, Felice; Barbonetti, Arcangelo (Italy)
- *Graphene Oxide's effect in human spermatozoa*
Machado-Simões, Juliana; Ramal-Sanchez, Marina; Fontana, Antonella; Ramalho-Santos, João; Barboni, Barbara; Bernabò, Nicola (Italy)
- *Characterization of human sperm intracellular metabolites and their association with genetic integrity and cryo-susceptibility*
Cheradath, Aswathi; Uppangala, Shubhashree; Kalthur, Guruprasad; Atreya, Hanudatta Shastryand Adiga, Satish Kumar (India)
- *Autoimmune epididymo-orchitis in the mouse: Indolamine deoxygenase-1 (Ido-1) expression and the effects of exogenous follistatin treatment*
Khande, Hemant; Nicolas, Nour; Biniwale, Sneha; Gregorevic, Paul; Loveland, Kate; Meinhardt, Andreas; Fijak, Monika; **Hedger, Mark** ; Wijayarathna, Rukmali (Australia)

12.00 - 12.15 [ETW2021 contest: video performances from ETW participants](#)

12.15 - 14.00 Break

14.00 - 14.30 [Short miniposters talks \(Session II\)](#)

Chairpersons: Margarida Fardilha and Antoni Riera-Escamilla

- *Whole-exome sequencing in testicular germ cell tumor: identification of novel genetic factors related to lynch syndrome*
Rosta, Viktoria; Riera-Escamilla, Antoni; Moreno-Mendoza, Daniel; Krausz, Csilla (Italy)
- *ERK role in the c-MET-mediated proliferation and motility signature of NT2D1 non seminoma cells*
Gesualdi, Luisa; Leonetti, Erica; De Vitis, Claudia; Cucina, Alessandra; Bizzarri, Mariano; Mancini, Rita; Ricci, Giulia; Catizone, Angela (Italy)

- *RASSF1A, MGMT, and PRSS21 as future diagnostic tool for testicular germ cell tumors*
Raos, Dora; Krasic, Jure; Masic, Silvija; Katusic Bojanac, Ana; Bulic-Jakus, Floriana; Jezek, Davor; Ulacec, Monika; Sincic, Nino (Croatia)
- *Peripubertal serum concentrations of dioxins and sperm small non-coding RNAs in the prospective cohort of healthy young men*
Shtratnikova, Victoria; Naumov, Vladimir; Bezuglov, Vitaly; Smigulina, Luidmila; Denisova, Tatiana; Dikov, Yury; Suvorov, Alexander; Pilsner, Jonathan R; Hauser, Russ; Krawetz, Stephen A; **Sergeyev, Oleg** (Russia)
- *PKA drives paracrine crisis and WNT4-dependent testis tumor in Carney complex*
Djari, Cyril; Sahut-Barnola, Isabelle; Stratakis, Constanine A.; Lefèbvre, Hervé; Guillou, Florian; Swain, Amanda; Martínez, Antoine; Lefrançois-Martínez, Anne-Marie (Switzerland)

14.30 - 14.45 Break

Symposium 3 - Sperm evolution, physiology and quality, and ART

14.45 - 15.15 Plenary lecture

Chairpersons: Meritxell Jodar and Eduardo Roldán

The importance of selection on sperm phenotypes and sperm genotypes
Simone Immler (UK)

15.15 - 16.00 Selected miniposters - Session I

Chairpersons: Meritxell Jodar and Eduardo Roldán

- *RAC1 controls sperm progressive motility and competition*
Amaral, Alexandra; Herrmann, Bernhard G (Germany)
- *Establishment & analysis of protamine 2 domain-specific knockouts*
Arévalo, Lena; Schneider, Simon; Merges, Gina Esther; Oben, Franka Enow; Schorle, Hubert (Germany)
- *Consequences of Protamine-2 deficiency on sperm DNA integrity and epigenetic signals associated with retained histones in mice*
Kruse, Alexander; Schneider, Simon; Forné, Ignasi; Schorle, Hubert; Steger, Klaus (Germany)

16.00 - 16.30 Break

16.30 - 17.15 Selected miniposters - Session II

Chairpersons: João-Ramalho Santos and Ferran Barrachina

- *Severe male factor impacts on early human embryo kinetics*
Méndez, Marta; Guimerà, Marta; Piñol, Albert; Cívico, Salvadora; Manau, Dolors (Spain)

- *Flow cytometry for sperm screening – a multiparametric approach*
Da Costa, Raúl; Redmann, Klaus; Schlatt, Stefan (Germany)
- *Functional sperm characterization in patients with Infertility of unknown origin*
Cristo, Maria Inês; Silva, Andreia; Tavares, Renata; Sousa, Ana Paula; Almeida-Santos, Teresa; Ramalho-Santos, João; **Amaral, Sandra** (Portugal)

17.15 – 17.30 Break

17.30 – 18.15 Short miniposters talks – Session I (Concurrent with Session II)

Chairpersons: Nitzan Gonen and João-Ramalho Santos

- *Establishment and analysis of a Prm1-deficient mouse line*
Merges, Gina Esther; Meier, Julia; Schneider, Simon; Kruse, Alexander; Fröbius, Andreas; Steger, Klaus; Arévalo, Lena; Schorle, Hubert (Germany)
- *Sperm DNA from species that contain protamine 2 present higher susceptibility to decondensation*
Ribas-Maynou, Jordi; Barranco, Isabel; Mateo-Otero, Yentel; Miró, Jordi; Bonet, Sergi; Yeste, Marc (Spain)
- *Integrated approach to the evaluation of male infertility: genome damage, sperm chromatin maturity and glycan composition*
Marić, Tihana; Fucic, Aleksandra; Ceppi, Marcello; Bruzzone Marco; Katusic-Bojanac, Ana; Evgeni, Evangelini; Petrovic, Tea; Trbojevic-Akmacic, Irena; Lauc, Gordan; Jezek, Davor (Croatia)
- *The impact of antisperm antibodies on sperm functionality*
Silva, Andreia Filipa; Cristo, Maria Inês; Sousa, Ana Paula; Almeida-Santos, Teresa; Schlatt, Stefan; Ramalho-Santos, João; Amaral, Sandra (Portugal)
- *Red-light irradiation increases mitochondrial activity of stallion spermatozoa in diluted fresh semen*
Catalán, Jaime; Yáñez-Ortiz, Iván; Gacem, Sabrina; Mateo-Otero, Yentel; Rodríguez-Gil, Joan; **Yeste, Marc;** Miró, Jordi (Spain)
- *The role of CatSper Ca²⁺ channels in male infertility: Question resolved!*
Young, S; **Schiffer, C;** Brenker, C; Tüttelmann, F; Röpke, A; Hamzeh, H; Wagner, A; Wachten, D; Kaupp, UB; Kliesch, S; Strünker, T (Germany)
- *Loss of CatSper function leads to fertilization failure in IVF*
Pock, Tim; Krallmann, Claudia; Sperlbaum, Tanja; Tüttelmann, Frank; Behre, Hermann M.; Kliesch, Sabine; Nordhoff, Verena (Germany)

17.30 – 18.15 Short miniposters talks – Session II (Concurrent with Session I)

Chairpersons: Katerina Komrskova and Juan Manuel Corral

- *Sperm in HD: imaging the structural organisation of mammalian sperm in a near-native state using cryo-electron tomography*
Leung, Miguel Ricardo; Roelofs, Marc C; Ravi, Ravi Teja; Gadella, Bart M; **Zeev-Ben-Mordehai, Tzviya** (Netherlands)

- *Is ex vivo magnetic resonance imaging useful in predicting sperm presence in testicular tissue?*
Planinić, Ana; Škokić, Siniša; Ježek, Davor (Croatia)
- *Mutual organization of JUNO and CD9 within protein interacting web of human egg membrane*
Svobodova, Jana; Frolikova, Michaela; Holubcova, Zuzana; Machan, Radek; Komrskova (Dvorakova-Hortova), Katerina (Czech Republic)
- *Contribution of paternally-derived elements to the early embryo development*
Mayorga-Torres, B. Jose Manuel; Rodríguez-Páez, Sofía; Soler-Ventura, Ada; de la Iglesia, Alberto; Marimón, Josep Maria; Castillo, Judit; Jodar, Meritxell; Oliva, Rafael (Spain)
- *Aging induces profound changes in rat sperm epigenome and these changes are modified by perinatal exposure to environmental flame retardant*
Suvorov, Alexander; Pilsner, J. Richard; Dribnokhodova, Olga; Dunaeva, Elena; Gerasimov, Evgeny; Logacheva, Maria; Marcho, Chelsea; Naumov, Vladimir; Shershebnev, Alex; Shtratnikova, Victoria; Wu, Haotian; Zheludkevich, Anna; Sergeyev, Oleg (USA)
- *Immunoaffinity approaches as an enhanced strategy to isolate extracellular vesicles from seminal plasma*
Barrachina, Ferran; Castillo, Judit; Casado, Marta; Villarreal, Laura; Ballescà, Josep Lluís; Vilaseca, Marta; Oliva, Rafael; Jodar, Meritxell (Spain)
- *Tumor necrosis factor-alpha receptor-1 (TNFR1) is present in human spermatozoa but is not functional in triggering apoptosis pathways*
Barbonetti, Arcangelo; Castellini, Chiara; D'Andrea, Settimio; Totaro, Maria; Parisi, Antonio; Palumbo, Paola; Augello, Francesca Rosaria; Lombardi, Francesca; Cinque, Benedetta; Francavilla, Sandro; Francavilla, Felice (Italy)

Tuesday, 1st June 2021

Symposium 4 - OMICS of testis and sperm function and dysfunction

09.00 - 09.30 Plenary lecture

Chairpersons: Nina Neuhaus and Frédéric Chalmel

Epigenetic of male germ cell differentiation and early embryo development
Antoine HFM Peters (Switzerland)

09.30 - 10.15 Selected miniposters

Chairpersons: Nina Neuhaus and Frédéric Chalmel

- *EGR4 dependent decrease of UTF1 is associated with failure to reserve spermatogonial stem cells in infertile men*
Di Persio, Sara; Tekath, Tobias; Siebert-Kuss, Lara Marie; Cremers, Jann-Frederik; Wistuba, Joachim; Li, Xiaolin; Meyer zu Hörste, Gerd; Dugas, Martin; Kliesch, Sabine; Schlatt, Stefan; Laurentino, Sandra; Neuhaus, Nina (Germany)
- *The NMD endonuclease SMG6 cooperates with the piRNA pathway to control the male germ cell transcriptome*
Lehtiniemi, Tiina; Bourgerie, Matthieu; Mäkelä, Margareeta; Asteljoki, Juho; Ma, Lin; Zhang, Fuping; Tan, Kun; Dumdie, Jennifer; Burrow, Dana; Chalmel, Frédéric; Wilkinson, Miles; Kotaja, Noora (Finland)
- *Variation in piRNA production associated with transposable element variants in mouse*
Casas, Eduard; Sierra, Pío; Moreta, Cristina; Cebrià, Judith; Jiménez-Chillaron, Josep; Forcades, Sonia, **Vavouri, Tanya** (Spain)

10.15 - 10.45 Break

10.45 - 11.45 Short miniposters talks

Chairpersons: Ada Soler-Ventura and Paulo Navarro-Costa

- *Primordial germ cell specific gene expression in cancer*
Bruggeman, Jan Willem; Irie, Naoko; van Pelt, Ans MM.; Lodder, Paul; Koster, Jan; Hamer, Geert (Netherlands)
- *Transcriptome analysis of fetal rat testes following intrauterine exposure to the azole fungicides triticonazole and flusilazole*
Draskau, Monica Kam; Lardenois, Aurélie; Evrard, Bertrand; Boberg, Julie; Chalmel, Frédéric; Svingen, Terje (Denmark)
- *Germ cell development of the common marmoset (*Callithrix jacchus*) analysed at scRNA-seq level*
Paturianne, Juan Manuel; Di Persio, Sara; Herden, Carla; Wöste, Marius; Li, Xiaolin; Meyer, zu Hörste, Gerd; Wistuba, Joachima; Schlatt, Stefana; Laurentino, Sandra; Neuhaus, Nina (Germany)

- *First wave of spermatogenesis: transcriptomic analysis of in vitro maturation of fresh and frozen murine testicular tissues*
Dumont, Ludovic; Lopez-Maestre, Hélène; Chalmel, Frédéric; Moutard, Laura; Rondanno, Christine, Rives, Nathalie (France)
- *A transcriptomic journey into mouse Leydig cells: how different fetal and adult Leydig cells are?*
Sararols, Pauline; Stévant, Isabelle; Neirijnck, Yasmine; Mayère, Chloé; Rebourcer, Diane; Darbey, Annaluacia; Curley, Michael K.; Kühne, Françoise; Dermitzakis, Emmanouil, Smith, Lee B.; Nef, Serge (Switzerland)
- *Transcriptomic differences between fibrotic and non-fibrotic testicular tissue reveal possible key players in Klinefelter syndrome-related testicular fibrosis*
Willems, Margo; Olsen, Catharina; Caljon, Ben; Vloeberghs, Veerle; De Schepper, Jean; Tournaye, Herman; Goossens, Ellen; Van Saen, Dorien (Belgium)
- *High-resolution analysis of Klinefelter germ cells reveals normal transcriptome but aberrant imprinting*
Laurentino, Sandra; Heckmann, Laura; Di Persio, Sara; Li, Xiaolin ; Meyer zu Hörste, Gerdb; Wistuba, Joachim; Cremers, Jann-Frederik; Gromoll, Jörg; Kliesch, Sabine; Schlatt, Stefan; Neuhaus, Nina (Germany)
- *A high-throughput screening platform identifies 177 new spermatogenesis genes*
Almeida, Joana; B. Correia, Rion; Misra, Chandra Shekhar; D. Becker, Jörg; Navarro-Costa, Paulo (Portugal)
- *Single nucleotide variants identified in azoospermia by whole genome sequencing (WGS)*
Malcher, Agnieszka; Stokowy, Tomasz; Berman, Andrea; Olszewska, Marta; Jedrzejczak, Piotr; Rozwadowska, Natalia; Yatsenko, Aleksander; Kurpisz, Maciej (Poland)

11.45 - 12.00 ETW2021 contest: video performances from ETW participants

12.00 - 14.00 Break

Symposium 5 - Spermatogenesis

14.00 - 14.30 Plenary lecture

Chairpersons: Noora Kotaja and Alberto de la Iglesia

Three-Dimensional Genomic Structure during Spermatogenesis
Aurora Ruiz-Herrera (Spain)

14.30 - 15.15 Selected miniposters

Chairpersons: Noora Kotaja and Alberto de la Iglesia

- *Phenotypic and molecular consequences of the knockout of histone methyltransferase DOTIL during spermatogenesis*
Blanco, Mélina; Gobé, Clara; Crespo, Marion; Ialy-Radio, Côme; Daveau, Romain; Pflieger, Delphine; El Khattabi, Laila; Cocquet, Julie (France)

- *Developing testes-on-a-chip model to study in vitro primate spermatogenesis and endocrine dynamics*
Sharma, Swati; Venzac, Bastien; Sandhowe-Klaverkamp Reinhild; Le Gac, Séverine; Schlatt, Stefan (Germany)
- *Estrogens alters histone-to-protamine transition process and epigenetic profiles in testis and sperm*
Ded, Lukas; Zatecka, Eva; Valakova, Eliska; Frolikova, Michaela; Dorosh, Andriy; Margaryan, Hasmik; Elzeinova Fatima; Kubatova, Alena; Peknicova, Jana; Paradowska-Dogan, Agnieszka; Steger, Klaus; Komrskova (Dvorakova-Hortova), Katerina (Czech Republic)

15.15 – 15.45 Break

15.45 – 16.30 Short miniposters talks – Session I

Chairpersons: Alexandra Amaral and Ferran Barrachina

- *Impact of WWC proteins on spermatogenesis and male fertility*
Höffken, Verena; Neuhaus, Nina; Tüttelmann, Frank; Pavenstädt, Hermann; Kremerskothen, Joachim (Germany)
- *Profilin3 required for male fertility*
Tariq, Naila; Arevalo, Lena; Phadke, Sharang; Sons, Dominik; Lohanadan, Keerthika; Kirfel, Gregor; Schorle, Hubert (Germany)
- *Investigating MIAP's role in male infertility of mice and humans*
Rotte, Nadja; Dunleavy, Jessica; Wyrwoll, Margot J; Kliesch, Sabine; Tüttelmann, Frank; O'Bryan, Moira; Friedrich, Corinna (Germany)
- *Novel in situ volume imaging for studying spermatogenesis in 3D*
Šanovec, Ondrej; Ded, Lukas; Komrskova (Dvorakova-Hortova), Katerina (Czech Republic)
- *Expression and distribution of CD151 as a partner of alpha6 integrin in male germ cells*
Jankovicova, Jana and Frolikova, Michaela; Palenikova, Veronika; Valaskova, Eliska; Cerny, Jiri; Secova, Petra; Bartokova, Michaela; Horovska, Lubica; Postlerova, Pavla; Antalikova, Jana; **Komrskova (Dvorakova-Hortova), Katerina** (Czech Republic)
- *SPAG17 is important for trafficking of proteins during sperm differentiation*
Teves, Maria Eugenia; Bhagat, Virali; King Isaiah; Shah Palak; Hassan, Lamisa; Sapao, Paulene; Krapf, Diego; Roldan, Eduardo RS (USA)
- *Clinical cases of azoospermia*
Petrov, Sava; Konova, Emiliana; Martinov, Danail; Uzunov, Robert (Bulgaria)

16.30 – 16.45 Break

16.45 – 17.30 Short miniposters talks – Session II

Chairpersons: Elena Vicini and Rod Mitchell

- *Early meiotic low transcription in mice*
Bellutti, Laura; Martini, Emmanuelle; Messiaen, Sebastien; Tourpin, Sophie; **Livera, Gabriel** (France)

- *Exonuclease Domain containing-protein EXD1 and EXD2 interact with piRNA machinery in germ granules during mouse spermatogenesis*
Olotu, Opeyemi; Lehtiniemi, Tiina; Da Ros, Matteo; Kotaja, Noora (Finland)
- *Long non-coding RNA function during meiotic divisions of spermatogenesis in mammals: link with Topaz1*
Chadourne, Manon; Poumerol, Elodie; Passet, Bruno; Jouneau, Luc; Pailhoux, Eric; Mandon-Pépin, Béatrice (France)
- *Distinct features between spermatozoa and testis circular RNAs(circRNAs)*
Soler-Ventura, Ada; Odriozola, Ainitze; Castillo, Judit; Delgado-Dueñas David; Guimerà, Marta; Corral, Juan Manuel; Ballescà, Josep Lluís; Oliva, Rafael; Jodar, Meritxell (Spain)
- *Identification of differentially expressed genes in human testis biopsies showing intact or defective spermatogenesis*
Kothalawala, Shashika; Günther, Stefan; Schuppe, Hans-Christian; Pilatz, Adrian, Wagenlehner, Florian; O'Donnell, Liza; Fietz, Daniela (Germany)
- *Mutations in Tcte1 gene are responsible for oligoasthenozoospermia - mouse 'knockout' model and screening of human infertile males*
Olszewska, Marta; Malcher, Agnieszka; Stokowy, Tomasz; Pollock, Nijole; Budkiewicz, Sylvia; Kamieniczna, Marzena; Jackowiak, Hanna; Jedrzejczak, Piotr; Yatsenko, Alexandre N.; Kurpisz, Maciej (Poland)
- *Expression and regulation of somatic heterochromatin regulators during mouse spermatogenesis*
Yadav, Ram Prakash; Mäkelä, Juho-Antti; Leskinen, Sini; Kotaja, Noora (Finland)

Wednesday, 2nd June 2021

Symposium 6 - (ISA sponsored) - *Accessory sex glands, fluids and sperm maturation*

09.00 - 09.30 Plenary lecture

Chairpersons: Monica Fijak and Elisabeth Pinart

Seminal fluid and fertility

Sarah Robertson (Australia)

09.30 - 10.15 Selected miniposters

Chairpersons: Monica Fijak and Elisabeth Pinart

- *Caput and cauda epididymides react fundamentally different during acute bacterial epididymitis*
Pleuger, Christiane; Bhushan, S; Bohnert, D; Hoppe, M; Fijak, M; Guenther, S; Middendorff, R; Loveland, KL; Hedger, MP; Meinhardt, A (Germany)
- *Voltage-Gated Hydrogen Channel 1 is essential for sperm motility during in vitro capacitation of boar spermatozoa*
Llavanera, Marc; Delgado-Bermúdez, Ariadna; Mateo-Otero, Yentel; Recuero, Sandra; Bonet, Sergi; Fernández-Fuertes, Beatriz; Barranco, Isabel; Yeste, Marc; Pinart, Elisabeth (Spain)
- *Proton secreting clear cells as novel modulators of the epididymal mucosal immunity*
Barrachina, Ferran; Mendelsohn, Alexandra C; Tu, Leona J; **Battistone, Maria Agustina** (USA)

10.15 - 10.45 Break

Symposium 7 - *Genetics and epigenetics*

10.45 - 11.15 Plenary lecture (EAA sponsored)

Chairpersons: Csilla Krausz and Frédéric Chalmel

Genomics of Male Infertility: from Genes to Function

Frank Tüttelmann (Germany)

11.15 - 12.15 Selected miniposters

Chairpersons: Csilla Krausz and Frédéric Chalmel

- *AXDND1 is essential for mammalian spermatogenesis*
Houston, Brendan; Lopes, Alexandra; Gonçalves, João; Nagirnaja, Liina; O'Connor, Anne; Merriner, Jo; Conrad, Don; O'Bryan, Moira (Australia)

- *Molecular markers of ageing in sex chromosome aneuploidies*
Gromoll, Jörg; Pohl, Eva; Muschal, Sina; Kliesch, Sabine; Zitzmann, Michael; Rohayem, Julia; **Laurentino, Sandra** (Germany)
- *Genetic dissection of spermatogenic arrest through exome analysis: clinical implications for the management of azoospermic men*
Riera-Escamilla, Antoni; Moreno-Mendoza, Daniel; Holleman, Kaylee; Cioppi, Francesca; Algaba, Ferran; Pybus, Marc; Friedrich, Corinna; Wyrwoll, Margot J; Casamonti, Elena; Pietroforte, Sara; Nagirnaja, Liina; Lopes, Alexandra; Kliesch, Sabine; Carrell, Douglas; Conrad, Donald; Ars, Elisabet; Ruiz-Castañé, Eduard; Aston, Kenneth; Baarends, Willy M; Tüttelmann, Frank; Krausz, Csilla (Spain)
- *Parental genomic imprinting during human spermatogenesis is not set in stone*
Struijk, Robert; Mulder, Callista; de Winter-Korver, Cindy; van Daalen, Saskia; Jongejan, Aldo; Repping, Sjoerd; van Pelt, Ans (The Netherlands)

12.15 - 12.30 ETW2021 contest: video performances from ETW participants

12.30 - 14.00 Break

Symposium 6 - (ISA sponsored) - *Accessory sex glands, fluids and sperm maturation*

14.00 - 14.36 Short miniposters talks (Concurrent with Symposium 7 - Short miniposters talks)
Chairpersons: Judit Castillo and Marc Yeste

- *AKR1B1 levels in seminal plasma of boar ejaculate fractions and its expression along reproductive tract*
Mateo-Otero, Yentel; Viñolas-Vergés, Estel; Llavanera, Marc; Ribas-Maynou, Jordi; Barranco, Isabel; Yeste, Marc (Spain)
- *The involvement of oxytocin in propulsing sperm during ejaculation - physiological and clinical implications*
Stadler, Beatrix; Wittaker, Michael; Nowell, Cameron; Wagenlehner, Florian; Exintaris, Betty; Middendorff, Ralf (Germany)
- *Cellular location of tyrosine phosphorylation during capacitation in rabbit spermatozoa*
Ruiz-Díaz, Sara; Arias, Maria; Pérez-Cerezales, Serafín (Spain)
- *Bovine serum albumin is essential for in vitro capacitation of boar sperm*
Recuero, Sandra; Resende Chaves, Bruna; Pinoti Pavaneli, Ana Paula; Blanco-Prieto, Olga; Pinart, Elisabeth; Bonet Sergi; Zangeronimo, Márcio Gilberto; Rodríguez-Gil, Joan E; Fernandez-Fuertes, Beatriz; Yeste, Marc (Spain)
- *Potassium channels play a key role on mammalian sperm capacitation*
Delgado-Bermúdez, Ariadna; Noto, Federico; Llavanera, Marc; Mateo-Otero, Yentel; Recuero, Sandra; Pinart, Elisabeth; Bonet, Sergi; Fernández-Fuertes, Beatriz; Barranco, Isabel; Yeste, Marc (Spain)

- *Antimüllerian hormone of pig seminal and its relationship with sperm quantity and quality parameters*
García-Bonavila, Estela; Delgado-Bermudez, Ariadna; Llavanera, Marc; Mateo-Otero, Yentel; Recuero, Sandra; Bonet, Sergi; Fernández-Fuertes, Beatriz; Yeste, Marc; Barranco, Isabel (Spain)

Symposium 7 - Genetics and epigenetics

14.00 - 15.00 Short miniposters talks (Concurrent with Symposium 6 - Short miniposters talks)

Chairpersons: Meritxell Jodar and Jörg Gromoll

- *Impairment of the MSH4-MSH5 heterodimer results in infertility due to azoospermia in males and premature ovarian insufficiency in females*
Wyrwoll, Margot J; van Walree, Eva S.; Hamer, Geert; Rotte, Nadja; Motazacker, Mahdi M.; Meijers-Heijboer, Hanne; Alders, Marielle; Meißner, Andreas; Kaminsky, Elke; Wöste, Marius; Krallmann, Claudia; Kliesch, Sabine; Friedrich, Corinna; van Pelt, Ans M. M.; Mathijssen, Inge B.; Tüttelmann, Frank (Germany)
- *To be or not to be pathogenic for male infertility - distinguishing pathogenic missense mutations from benign variants in AR, DMRT1, and NR5A1*
Emich, Jana; Friedrich, Corinna; Fenz, Thaís; Wagner, Alice; Tewes, Ann-Christin; Ledig, Susanne; Röpke, Albrecht; Kliesch, Sabine; Gromoll, Jörg; Tüttelmann, Frank (Germany)
- *Mutational landscape and clonal dynamics in human testis*
Moore, Luiza; Cagan, Alex; Coorens, Tim HH; Neville, Matthew DC; Sanghvi, Rashesh; Oliver, Thomas RW; Stratton, Michael R, **Rahbari, Raheleh** (UK)
- *TREGEL - a shiny tool to identify type, composition and location of gene regulatory elements*
Berres, Sven; Laurentino, Sandra; Wöste, Marius; Dugas, Martin; Gromoll, Jörg (Germany)
- *Faulty expression of Spo11 splice isoform predisposes to XY aneuploidy in sperms with a penetrance that depends on genetic background*
Giannattasio Teresa; Testa Erika; Faieta Monica; Palumbo Elisa; Russo Antonella; Barchi Marco (Italy)
- *Shani mutation in mouse affects splicing of Spata22 and leads to impaired meiotic recombination*
Petrillo, Cynthia; Barroca, Vilma; Ribeiro, Jonathan; Lailier, Nathalie; **Livera, Gabriel;** Keeney, Scott; Martini, Emmanuelle; Jain, Devanshi (France)
- *Battle of the sex chromosomes: competition between X- and Y-chromosome encoded proteins drives multicopy gene expression in mouse spermatids*
Moretti, Charlotte; Blanco, Melina; Ialy-Radio, Côme; Serrentino, Maria-Elisabetta; Vaiman, Daniel; Tores, Frederic; **Cocquet, Julie** (France)
- *The sperm epigenome does not display recurrent epimutations in patients with impaired spermatogenesis*
Di Persio, Sara; Leitão, Elsa; Laurentino, Sandra; Wöste, Marius; Dugas, Martin; Kliesch, Sabine; Horsthemke, Bernhard; **Neuhaus, Nina** (Germany)

- *Haploid selection in sperm affects the genome and transcriptome of the resulting offspring*
Alavioon, Ghazal; Francis, Roy; Wyszowska, Julia; Armstrong, Claire; **Marcu, Daniel**; Sutter, Andreas; Spurgin, Lewis; Immler, Simone (UK)
- *Three subpopulations of human sperm with various chromatin protamination status differ in global 5mC and 5hmC levels*
Olszewska, Marta; Kordyl, Oliwia; Kamieniczna, Marzena; Jedrzejczak, Piotr; Kurpisz, Maciej (Poland)

15.00 – 15.30 Break

Symposium 8 - *Germ stem cells, spermatogonia and fertility preservation*

15.30 – 16.00 Plenary lecture (The Company of Biologists sponsored)

Chairpersons: Ellen Goossens and Stefan Schlatt

Fertility preservation from prepubertal testis
Kyle Orwig (USA)

16.00 – 16.30 Selected miniposters – Session I

Chairpersons: Ellen Goossens and Stefan Schlatt

- *Melatonin actions on the spermatogonial stem cell niche in immature Syrian hamsters*
Rossi, Soledad P; Riviere, Eugeniaa; Calandra, Ricardo; Mayerhofer, Artur; Matzkin, María E; Frungieri, Mónica B (Argentina)
- *Analysis of spermatogonial marker expression in non-human primate*
Capponi, Chiara; Di Persio, Sara; Fera, Stefania; Schlatt, Stefan; Neuhaus, Nina; de Rooij, Dirk; Vicini, Elena (Italy)

16.30 – 17.00 Break

17.00 – 17.45 Selected miniposters – Session II

Chairpersons: Nadja Rotte and Sudhanshu Bhushan

- *Long-term maintenance and meiotic entry of early germ cells in functional murine testicular organoids mediated by 3D printed scaffolds and air-medium interphase*
Richer, Guillaume; Hobbs, Robin; Loveland, Kate; Goossens, Ellen; Baert, Yoni (Belgium)
- *Chemotherapy induced damage to spermatogonial stem cells in prepubertal mouse in vitro impairs long-term spermatogenesis*
Lopes, Federica; Tholeti, Prathima; Adiga, Satish K; Mitchell, Rod T; Spears, Norah (UK)
- *Recapitulation of testicular morphogenesis in vitro using a novel xeno organoid approach*
Rotte, Nadja; Sandhowe-Klaverkamp, Reinhild; Mall, Eva Maria; Wistuba, Joachim; Schöler, Hans; **Schlatt, Stefan** (Germany)

17.45 – 18.00 Break

18.00 – 18.45 Short miniposters talks - Session I (Concurrent with Session II)

Chairpersons: Elena Vicini and Andreas Meinhardt

- *Combining hiPSC differentiation with genome editing to explore the role of candidate genes in early germ cell specification*
Mall, Eva Maria; Rotte, Nadja; Emich, Jana; Tüttelmann, Frank; **Schlatt, Stefan**; Schöler, Hans R (Germany)
- *Novel insights in transgender testes offer new possibilities for fertility preservation*
Schneider, Florian; Dabel, Jennifer; Sandhowe-Klaverkamp, Reinhild; Wistuba, Joachim; Kliesch, Sabine; Schlatt, Stefan; Neuhaus, Nina (Germany)
- *Epigenetic analyses of sperm derived from transplanted offspring with in vitro propagated spermatogonial stem cells in two generations in a mouse model*
Serrano, Joana B; Tabeling, NC; de Winter-Korver, Cindy M; van Daalen, Saskia KM; Mulder, Callista L; van Pelt, Ans MM (Netherlands)
- *Interleukin-1a induced the proliferation and differentiation of spermatogonial cells to meiotic and postmeiotic cells in vitro using methylcellulose culture system (MCS)*
Huleihel, Mahmoud; Ali Nagham; Lunenfeld, Eitan (Israel)
- *Excessive unilateral proliferation of spermatogonia in a patient with non-obstructive azoospermia after clomiphene citrate pre-treatment*
Fietz, Daniela; Pilatz, Adrian; Diemer, Thorsten; Wagenlehner, Florian; Bergmann, Martin; Schuppe, Hans-Christian (Germany)
- *Effects of Cisplatin and Granulocyte-Colony Stimulating Factor on the germ cell populations in immature human testis*
Matilonyte, Gabriele; Anderson, Richard A; Mitchell, Rod T (UK)
- *Hydroxyurea is not the major cause for the germ cell reduction in patients with sickle cell disease*
Benninghoven-Frey, Klara; Krallmann, Claudia; Jarisch, Andrea; Sundin, Mikael; Langenskiöld, Cecilia; Ba Omar, Hajar A. M.; Stukenborg, Jan-Bernd; Schlatt, Stefan; Kliesch, Sabine; Neuhaus, Nina; Jahnukainen, Kirsi (Germany)

18.00 – 18.36 Short miniposters talks - Session II (Concurrent with Session I)

Chairpersons: Ans van Pelt and Kyle Orwig

- *Single cell transcriptome analysis identifies molecular markers of putative human spermatogonial stem cells*
Munyoki, Sarah; Sukhwani, Meena; Shami N., Adrienne; Ma, Qianyi; Zheng, Xianing; Green, Chris; Li, Jun; Hammoud, Sue; Orwig, E Kyle (USA)
- *A novel culture system supported germ cell development in non-human primate testicular tissues*
Tran, Kien; Li, Wenbo; Chu, Tianjiao; Cho, Kwon Song; Orwig, Kyle (USA)

- *Dopamine receptor D1 contributes to cocaine epigenetic reprogramming of histone modifications in male germ cells*
González, Betina; Gancedo, Samanta N; Janeir Garazatua, Sahira A.; Roldán, Eduardo; Vitullo, Alfredo D; **González, Candela R** (Argentina)
- *Can antioxidant treatment protect a rat spermatogonial stem cell line against chemotherapy-induced damage?*
Allen, Caroline M; Lopes, Federica; Mitchell, Rod T; Spears, Norah (UK)
- *Testis-derived DTM as potential three-dimensional scaffolds for reorganization of isolated human testicular cells*
Höffken, Verena; Sandhowe-Klaverkamp, Reinhild; Schlatt, Stefan; **Wistuba, Joachim** (Germany)
- *In vitro meiosis of male germline stem cells*
Lei, Qijing; Lai, Xin; Eliveld, Jitske; Chuva de Sousa Lopes, Susana M; van Pelt, Ans MM; Hamer, Geert (Netherlands)

Thursday, 3rd June 2021

Symposium 9 - *Testicular physiology and somatic cells*

09.00 - 09.30 Plenary lecture

Chairpersons: Katja Teerds and João-Ramalho Santos

The role of peritubular cells
Artur Mayerhofer (Germany)

09.30 - 10.15 Selected miniposters - Session I

Chairpersons: Katja Teerds and João-Ramalho Santos

- *Effect of vitamin B2 deficiency on testicular function in the mice*
Liang, Yaodi; Meng, Li; Teerds, Katja; Zhang, Shouquan (China)
- *Expression of Wnt5a defines the major progenitors of fetal and adult Leydig cells*
Djari, Cyril; Ademi, Herta; Stévant, Isabelle; Rands, Chris M; Conne, Béatrice; Nef, Serge (Switzerland)
- *Diamonds are forever: is it the same case with Reinke's crystals of infertile men?*
Kordić, Mario; Karnthaler, Hans Peter; Kubinová, Lucie; Himmelreich Perić, Marta; Marić, Tihana; Planinić, Ana; Katušić Bojanac Ana; **Ježek, Davor** (Croatia)

10.15 - 10.45 Break

10.45 - 11.15 Short miniposters talks - Session I

Chairpersons: Meritxell Jodar and Davor Ježek

- *Delineation of macrophages, T cells and mast cells during human fetal testis development*
Hosseini, Samira; Jezek, Davor; Kos, Marina; Hedger, Mark P; Loveland, Bruce, Fietz, Daniela; Schuppe, Hans-Christian; Loveland, Kate L (Australia)
- *Analysis of macrophages in the murine rete testis: Regulation by activin*
Biniwale, Sneha; Wijayarathna, Rukmali; Pleuger, Christiane; Bhushan, Sudhanshu; Meinhardt, Andreas; Loveland, Kate; Hedger, Mark (Australia)
- *Expression and regulation of interferon epsilon in the reproductive tract of the adult male mouse*
Wijayarathna, Rukmali; de Geus, Eveline; Sreenivasan, Rajini; Genovese, Rosemary; Loveland, Kate; Hertzog, Paul; Hedger, Mark (Australia)
- *Handing temperature and time interval prior to testicular-tissue organotypic culture in prepubertal mice have a differential impact on cellular homeostasis*
Pandya, Riddhi Kirit; Salian, Sujith Raj; Koulmane Laxminarayana, Sindhura Lakshmi; Krishnamurthy, Hanumantappa; Cheredath, Aswathi; Tholeti, Prathima; Uppangala, Shubhashree; Kalthur, Guruprasad; Schlatt, Stefan; Adiga, Satish Kumar (India)

11.15 – 12.15 Selected miniposters – Session II

Chairpersons: Meritxell Jodar and Davor Ježek

- *Loss of CCR2 inhibits testicular fibrosis caused by EAO: possible role for activin A in fibrosis development*
Peng, Wei; Hasan, Hiba; Kauerhof, Christine A; Wahle, Eva; Pleuger, Christiane; Bhushan, Sudhanshu; Loveland, Kate L; Wygrecka, Malgorzata; Meinhardt, Andreas; Hedger, Mark P; Fijak, Monika (Germany)
- *Adult testicular and epididymal macrophages originate from different waves of embryonic hematopoiesis*
Wang, M; Yang, Y; Cansever, D; Fijak, M; Pleuger, C; Klein, B; Livera, G; Epelman, S; Greter, M; Schulz, C; Meinhardt, A; **Bhushan, Sudhanshu** (Germany)
- *Peritubular myoid cells in men with normal and impaired spermatogenesis*
Siebert-Kuss, Lara Marie; Di Persio, Sara; Tekath, Tobias; Cremers, Jann-Frederik ; Wistub, Joachim; Li, Xiaolin; Meyer zu Hörste, Gerd; Dugas, Martin; Kliesch, Sabine; Schlatt, Stefan; Laurentino, Sandra; Neuhaus, Nina (Germany)
- *Zika virus persistence in the human testis: role of the innate immune response*
Kuassivi, O Nadège; Aubry, Florence; Houzet, Laurent; Satie, Anne-Pascale; Mahé, Dominique; Lavoué, Sylvain; Mathieu, Romain; Le Tortorec, Anna; **Dejucq-Rainsford Nathalie** (France)

12.15 – 14.00 Break

14.00 – 15.00 Short miniposters talks – Session II

Chairpersons: Christiane Pleuger and Jose Manuel Mayorga-Torres

- *HIV, a lentivirus with potential for integration in male germ cells and endogenization in human population?*
Mahé, Dominique; Matusali, Giulia; Deleage, Claire; Alvarenga, Raquel; Satie, Anne-Pascale; Pagliuzza, Amélie; Mathieu, Romain; Lavoué, Sylvain; Jégou, Bernard; Chomont, Nicolas; de França, Luiz Renato; Houzet, Laurent; Rolland, Antoine D.; **Dejucq-Rainsford, Nathalie** (France)
- *Exploring the purinergic system of the testis: Ectonucleotidases CD39/CD73 and ADORA receptors*
Missel, Annika; Walenta, Lena; Pickl, Ulrich; Trottmann, Matthias; Koehn, Frank-Michael; Mayerhofer, Artur (Germany)
- *The role of activin A and chemokines in the development of inflammatory responses during chronic testicular inflammation in mice*
Hasan, Hiba; Peng, Wei; Bhushan, Sudhanshu; Wahle Eva; Pleuger, Christiane; Günther, Stefan; Loveland, Kate L; Meinhardt, Andreas; Hedger Mark P; Fijak, Monika (Germany)
- *Androgen receptors AR and ZIP9 are involved in the control of Notch pathway in Sertoli cells*
Hejmej, Anna; Kaminska, Alicja; Pardyak, Laura; Marek, Sylwia; Brzoskwinia, Malgorzata; Bilinska, Barbara (Poland)

- *Selection for a primarily female-derived trait of high fertility also alters the male phenotype*
Weitzel, Joachim; Sobczak, Alexander; Ludwig, Carolin; Calanni Pileri, Michela; Langhammer, Martina; Schön, Jennifer; Reinsch, Norbert; Michaelis, Marten (Germany)
- *Character and relevance of superficial wall movements in seminiferous tubules*
Mietens, Andrea; Rager, Christine; Tasch, Sabine; Stadler, Beatrix; Nowell, Cameron; Middendorff, Ralf (Germany)
- *Porcine prepubertal Sertoli cells exposed to nanopollutants: an “in vitro” study*
Mancuso, Francesca; Arato Iva; Giovagnoli, Stefano; Antognelli, Cinzia; Moretti, Massimo; di Michele, Alessandro; Gambelungha, Angela; Muzi, Giacomo; Lilli, Cinzia; Bellucci, Catia; Aglietti, Maria Chiara; Calafiore, Riccardo; Luca, Giovanni (Italy)
- *Dissection of spontaneous Ca²⁺ signaling in the mouse testis*
Fischoeder, Justine; Uesaka, Naofumi; Fleck, David; Strauch, Martin; Merhof, Dorit; Spehr, Jennifer; Spehr, Marc (Germany)
- *ATP-induced calcium signals and contractions in testicular peritubular cells*
Kenzler, Lina; Fleck David; Strauch, Martin; Spehr, Jennifer; Merhof, Dorit; Mayerhofer, Artur; Spehr, Marc (Germany)

15.00 – 15.30 Break

Closing session

15.30 – 16.00 Plenary Lecture

Chairpersons: Judit Castillo and Serge Nef

Mouse piRNAs are required for sperm function and embryo viability

Pei-Hsuan Wu (USA)

16.00 – 16.15 Awards (grants, best talks and ETW contest)

Chairpersons: Rafael Oliva and Judit Castillo

16.15 – 16.30 Concluding remarks

Rafael Oliva and Judit Castillo