



European Academy of Andrology
EAA 3rd School in Genetics

May 26th-28th (Wed-Fri), 2027

Tallinn, Estonia

Organized by the EAA Centre: Andrology Clinic, Tartu University Hospital

EAA School in Genetics aims to offer the high-quality state-of-the-art level training to physicians and biomedical researchers interested in medical genetics with the specific focus on the genetics of andrological conditions. This will increase the knowhow and broader application of genetic testing among the andrologists, speed up the transfer of knowledge concerning recent advances in genetics and standardization of the utility and interpretation of novel genetic tools in the clinical practice. The course is also expected to promote genetic research in European andrology centres, with the specific focus on promoting synergetic and complementary actions.

Course venue: Conference Centre of Andrology Clinic/Tartu University Hospital in Tallinn,
Address: Ülemiste Health Centre 2, Karl Ernst von Baer Building, Sepapaja Str. 12, 5. Floor, Tallinn

Expected number of course participants: up to 25

Faculty of University of Tartu (UT) and Tartu University Hospital (TUH):

Maris Laan, PhD; professor of human genetics, Vice-Dean for research, Faculty of Medicine, UT

Kristjan Pomm, MD; Head of the Clinic, Andrology Clinic, TUH

Margus Punab, MD, PhD; professor in andrology, Institute of Clinical Medicine, UT; chief andrologist-urologist, Andrology Clinic, TUH; Head of 6th clinical division, TUH

Laura Kasak, PhD and Triin Kikas, PhD; lecturers in human genetics, Institute of Biomedicine and Translational Medicine, UT

Maire Peters, PhD; Assoc. Prof. in Genetics, Women's Clinic, Institute of Clinical Medicine, UT

Laura Roht, MD, PhD; clinical geneticist, Genetics and Personalised Medicine Clinic, TUH

International faculty:

Birgitte Stallmeyer, PhD; Group Leader, Institute of Reproductive Genetics, University of Münster, Germany.

Stephane Viville, MD, PhD; professor, Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), Strasbourg, France

Kristian Almstrup, PhD; Senior Scientist, Dept. of Growth and Reproduction, Copenhagen University Hospital – Rigshospitalet; Associate Professor, University of Copenhagen, Denmark

Frank Tüttelmann, MD; Director, Centre of Medical Genetics, Institute of Reproductive Genetics, University of Münster, Germany

Jüri Reimand, PhD; Associate Professor of Molecular Genetics, Ontario Institute for Cancer Research, University of Toronto, Canada

Course administration: Mailis Sütt, MSc, Andrology Clinic, Tartu University Hospital

Day 1 – Basics in human and medical genetics

09:00 – 09:30 **Maris Laan**, opening & warming-up discussion genetics in reproductive medicine

09:30 – 11:00 **Maris Laan** “Human genome variation – chromosomal, monogenic and complex diseases”

11:00 – 11:15 Coffee break

11:15 – 12:30 Practical exercises 1 – monogenic disorders (in two parallel groups)

12:30 – 13:15 Lunch

13:15 – 14:45 **Laura Kasak and Triin Kikas** “Genomic technologies in advancing molecular diagnostics”

14:45 – 15:30 **Maire Peters** “Preimplantation genetic testing (PGT) – added value and limitations”

15:30 – 16:00 **Margus Punab/Kristjan Pomm** “Discussion – opportunities, rationale and clinical benefit of advanced genetic testing in the efficient management of an infertile couple”

16:00 – 16:15 Coffee break

16:15 – 18:30 Practical exercises 2 – chromosomal disorders (in two parallel groups)

19:00 – ... Welcome reception & dinner

Day 2 – Genetics of infertility in diagnostics and management

9:00 – 10:30 **Frank Tüttelmann** “From diagnostic Y-chromosome testing to advanced molecular diagnostics of monogenic male infertility – Münster experience” (online lecture)

10:30– 10:45 Coffee break

10:45 – 12:15 **Birgit Stallmeyer** “Approaches and examples in demonstrating gene-disease and variant-disease relationships – *in silico*, *in vitro*, *in vivo* tools”.

12:15 – 13:00 Lunch

13:00 – 14:30 **Stephane Viville** “Monogenic causes of female infertility and shared etiology with male infertility. A new paradigm in MAR practice.”

14:30 – 14:45 Coffee break

14:45 – 16:15 **Maris Laan** “Utility of exome/genome sequencing in infertility management and beyond – Estonian experience”

16:15 – 19:00 guided walking tour

19:00 – ... Course Dinner in Tallinn Old City or seaside

Day 3 – Case discussions. Genetics of male specific cancers.

Presentation and discussion of homework by course participants – clinical cases from their practice relevant to genetics (7-9 min/ case – presentation & discussion; if no relevant cases to be presented, then presenting other state-of-the-art androgenetics related discussion topic from literature – moderated by the Course Faculty

08:30 – 10:00 Session I (e.g. to be moderated by Maris and Birgit)

10:00 – 10:15 Coffee break

10:15 – 11:45 Session II (e.g. to be moderated by Kristian and Stephane)

11:45 – 12:30 Lunch

12:30 – 13:30 **Kristian Almstrup** “Genetics of testicular cancer and its link to testicular development”

13:30 – 14:15 **Laura Roht** “Genetics of hereditary cancers. Germline genetics of prostate cancer”

14:15 – 15:00 **Jüri Reimand** “Omics profiling of prostate cancer and its utility in clinical management”

15:00 – 15:30 Wrap-up discussions on the actions needed to promote advanced genetic testing in European andrology centres, the challenges in test standardization, data interpretation and counselling of patients.

Farewell