PGDIS HANDS-ON WORKSHOP ON PGT FOR GENETIC AND CHROMOSOMAL DISORDERS BY TROPHECTODERM BIOPSY
Istanbul Memorial Hospital ART and Genetics Center
April 29-May 1, 2018

April 28 Arrival & Accommodation

APRIL 29
09:00-10:05 Preimplantation Genetic Testing (PGT) for Monogenic and Chromosomal Disorders by Blastomere and Trophectoderm Biopsy - Theoretical Session 1
08:30 - 09:00 Registration
09:00 - 09:05 Opening of Workshop, Semra KAHRAMAN, Memorial Hospital ART and Genetics Center, Istanbul, Turkey
09:05 - 09:35 Practical PGT, Anver KULIEV, RGI, Chicago, USA
09:35 -10:05 Advantages and disadvantages of trophectoderm biopsy – Caroline Selma PIRKEVI CETINKAYA, Memorial Hospital ART and Genetics Center, Istanbul, Turkey
10:05 -10.35 DISCUSSION & COFFEE BREAK
10:35 -13:10 Hands-on Applications of Biopsy Procedures under Supervision of Trainers
Participants will be divided into 3 groups, up to 5 in each for practical sessions.
- Zona Drilling Methods
- Blastomere Biopsy Techniques
- Trophectoderm Biopsy Techniques
13:10 -14:20 LUNCH & DISCUSSION
14:20 -18:30 Each group will apply all the demonstrated techniques

APRIL 30
09:00 - 10:00 PGT for Monogenic and Chromosomal Disorders by Blastomere and Trophectoderm Biopsy- Theoretical Session 2
09:00 - 09:20 Clinical aspects of successful PGT, Semra KAHRAMAN, Memorial Hospital ART and Genetics Center, Istanbul, Turkey
09:20 - 09:40 PGT for Aneuploidy (PGT-A) and Structural Rearrangements (PGT-SR)- From FISH to Next Generation Technologies, Anver KULIEV, RGI, Chicago, USA
09:40 - 10:00 Molecular Techniques and Next Generation Technologies in PGT: Testing for Monogenic Disorders (PGT-M), HLA Typing (PGT-HLA), and 24 Chromosome Aneuploidy (PGT-A) by Next Generation Sequencing (NGS), Don LEIGH, Sydney, Australia
10:00 -10:30 DISCUSSION & COFFEE BREAK
10:30 -13:30 Hands-on applications of trophectoderm biopsy by participants under supervision of trainers 13:30 -14:30 LUNCH & DISCUSSION
14:30 - 18:30 Hands-on Applications of FISH and PCR techniques under supervision of trainers

- Preparation, Spreading and Fixation of Blastomere and Trophectoderm Cells
- In Situ Hybridization with Different Chromosome Specific Probes
- Analysis and Scoring of FISH Signals
- 1st and 2nd Round PCR for PGT-M and PGT-HLA
- Testing for 24 Chromosomes by Microarray Technology and NGS

Participants will be divided into 3 groups, up to 5 in each for practical sessions according to their interests.

May 1
09:00 - 13:00 Interpreting NGS, aCGH, FISH and PCR Results

09:00 - 12:00 Analysis and Interpreting NGS, arrayCGH and FISH results, Murat CETINKAYA, Memorial Hospital ART and Genetics Center, Istanbul, Turkey

Analysis and Interpretation of NGS and PCR Results, Don LEIGH, Sydney, Australia

12:00 - 13:00 GENERAL DISCUSSION & CLOSING

Practical Stations

Station 1: Blastomere Biopsy Techniques;
Zona hatchings by enzymatic, mechanical and laser applications

Station 2: Trophectoderm Biopsy Techniques;

Station 3: FISH Techniques;
Preparation, spreading and fixation of Blastomere and Trophectoderm Cells
In situ hybridization of chromosomes with different probes
Analysis and Scoring of FISH signals

Station 4: array CGH and NGS Techniques;
Extraction and Amplification of blastomere and trophectoderm cells
Labeling Hybridization
Scanning and analysis of aCGH and NGS results

Station 5: PCR Techniques;
Lysis of blastomere and trophectoderm cells
First and second round PCR for PGT-M and PGT-HLA, Mutation Analysis and Restriction Enzyme Digestion Analysis and interpretation of PCR results
• These applications will be done simultaneously in 4 stations and each participant will attend to each station and perform all demonstrated techniques