

**PGDIS HANDS-ON WORKSHOP ON PGD FOR GENETIC AND  
CHROMOSOMAL DISORDERS BY TROPHECTODERM BIOPSY**  
Istanbul Memorial Hospital ART and Genetics Center  
March 31-April 2, 2017

**March 30 Arrival & Accommodation**

**MARCH 31**

**09:00-10:05 PGD for Single Gene 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 PGD, Anver KULIEV, RGI, Chicago, USA

09:35 -10:05 Technique, advantages, disadvantages of trophectoderm biopsy and brief summary of PGD  
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 1**

**09:00 - 10:00 PGD for Single Gene and Chromosomal Disorders by Blastomere and Trophectoderm Biopsy- Theoretical Session 2**

09:00 - 09:20 Clinical aspects of successful PGD, Semra KAHRAMAN, Memorial Hospital ART and Genetics Center, Istanbul, Turkey

09:20 - 09:40 PGD for Aneuploidy and Translocations- From FISH to Next Generation Technologies, Anver KULIEV, RGI, Chicago, USA

09:40 - 10:00 Molecular Techniques and Next Generation Technologies in PGD: Testing for Single Gene Disorders, HLA Typing, and 24 Chromosome Aneuploidy 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 PGD of Single Gene Disorders and HLA Typing
  - 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.*

## **APRIL 2**

### **09:00 -13:00 Interpreting NGS, aCGH, FISH and PCR Results**

09:00 - 12:00 Analysis and Interpreting array CGH 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 and Huseyin Avni TAC, Memorial Hospital ART and Genetics Center, Istanbul, Turkey

**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 PGD of single gene disorders and HLA matching 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*