

PGDIS HANDS-ON WORKSHOP ON PGD FOR GENETIC AND CHROMOSOMAL DISORDERS BY BLASTOMERE AND TROPHECTODERM BIOPSY

MAY 7

- 09:00-10:05 PGD for Single Gene and Chromosomal Disorders by Blastomere and Trophoctoderm Biopsy - Theoretical Session I**
- 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 Advantages and disadvantages of trophoctoderm biopsy - Murat ÇETİNKAYA, Hüseyin TAÇ, Memorial Hospital ART and Genetics Center, Istanbul, Turkey
- 10:05 -10:35 **DISCUSSION AND COFFEE BREAK**
- 10:35 -13:10 **Hands-on Applications of Biopsy Procedures under Supervision of Trainers**
Participants will be divided into 4 groups, up to 5 in each for practical sessions.
- Zona Drilling Methods
 - Blastomere Biopsy Techniques
 - Trophoctoderm Biopsy Techniques
- 13:10 -14:20 **LUNCH AND DISCUSSION**
- 14:20 -18:30 Each group will apply all the demonstrated techniques**

MAY 8

- 09:00 - 10:00 PGD for Single Gene and Chromosomal Disorders by Blastomere and Trophoctoderm 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 Effectiveness of PGD for Aneuploidy and Translocations by FISH, Cagri BEYAZYÜREK, Memorial Hospital ART and Genetics Center, Istanbul, Turkey
- 09:40 - 10:00 Molecular Techniques in PGD: Testing for Single Gene Disorders, HLA Typing, and 24 Chromosome Aneuploidy, Don LEIGH, Sydney, Australia
- 10:00 -10:30 **DISCUSSION AND COFFEE BREAK**

10:30 -13:30 **Hands-on applications of trophoctoderm biopsy by participants under supervision of trainers**

13:30 -14:30 **LUNCH AND DISCUSSION**

14:30 -18:30 **Hands-on Applications of FISH and PCR techniques under supervision of trainers**

- Preparation, Spreading and Fixation of Blastomere and Trophoctoderm 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

Participants will be divided into 3 groups, up to 6 in each for practical sessions according to their interests.

MAY 9

09:00 -13:00 **Interpreting FISH and PCR Results**

09:00 - 12:00 Analysis and Scoring of FISH Signals, Çağrı BEYAZYÜREK, Çiğdem YAPAN, Memorial Hospital ART and Genetics Center, Istanbul, Turkey

Analysis and Interpretation of PCR Results, Don LEIGH, Sydney, Australia and Cumhuriyet Memorial Hospital ART and Genetics Center, Istanbul, Turkey

12:00 -13:00 **GENERAL DISCUSSION AND 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 Techniques;
Extraction and Amplification of blastomere and trophectoderm cells
Labeling
Hybridization

Scanning and analysis of aCGH 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*