

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

May 12 Arrival and Accommodation

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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 Advantages and disadvantages of trophectoderm biopsy - Murat CETİNKAYA, Huseyin TAC, 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

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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,TBA,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 & 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.

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

09:00 - 12:00 Analysis and Scoring of FISH Signals, and aCGH results, Don LEIGH, Sydney, Australia and Cumhuriyet Memorial Hospital ART and Genetics Center, Istanbul, Turkey
Analysis and Interpretation of NGS and PCR Results, Don LEIGH, Sydney, Australia and Cumhuriyet 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*