

Advanced Course in Clinical Embryology

Academic Year 2023-2024



Programme of Teaching Module 1

"Human Reproduction: Physiology, Pathophysiology and Recent Advances"

Submodule	Lecture-Speakers	Date-Time
Scientific & Academic Director Welcome	Welcome-Aims <i>Mara Simopoulou</i>	4/10/2023 5:00 p.m – 5:15 p.m
Opening Lecture	On the future of assisted reproduction: Lessons from the past <i>Jacques Cohen</i>	4/10/2023 5:15 p.m – 6:00 p.m
1.1	Physiology of the male reproductive system <i>To be confirmed</i>	11/10/2023 5:00 p.m – 6:00 p.m
1.2	Male Infertility: Aetiology and management strategies <i>To be confirmed</i>	11/10/2023 6:00 p.m – 7:00 p.m
1.3	Physiology of the female reproductive system <i>Byron Asimakopoulos</i>	18/10/2023 5:00 p.m – 6:00 p.m
1.4	Female Infertility: Aetiology and management strategies <i>To be confirmed</i>	18/10/2023 6:00 p.m – 7:00 p.m
1.5	Ovarian stimulation in the era of personalized and precision medicine <i>To be confirmed</i>	18/10/2023 7:00 p.m – 8:00 p.m
1.6	Ovarian Insufficiency: Options and considerations from the clinician's perspective <i>Konstantinos Sfakianoudis</i>	25/10/2023 5:00 p.m – 6:00 p.m
1.7	Recurrent Miscarriage and Recurrent Implantation Failure: How far have we come? <i>Petros Drakakis</i>	25/10/2023 6:00 p.m – 7:00 p.m
1.8	Embryo and Endometrium: A complex relationship <i>To be confirmed</i>	25/10/2023 7:00 p.m – 8:00 p.m

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Programme of Teaching Module 2

“Organization, Management and Quality Control in the Embryology Laboratory, in the Andrology Laboratory and in Cryopreservation Banks”

Submodule	Lecture-Speakers	Date-Time
2.1	Organization and management on setting up an Assisted Reproduction Unit <i>Despina Tzanakaki</i>	1/11/2023 5:00 p.m – 6:00 p.m
2.2	Organization, management, and Standard operating procedures (SOPs) for the Embryology Laboratory <i>Giles Palmer</i>	1/11/2023 6:00 p.m – 7:00 p.m
2.3	Organization, management, and Standard operating procedures (SOPs) for the Andrology Laboratory <i>Evangelini Evgeni</i>	8/11/2023 5:00 p.m – 6:00 p.m
2.4	Organization, management, and Standard operating procedures (SOPs) for Cryopreservation Banks <i>Alexia Chatziparasidou</i>	8/11/2023 6:00 p.m – 7:00 p.m
2.5	Inspecting an IVF Laboratory <i>Gerry Celia</i>	15/11/2023 5:00 p.m – 6:00 p.m
2.6	New Technologies for High Tech Management of Quality in IVF Laboratories <i>Carol Lynn Curchoe</i>	15/11/2023 6:00 p.m – 7:00 p.m
2.7	Quality control and crisis management in the IVF laboratory <i>Carol Lynn Curchoe</i>	15/11/2023 7:00 p.m – 8:00 p.m
2.8	Data, data, data. The past, present and future of data management in IVF <i>Jaques Cohen</i>	22/11/2023 5:00 p.m – 6:00 p.m

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Programme of Teaching Module 3

“Semen Analysis, Sperm Preparation and Evaluation of Sperm Quality and Functionality”

Submodule	Lecture-Speakers	Date-Time
3.1	Standardized Semen Analysis: Lessons for novice and experts <i>Betsy Cairo</i>	29/11/2023 5:00 p.m – 6:00 p.m
3.2	Sperm morphology assessment by strict criteria <i>Betsy Cairo</i>	29/11/2023 6:00 p.m – 7:00 p.m
3.3	Semen Analysis: Ancillary tests <i>George Liperis</i>	6/12/2023 5:00 p.m – 6:00 p.m
3.4	The role of patient's history and sperm preparation techniques for diagnostic and ART purposes <i>Stamatis Papaharitou</i>	6/12/2023 6:00 p.m – 7:00 p.m
3.5	Optimal management of ejaculate and non-ejaculate originating spermatozoa for ART purposes <i>Michael Carroll</i>	13/12/2023 5:00 p.m – 6:00 p.m
3.6	Latest research in andrology <i>Ralf Henkel</i>	13/12/2023 6:00 p.m – 7:00 p.m
3.7	Advanced semen tests <i>Dolores Lamb</i>	20/12/2023 5:00 p.m – 6:00 p.m
3.8	The impact of spermatozoa characteristics on embryo developmental potential <i>To be confirmed</i>	20/12/2023 6:00 p.m – 7:00 p.m

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Programme of Teaching Module 4

“Novel Techniques and Approaches in Gamete, Embryo, Testicular and Ovarian Tissue Cryopreservation”

Submodule	Lecture-Speakers	Date-Time
4.1	How understanding basic cryobiology can help us improve outcomes <i>Kimball O. Pomeroy</i>	3/1/2024 5:00 p.m – 7:00 p.m
4.2	Safety in human reproductive cell cryopreservation <i>Lodovico Parmegiani</i>	10/1/2024 5:00 p.m – 6:00 p.m
4.3	Cryostorage safety: validation, quality control and best practices <i>Kimball O. Pomeroy</i>	10/1/2024 6:00 p.m – 7:00 p.m
4.4	Factors Affecting Vitrification Success <i>Kimball O. Pomeroy</i>	17/1/2024 5:00 p.m – 6:00 p.m
4.5	Oocyte and embryo cryopreservation <i>Laura Rienzi</i>	17/1/2024 6:00 p.m – 7:00 p.m
4.6	Ovarian tissue cryopreservation: Where are we today? <i>David Albertini</i>	24/1/2024 5:00 p.m – 6:00 p.m
4.7	Testicular tissue cryopreservation: Where are we today? <i>Elena Kontogianni</i>	24/1/2024 6:00 p.m – 7:00 p.m

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Programme of Teaching Module 5 *"Insemination Methods and Personalized Medicine"*

Submodule	Lecture-Speakers	Date-Time
5.1	Insemination methods an Overview of IUI, IVF, ICSI and specialized equipment <i>Danny Daphnis</i>	31/1/2024 5:00 p.m – 6:00 p.m
5.2	Micromanipulation in the era of Individualized Medicine: how to select the best sperm for ICSI <i>Lodovico Parmegiani</i>	31/1/2024 6:00 p.m – 7:00 p.m
5.3	Intracytoplasmic Sperm Injection (ICSI): Technique and technical aspects <i>Mina Alikani</i>	7/2/2024 5:00 p.m – 6:00 p.m
5.4	Evaluation of insemination outcomes <i>Nikica Zaninovic</i>	7/2/2024 6:00 p.m – 7:00 p.m
5.5	ICSI for All? <i>Mina Alikani</i>	14/2/2024 5:00 p.m – 6:00 p.m
5.6	Artificial activation of spermatozoa and oocytes: From basic research to clinical practice <i>To be confirmed</i>	14/2/2024 6:00 p.m – 7:00 p.m
5.7	Understanding the oocyte and decoding its competence <i>Federica Franciosi</i>	21/2/2024 5:00 p.m – 6:00 p.m
5.8	How to select the best insemination method: Evidence Based Clinical Practice <i>Gemma Arroyo</i>	21/2/2024 6:00 p.m – 7:00 p.m

Written exams on Modules 1-5

(The examination platform will open on March 1st, 2023, at 5:00 p.m and will close on March 6th, 2023, at 5:00 p.m)

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Programme of Teaching Module 6

*“Understanding the Embryo and Culture Systems:
Mapping of state-of-the-art Equipment and Protocols”*

Submodule	Lecture-Speakers	Date-Time
6.1	Physiology and development of the preimplantation embryo <i>Mara Simopoulou</i>	28/2/2024 5:00 p.m – 6:00 p.m
6.2	The pyramid of successful implantation <i>Laura Rienzi</i>	28/2/2024 6:00 p.m – 7:00 p.m
6.3	Metabolism of the preimplantation embryo <i>Roger Sturmey</i>	6/3/2024 5:00 p.m – 6:00 p.m
6.4	Culture media in IVF <i>Dean Morbeck</i>	6/3/2024 6:00 p.m – 7:00 p.m
6.5	Embryo culture incubators <i>Jason E. Swain</i>	13/3/2024 5:00 p.m – 6:00 p.m
6.6	Time-lapse imaging technology in the IVF laboratory <i>Marcos Meseguer</i>	13/3/2024 6:00 p.m – 7:00 p.m
6.7	The epigenetics of blastocyst culture <i>To be confirmed</i>	20/3/2024 5:00 p.m – 6:00 p.m
6.8	Embryo Culture: Past, Present and Future <i>David Gardner</i>	27/3/2024 8:00 a.m – 9:00 a.m

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Programme of Teaching Module 7

*“Basic Knowledge and Recent Advances on Embryo Quality and Evaluation:
From Embryo Morphology to Artificial Intelligence”*

Submodule	Lecture-Speakers	Date-Time
7.1	Embryo selection <i>David Gardner</i>	27/3/2024 9:00 a.m – 10:00 a.m
7.2	The making of the blastocyst <i>Giovanni Coticchio</i>	3/4/2024 5:00 p.m – 6:00 p.m
7.3	Novel approaches in oocyte and preimplantation embryo evaluation and automation in MAR <i>To be confirmed</i>	3/4/2024 6:00 p.m – 7:00 p.m
7.4	Embryo identification <i>Irene Dimitriadis</i>	10/4/2024 5:00 p.m – 6:00 p.m
7.5	Morphokinetic evaluation of the preimplantation embryo: What is there to gain? <i>To be confirmed</i>	10/4/2024 6:00 p.m – 7:00 p.m
7.6	Artificial intelligence in the IVF laboratory <i>Charles Bormann</i>	17/4/2024 5:00 p.m – 7:00 p.m
7.7	Non-invasive selection of embryo viability: The value of the embryo’s metabolic blueprint <i>Denny Sakkas</i>	24/4/2024 5:00 p.m – 6:00 p.m

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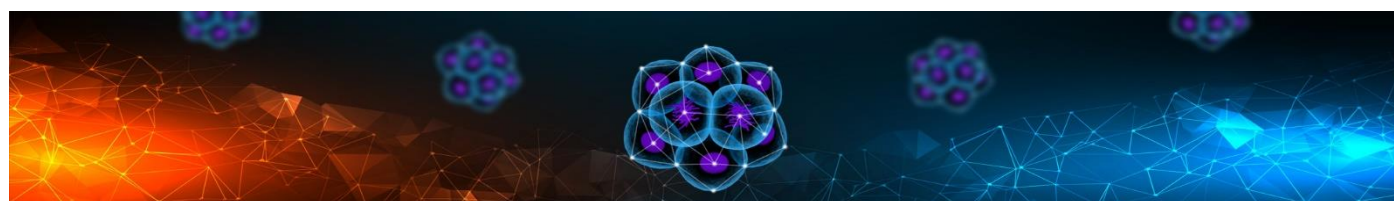
Programme of Teaching Module 8

“Preimplantation Genetic Testing: From Embryo Biopsy and Genetic and Molecular Diagnosis to Novel Approaches and Considerations”

Submodule	Lecture-Speakers	Date-Time
8.1	Genetic profile, analysis of the preimplantation embryo and novel approaches <i>Dagan Wells</i>	8/5/2024 5:00 p.m – 6:00 p.m
8.2	Biopsy methods, novel techniques and PGT optimal practice according to guidelines <i>Georgia Kokkali</i>	15/5/2024 5:00 p.m – 6:00 p.m
8.3	Preimplantation Genetic Testing for Structural Rearrangements (PGT-SR) <i>Darren Griffin</i>	15/5/2024 6:00 p.m – 7:00 p.m
8.4	Preimplantation Genetic Testing for Monogenic Disorders (PGT-M) <i>Joanne Traeger-Synodinos</i>	22/5/2024 5:00 p.m – 6:00 p.m
8.5	Preimplantation genetic testing for aneuploidy (PGT-A): Benefits, risks, and its true place in MAR <i>To be confirmed</i>	22/5/2024 6:00 p.m – 7:00 p.m
8.6	Embryo ploidy status and implantation: A conundrum <i>To be confirmed</i>	29/5/2024 5:00 p.m – 6:00 p.m
8.7	Physiology of the preimplantation embryo post biopsy and vitrification <i>Aikaterini Chatzimeletiou</i>	29/5/2024 6:00 p.m – 7:00 p.m
8.8	Biological and clinical importance of mosaicism of the preimplantation embryo <i>Ioannis Georgiou</i>	29/5/2024 7:00 p.m – 8:00 p.m

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Programme of Teaching Module 9

“Novel Concepts and Experimental Approaches in Assisted Reproduction”

Submodule	Lecture-Speakers	Date-Time
9.1	Novel promising concepts in clinical embryology research <i>To be confirmed</i>	5/6/2024 5:00 p.m – 6:00 p.m
9.2	Novel approaches in fertility preservation <i>Nikolaos Vlachos</i>	5/6/2024 6:00 p.m – 7:00 p.m
9.3	Novel experimental approaches in addressing ovarian insufficiency <i>Sonia Herraiz</i>	12/6/2024 5:00 p.m – 6:00 p.m
9.4	Novel experimental approaches: Mitochondrial Replacement Therapy <i>Nuno Costa-Borges</i>	12/6/2024 6:00 p.m – 7:00 p.m
9.5	Digital transformation of the IVF unit <i>To be confirmed</i>	19/6/2024 5:00 p.m – 6:00 p.m
9.6	The future of IVF <i>Joyce Harper</i>	19/6/2024 6:00 p.m – 7:00 p.m
9.7	Concerns and considerations in IVF practices <i>David Albertini</i>	26/6/2024 5:00 p.m – 7:00 p.m

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Programme of Teaching Module 10

“Research Methodology and Evidence Based Medicine”

Submodule	Lecture-Speakers	Date-Time
10.1	The evolution of research in female reproduction: Milestones and future goals <i>George Mastorakos</i>	3/7/2024 5:00 p.m – 6:00 p.m
10.2	Type of studies in research <i>Theodoros Sergentanis</i>	3/7/2024 6:00 p.m – 7:00 p.m
10.3	Research and statistics <i>Kimball Pomeroy</i>	10/7/2024 5:00 p.m – 6:00 p.m
10.4	Basic statistical principles for the practicing physicians and embryologists <i>Theodoros Sergentanis</i>	10/7/2024 6:00 p.m – 7:00 p.m
10.5	The value of systematic reviews and meta-analyses in ART <i>Efstratios Kolibianakis</i>	17/7/2024 5:00 p.m – 6:00 p.m
10.6	Evidence Based Medicine <i>To be confirmed</i>	17/7/2024 6:00 p.m – 7:00 p.m
10.7	Evidence-base in embryology-it is not that simple <i>Jacques Cohen</i>	24/7/2024 5:00 p.m – 6:00 p.m
10.8	IVF add-ons: Proper research methodology and execution <i>Mara Simopoulou</i>	24/7/2024 6:00 p.m – 7:00 p.m

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Programme of Teaching Module 11 Critical Analysis Skills Assessment Round Tables "Problem Based Learning Sessions"

Critical Analysis Skills Assessment		August 2024
Round Tables	Topics-Speakers	Date-Time
Round Table I "The Dos and Don'ts of How to Run a Successful IVF Laboratory"	Instructors to be confirmed	4/9/2024 5:00 p.m – 8:00 p.m
Round Table II "Outliers: handling unusual events in the IVF laboratory"	<u>Moderator:</u> <i>Gerry Celia</i>	11/9/2024 5:00 p.m – 7:15 p.m
	Andrology-The challenge of handling different specimens <i>Liesl Nel-Themaat</i>	11/9/2024 5:00 p.m – 5:20 p.m
	Handling unusual patients-Things to watch out <i>Bryan Kloos</i>	11/9/2024 5:20 p.m – 5:40 p.m
	Oocyte freezing and thawing: What to watch out For <i>Wayne Caswell</i>	11/9/2024 5:40 p.m – 6:00 p.m
	Culture conditions-blastocyst problems: What do we need to know <i>Arthur Chang</i>	11/9/2024 6:00 p.m – 6:20 p.m
	Micromanipulation-Tips and tricks on Biopsy for challenging cases <i>Debbie Venier</i>	11/9/2024 6:20 p.m – 6:40 p.m
	PGT-A: The perspective and responsibility of the geneticist <i>Gary Harton</i>	11/9/2024 6:40 p.m – 7:00 p.m
	<i>Discussion with experts</i>	11/9/2024 7:00 p.m – 7:15 p.m
Round Table III "The JARG's Round Table: Insights in publishing in	<u>Moderator:</u> <i>David Albertini</i>	18/9/2024 5:00 p.m – 7:00 p.m
	The Editor's perspective: A view from the top 2 decades of change and where we are going <i>David Albertini</i>	18/9/2024 5:00 p.m – 5:25 p.m

Reproductive Medicine''	What are the characteristics of a publishable manuscript Pierre Comizzoli	18/9/2024 5:25 p.m – 5:50 p.m
	From the trenches: Managing the process of reviewing Arthur Chang	18/9/2024 5:50 p.m – 6:15 p.m
	From data analysis to clinical relevance Alex Quass	18/9/2024 6:15 p.m – 6:40 p.m
	Discussion with experts	18/9/2024 6:40 p.m – 7:00 p.m
Round Table IV ''Training Management and Development in Clinical Embryology''	Moderator: Giles Palmer	25/9/2024 5:00 p.m – 7:30 p.m
	Training and Management Giles Palmer	25/9/2024 5:00 p.m – 5:30 p.m
	Staff Recruitment /Worldwide Embryologists Status Joe Conaghan	25/9/2024 5:30 p.m – 5:50 p.m
	Responsibilities/Occupational Demands Kathryn Go	25/9/2024 5:50 p.m – 6:10 p.m
	Conflict resolution Andrew Thompson	25/9/2024 6:10 p.m – 6:30 p.m
	Continuing Professional Development Mara Simopoulou	25/9/2024 6:30 p.m – 6:50 p.m
	Wellbeing and Burn-out in the IVF Laboratory Shaista Sadruddin	25/9/2024 6:50 p.m – 7:10 p.m
	Discussion with experts	25/9/2024 7:10 p.m – 7:30 p.m
Written exams on Modules 5-11 (The examination platform will open on September 27 th , 2024, at 5:00 p.m and will close on October 2 nd , 2024, at 5:00 p.m)		