



I. Embryology

Seminar: Physiology of Gametes, syngamy and early stages of embryos recovery, Washing, Qualifying of oocyte-cumulus- complexes

Showing of different handling techniques for embryos and oocytes, showing classical IVF

- Unopette
- Biomedical Instruments
- Cook Stripper
- Fire polished Humagen –Pasteurpipette

Using of different Techniques of Handling

Training of transferring female gametes in different culture systems.

II. Cryopreservation

Seminar: Basics of Cryopreservation and mechanism of freezing and freezing substances, Biochemistry and behaviour of cryopreserved cells.

Presenting of different tools for Cryopreservation and freezing protocols

- LCU
- CTE
- Consartic

Using different tools for different cells with protocols and techniques

Straws, Vials)

- Oocytes
- Sperm
- PN-Stages
- Embryos
- Ejaculate
- TESE Biopsy
- MESA Samples
- Ovarian biopsies

III. ICSI

Meaning of Intracytoplasmic sperm injection (ICSI) and importance of IVF

Presentation of different manipulation systems and pipette types

- Eppendorf
- Luigs&Neumann

IV. ICSI

basics of manipulation, adjustment of pipettes, basic -knowledge

manipulation, way to prepare dishes.

oocyte and sperm preparation for ICSI

Preparation of ICSI, hands on training ICSI

V. **IMSI = Cyto screen and polarAide MTG**

Seminar: Importance and use of IMSI

Technology , understanding and results of new methods in assisted reproduction

VI. Polar body biopsy

Seminar: Basics of genetic analysis of FISH samples, meaning and

explanation of results of 1st and 2nd polar body of oocytes. Genetic diseases.

adjustment of biopsy pipettes and manipulator, theorie of biopsy

and preparation of FISH

Extraction of polar bodies of animal oocytes and preparation of

FISH

VII. Blastomere biopsy

Seminar: Basics of genetic analysis of FISH Samples and meaning

regarding genetic diseases. Use of blastomere in other countries without restriction because of embryo laws.

Use of Laser Octax MTG and extraction of blastomeres and preparation for

FISH.

Use of Hamilton Thorne Laser

Training of extraction of blastomeres and polar bodies, transferring and

handling.

VIII. Quality management in human IVF lab, collecting Data and protocols.

Seminar: Basics of quality control in IVF laboratories

recording different working areas

Recording of section points in a IVF laboratory

Recording IVF Protocols

- Stimulation

- Egg collection
- Spermogramm
- Sperm preparation
- PN control
- Embryoscoreing
- Embryotransfer
- Cryoprsvervation
- Assisted hatching

IX. In vitro Maturation, Vitrification, Blastocyste culture

Seminar: State of the art, benefit and examples out of routine

Finding GV oocytes and preparation of media

Performing Vitrification of oocytes and thawing procedure as well

performance of blastocyst culture under different

restrictions, Blastocyst grading

X. Maintainance and callibrating of equipement in IVF Lab, recording data and documentation

Discussion of equipement I

- Inkubators C16, C60 Labotect
- Heating stages
- Manipulators Luigs and Neumann
- **Eppendorf**

Discussion of equipement II

- Sterilisation
- Autoklave
- Ultrasound

- Cryopreservation

XI. Trouble Shooting in human IVF laboratory, emergency plans

Working out of sensitive switch points in human IVF labs (Examples)

- How to mark dishes and samples
- Organization
- Water and electricity
- Protection of data privacy
- Protection of patients

Working out emergency plans

- Power failure
- Water flow
- Failure of gas
- Mistake
- No ET possible

XII. Certificate

XIII. Handle out certificate and congratulation procedure

These lectures and hands on trainings are created by



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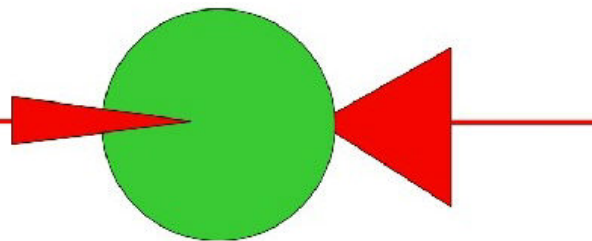
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List of Disposals and machines



- **STERILE Corral-Dishes and UNSTERIL Corral-Dishes**
- **STERILE GPS-Dishes and UNSTERIL Corral-Dishes**
- **Mineralöl 10 und 2 x 50 ml**
- **Sperm gradient system: Upper and Lower Solution and Wash-Solution**
- **1 Coda-Unit for Incubator and**
- **1 Coda-Inline-Filter for Purification of Gas inbetween gasbottle and Incubator)**



K-MINC-1000	Mini-Incubator
ICSI-Pipettes/Holding	30°/35°- K-MPIP-/K-HPIP
Denuding Pipettes(Flexipets)	130/140/170 K-FPIP-
Flexipet Handstück	K-MPH-1000

KB Biosystem Clédon

ART-1526 - Cleavage Protein Plus Medium 20ml

1 x ART-1529 - Blastocyst Protein Plus Medium 20ml

1 x ART-4008P - Oil for Tissue Culture 100ml

5 well dishes

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Medizinprodukte GmbH & Co. KG

GM 501

PVP

Origio GmbH

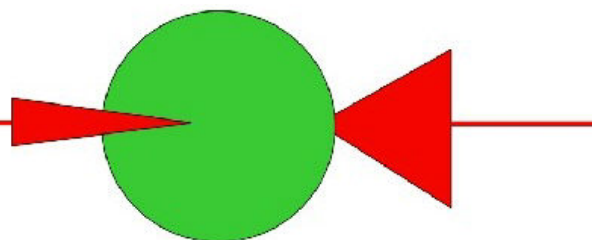
rekombinant ICSI Cumulase

Vitrification media

BlastAssist for Blastocyst culture

NUNC dish collection

**BioMedical
Instruments**



Holding Pipettes

ICSI Pipettes

Retransfer pipettes



C16

C60

InControl

Thermo Cell

Cell Trans

Hotplate

Fermacidal

Labotect Cryo Uni

Embryotransfercatheder

Hamilthon Thorne Laser



Octax Laser Shot System

Octax Eyeware Imaging Software

Octax polarAide System

Octax ICSI Guard

Octax Cytoscreen



Meditex IVF Software



CVM Vitrification System

HSV High security vitrification kit

High security Straw and sealer

IVF Biofreeze



Workstation



Special designed laboratory table



Pressure regulator with steel membrane