Summer Training on Assisted Reproductive Technologies with Germ cells of Animal ModEls – 2 CRYO

26-30 September 2022

GENERAL INFORMATIONS

LOCATION

University of Bari - Department of Biosciences, Biotechnologies and Biopharmaceutics

- Labo-biotech, via Giuseppe Fanelli n. 204, Bari
- University Pole of Valenzano, Provincial road to Casamassima, km 3 - Valenzano (Bari)

THEORETICAL AND PRACTICAL SESSIONS

Theory: 09:00 – 13:00
Practice: 14:00-18:00

CALL

http://www.uniba.it/didattica/corsi-universitari-di-formazione-finalizzata/summer-winter-school/summer-school

The course is **FREE**. Deadline for the applications: **30 June 2022**

Maximum number of partecipants: **20**

3,5 academic credits **(CFU)**

SPONSOR

OUR CONTACT
Director of the Course: Prof. Maria Elena Dell'Aquila
Tel: 080 5443888 – email: mariaelna.dellaquila@uniba.it

Scientific Program

26.09 The oocyte

8:00 Registration
8:30 Opening remarks
- Rector of University of Bari
- Head of the Department DBBB
- Summer School Director

9:00 – 13:00 Lectures
9:00 **BAJ Roelen** Oocyte growth and maturation
10:30 **ME Dell'Aquila** The IVM technology
11:30 **NA Martino** Oocyte quality assessment
12:30 **A Mastrorocco** 3D oocyte maturation systems

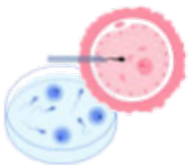
14:00-18:00 Lab training
NA Martino, BAJ Roelen, A Mastrorocco, ME Dell'Aquila
The ART lab; oocyte collection and selection; IVM (static and perfusion systems)

27.09 The sperm cell

9:00 – 13:00 Lectures
9:00 **ME Dell'Aquila** Spermatogenesis and sperm capacitation
10:30 **NA Martino** Sperm quality assessment
11:30 **D Ferri** Male Fertility Assessment in human ARTs
12:00 **P Cirigliano** SCA Evolution sperm quality system

14:00-18:00 Lab training
NA Martino, BAJ Roelen, A Mastrorocco, ME Dell'Aquila
Sperm preparation procedures (swim-up and density gradient centrifugation)
Basic methods for sperm quality evaluation (concentration, viability, motility)
Demonstration activity by the company (MICROPTIC)

28.09 Assisted fertilization



9:00 – 13:00 Lectures
9:00 **BAJ Roelen** Physiology of fertilization in mammals
10:00 **BAJ Roelen** Assisted microfertilization techniques: evolution and clinical applications
11:00 **BAJ Roelen** Genetic modifications
11:30 **ME Dell'Aquila** Assisted fertilization (IVF, ICSI)
12:00 **S Mrenoshki** Microbiome role in female reproduction
12.30 **D Baldini** Medically assisted procreation techniques in humans: from the diagnostic setting to the therapeutic cycle

14:00-18:00 Lab training
14:00 **YS Cho** Human and large animal IVF labs - Differences and similarities
14:45 **YS Cho, NA Martino, BAJ Roelen, A Mastrorocco, ME Dell'Aquila**
Oocyte and sperm preparation for IVF and ICSI; Conventional IVF and ICSI procedures

29.09 The embryo

9:00-13:00 Lectures
9:00 **BAJ Roelen** Preimplantation embryo development
10:00 **ME Dell'Aquila** The IVEC technology
10:30 **NA Martino** Embryo quality assessment
11:00 **S Cseh** Basic principles of cryopreservation and cryoprotectants
12:00 **B Somoskoi** Basic principles of vitrification

14:00-18:00 Lab training
NA Martino, BAJ Roelen, A Mastrorocco, ME Dell'Aquila
Set up of the laboratory for cryopreservation of gametes and embryos
Slow freezing and rapid thawing techniques of oocytes and embryos
Polscope-, Piezo- and Laser-assisted ICSI
Setting-up of in vitro embryo culture
Assessment of embryo morphology and morphokinetics

30.09 Cryopreservation of gametes and embryos

9:00-13:00 Lectures
9:00 **S Cseh** Slow freezing techniques of oocytes and embryos
10:00 **B Somoskoi** Vitrification of oocytes and embryos
11:00 **BAJ Roelen** Embryo models using stem cells
11:30 **ME Dell'Aquila** Preimplantation Genetic Testing
12:30 **L Temerario** Cryopreservation for biodiversity conservation

14:00-17:30 Lab training
S Cseh, B Somoskoi, NA Martino, A Mastrorocco, ME Dell'Aquila
Vitrification procedures of oocytes and embryos
Post-thawing and post-vitrification evaluations
Chromatin staining of oocytes, zygotes and embryos and analysis
Assessment of embryo bioenergetic/oxidative status

17:30-18:30 Final test

ME Dell'Aquila
University of Bari

NA Martino
University of Bari

A Mastrorocco
University of Bari

L Temerario
University of Bari

BAJ Roelen
University of Utrecht

Y S Cho
Assisted Procreation Unit Santa Maria Hospital, Bari

D Baldini
Momò FertiLife, Bisceglie

D Ferri
Momò FertiLife, Bisceglie

S Mrenoshki
University of Skopje

S Cseh
University of Budapest

B Somoskoi
University of Budapest