UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

SHORT MASTER FORM

Title of the Short Master	**3D TECHNOLOGIES IN ASSISTED REPRODUCTION - ANIMAL MODELS FOR TRANSLATIONAL MEDICINE**
Duration	**100 hours**
European credit transfer system (ECTS)	**4 ECTS**
Course description	**Four meetings of 8 hours of lessons each, for a total of 32 hours, are planned for 4 weekends. The course will start on 27 October 2017 and will last up to mid-December 2017. The official language of the course is Italian. Some lectures will be in English.** **New deadline for submitting applications: 25 October 2017**

LOCATION AND SECRETARY OFFICE

Name of the proposing structure	**Department of Biosciences, Biotechnologies and Biopharmaceutics (DBBB)**
Secretary office	**- LABO-BIOTECH** **(Via Giuseppe Fanelli 2014, 70125, Bari, Italy)**
Location for teaching activities	**- LABO-BIOTECH** **(Via Giuseppe Fanelli 2014, 70125, Bari, Italy)** **- Biotechnologies laboratories - Department of Biosciences, Biothecnologies and Biopharmaceutics - Valenzano (Str. Prov. Casamassima Km3 70010** *** Details of data and locations will be provided during the presentation event**

COURSE DIRECTOR

Name and surname	**Prof. Maria Elena Dell'Aquila**
Department	**Department of Biosciences, Biothecnologies and Biopharmaceutics (DBBB)**
Telephone/ E-mail	**+39 080-4679888 / +39 3471953159** **mariaelena.dellaquila@uniba.it**

ADMINISTRATIVE SECRETARY OFFICE - MASTER OPERATING UNIT

Multifunctional Student Palace (ex Palazzo Poste)
Piazza Cesare Battisti n.1, firts floor - 70122 Bari Email: universitabari@pec.it
Reception hours: Monday- Friday 10.00 – 13.00- Tuesday- Thursday : 15.00 – 17.00

OBJECTIVES OF THE COURSE

Aim of the proposal: Assisted reproduction is an important field of biomedical sciences with the aim of overcoming human infertility, a growing social problem, and infertility in farm animals, a phenomenon with significant economic impact. The success of these technologies requires continuous development of innovative methods and devices and the preparation of specialized personnel. 3D culture technologies, associated with microfluidics, microbiosensoristics and non-invasive evaluation of cellular systems, are emerging scientific and technological areas from which assisted reproduction can get significant benefits. The automation of long and delicate procedures, the ability to better mimic the in vivo environment and the miniaturization of the required instrumentation would result in considerable quality and objectivity improvements with costs and time savings. Non-invasive methods are being developed, allowing analysis at high technological levels while maintaining the viability of reproductive cell systems.

This short master is aimed to provide theoretical-practical skills on reproductive technologies, from the traditional ones (still currently used) to their innovative 3D counterparts, candidate in the near future to occupy a prominent role in assisted reproduction, both in clinical applications and in research programs. Starting from the physiological bases of reproduction in humans and in animal models of translational relevance, such as cows and sheep, the set of traditional and innovative 3D devices and their operating principles will be presented covering the entire path of assisted fertilization, i.e. oocyte maturation, viable sperm selection and capacitation, fertilization, pre-implantation embryo culture, and quality assurance methods for gametes and embryos. The course will give attendees the unique opportunity to perform practical training on most of these technologies, with gametes and embryos of farm animals, under the guide of specifically trained personnel.

Professional opportunities: Acquired innovative skills will be expendable in Italy and abroad in public and private health care facilities, with human or veterinary assisted procreation units, and in research institutions working on human or animal reproduction. Furthermore, as the in vitro and animal models presented here have been validated or are currently under validation procedure by the European Organism for the Validation of Methods Alternative to Animal Experimentation (ECVAM), acquired skills will be available for use in toxicity control laboratories of industries for pharmaceuticals, cosmetics, foodstuffs, hygiene products and other articles of daily use.

ORGANIZATION OF THE COURSE

Minimum frequency required: 80%. The course will consist in a mix of theoretical lessons and lab activities to be carried out in equipped scientific laboratories at University of Bari. At the end of the course, a certificate will be issued on the skills acquired to those who have attended at least 80% of the training activities and passed a final evaluation test.

NUMBER OF PARTECIPANTS

Minimum number	10
Maximum number	30
Hearers	max 20% of the participants
Participants in individual modules	for each module, max 20% of the participants

QUALIFICATIONS

BACHELOR DEGREE	All courses
MASTER DEGREE	All courses
	Candidates may also be admitted when they are not in possession of one of the abovementioned degrees, after evaluation and approval of the Short Master Committee, provided they have completed the High School and have gained professional experience for at least two years in work at structures related to assisted reproduction of human or veterinary areas.
TITOLI E REQUISITI PREFERENZIALI	Master degree, specialization degrees, post-graduate courses, and phd programs consistent with the course topics; upper secondary education diploma associated with certification of work activities (and duration) in assisted reproductive health care centers. English language at the B2 level.

SELECTION PROCEDURE

The selection will be done only if applicants exceed the maximum number of eligible students and will be carried by qualifications and oral exam. A score of merit will be provided on the basis of the consistency of the curriculum (50 points) presented with the training course and an oral exam (50 points). In case of equal merit the youngest will be favorite (chronological age).

Analytical criteria: Degree of study up to max 15 pt (3-year degree: 3 pt, master's or master's degree: 5 pt; Specialization diplomas, master's and advanced courses, up to max 5 pt; Doctoral degree: up to max 5pt); Professional

activity (max 10 pt); Knowledge of English (max 5 pt); Graduation Rating (max 20 pt: 110 / and praise = 20; 110-106 = 15; 105-101 = 10; 100-96 = 5; 95-92 = 1; 91 or lower vote = 0).

The oral exam will consist of an interview aimed to verify the characteristics of the candidate: curriculum vitae et studiorum, attitude and motivation, knowledge of the English language. At the oral exam are assigned up to 50 points.

QUOTA D'ISCRIZIONE E CONTRIBUTO

Subscription fee	1000,00 Euro
Number of payment rates	2
Amount of the first payment rate + insurance + stamp duty	Euro 500,00 + Euro 4,13 + Euro 16,00
Amount of the second paymeent rate (35 days after the subscription)	Euro 500,00
Optional graduation parchment	Euro 67,60 + n.2 stamp duty* of Euro 16,00 * to be due to administrative secretary - master operating unit
Fee for hearers max 4 modules	For each single module: Euro 100,00 For all modules: Euro 400,00
Participants to individual modules	Euro: 250,00