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VP097_DISAFA

Visiting Professor Program
Academic Year 2024/2025

TEACHING COMMITMENT: **20 hours**

COURSE TITLE

Biotechnology of Animal Reproduction

TEACHING PERIOD

2nd term

SCIENTIFIC AREA

Animal Science

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

The VP will focus the teaching activities on the following biotechnologies: - Cryopreservation for oocytes and embryos; - In vitro maturation (IVM); - In vitro fertilization (IVF); - Intra-cytoplasmatic sperm injection (ICSI); - In Vitro Embryo Production (IVEP); - New frontiers in the Embryo Transfer; - Somatic Cell Nuclear Transfer (SCNT); - Cloning technologies in mammals. In addition, the VP will focus on the protective role of cumulus cells and the effect of antioxidants in the production and development of buffalo embryos.

LEARNING OBJECTIVES

Theoretical and practical knowledge of the most modern animal biotechnologies for the genetic management of animal biodiversity, with particular reference to biomolecular techniques related to the optimisation of animal reproduction and the protection of endangered species.

OTHER ACTIVITIES BESIDES THE COURSE

Throughout the visitation period at UniTo, the VP will conduct a seminar open to all members of the SAMEV School (Department of Agricultural, Forest, and Food Sciences, and Department of Veterinary Medicine). Additionally, the VP will be available to provide guidance to PhD students and research fellows in Animal Science regarding their scientific inquiries.

VISITING PROFESSOR PROFILE

The profile of the best candidate is: - Master Science degree in Animal genetics, breeding and reproduction; - PhD in Animal Physiology; - documented experience in the biotechnology of animal reproduction with particular reference to big ruminants (bovine and buffalo); - documented experience in the regulation of oocyte maturation and embryonic development in vitro; - documented experience in the Ovum Pick Up (OPU), In Vitro Embryo Production (IVEP), Embryo Transfer (ET), technologies and transgenic Somatic Cell Nuclear Transfer (SCNT) technology. A plus is a documented experience in molecular markers identification (SNPs, CNVs, etc.) and Genome Wide Association Studies (GWAS).

CONTACT REFERENT

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