

Nutritional and reproductive strategies to mitigate the impact of heat stress on dairy cows

Background

Global warming negatively affects dairy farming causing a production decline, fertility problems, immune and metabolic problems in the transition period and an overall reduced sustainability.

- **OB1.** Identify early biomarkers of the effects of heat stress on dairy cow fertility:
 - Follicular fluid analysis during the transition period (metabolomics, gene expression, proteomics, miRNA)
 - Analysis of gametes quality during different period of exposure to heat stress
 - Oocyte culture, embryonic development (microscopy; gene expression; Seahorse®)
 - Semen quality analysis (CASA; flow cytometry; Seahorse®)

OB2. Promote nutritional and managerial strategies aimed at improving and mitigating the possible negative effects induced by heat stress

Period of activity: 1st November 2023 to 30th October 2026.

6 months period abroad compulsory

The period abroad should be carried out at Ghent University with the purpose to perform analysis not routinely carried out in our structures

Tutor and co-tutors

Tutor : Prof. Diego Bucci

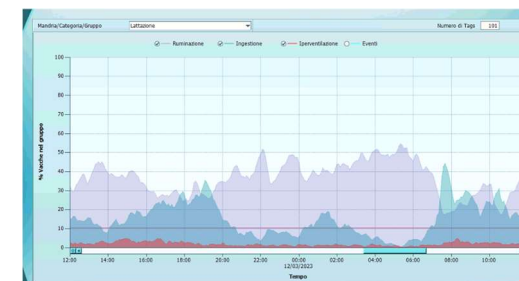
Co-tutors: Ludovica Mammi and Barbara Merlo

Contacts

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Phd position

Basic sciences curriculum
at the Department of
Veterinary Clinical Sciences
(DIMEVET), University of
Bologna, Italy

Facilities involved at DIMEVET

National Institute of Artificial Insemination (INFA)

Mari, Mislei, Ballotta, Bucci



National institute for artificial insemination facilities

Laboratory of gametes physiology and reproductive biotechnologies. (FBGR)

Bucci, Spinaci, Ortiz, Cappannari



Laboratory of animal reproduction and biotechnologies (LRBA)

Merlo, Iacono



At the end of the 3 years PhD period, the candidate should have published 2 peer reviewed articles

Access to the position following a public selection. For applications check at the [PhD in Veterinary Sciences website](#).

Laboratory of biochemistry, molecular and cellular biotechnologies (BioCM)

Nesci, Bernardini, Zannoni



Experimental dairy farm

Formigoni, Mammi, Cavallini

