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AGRI SYSTEM
Scuola di Dottorato
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KEY-WORDS:
STRESS · GENETICS · DAIRY CATTLE

PROFILE
I am a second-year PhD student in Animal Science specialized in Animal Genetics and Genomics. Thanks to several international experiences (Europe and Australia) I learnt the value of networking.

AFFILIATION
Department of Animal science, Food and Nutrition (DIANA) Università Cattolica del Sacro Cuore

LANGUAGES

Mother language

Level C1

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PROJECT TITLE
Genome-wide analysis of stress related biomarkers in dairy cattle

Steps of the research
- Genomic analysis on lactating cows to identify DNA markers associated to blood biomarkers indicators of stress.
- Identification of gene variants influencing the expression of blood stress biomarkers.
- Validation of the association of gene variants with the welfare of cows during peripartum stress.
- Propose the use of DNA variants for the selection of more stress resilient dairy cows.

Main Results
Significant genetic association found for three biomarkers related to liver functionality and inflammation process

Research Contribution
When validated, this information would permit genetic selection for more robust and stress resilient cows. Expected effects are increased animal welfare, decreased production losses and lower use of antimicrobials. The resulting higher production efficiency and lower environmental impact will improve the sustainability of dairy farming.

Collaborations
University of Adelaide - 2019
Prof. J.L. Williams

Why should you care?
Dairy cattle are exposed to several stressors leading to efficiency losses. This means higher environmental impact and higher costs for the farmers.
But what if we identify a genotype allowing a resilient stress response?