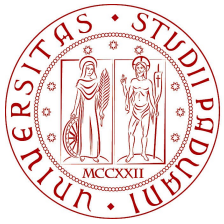

UNIVERSITÀ
DEGLI STUDI
DI PADOVA

Curriculum Vitae

Family Name: Martinez Castillero

Given Name: Maria

Nationality: Spanish

Date of birth: 16/05/1991

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Education:

- Degree in Veterinary Medicine (Zaragoza, Spain)
- MSc in Animal Science (Copenhagen, Denmark)
- PhD student in Animal and Food Science (Padova, Italy)

Research areas:

- Quantitative Genetics
- Genomics
- Programming

PhD project:

My PhD projects consists on the performance of genetic and genomic analyses for fertility associated traits in Italian Simmental, Brown Swiss and Holstein populations of the northeastern Bolzano province. The genetic study includes univariate and multivariate analyses for each breed, and the inclusion of a genotype x environment interaction by treating those fertility associated traits as different traits (depending on the environments created) and by the use of reaction norm models. All analyses are implemented using a software tool, TM. The analyses of genotype x environment. In addition, a study of the causal effects of the production based traits on fertility traits will be performed by analyses using recursive models.

The genomic study for the fertility associated traits will be done by Genome Wide Association (GWAS) procedures using phenotypic and genomic information and considering additive and non-additive genetic effects. Fertility will be analyzed in order to obtain appropriate estimates of additive, dominant and epistatic variance components. The data will be analyzed using single-step genomic approaches that consider both additive and non-additive genetic variation.

The output of these analyses will allow to provide genomic breeding values for and to evaluate its potential use for breeding purposes in the Italian Simmental, Brown Swiss and Holstein populations and, to develop simulation studies to define optimum genetic management to increase fertility using mate allocation techniques that allow to take advantage of the prediction of non-additive genetic effect between potential mates.

Supervisor:

Alessio Cecchinato

Oral communication:

Martinez-Castillero, M., Varona, L., Toledo-Alvarado, H., Bittante, G., Cecchinato, A.: Genetic analyses of fertility traits in Italian Brown Swiss and Simmental breeds. XIX National congress of Animal Genetics, 14-15.June 2018, University of Leon, Spain