

Call for PhD candidates at the Laboratory of Animal Genetic Resources at CIISA-FMV

**Title: Litter size in Alentejano sows: a consequence of crosstalks between the Oak tree ecosystem, DNA methylation and Genes**

The success of genomic selection in the improvement of several complex traits with low heritability has been reduced. Project GERO-NIMO: Genome and Epigenome eNabled breeding in Monogastrics (101000236) aims to improve the understanding of the biological mechanisms underpinning complex traits that are strongly affected by non-genetic inheritance that affects the epigenome. Litter size is among these traits, and it is the major factor affecting profitability in Alentejano swine production. Using state of the next generation sequencing technologies that will allow to characterize the genome, the transcriptome and the epigenome of the reproduction system of pregnant sows combined with an experimental design that will allow estimating the effects of breed, of mating season and of crucial physiological traits, this proposal will contribute to generate a deeper understanding of the physiological and molecular mechanisms associated with reproductive efficiency in pigs with impact in breeds of low prolificity breeds like the Alentejano. Candidates with a recognized MSc in any field of life sciences including mathematics and statistics are accepted.

Bolsa Mista: FMV-UL & Wageningen University (Netherlands) funded by CIISA  
Supervisor: A.J. Amaral (CIISA-FMV)  
Co-supervisors: L.T. Gama (CIISA-FMV)  
Ole Madsen (WUR)

Contact: [andreaamaral@fmv.ulisboa.pt](mailto:andreaamaral@fmv.ulisboa.pt)  
[andreaamaral@campus.ul.pt](mailto:andreaamaral@campus.ul.pt)