

Breed effects on adipose tissue and muscle transcriptome in growing Iberian and Duroc pigs

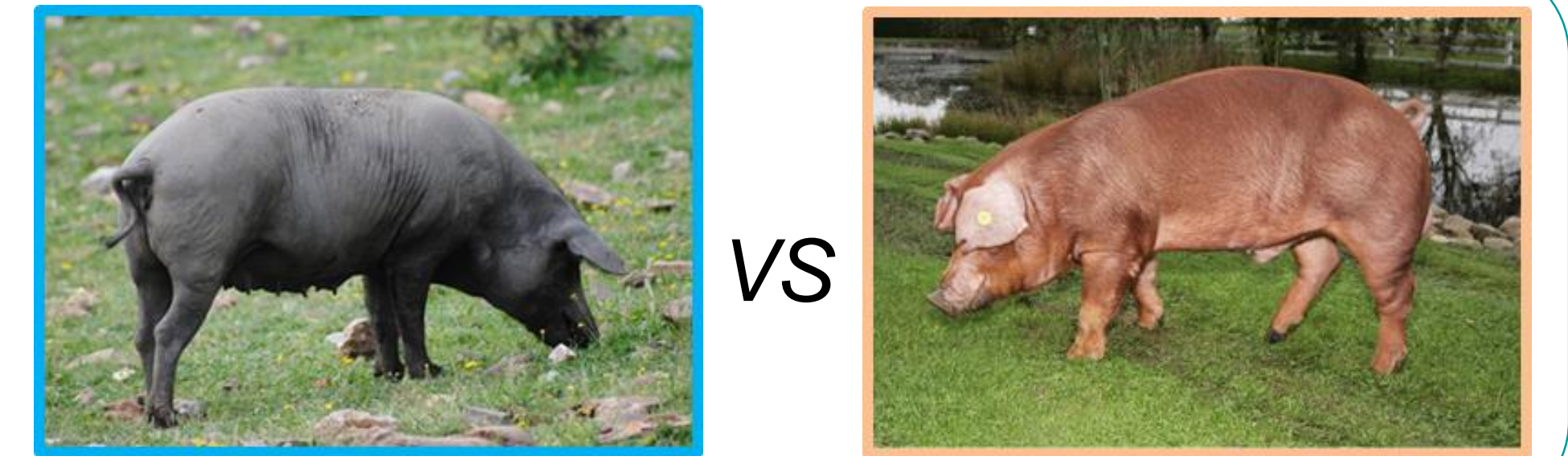


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INTRODUCTION

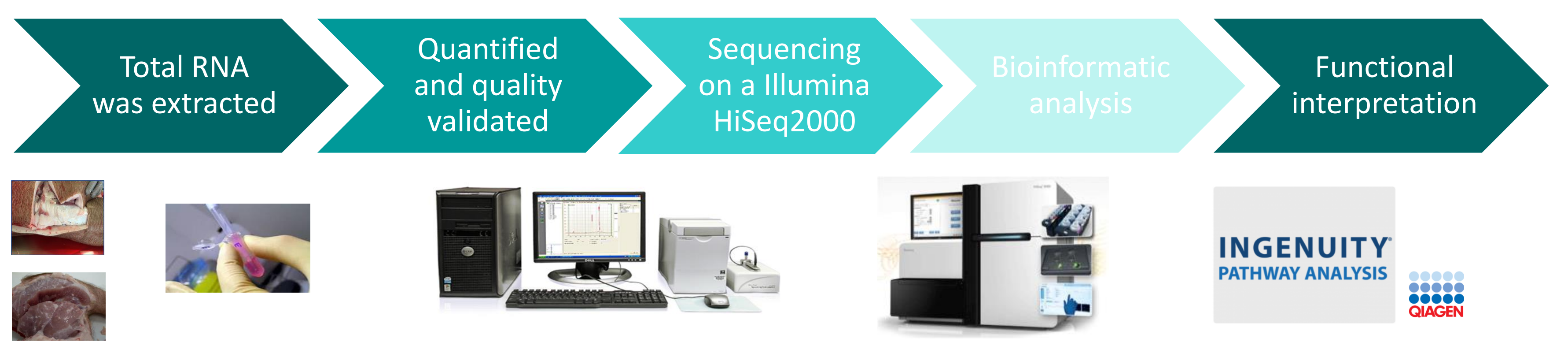
Iberian pig production is based on both purebred Iberian and crossbred Duroc x Iberian pigs. Iberian and Duroc breeds show important phenotypic differences in growth, fattening, tissue composition and meat quality. The study of breed effects on gene expression, could explain phenotypic and metabolic differences between breeds.



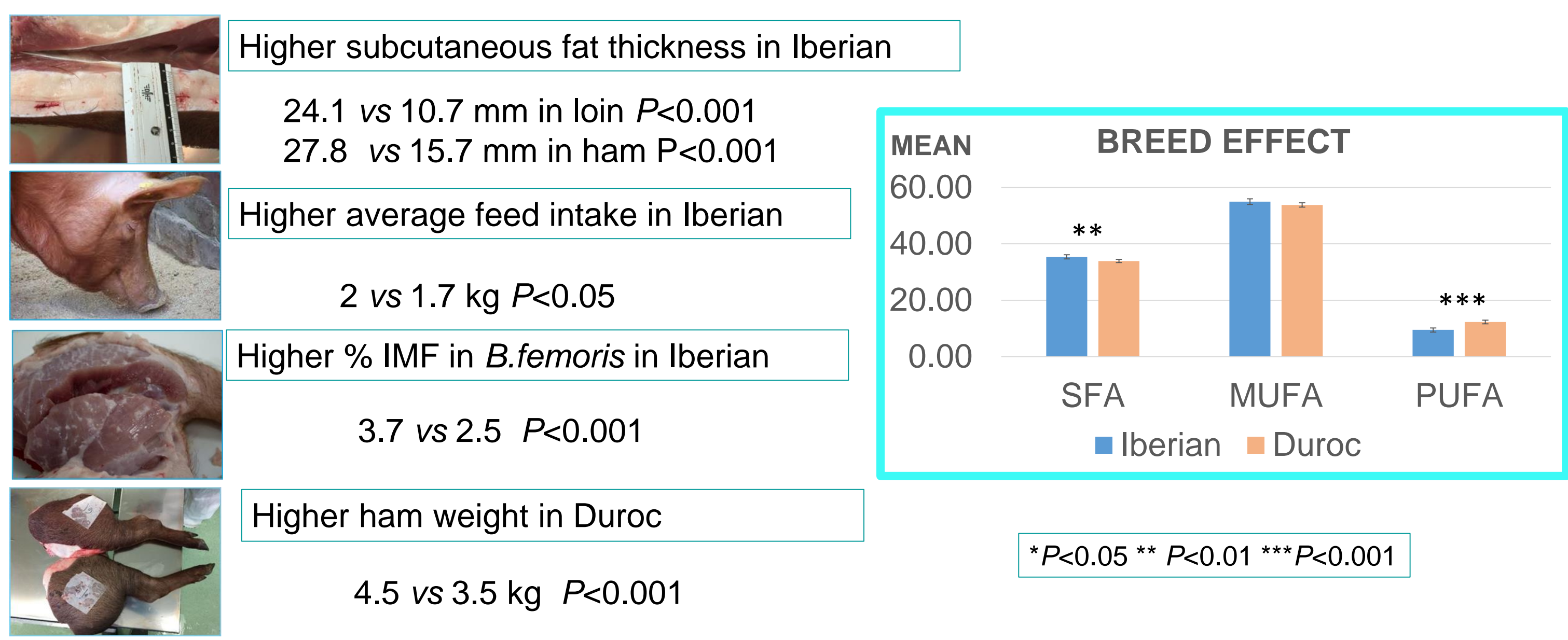
AIM

The objective of this study was to evaluate breed effects on phenotype and ham subcutaneous adipose tissue and *Biceps femoris* muscle transcriptome in growing Iberian and Duroc pigs with RNAseq technology.

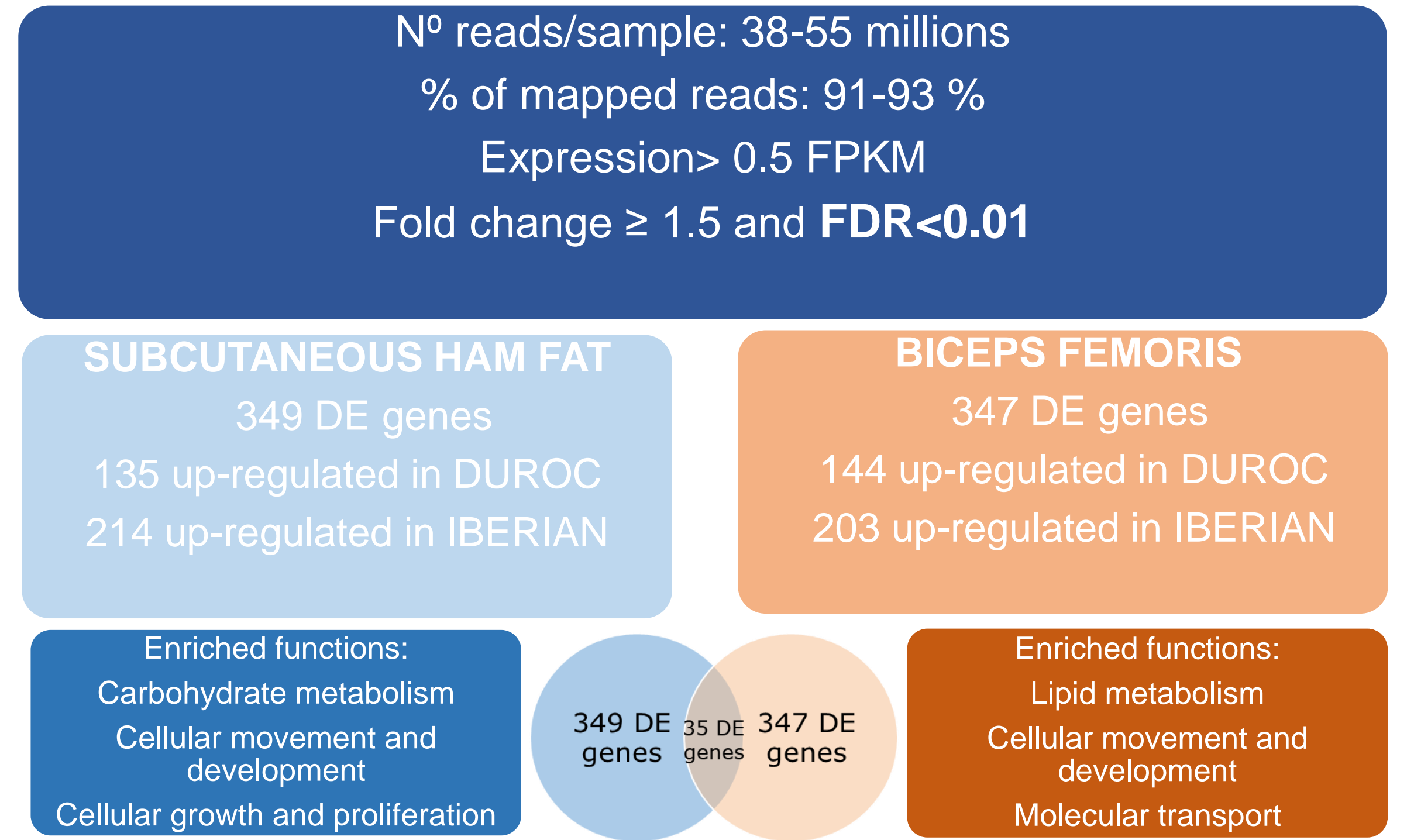
MATERIAL AND METHODS



PHENOTYPIC RESULTS

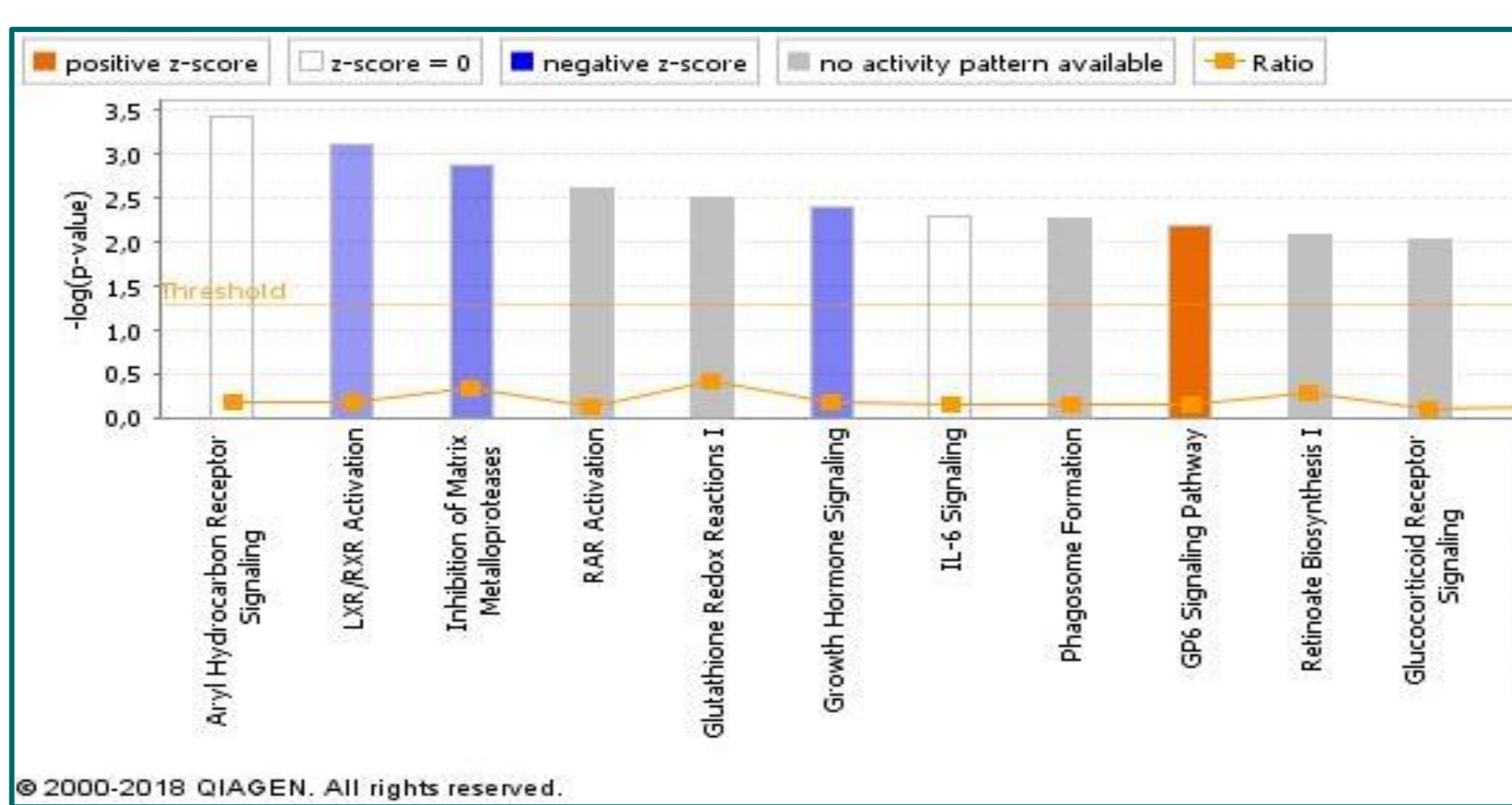


TRANSCRIPTOMIC RESULTS

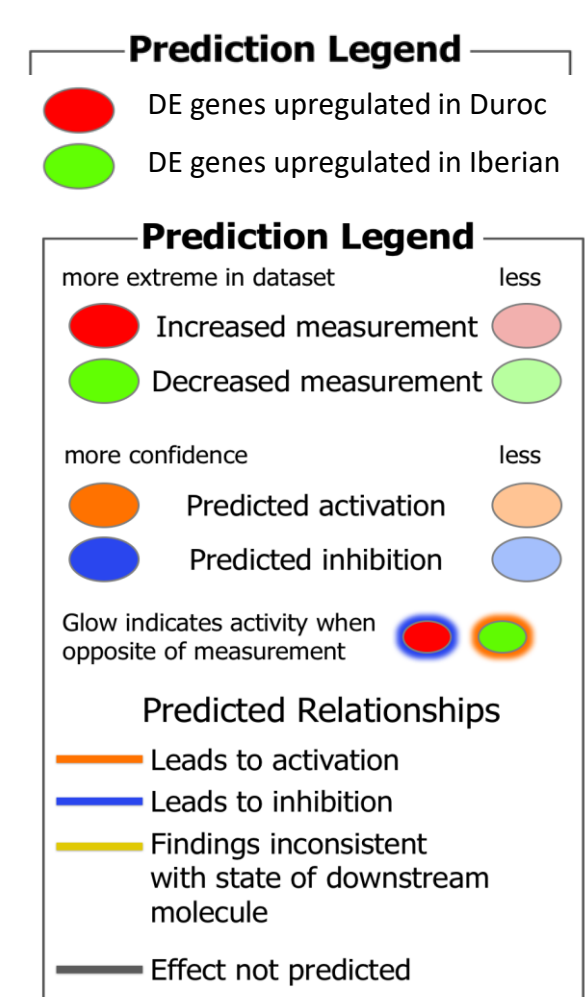
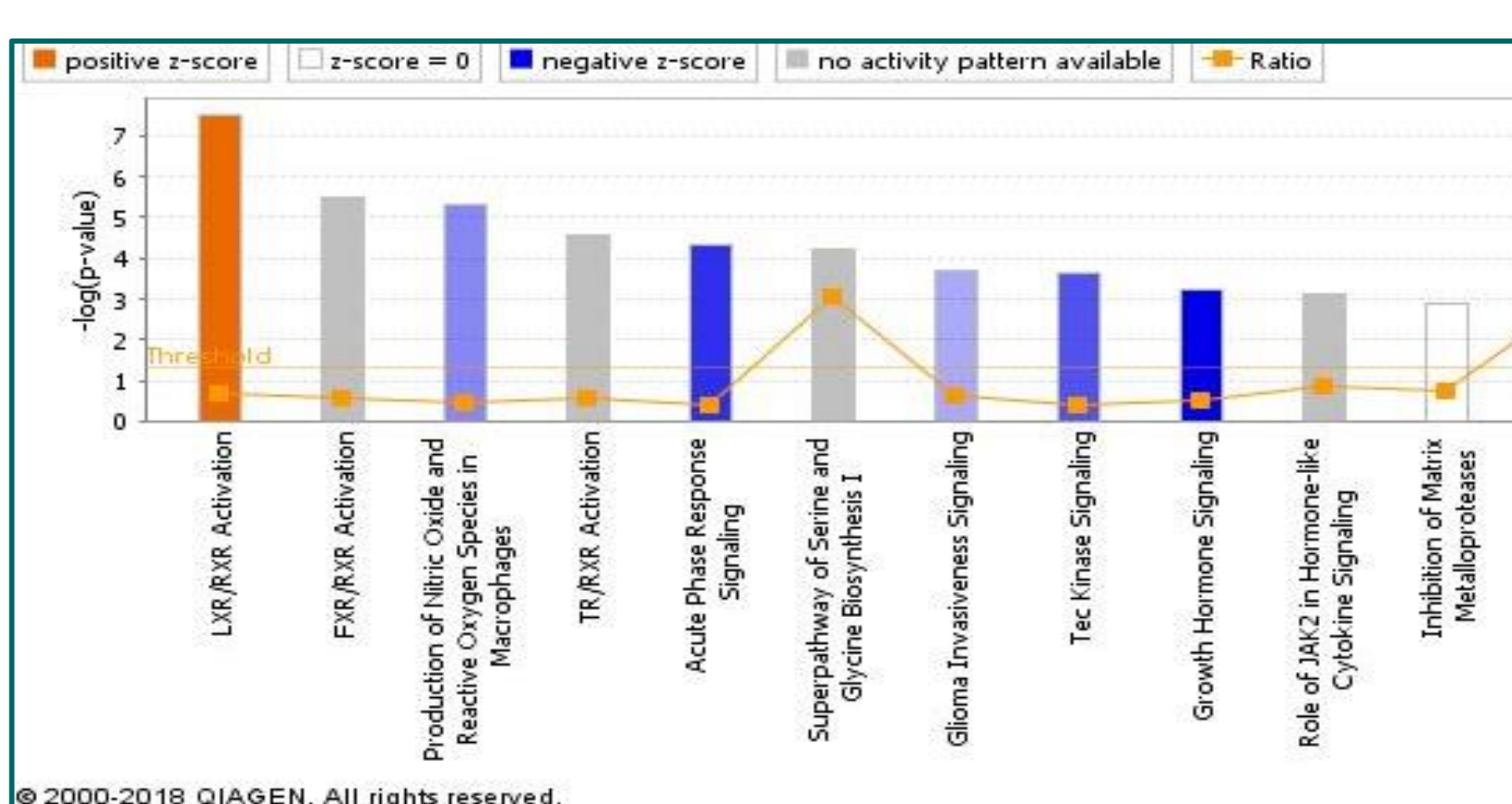


FUNCTIONAL ANALYSIS

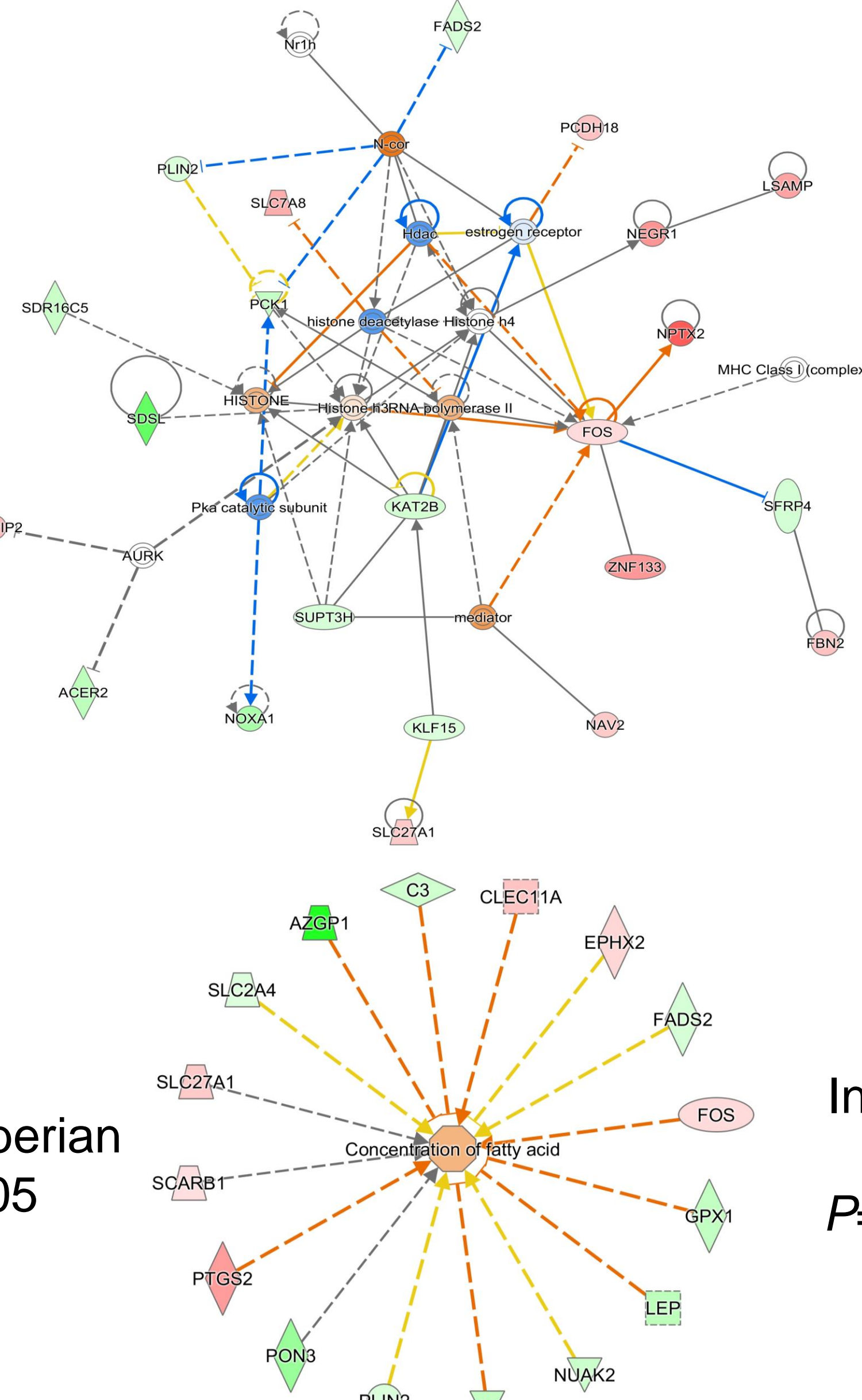
CANONICAL PATHWAYS ADIPOSE TISSUE



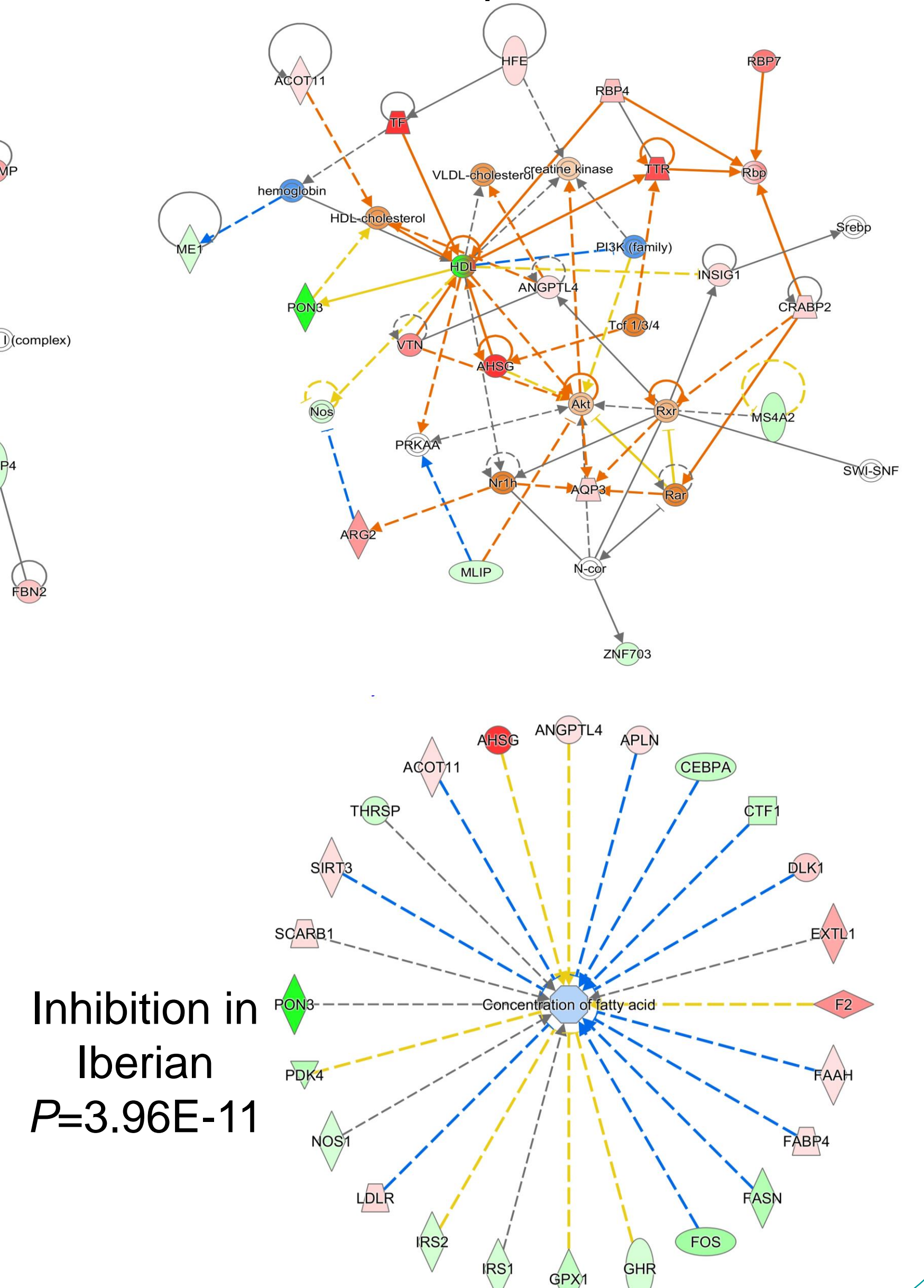
CANONICAL PATHWAYS BICEPS FEMORIS



Adipose tissue



Biceps femoris



CONCLUSIONS

The results indicated a **strong effect of the breed on gene expression** in both tissues affecting relevant molecular functions related to the phenotypic differences observed. The bioinformatic analysis also allowed the prediction of potential regulators (such as ATF4, ERBB2, INS1 or TNF) for the expression differences observed.