

Construction d'un modèle de prédiction de la force de cisaillement de la viande de porc cuite à partir de données d'expression génique

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Construction of a predictive model of shear force of cooked pig meat using high-throughput expression data

Pork quality is highly variable and the availability of relevant predictors of fresh meat quality at slaughter is critical to optimize carcass use and improve its valuation. High throughput gene expression studies have been widely used to describe biological mechanisms underlying variation of several traits but data are scarce regarding their use as tools for the development of biomarkers. In this study, exhaustive transcriptomics analysis of 300 Longissimus muscles (collected at slaughter) was achieved by microarray hybridization, using a custom repertoire of 15,000 60-mer DNA probes, targeting transcripts expressed in pig skeletal muscle. This study describes the method applied for selecting informative and robust predictors of shear force of cooked meat using mRNA levels. In particular, the minimal number of predictors included in the model was defined using a statistical framework for prediction. Finally, an optimal model with 7 predictors was established but will have to be validated using qPCR before it can be considered an effective tool to predict pork tenderness.