The EXCELMEAT project (http://www.bdporc.irta.es/excelmeat/Index.html) is a collaboration of eight research groups from Spain, United Kingdom, Italy, Belgium, Ukraine, United states andd China geared toward increasing worldwide cooperation in the area of pig meat quality. The project aims also at stimulating academia–industry interaction and developing multidisciplinary collaborative research in the area of genetics of pork quality and novel effective technologies for meat quality trait detection

Since the beginning of the EXCELMEAT project, many fruitful researcher exchanges and collaborative studies have been carried out. Through these exchanges a number of candidate genes related to muscle development and fat metabolism, which are the two main attributes to the quality of pork, have been studied. This has resulted in the development of new meat quality markers.

Novel technologies for the rapid and cost-effective analyses of meat quality traits have also been developed. These new technologies, after appropriate industry evaluations, can potentially be implemented in abattoirs, meat cutting plants and can be adapted for application on live animals. Moreover new genomic data (at DNA and RNA level) on fat traits (backfat and intramuscular fat content and fatty acid composition) in pigs have been obtained by the different partners involved in the project and these results can be moved to and applied in selection schemes in pigs to improve nutritional of fresh meat and technological quality of dry-cured ham.

Project activities have been communicated in the form of two international workshops entitled “The omics of pork quality and biosensing technology” held in Lleida (Spain) and “Genomics, welfare and new technologies for pork quality” held in Bologna (Italy). The workshops included 30 research presentations and were attended by over 60 delegates from academia, research organisations, industry and other stakeholders.

The collaborative effort of EXCELMEAT ultimately aims to boost the improvement of animal breeding and selection procedures with regard to pork quality. The final goal is to contribute towards more competitive pork production in the EU while maintaining animal welfare and positively contributing to human health.

Key words:

Pig meat quality, meat quality markers, candidate genes, novel technologies.