

- Workshop: May 4-5, 2017
- Importance of nutrition and environment on birth weight, muscle growth, health and survival of the neonate
- To be held at: Animal and Grassland Research and Innovation Centre, Moorepark, Fermoy Co. Cork, Ireland

# **COST Action 925/Part 1**

## **Domain Food and Agriculture (FA)**

The importance of prenatal events for postnatal muscle growth  
in relation to the quality of muscle-based foods

**CSO approval date 10/04/2003**

**Entry into force 11/12/2003**

**End date 28/02/2008**

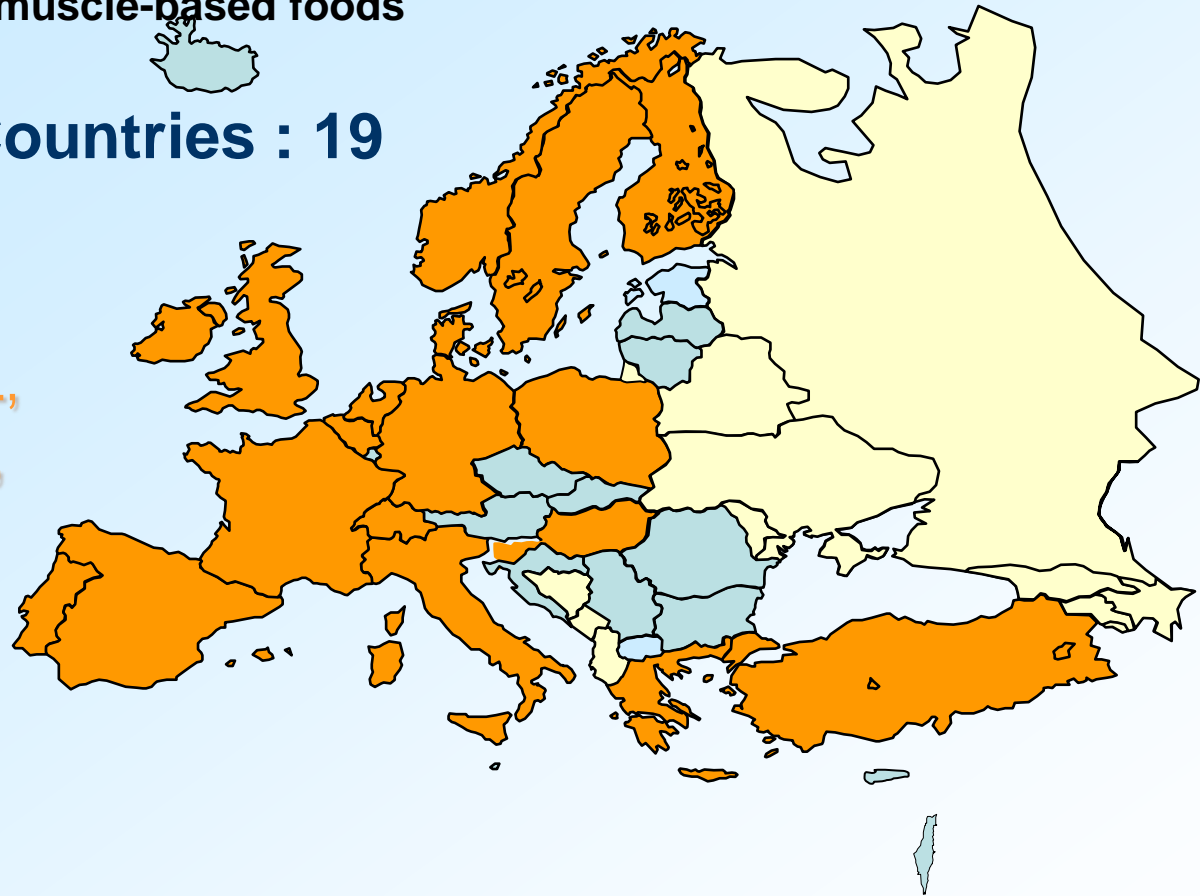


**COST 925:** The importance of prenatal events for postnatal muscle growth in relation to the quality of muscle-based foods

**Participating Countries : 19**

Chair : DK

NO, SE, FI, DK,  
DE, HU, GR, IT, NL,  
BE, ES, PT, FR, IE,  
UK, CH, SI, TR



Non-COST:

**Economic Dimension: 18 Million €**  
**Duration: 4 years**

## **Name of Chair, Rapporteur, Scientific Officer, and Administrative Officer**

- **Chair:** Niels Oksbjerg, University of Aarhus, Faculty of Agricultural Sciences, P.O Box 50, 8830-Tjele, Denmark
- **Vice-chair:** Marinus te Pas
- **Rapporteur:** Vlatko Iliesky, University St “CiryI and Methodius Skopje, Faculty of Veterinary Medicine, R. of fomer Macedonia.
- **Scientific Officer:** John Williams, COST Office, 149 Avenue Louise, 1050 Brussels
- **Administrative Officer:** Cristhophe Peeters, COST Office, 149 Avenue Louise, 1050 Brussels

## **Main OBJECTIVES,**

The main objective of the Action was to explain genetic by environmental variation in prenatal events (myogenesis and satellite cell behaviour) in an attempt to find new and alternative methods to be used in selection for optimising postnatal growth and meat/fish quality.

# OBJECTIVES

Moreover the objectives were:

Firstly, to pass on the knowledge in this area to the scientific community, primary producers, and the derived food industry

Secondly, to stimulate research, education, exchange of knowledge, technical experiences, and the mobility among scientists within the participating countries of this Action.

# Organising

- WG 1: Environmental variation in prenatal events in relation to postnatal growth and meat/fish quality
- **Chair:** Professor Neil Stickland, The Royal Veterinary and College, London NW1, UK
- WG 2: Genetic variation in prenatal events and its effect on postnatal growth and meat/fish quality
- **Chair:** Professor Klaus Wimmers, Research Institute for Biology in Farm Animals, Dummerstorf, Wilhelm-Stahl- Allé D-18196 Dummerstorf, Germany.



## Dissemination of results

- Scientific Journals (Special issues)
- Archives of Animal Breeding 2005 Volume 48
- Archives of Animal Breeding 2006 Volume 49
- Archives of Animal Breeding 2007 Volume 50
- Archives of Animal Breeding 2008 Volume 51
- WG-meeting in Oporto, Portugal 2004
- WG-meeting in Volos, Greece 2005
- WG-meeting in Antalya, Turkey, 2006
- WG-meeting in Viborg, Denmark, 2007

# Scientific review paper

- Two consecutive papers in Animal
- 1. Animal Volume 5, Issue 5
- May 2011, pp. 703-717
- Advances in research on the prenatal development of skeletal muscle in animals in relation to the quality of muscle-based food. I. Regulation of myogenesis and environmental impact
- C. Rehfeldt, M. F. W. Te Pas, K. Wimmers, J. M. Brameld , P.M. Nissen, C. Berri, L.M.P. Valente, D.M. Power, M. Picard,
- N.C. Stickland and N. Oksbjerg.

# Scientific review paper

- 2. Animal (2011), 5:5, pp 718-730
- Advance in research on the prenatal development of skeletal muscle in farm animals in relation to the quality of muscle-based food II. Genetic factors related to animal performance and advances in methodology.
- Rehfeldt, C; Te Pas, M F W; Wimmers, K; J.Brameld, J M; Nissen, P M; Berri, C; Valente, L M P; Power, D M; Picard, B; Stickland, N C; Oksbjerg, N.

- Title:
- Importance of nutrition and environment on birth weight, muscle growth, health and survival of the neonate.
- Objectives:
  - What's going on?,
  - New faces
  - Possibility of a new COST Action/EU proposal

# **Food and Agriculture (FA) Domain Committee**

# **MONITORING PROGRESS REPORT 2006**

**3rd DC meeting, Antalya (TR), 31 Jan – 2 Feb 2007**

# Results

- Time table/milestones (On time)
- Main goal (not achieved yet)
- Scientific Community (Achieved until now  
Primary producers and meat industry (EAAP, not achieved yet - Methods not identified))
- Mobility (7 STSM,s)

## Self evaluation

- Main success: Interactive collaboration among scientists in national funded research!
- Any drawbacks (? Too few STSMs)
- Any difficulties (time is required)

## Milestones/time schedules

- *1. Defining prenatal events important for postnatal growth performance and meat quality (Oporto, Oct. 2004)*
- *2. Comparative aspects of prenatal events on growth and meat/fish quality (Volos, Sept. 2005)*
- *3. Environmental and genetic regulation of prenatal events and its importance for postnatal growth performance and meat quality (Belek, Sept 2006/EAAP)*
- *4. Possible new technologies to estimate the muscle fibre number for use in animal production (Denmark Sept,. 2007)*



## Conclusion

- Workplan as stated in Technical Annex is followed strictly.
- Increase # of STSM
- Scientific publication
- Dissemination to the primary producer and the meat industry.