

Giovanna Minelli, in the academic year 1988/89, obtained a degree in Scienze della Produzione Animale at the Facoltà di Agraria of the University of Bologna with a score of 110 out of 110 with honors, discussing an experimental thesis entitled: "Polymorphism genetics of GPI (Glucosophosphate Isomerase) and PGD (6-Phosphogluconate Dehydrogenase) in some Italian pig breeds".

In 1989 he participated in the Technical Trainer Course organized by the C.I.P.A. (Centro di Istruzione Professionale Agricola) obtaining the Technical Trainer Diploma and obtained the role of coordinator of the Seminar aimed at pig farmers relating to "Management of sewage and environmental implications".

In the period May-November 1990 he attended the Istituto di Zootecnica of the Facoltà di Agraria of the University of Bologna, participating in research on the qualitative characteristics of pig meat and adipose tissue.

- In the three-year period 1990-1993 he attended the PhD course in Scienze Zootecniche at the Faculty of Veterinary Medicine of the University of Milano and with a consortium at the University of Bologna.

In 1991, he attended the course of "Metodologia statistica applicata alla ricerca in zootecnia" organized by the Scientific Association of Animal Production (A.S.P.A.).

He carried out a 5-month internship (November 1992 - March 1993) at the Station de Recherches sur la Viande, of the Institut National de la Recherche Agronomique (INRA) of St. Genes Champanelle - Theix (France), directed by Prof. Gabriel Monin collaborating on the research activity of this Institute. In particular, he carried out a study on the metabolic characteristics of muscle and on the post-mortem evolution of pig muscle tissue in relation to sensitivity to halothane. On this occasion he learned electron microscopy techniques for the study of muscle fibers and rheology for the study of the tenderness of meat.

In 1995 he obtained a two-year post-doctoral scholarship in "Scienze delle Produzioni Agrarie" which he carried out at the Istituto di Zootecnica of the University of Bologna, concerning the study of the qualitative characteristics of carcasses and meat of beef and pig.

- In 1997 he received a professional assignment, lasting four months, from the Animal Production Research Center (C.R.P.A.) for research relating to the influence of the use of vitamin E in the diet on the qualitative characteristics of meat and in particular on the fatty acid composition of the lipid fractions of matured Parma ham.

- In 1997 he participated in the rabbit breeding training and professional refresher course, obtaining the final certificate of attendance with a score of 36/45.

In February 1999 he obtained the title of Collaboratore Tecnico VII qualifica, Area Funzionale Tecnico-Scientifica e Socio-Sanitaria, presso l'Unità Complessa di Istituti "Scienze e Tecnologie Agroindustriali e Agroambientali" of Facoltà di Agraria - University of Bologna

In the two-year period 2001-2003 he held the role of Collaboratore Tecnico D1, technical-scientific and data processing area, at the Department of Food Sciences of the Facoltà di Agraria of the University of Bologna.

- In 2002 she was appointed Head of Laboratory Safety for the analysis of products of animal origin.

In the four-year period 2004-2008 he held the role of D2 Technical Collaborator, technical, technical-scientific and data processing area, at the Department of Food Sciences of the Faculty of Agriculture of the University of Bologna.

On 23 December 2008, he obtained the title of university researcher (SSD AGR/19) at the Department of Life Sciences of the University of Modena and Reggio Emilia.

Since 23 December 2011 he has been a confirmed full-time researcher at the Department of Life Sciences of the University of Modena and Reggio Emilia (Scientific Disciplinary Sector AGR/09/C).

### **Research topics**

- Study of the qualitative characteristics of meat and adipose tissue of pigs;
- Study on the qualitative characteristics of bovine and pig carcasses;
- Study on the metabolic characteristics of the muscle and on the post-mortem evolution of pig muscle tissue in relation to stress in intensive farming;
- Analysis of muscle fibers and rheological characteristics of the muscle for the study of pork;
- Analysis of the genetic type on the quality of pig production;
- Research relating to the influence of the use of vitamin E in the diet on the qualitative characteristics of meat and in particular on the acid composition of the lipid fractions of cured ham;
- Study of the qualitative characteristics of the carcass and meat of broiler chicken;
- Evaluation and improvement of the welfare of laying hens, chickens and rabbits for meat in different types of farming;
- Analysis of chicken farming conditions: effects on production performance and meat quality;
- Study of the qualitative and functional characteristics of eggs;
- Study of the natural antioxidants in the diet of laying hens: effects on the qualitative and functional characteristics of eggs;
- Study of the qualitative characteristics of eggs in relation to environmental aspects: comparison between the organic farming method and the conventional intensive cage system, as part of the research project entitled: "Quality and safety

of chicken eggs obtained with the organic method and with the conventional intensive system. Evaluation of the durability and quality of egg products and egg-based products in the food supply chain".

- He also collaborated on the research project entitled "Improvement of reproductive efficiency in zoocultures". In this context he learned techniques relating to artificial insemination in poultry and rabbits.

- Obtained the assignment of the work relating to the "Analysis of egg transformation and conservation processes" within the program "Improvement of the hygienic, nutritional and functional qualities of chicken eggs and their interactions with the processes processing and conservation of eggs".

Study of the qualitative characteristics of fresh and cured ham in relation to the genetic type used and the different maturation method.

- Study of the quality of meat and the lipid component in relation to breeding techniques, dietary integration with different nutritional principles, analysis of the characteristics of the pig carcass and the technological, nutritional and shelf-life characteristics of the meat and products transformed.

#### **Participation in national research projects**

- 2015-2018- PRIN - Genetic and genomic approaches to improve quality of fatty acid composition in pig meat for healthier fresh and seasoned pig products.

- - POR-FESR 2014-2020- Innovate the pork supply chain through the valorization of vegetable by-products and the use of advanced "omics" and process technologies, for the sustainable production of meat and cured meats with a positive impact on health;

- 2018-2020 - FAR - Sous-Vide Heat Treatment: Real and perceived quality.

- POR\_FESR 2014-2020:FLIES4VALUE Insects for the bioconversion of food by-products into feed and substances with high added value".

- POR-FESR 2014-2020: "Improvement of the nutritional, functional and technological characteristics of pork by integrating the diet with lipid sources high in omega-3 fatty acids and natural antioxidants from plant by-products".

- PRIN 2020 - LIVE-HAZE - Hazelnut industrial by-product inclusion in livestock chains in Italy.

#### **Teaching experience**

- In 1991 he collaborated with the IFOA (Company Operators Training Institute) of Reggio Emilia as a teacher of lessons relating to the weaning of piglets and breeding techniques as part of a course on cattle, sheep and pig breeding techniques. These lessons were part of the training programs created in collaboration with the Ministry of Foreign Affairs and aimed at Italians and foreigners with diplomas or degrees in agro-zootechnical disciplines.

- In 1993 he collaborated with the Agricultural Professional Education Center of Modena as a teacher on the course "Technician expert in breeding, processing and marketing of pork".

- In 1996 he obtained the recognition of Expert of the Subject for the teachings of Zootechnics and General Zootechnics.

- In the 1997-98 academic year she was teaching assistant in the Animal Production area of the Degree Course in Food Science and Technology of the Faculty of Agriculture, Cesena branch, of the University of Bologna, where she carried out activities by Tutor.

- At the University of Camerino he held two seminars, aimed at students of the University Diploma in Animal Production, on the theme: "Modern breeding technologies in the rabbit sector", held respectively in 1999 and 2000 at the headquarters of the University Center of Research and Teaching in Aquaculture and Mariculture in San Benedetto del Tronto.

- From November 2004 to November 2008 he was part of the Aviculture examination commission and assisted students in the preparation and writing of their degree thesis. He also performed exercises for the aforementioned course.

- AA 2008/2009, 2009/2010, 2010/2011, 2012/2013 and 2013/2014 held the teaching position "Organic breeding technologies" [OPZ34] at the Department of Life Sciences of the University of Modena and Reggio Emilia.

- AA 2009/2010 and 2010/2011, 2013/2014 held the teaching position "Breeding techniques, ethnography and animal welfare [STAA14] teaching in co-presence with Prof. L. A. Volpelli.

- AA 2010/2011, 2011/2012 held the teaching position "Sustainable breeding technologies and environmental impact" [SBA14] at the Department of Life Sciences of the University of Modena and Reggio Emilia.

- From the AA 2015/2016 to the AY 2019/2020 he held the teaching position "Breeding technologies and organic production" [STAA76] at the Department of Life Sciences of the University of Modena and Reggio Emilia.

- From the 2020/2021 academic year he holds the teaching position "Sustainable Livestock Production" [SISTA-0008].