

Curriculum Vitae

Education/training and career

1991: Master Degree in Agricultural Sciences at the University of Bologna with score 110/110 cum laude.

1997: PhD in Animal Sciences with specialization in Animal Genetics (PhD course of the University of Milan). PhD thesis entitled "Isolation and characterization of skeletal muscle protein genes and identification of DNA markers in the pig genome".

During the PhD course he worked for about one year in the Department of Veterinary Pathobiology, University of Minnesota (St. Paul, MN, USA) led by Prof. Lawrence B. Schook.

Then, he obtained a few fellowships and a post-doctoral position at the University of Bologna.

1999: research assistant position in the DIPROVAL dept. of the University of Bologna.

2006-2011: research scientist in the same dept. (sector AGR/19).

2008: Professoeur invite' (Invited Professor) at the Faculte' des Sciences et Techniques de Universite' de Limoges, Limoges, France (20 June-12 July 2008)

2011-present: Associate Professor of Animal Breeding and Genetics (sector AGR/17)

2013: Passed positively the national evaluation to become Full Professor.

He attended more than 50 international or national conferences or courses.

Research activities

Since 1992 he is involved in research activities on the identification, characterization, mapping of genes and QTL affecting farm animal production traits with the final aim to improve selection strategies in dairy cattle, pigs and rabbit. Moreover, he is has been involved in research programs having as objectives animal products traceability using DNA technologies and identification of the genetic factors affecting phenotypic traits (such as coat color) in livestock. He has been involved or is still currently involved in 35 research projects, 6 of which have been funded by the European Union.

His scientific production accounts for more than 130 scientific papers in peer reviewed journals and more than 200 communications and posters to international or national conferences. He is co-inventor of the patent "Natural Food Tracer" (RM2005 A000235) which includes the use of the DNA to trace food products.

He has been coordinator of the strategic research project FAGenomicH (Farm Animal Genomics for Humans) funded by the University of Bologna (2007-2010). He has been scientific coordinator of a research sub-unit in the Selmol project (funded by the Italian Ministry of Agriculture; 2007-2010) and the PRIN 2007 project (funded by the Italian Ministry of the University and Research; 2008-2010).

He is currently involved in 5 research projects related to livestock genomics (in pigs, cattle, sheep, goats and rabbit) and authentication of food products, including a European project H2020 (TREASURE " Diversity of local pig breeds and production systems for high quality traditional products and sustainable pork chains": 2015-2019).

He is Chair of the European funded COST Action TD1101 "A Collaborative European Network on Rabbit Genome Biology (RGB-Net)" (2011-2015) - <http://www.biocomp.unibo.it/rabbit/>. He is member of the WG2 of the COST Action PiGutNet, FA1401 (2014-2018).

He is Member of the Steering Committee and founder of the Lagomorph Genomics Consortium (LaGomiCs).

He is member of the ISAG "Domestic Animal Epigenetics" committee (<http://www.isag.us/committees.asp>) (2014-2016).

Other activities

Since 2007: Sector Editor of *Italian Journal of Animal Science* (<http://www.aspajournal.it>). Since 2010: Reviewer Editor of *Frontiers in Livestock Genomics* (http://www.frontiersin.org/livestock_genomics/about). Since 2012: Member of the Editorial Board of *Agriculturae Conspectus Scientificus* (<http://acs.agr.hr/>). Since 2014 is Associate editor of *Gene* (<http://www.journals.elsevier.com/gene/>). He has been involved in peer reviewing activities for: *African Journal of Biotechnology*, *Animal*, *Animal Biotechnology*, *Animal Genetics*, *Biologia Serbica*, *BMC Genetics*, *BMC Genomics*, *BMC Evolutionary Biology*, *BMC Research Notes*, *CAB Reviews*, *Canadian Journal of Animal Science*, *Czech Journal of Animal Science*, *Comparative Biochemistry and Physiology*, *DNA and Cell Biology*, *Electronic Journal of Biotechnology*, *European Journal of Nutrition*, *Gene*, *Genes & Genomics*, *Genetics Selection Evolution*, *Heredity*, *Italian Journal of Animal Science*, *Journal of Animal Breeding and Genetics*, *Journal of Animal Science*, *Journal of Animal Science and Technology*, *Journal of Applied Genetics*, *Journal of Dairy Research*, *Journal of Dairy Science*, *Journal of Dental Research*, *Journal of Genomics*, *Journal of Heredity*, *Journal of Investigative Dermatology*, *Journal of Proteomics*, *Livestock Genomics (Frontiers in)*, *Livestock Science*, *Mammalian Genome*, *Meat Science*, *Molecular Biology Reports*, *Molecular Immunology*, *PLoS ONE*, *Research in Veterinary Science*, *Theriogenology*, *World Rabbit Science*.

Review activities of projects for the following agencies/organizations: PRIN (Italian Miur), University of Milano, University of Padova, Finpiemonte, FP7 European Union, Agence Nationale de la Recherche (ANR; France), OKTA (Hungarian Scientific Research Fund Organization), National Science Centre (Poland), Croatian Science Foundation (Croatia). Evaluator of research structures for the Secretariat of State for Research, Development and Innovation Spanish Ministry of Economy and Competitiveness (Spain).

Since 2000: member of the International Society for Animal Genetics (ISAG).

Since 2002: member of the Association for Animal Production (ASPA).

Since 2006: member of the Italian Association for rabbit Production (ASIC).

Since 2012: member of the American Society of Animal Science (ASAS).

Since 2013: member of the World Lagomorph Society (WLS).

He has been co-founder of the Centre for Genome Biology of the University of Bologna.

He is member of the advisory board of the Integrated Research Team "ALMA Sequencing" of the University of Bologna.

He is member of the Technical Committee of the Italian Rabbit Herd Book as experts nominated by the Ministry of Agriculture.

He is President of the "Recourse Council" of INEQ (<http://ineqweb.it/>).

He is member of the research commission of the Department of Agricultural and Food Sciences.

He is member of the board of the PhD program in Agricultural, Food and Environmental Sciences of the University of Bologna.

Research services provided to scientists and private enterprises

- 1) Authentication of mono-breed dairy products based on DNA analysis
- 2) Differentiation between wild boar and domesticated pig meat based on DNA analysis
- 3) Authentication and traceability services for animal products with DNA analysis
- 4) Next generation sequencing with Ion Torrent platform

Research awards

2007: Second at the 2006-2007 edition of "Premio Montana alla Ricerca Alimentare" with a research project entitled "A new system for authentication and traceability of food products" (research project carried out with Dr. Marco Pancaldi, Biolab spa).

2008: First at the 2007-2008 edition of "Premio Montana alla Ricerca Alimentare" with a research project entitled "Identification of biomarkers for meat quality prediction: a new approach based on post mortem gene expression analysis (research project carried out with Dr. Daniela Giovanna Calo', Dept. of Statistics of the University of Bologna).

Invited presentations at national or international congresses/workshops and dissemination events

- 1) International congress: "*Regional Workshop on Biotechnology Applied to Agriculture*" Beograd (former Yugoslavia Republic), Vicia Institute, 5-6 June 1998 (Title: Molecular genetics and animal production improvement).
- 2) National congress: Invited presentation at the "*Convegno su Biodiversita' e Riproduzione Animale*", Bari 6-8 December 2001, Hotelclub il Baricentro, Casamassima (BA) (Title: Importanza della biodiversita' per le produzioni zootecniche - Roles of biodiversity in animal productions).
- 3) National congress: Main lecture at the XLIX SIGA Annual Congress, Potenza, 12-15 Sept. 2005 (Title: Genetic strategies to improve and control the quality of animal products).
- 4) International Workshop: Invited presentation at the "*Animal Genetics Workshop -A 'Go Milk Sicily' Workshop - Transfer of Knowledge-Development* . Marie Curie Actions Animal Genetics Workshop -A 'Go Milk Sicily' Workshop -Transfer of Knowledge-Development. University of Palermo - Department S.En.Fi.Mi.Zo. 21 Aprile 2006 (Title: The genome scan for QTL affecting milk production by means of selective milk DNA pooling)
- 5) National event: Invited presentation at the 8th Matching technology-Innovation, ICOMO la Fabbrica delle Idee, Centro Volta, Villa Olmo, Como, 28 Sept. 2006 (Title: Tracciante alimentare naturale - Natural food tracer).

- 6) International Workshop: "The Animal Genetics Workshop", University of Palermo, GoMilkSicily project, 25-01-2008, Palermo (Title: Molecular genetics of coat color in livestock: insights into comparative biology and applications for animal products traceability).
- 7) Professoeur invite' (Invited Professor) at the Faculte' des Sciences et Techniques de Universite' de Limoges, Limoges, France (20 June-12 July 2008) (A series of seminars).
- 8) National Congress: Main lecture at the 18th ASPA Congress, Palermo, 9-12 June, 2009 (Title: *Main lecture - Genetic authentication and traceability of food products of animal origin: new developments and perspectives*).
- 9) National event: presentation at the 52th International Pig Fair (RASSEGNA SUINICOLA INTERNAZIONALE), Reggio Emilia 19 April 2013, during the presentation of the "AGER Hepiget research project: Ricerca avanzata in genomica e innovazioni tecnologiche per la filiera produttiva del suino pesante italiano: primi risultati" (Title: Le tecnologie di analisi del DNA per il miglioramento genetico dei suini e prospettive della selezione genomica nella suinicoltura italiana - DNA technologies in pig selection and perspective for genomic selection in the Italian pig breeding sector).
- 10) International Congress: Invited lecture at the 5th International Meeting on Rabbit Biotechnology, Shanghai (China), June 6-8, 2013 (Title: Genomics of coat colour in the rabbit: modelling and animal model for pigmentation related diseases in human).
- 11) International Congress: Keynote lecture at the 8th International symposium on the Mediterranean pig, Ljubljana (Slovenia), 10-12 October 2013 (Title: Molecular genetics of coat colour in pigs)
- 12) International workshop in a national event: invited presentation at the First Forum on European pig Genetics. ITALPIG, Rassegna Suinicola di Cremona (Pig fair of Cremona), 25 October 2013 (Title: La selezione per la suinicoltura italiana - Pig selection for the Italian pig production chain).
- 13) International congress: invited presentation at the Plant and Animal Genome Congress (PAG2015), San Diego, California, 10-14 January 2015: " Genomics meets metabolomics: developing a systems biology approach to understand the genetic mechanisms affecting complex traits in pigs".

Teaching: University courses

2006/2007: Organic productions in farm animals.

From 2007/2008 to 2010/2011: Slaughtering and meat quality evaluation.

2009/2010, 2010/2011, 2014/2015: Traceability in animal production

From 2010/2011 to 2012/2013: Production and breeding in game animals

2010/2011: Molecular Mechanisms of Gene Expression (at the International Master degree Course in Bioinformatics - In English)

From 2010/2011 to 2014/2015: Biotechnologies in animal productions

From 2012/2013 to 2014/2015: Pig breeding and production

2013/2014, 2014/2015: Applied Genomics in Animal Production

2013/2014, 2014/2015: Applied Genomics (at the International Master degree Course in Bioinformatics - In English)

Teaching: other courses

Since 1994 he teaches animal genetics and genomics in several courses, invited workshops and seminars, organized by different institutions: IFOA, Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, ASPA, University of Messina, University of Palermo, University of Padova, University of Pisa, University of Limoges (France) (in English), PhD school of the former Faculty of Agriculture of the University of Bologna (in English), COST Action "A Collaborative European Network on Rabbit Genome Biology" (in English).