

## **Gianni Barcaccia**

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## **Education and training stages**

1986 – 1991: M.Sc.

Faculty of Agriculture, University of Perugia, Italy (<https://www.unipg.it/>)  
Agricultural Science (specialty: Plant Genetics and Breeding) – 01 March 1991

1992 – 1995: Ph.D.

Institute of Plant Genetics and Breeding, Faculty of Agriculture, University of Perugia, Italy with Administrative affiliation at the University of Padova, Italy (<https://www.unipd.it/>)  
Crop Science (curriculum: Genetics of plant reproductive systems) – 18 October 1995

1996 – 1998: Post-Doc

Institute of Plant Genetics and Breeding, Faculty of Agriculture, University of Perugia, Italy (<https://www.unipg.it/>)  
Research project: Molecular markers for populations genetics – 01 November 1996

## **Academic experiences**

1998 – 2003: Researcher

Faculty of Agriculture, University of Padova, Italy (<https://www.unipd.it/>) – 18 November 1998  
Teaching BSc and MSc courses: Agricultural Genetics, Applied Genomics and Biotechnologies  
Research activities: plant reproductive systems and population genetics, local germplasm analysis

2004 – 2016: Associate Professor

Faculty of Agriculture, University of Padova, Italy (<https://www.unipd.it/>) – 07 January 2004  
Teaching BSc and MSc courses: Agricultural Genetics, Applied Genomics and Biotechnologies  
Research activities: plant reproductive systems and population genetics, genomics applied to plant breeding, molecular marker-assisted selection, genetic traceability of agrifood products

2017 – present: Full Professor

Department of Agronomy Food Natural resources Animals and Environment (DAFNAE), University of Padova, Italy (<https://www.dafnae.unipd.it/>) – 01 March 2017  
Teaching BSc and MSc courses: Agricultural Genetics, Applied Genomics and Plant Breeding  
Research activities: plant reproductive systems and population genetics, genomics applied to plant breeding, molecular marker-assisted selection, genetic traceability of agrifood products

2018 – present: Adjunct Professor

University of Georgia (UGA), Athens, USA  
Department of Crop and Soil Sciences (<https://cropsoil.uga.edu/>)  
Teaching courses: Plant Genetics and Breeding

2019 – present: Department Head

Department of Agronomy, Food, Natural resources, Animals and Environment (DAFNAE)  
School of Agriculture Science and Veterinary Medicine  
University of Padova (<https://www.dafnae.unipd.it/>) – 01 October 2019  
Director of Department for the academic years 2019 – 2023 (recently re-elected Director of Department for a second term for the academic years 2023 – 2027)

2022 – present: Spoke leader of Agritech

PNRR: CN2 National Center for Technology in Agriculture – AGRITECH (<https://agritechcenter.it/>)

### **Research grants and contracts\***

2018 – 2023: Several R&D contracts stipulated with Italian seed companies and food industries (overall budget, 450 K€, PI)

2018 – 2022: CASA project MUR – “Center for Agricultural and Environmental Sustainability”, MUR Department of Excellence, DAFNAE – University of Padova (total budget 8,675,000 €, PI)

2019 – 2021: VALEBIO project – “Selection of leguminous varieties for sustainable agricultural systems”, UNI-IMPRESA – University of Padova/Blumen Group SpA (total budget 100,000 €, PI)

2020 – 2024: MAD project - “Mechanisms of Apomictic Developments”, MSCA-RISE-2019, EU project 872417 (assigned budget 90 K€)

2020 – 2022: FA&AF project – “Primary Production and Functional Food”, POR-FESR – Regional Innovative Networks, ID 10288429/DGR N. 822/2020 (total budget 1,915,000 €, assigned budget 460,000 €, PI)

2022 – 2026: AGRITECH project – “Multifunctional and resilient agriculture and forestry systems for the mitigation of climate change risks”, MUR – National Centre for New Technologies in Agriculture (total budget Hub 320,000,000 €, assigned budget Spoke 20,000,000 €, PI)

2023 – 2027: VITAE project MUR – “Center for Viticulture and Enology”, MUR Department of Excellence, DAFNAE – University of Padova (total budget 8,350,000 €, PI)

\*The best ones selected in the last 5 years as Principal Investigator

### **Patents**

Discovery and analysis of nuclear male sterility in leaf chicory (*Cichorium intybus* L.), Inventor  
Intl. Patent Application PCT/EP2011/058765 (<https://encrypted.google.com/patents/EP2713705B1>) EU  
Patent WO2012163389-A1 and USA Patent US20140157448-A1

### **Editorial board memberships and activities**

Associate Editor: Scientific Reports since 2015 (5-year IF: 5.134), Plants since 2019 (IF 4.658, Q1), Frontiers in Plant Science, section Plant Breeding since 2022 (IF 6.627, Q1)

Past Guest Editor actions: Agriculture (IF 2.925, Q1), Genes (4.096, Q1), Horticulture (IF 2.331, Q1), Diversity (IF 2.253, Q1), Frontiers in Plant Science (IF 5.754, Q1)

Present roles: Research Topic Editor: Frontiers in Plant Science (IF 6.627, Q1), Research Collection Guest Editor: Scientific Reports (IF 4.996, Q1), Special Issue: Plants (IF 4.658, Q1)

### **Oral presentations**

Several invited and selected oral presentations at the Plant and Animal Genome Conference, Annual Meetings of Eucarpia sections, Sexual Plant Reproduction, Italian Society of Agricultural Genetics, etc.

### **Management skills**

Director of Department (currently administrates a total budget for research and development of an overall economic value of about 10,000,000 € per year)

Coordinator of several institutional and academic commissions including the Scientific Commission and Third Mission Boards (annually manages and allocates internally funds for research projects and grants of more than 500,000 €)

Supervision and mentoring of many PhD, Post-doc and Researcher carriers in the last 25 years

### **Job-related skills**

2007 – present: Inventor and Holder of BreedOmics, Service Laboratory of Genomics for Plant Breeding, c/o DAFNAE, University of Padova (<https://www.giannibarcaccia.com/services/>)

### **Academic duties and positions**

2012 – 2016: Vice-director of the School of Doctorate in Scop Science

2013 – 2015: Vice-director of Department for the academic years 2013 – 2015

2015 – 2019: Vice-director of Department for the academic years 2015 – 2019

(for six years he has been Coordinator of Scientific Commission as well as Third Mission and Technology Transfer Board of the Department)

2019 – 2023: Director of Department for the academic years 2019 – 2023

2022 – 2026: Spoke leader of the Agritech National Center – Project: Multifunctional and resilient agriculture and forestry systems for the mitigation of climate change risks

2023 – 2027: Director of Department for a second term for the academic years 2019 – 2023

2023 – 2027: Coordinator of the Council of Department Directors of the University of Padova for the academic years 2019 – 2023

Since 2007 he is also the responsible person of BreedOmics®, the academic laboratory service of genomic analyses for plant breeding and food traceability

### **Scientific society memberships**

As far as scientific society membership is concerned, he is member of the Italian Society of Agricultural Genetics (SIGA), the Interuniversity Consortium for Biotechnologies (CIB) and the European Association of Plant Breeding (EUCARPIA)

### **Research activities**

In the last 10 years he was involved in several research projects financed by regional and national institutions. In particular, research activity focused on the following themes: i) plant reproductive systems, mainly genetic control of fertilization barriers (e.g. male-sterility and self-incompatibility) and seed formation (i.e. apomixis) in crop and model species; ii) genome analysis by means of PCR-derived molecular markers and Genotyping-by-Sequencing aimed at the construction of genetic linkage maps, identification of Mendelian genes/QTLs and marker-assisted selection (MAS); iii) transcriptome analysis by means of mRNA profiling and NGS technologies, gene expression studies, and structural, bioinformatic and functional analysis of genes; iv) analysis of genetic variability: characterization of varieties and natural populations belonging to crop plant species; v) development of molecular diagnostic assays for the genetic traceability of plant varieties and food derivatives using Genotyping-by-Sequencing and cpDNA/mtDNA barcoding.

### **Main ERC descriptors**

LS2 Genetics, Genomics, Bioinformatics and Systems Biology (LS2\_1 Genomics, comparative genomics, functional genomics)

LS9 Applied Life Sciences and Non-Medical Biotechnology (LS9\_5 Agriculture related to crop production, soil biology and cultivation, applied plant biology)

### **Scientific publications**

Total no. of publications in peer-review journals: about 160 (Scopus author ID: 6701731637)

Total Impact Factor (IF): nearly 600 (on average 4/paper) (Web of Science)

Total number of citations: about 3,400 (Scopus) and 5,500 (Google Scholar)

H index: 34 (Scopus), 44 (Google Scholar) and 40 (Research Gate)

### **Academic books**

First author of several Academic Books in Genetics, Plant Breeding, Genomics and Biotechnologies (Liguori Editore, Napoli, Italy) and Plants, Genes and Sustainable Agriculture (Piccin Editore, Padova)

Campus of Agripolis, Padua (Italy)

1 December 2023

Prof. Gianni Barcaccia

