

PERSONAL INFORMATION

Giovanni Giuliano



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Sex M | Date of birth 22/08/1958 | Nationality Italian

POSITIONS HELD

- 2020-2024. Elected member of the ENEA Board of Directors.
- 2015-Present. Member, Head office, Biotechnology and Agroindustry Division, ENEA
- 2010-2015. Head, Green Biotechnology Laboratory, ENEA
- 2004-Present. Research Director, ENEA
- 2002-2004. Senior Research Scientist, ENEA
- 1988-2002. Research Scientist, ENEA (Italian National Agency for New technologies)
- 1987-1988. Postdoctoral Fellow in plant molecular biology, University of Pennsylvania, USA
- 1985-1986. Postdoctoral Fellow in plant molecular biology, Cold Spring Harbor Laboratory, USA
- 1983-1985. Predoctoral Fellow in plant cell genetics, Consiglio Nazionale delle Ricerche, Pisa

EDUCATION, TITLES AND AWARDS

- 2023. Renewal of the “Abilitazione scientifica nazionale” as full professor in the Italian Universities, sectors “Molecular Biology”, “Plant Physiology” and “Agricultural Genetics”.
- 2016. Prize of the Italian Minister for Cultural Affairs, assigned by the Accademia Nazionale dei Lincei
- 2014. “Abilitazione scientifica nazionale” as full professor in the Italian Universities, sectors “Molecular Biology”, “Plant Physiology”, “Applied Biology” and “Agricultural Genetics”.
- 1994. “Qualification aux Fonctions de Professeur” in the French Universities, sectors “Biochemistry and Molecular Biology” and “Physiology”.
- 1987. Ph.D. in Plant Biology
- 1981. Laurea (Master degree) in Biology, University of Pisa (with full honours)
- 1981. “Cremona-Scoffone” masters thesis award by the Italian Society of Biophysics and Molecular Biology.
- 1981. Diploma in Biology, Scuola Normale Superiore, Pisa, Italy
- 1976-1981. Internship at the Scuola Normale Superiore, Pisa, Italy (25 positions awarded annually in Italy)

TEACHING

- 2018-2024 Invited professor on Phytonutrients, Mediterranean Agronomic Institute of Chania, Greece.
- 2015 Invited professor in Plant Biotechnology, University of Rome, Italy
- 1999 Invited professor in Molecular Biology, University of Catania, Italy
- 1998 Invited professor in Plant Photomorphogenesis, Université Pierre et Marie Curie, Paris, France.

GRANTS (NATIONAL)

1. 1991-1995: Italian Research Council, special project RAISA: "Photoperception and light signal transduction: transcription factors for plant light-regulated genes".
2. 1992-1995: Italian Ministry of Agriculture: "Carotenoid biosynthesis in higher plants: isolation of genes able to confer herbicide resistance".
3. 1996-1998: Italian Ministry of Agriculture: "Isolation and analysis of genes involved in major metabolic pathways in crop plants".
4. 2002-2005: Italian Ministry of Research: "Development and Characterization of Native Genetic Resources in Hortifruitculture (SCRIGNO)"
5. 2003-2004: Italian Ministry of Research, Post-Genomics program: "Genes and their functions: an integrated approach" (Coordinator).
6. 2003-2005: Italian Ministry of Research, Special Fund for Basic Research: "Molecular mechanisms of Photosynthesis".
7. 2003-2005: Italian Ministry of Research, Special Fund for Basic Research: "Network on the genomics of plant stress"
8. 2003-2005: Italian Ministry of Research, Special Fund for Basic Research: "Virtual Laboratory for Genomics, Proteomics, Bioinformatics"
9. 2004-2007: Italian Ministry of Research, "Innovative methodologies for hydrogen production from biological processes (IDROBIO)".
10. 2005-2011: Italian Ministry of Research, Special Fund for Basic Research: "National Laboratory for genomics and postgenomics of agricultural plants" (Coordinator).
11. 2005-2011: Italian Ministry of Research, Special Fund for Basic Research: "Parallelomics: massively parallel transcriptional and metabolic profiling approaches for plant improvement" (Coordinator).
12. 2006-2009: Italian Ministry of Research: "ITALYCO: Advanced biology for the improvement of Italian processing tomatoes".
13. 2009-2013: Italian Ministry of Agriculture. "Physical mapping and survey sequencing of wheat chromosome 5A".
14. 2009-2012: Lazio Region: "Public-private Laboratory for High-Throughput Omic Sciences (ATOMICS)"
15. 2010-2012: "Improvement of nutritional and phytosanitary properties of commodities for human and animal nutrition (ALISAL)".
16. 2009-2013: Italian Ministry of Agriculture. "Optimization of biological hydrogen production from Chlamydomonas- HYDROBIO".
17. 2011-2014: AGER private consortium. "Durum wheat adaptation to global change: effect of elevated CO₂ on yield and quality traits - DUCCO".
18. 2011-2015. Italian Ministry of Economic Development. "Pasta and new, high quality products from Italian cereals – PAQ".
19. 2011-2014: Italian Ministry of Agriculture. "Improvement of the utilization and digestibility of agricultural residues for biofuel production - BIOMASSVAL".
20. 2012-2015: Italian Ministry of Agriculture. "Italian-Israeli Initiative for the nutritional improvement of Solanaceous crops (IT-IL-NUTRI-SOL)".
21. 2014-2017. Italian Ministry of Research: "Food product identification and their territorial origin – IDENPREPT" (Coordinator).
22. 2018-2020. Lazio Region: "Production of saffron bioactive compounds in yeast (PROBIOZAFF)" (Coordinator).
23. 2017-2021. Italian Ministry of Economic Development: "Product and process innovations in the durum wheat production chain (INNOGRANO)"
24. 2021-2024. Lazio Region: "New typical tomato varieties of tomato with improved agronomic and quality characteristics (NOVIPOM)" (Coordinator).
25. 2022-2023: Italian Research Council: "Uncovering the genetic determinants of the TOMato fruit ionome by ATOMIC emission spectrometry" (Coordinator)

GRANTS (INTERNATIONAL)

1. 1991-1993: EU, BRIDGE program: "Isolation and functional characterization of genes controlling major metabolic pathways in higher plants".
2. 1994-1996 EU, BIOTECH program: "Genes and enzymes for carotenoid biosynthesis: structure, regulation and heterologous expression".
3. 1997-2000: EU, BIOTECH program: "The photoregulation of plant architecture and performance".
4. 1997-2000: EU, BIOTECH program: "Mechanisms for the regulation of carotenoid production and accumulation in plants".
5. 1997-2000: EU, FAIR program: "Genetic engineering of carotenoid metabolism: a novel route to vitamins, colours and aromas for the European market (CAROTENE PLUS)" (Coordinator).
6. 2001-2004: EU, 5th FP: "Production of high value-added carotenoids and provitamin A in cell factory crops (PROVITA)" (Coordinator).
7. 2006-2011: EU, 6th FP: "High Quality Solanaceous Crops for Consumers, Processors and Producers by Exploration of Natural Biodiversity (EU-SOL)".
8. 2007-2010: EU, 6th FP: "Development of High Throughput Approaches to Optimise the Nutritional Value of Crops and Crop-Based Foods (DEVELONUTRI)".
9. 2009-2013: EU, 7th FP: "Development of tools and effective strategies for the optimisation of useful secondary METAbolite PROduction in planta (METAPRO)".
10. 2013-2017: EU, 7th FP: "From DISCOvery to products: A next generation pipeline for the sustainable generation of high-value plant products (DISCO)".
11. 2015-2018: EU, H2020: "Traditional tomato varieties and cultural practices: a case for agricultural diversification with impact on food security and health of European population (TRADITOM)".
12. 2016-2021: EU H2020: "Linking genetic resources, genomes and phenotypes of Solanaceous crops (G2P-SOL)" (Coordinator).
13. 2018-2022: EU, H2020: "Developing Multipurpose Nicotiana Crops for Molecular Farming using New Plant Breeding Techniques (NEWCOTIANA)".
14. 2020-2024: EU, H2020: "Harnessing the value of tomato genetic resources for now and the future (HARNESSTOM)".
15. 2023-2025: EU, Horizon EU: "Promoting a Plant Genetic Resource Community for Europe (PRO-GRACE)" (Coordinator)

INVITED LECTURES AT INTERNATIONAL MEETINGS (SINCE 2010)

1. *Metabolic engineering of potato carotenoid content*. International Symposium "Perspectives on genetically modified foods and crops", Fundacion Ramon Areces, Madrid, 2010.
2. *The genome that makes tomatoes*. 7th Solanaceae genome workshop. Dundee, 2010.
3. *The genome that makes tomatoes*. 14th International Biotechnology Symposium and Exhibition. Rimini, 2010.
4. *Carotenoid biosynthesis in tomato at the crossroad between genomics and metabolic engineering*. 16th International Symposium on Carotenoids. Krakow, 2011.
5. *New insights into carotenoid biosynthesis from the tomato genome sequence*. 8th Solanaceae genome workshop. Kobe, Japan, 2011.
6. *Saffron genes: the transcriptome of saffron*. International meeting COST action Saffronomics, Athens, Greece, May 2012.
7. *Gene mining in Saffron*. EU Seminar on Saffronomics, Cuenca, Spain, Nov 2012.
8. *Manipulating carotenoid composition in tomato and potato*. Gordon Research Conference on Carotenoids, Ventura, USA, Jan 2013.

9. *Multi-level control of carotenoids on tomato fruit ripening*. International meeting COST action QualityFruit, Chania, Crete, Sept 2013.
10. *In and out of the Solanaceae genomes: a quest for quality traits*. III International Symposium on Molecular Markers in Horticulture, Riva del Garda (Trento), Italy, Sept 2013.
11. *In and out of the Solanaceae genomes: a quest for quality traits*. XV EUCARPIA Meeting on Genetics and Breeding of Capsicum and Eggplant. Turin, Italy, Sept 2013.
12. *Multi-level control of carotenoids on tomato fruit ripening*. 10th Solanaceae genome workshop, Beijing, China, Nov 2013.
13. The coffee genome sequence reveals adaptive responses for the production and accumulation of caffeine. *Plant Genomes & Biotechnology: From Genes To Networks*. Cold Spring Harbor Laboratory, NY, Dec 2014.
14. *The genomic basis of red fruit color in cultivated tomato*. Solanaceae workshop, XXII Plant and animal genome meeting, San Diego, Jan 2014.
15. *In and out of the Solanaceae genomes: a quest for quality traits*. VISCEA Applied Vegetables Genomics conference. Vienna, Feb 2014.
16. *The Coffee Genome Sequence Suggests Polyphyletic Origin of Caffeine in Eudicot Evolution*. The 2nd Plant Genomics congress, London, May 2014.
17. *A novel carotenoid cleavage dioxygenase catalyzes the first dedicated step in saffron crocin biosynthesis*. 11th Solanaceae genome workshop, Porto Seguro, Brazil, Nov 2014.
18. *A high quality eggplant (Solanum melongena L.) genome draft and its use for mapping metabolic QTLs*. 11th Solanaceae conference, Porto Seguro, Brazil, Nov 2014.
19. *Dissecting the saffron stigma apocarotenoid pathway*. Final meeting, PlantEngine COST action, Sorrento, Italy, April 2015.
20. *Tomato fruit carotenoid biosynthesis: regulation and evolutionary aspects*. Symposium of the Serbian Plant Physiology Society, Petnica, Serbia, June 2015.
21. *Saffron apocarotenoid biosynthesis: a tale of three compartments*. Joint SIBV-SIGA congress, Milano, Italy, September 2015.
22. *Saffron apocarotenoid biosynthesis: a tale of three compartments*. Final meeting, Saffronomics COST action, Almagro, Spain, September 2015.
23. *Concerted transcriptional-metabolic remodelling underlies the transition from green-fruited to red-fruited tomato species*. Annual meeting, Qualityfruit COST action, Lisbon, Portugal, October 2015.
24. *Concerted transcriptional-metabolic remodelling underlies the transition from green-fruited to red-fruited tomato species*. 12th Solanaceae conference, Bordeaux, France, October 2015.
25. *Transgenic enhancement of beta-carotene content in tomato fruits results in increased fruit shelf-life*. Ethylene 2015, Chongqing, China, November 2015.
26. *The eggplant genome reveals key events in Solanaceae evolution*. Final meeting, QualityFruit COST action, Porto, Portugal, Oct 2016.
27. *Crocin biosynthesis in saffron stigmas: a tale of three compartments*. 5th International Saffron Symposium, Agadir, Morocco, November 2016.
28. *The eggplant genome reveals key events in Solanaceae evolution*. Meeting "WURomics: Technology-Driven Innovation for Plant Breeding", Wageningen, The Netherlands, Dec 2016.
29. *The eggplant genome reveals paleopolyploid origin of fruit ripening*. 14th Solanaceae workshop, Valencia, Spain, Sept 2017.
30. *Multiple roles of cryptochromes in controlling Solanaceae physiology and development*. European photobiology congress, Pisa, Italy, Sept 2017.
31. *Saffron crocin biosynthesis: A highly compartmented pathway*. EUROCAROTEN COST Action workshop, Trogir, Croatia, Oct 2017.
32. *The G2P-SOL project: harnessing the genetic and phenotypic diversity of the four major Solanaceae crops*. 15th Solanaceae Conference, Chiang Mai, Thailand, October 2018.
33. *Single Primer Enrichment genotyping highlights the worldwide population structure of tomato and eggplant genebank holdings*. Plant Genomics and Gene Editing Congress: Europe. Rotterdam, Mar 2019.
34. *Worldwide genebank genomics of the four major Solanaceous crops*. 16th Solanaceae Conference, Jerusalem, Israel, September 2019

35. *Worldwide genebank genomics of the four major Solanaceous crops*. 6th International Horticulture Research Conference, Venezia, Italy, October 2019.
36. *The G2P-SOL project: a cornucopia full of traits*. XXth EUCARPIA Tomato Meeting, Valencia, Spain, May 2022.
37. *The genetic architecture of fruit quality and nutritional traits in Solanaceous crops*. 17th International Solanaceae Conference. Thessaloniki, Greece, November 2022.
38. *Plant genetic resources: a cornucopia full of traits for future generations*. 4th Medforum, Chania, Greece, December 2022.
39. *Apocarotenoid Biosynthesis Pathways and their Subcellular Compartmentation*. Gordon Research Conference on Carotenoids, Ventura, USA, January 2023.
40. *Dissection of the saffron crocin biosynthesis pathway and its biotechnological applications*. International symposium on carotenoids, Toyama, Japan, July 2023.
41. *Comparative Genetic Architecture of Fruit Traits in the Three Major Solanaceae Fruit Crops*. Eucarpia meeting on the genetics and breeding of pepper and eggplant, Plovdiv, Bulgaria, September 2023.
42. *A multi-omic Nicotiana benthamiana resource for fundamental research and biotechnology*. 18th International Solanaceae Conference, Montreal, Canada, October 2023.
43. *Phenotyping and resequencing of tomato and eggplant worldwide core collections reveals common and species-specific regions controlling fruit traits*. 18th International Solanaceae Conference, Montreal, Canada, October 2023.

ORGANIZATION OF
INTERNATIONAL MEETINGS
(SINCE 2010)

1. Discussion leader, Gordon research conference on carotenoids, Ventura (CA), 2010.
2. Organizer, Solanaceae workshop, XVIII Plant and animal genome meeting, San Diego, 2010.
3. Session chair, 14th International Biotechnology Symposium, Rimini, Sept 2010.
4. Organizer, Solanaceae workshop, XIX Plant and animal genome meeting, San Diego, Jan 2011.
5. Session chair, 8th Solanaceae Conference, Kobe, Japan, Nov 2011.
6. Organizer, Solanaceae workshop, XX Plant and animal genome meeting, San Diego, Jan 2012.
7. Organizer, Solanaceae workshop, XXI Plant and animal genome meeting, San Diego, Jan 2013.
8. Session chair, 10th Solanaceae Conference, Beijing, China, Nov 2013.
9. Organizer, Solanaceae workshop, XXII Plant and animal genome meeting, San Diego, Jan 2014.
10. Session chair, 11th Solanaceae Conference, Porto Seguro, Brazil, Nov 2014.
11. Organizer, Solanaceae workshop, XXIII Plant and animal genome meeting, San Diego, Jan 2015.
12. Vice-chair, Gordon Research Conference on Carotenoids, Barga, May 2016.
13. Chair, Gordon Research Conference on Carotenoids, Newry, USA, Jun 2018.
14. Session chair, 16th Solanaceae Conference, Jerusalem, Israel, September 2019.
15. Session chair, 6th International Horticulture Research Conference, Venezia, Italy, October 2019.
16. Session chair, Online Solanaceae Conference, Nov 2020.
17. Session chair, 17th International Solanaceae Conference, Thessaloniki, Greece, November 2022.
18. Member of the Scientific Committee and session chair, 18th International Solanaceae Conference, Montreal, Canada, October 2023.

PERSONAL SKILLS

Mother tongue(s) Italian, Modern Greek

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	

English	C2	C2	C2	C2	C2
French	C2	C2	C2	C1	B2

COMMUNICATION SKILLS Excellent scientific communication skills acquired in over 100 seminars/invited lectures.

ORGANISATIONAL / MANAGERIAL SKILLS Excellent managerial skills acquired in 30 years of leadership of a research group composed of >10 scientists, 5 years of responsibility of an ENEA laboratory (>20 permanent and 8 non-permanent staff), and scientific and administrative coordination of 3 Italian and 3 EU projects.

ADMINISTRATION 1980-1981. Elected member of the Board of Directors of the Scuola Normale Superiore, Pisa.
2020-2024. Elected member of the ENEA Board of Directors.

ADDITIONAL INFORMATION

PUBLICATIONS Over 120 peer-reviewed international publications (Among which 2 Nature, 1 Science, 1 Nature Genetics, 1 Nature Plants, 3 PNAS, 1 EMBO J, 3 Plant Cell, 1 Annu Rev Plant Biol, 1 Mol Plant,). Several Italian and International patent applications. >19,000 citations, h-index 68. (<https://scholar.google.it/citations?hl=en&user=Yp9Iny4AAAAJ>)

EDITORIAL AND REVIEWING ACTIVITIES Deputy Section Editor of BMC Plant Biology. Invited editor for PNAS. Referee for international journals (Science, Nature, Nature Genetics, Plant Cell) and granting agencies (U.S. Dept. of Agriculture, US-Israel Agricultural Res. Fund, EU).

Rome, May 2024