

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name



BARBARA BALDAN

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**DIPARTIMENTO DI BIOLOGIA (DiBio),
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WOS and SCOPUS links

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Nationality

Italian

Date of Birth

16/05/1962

Gender

female

WORK EXPERIENCE

- Name and address of the employer University of Padova – Department of Biology (DiBio)
 - Type of business or sector
 - Occupation or position held **Full professor – Botany (BIOS-01/A)**
- Main activities and responsibilities

EDUCATION AND TRAINING

- Dates (from - to) 1987-1990
- Name and type of organisation providing education and training University of Padova
- Principal subjects/occupational skills covered Research work concerned ultrastructural characterization, biochemical and biophysical analysis of thylakoid membrane composition and functionality in *C. reinhardtii*.
1987-1988: One-year stay at the I'J'M, Université Paris VII, France.
1988-1989: One-year stay at the IBPC (CNRS), Paris, France.
- Title of qualification awarded **PhD in Evolutionary Biology**
- Dates (from - to) 1985 – 1987
- Name and type of organisation providing education and training University of Padova

- Principal subjects/occupational skills covered
- Title of qualification awarded

Research activity as graduate, Plant Cell Biology laboratory, Department of Biology, University of Padova [Supervisor: Prof. P. Mariani]

National qualification - Register of biologists

- Dates (from - to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded

1981 - 1985

University of Padova

M.Sc. in Biology, summa cum laude

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE
OTHER LANGUAGES

ITALIAN
ENGLISH, FRENCH

SCIENTIFIC SKILLS AND COMPETENCES

Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.

- **Research interests:** Keywords: Plant reproductive structures, ovule development and evolution; plant biodiversity; plant microbe interactions; beneficial microorganisms.
- In the last years, the research has been addressed to: a) the characterization (by molecular, biochemical, physiological approaches) of microbial endophytes, living in grapevine inner tissues, for their potential application to improve crop productivity and plant disease biocontrol. b) the molecular identification of fungal specimens from the historical Saccardo's collection, known at international level and conserved in the Herbarium of the Botanic Garden belonging to Padova University; c) the study of MADS-box genes that are expressed in the floral buds and in reproductive structures of basal angiosperms that belong to the Nymphaeales order; d) the role of pollination in controlling Ginkgo biloba ovule development.
- Author of 101 publication on Scientific Journals.
- **Lecturer in courses or modules** since 1991 at University of Padova (i.e. Plant cell cultures, Plant Morphology and Physiology, Bachelor Degree in Biotechnology; Molecular and Cell Biology of Plants, Master Degree in Molecular Biology; Plant Biology, Bachelor Degree in Environmental Sciences and Technologies; Integrate Course in Cell Biology, Bachelor Degree in Molecular Biology Plant Cell Biology and Laboratory in Botanic Methodologies, Academic Diploma in Agro-industrial Biotechnologies; Botany and Experimental Biology II Laboratory, Bachelor Degree in Biological Sciences,).
- **Organization of national and international meetings:**
- 2019: VI International Plant Science Conference. Padova, September 4-7, 2019 (Responsible of the Organizing Committee); 2012: Annual Meeting of the SBI Work Groups "Molecular and Cell Biology" & "Biotechnology and Differentiation". Abano Terme (Pd) (responsible of the Organizing Committee).
- Local responsible of the organization of the Fascination of Plants Day (18/05/2012, 2013, 2014, 2017, 2019) in the Botanical Garden of Padova. Contribution to the organization della Notte Europea dei Ricercatori (Nord Est Night, 27/09/13, Veneto Night, 28/09/12 e 26/09/2015).
- **Communication at national and international meetings:**
- Invited speaker at: TEDx Roncade, TV 2014; Congresso della Società Italiana di Nefrologia Pediatrica, Padova, 2014; "Quand les Plantes se font la malle", Chateau St.Marcel, France, 2015; «Jardins d'hier à aujourd'hui, de Nancy... à Padoue», Nancy, France 2016; "History of Padova University Botanic Garden, the most ancient in the world", Osaka 2017; Botanic Garden of Padua University, WATER MUSEUMS Global Network, International Workshop, Venice 2 – 4 May 2017; "The birth of Botanical Gardens: the case of Padova" Shanghai, 16-18 Nov 2017; "Le collezioni botaniche nella salvaguardia del patrimonio arboreo monumentale", Convegno "Alberi Monumentali del FVG: nuove regole e linee guida –Una Regione attenta alla cura e tutela dei suoi grandi alberi", Udine, 28 Ottobre 2017; "I giardini botanici e la conservazione della biodiversità"-Convegno internazionale "Le città universitarie del XX secolo e la Sapienza di Roma", Roma 24-25 Novembre 2017); "Orto Botanico di Padova: dal 1545 al futuro", Progetto Interreg USEFALL – Unesco Site Experience For All" Orto Botanico Padova 25 settembre 2018; Ongoing research at Padova Botanic Garden: the role of pollination in controlling Ginkgo biloba ovule development".

Symposium: Celebrating Botanic Gardens: Past, Present and Future. Oxford Botanic Garden and Arboretum (UK), 21 October 2021; seminar within the "NYBG Science & Humanities Seminars" frame, NYBG (USA), May 2025.

- **Partecipazione to the following Summer/Winter Schools:**
- "Propagation by clonal methods based in plant tissue culture: some applicative examples" "The Botanic Garden of University of Padova"; International Summer School Environment and Biodiversity Management in Nepal Himalayas July 25-august 12, 2016 Kathmandu, Nepal .
- "The Botanic Garden of Padova: from 1545 to the future", SHANGHAI TECH Summer School, Padova 16 July-5 August 2017;
- "Clonal propagation in plant tissue culture: some applicative examples for biodiversity conservation". International Winter School- "Biodiversity, Ethnoecology and Bioprospecting in Nepal Himalaya", January 29 – February 8, 2018 Kathmandu, Nepal
- **Supervision of graduate students and post-doctoral fellows**
- 2009-present: 9 (1 MSCA fellow) PhD students, PhD Course in Biosciences, University of Padova); 2 PhD students, PhD Course in Biosciences and Biotechnologies, University of Padova
- 2000-present: Supervisor of 14 Master students in Molecular Biology, 14 Master students in Evolutionary Biology, 10 Master student in Industrial Biotechnology , 40 Bachelor students in Molecular Biology, 25 Bachelor Students in Biotechnology, 5 Bachelor students in Biology.

RELEVANT ROLES AND COMPETENCES

Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

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- 2024- : member of the GEV 05 Committee (VQR 2020-2024)
- 2024- : member of the SBI committee (role: secretary)
- 2016- : Rector's Delegate to the Board Committee of the 'L. Toniolo' Experimental Agricultural Company, Legnaro, Padova
- 2015-2021: Director of the Botanical Garden, UniPd
- 2008-2022: Scientific coordinator of the Electron Microscopy Service of DiBio,
- 2009-2015: Head of the Molecular Biology (3+2 years) Degrees, School of Sciences,
- 2015-2020: member of the Scientific Committee of the DiBio, UniPd
- 2016-2018: member of the ASN Committee (05/A1 sector)
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- **Funded projects (last 10 years):**
- PRIN 2022-MUR [PI-RU2, 24 months]
- UNIMPRESA 2021 Biodiversità microbica del compost per innovare l'agricoltura sostenibile e l'economia circolare". MICROCOSMO [PI, 24 month]
- 2021RUAPON-REACT EU- Finanziamento PON ricerca e Innovazione 2014-2020 (36 months, Agreement SESA- DiBio UNIPD 2022-2025.
- EU STAFF EXCHANGE 101007738 EVOfruland "Evolution of genetic network required for fruit and fruit-like structures development of land plants" [COORDINATOR]
- PRIN 2017 MUR [PI-RU2, 36 month]
- Agreement SESA SpA, Aprile 2019-Marzo 2020, Este (PD) [PI, 12 months]
- Agreement SESA SpA, Ottobre 2017-Ottobre 2018, Este (PD) [PI, 12 months]
- Progetto Europeo ERASMUS plus 2017-KA201-037520: Jardin sans frontière. Partner Unit: Botanical Garden of Padova [PI, 24 months]
- PostDoc fellowships assigned Università degli Studi di Padova, Dipartimento di Biologia - 2003, 2009, 2011, 2016 [PI, 24 months/each]
- Progetto legge 6/2000-Bando 2015 PANN15T3_00789: Strategie innovative per la valorizzazione e la diffusione della conoscenza di collezioni botaniche e bibliografiche ad esse correlate. [PI, 12 months]
- Legge 77/2006-siti UNESCO. Bando 2013. L'Orto Botanico di Padova: un ponte UNESCO fra il VI e XXI secolo. [PI, 24 months]
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PUBLICATION INDEXES (SCOPUS)

- NUMBER OF PUBLICATIONS: 109
- TOTAL NUMBER OF CITATIONS: 3314
- H-INDEX: 34

20 MOST RELEVANT
PUBLICATIONS
In the last 10 years.

1. Montanari S., Trenti F., Nesler A., Navazio L., Baldan B., Guella G., Longa C. M. O., Perazzolli M. (2025) The sustainable fungicide choline pelargonate inhibits *Botrytis cinerea* and *Phytophthora infestans* growth by altering membrane structure and lipid content. *Pesticide Biochemistry and Physiology*, 213: 106471, <https://dx.doi.org/10.1016/j.pestbp.2025.106471>
2. Natale, S., Canella, M., Moschin, S. *et al.* Microscopy observations reveal a new glandular morphology in four *Pinguicula* L. species. *BMC Res Notes* **17**, 367 (2024). <https://doi.org/10.1186/s13104-024-07021-1>
3. Forin, N., Vizzini, A., Amalfi, M. *et al.* New insights on the *Xylaria* species (Ascomycota, Xylariales) with bright-coloured exudates: *Xylaria aurantiorubroguttata* sp. nov. and revision of *X. haemorrhoidalis* and *X. anisopleura* type collections. *IMA Fungus* **15**, 37 (2024). <https://doi.org/10.1186/s43008-024-00168-3>
4. Moschin, S., Nigris, S., Offer, E. *et al.* Reproductive development in *Trithuria submersa* (Hydatellaceae: Nymphaeales): the involvement of AGAMOUS-like genes. *Planta* **260**, 106 (2024). <https://doi.org/10.1007/s00425-024-04537-5>
Antonella Muto, Emanuela Talarico, Greta D'Apice, Maurizio Di Marzo, Silvia Moschin, Sebastiano Nigris, Nicola Babolin, Eleonora Greco, Fabrizio Araniti, Adriana Chiappetta, Lucia Colombo, Barbara Baldan, Leonardo Bruno, Development of pollinated and unpollinated ovules in *Ginkgo biloba*: unravelling the role of pollen in ovule tissue maturation, *Journal of Experimental Botany*, Volume 75, Issue 11, 7 June 2024, Pages 3351–3367, <https://doi.org/10.1093/jxb/erae102>
5. Elisabetta Offer, Silvia Moschin, Sebastiano Nigris and Barbara Baldan (2023) Reproductive Mechanisms in Ginkgo and Cycas: Sisters but not Twins, *Critical Reviews in Plant Sciences*, 42:5, 283-299, DOI: 10.1080/07352689.2023.2235173
6. Enrico Cortese, Roberto Moscatiello, Francesca Pettiti, Luca Carraretto, Barbara Baldan, Lorenzo Frigerio, Ute C. Vothknecht, Ildiko Szabo, Diego De Stefani, Marisa Brini, Lorella Navazio (2021). Monitoring calcium handling by the plant endoplasmic reticulum with a low-Ca²⁺-affinity targeted aequorin reporter. First published: 26 November 2021 <https://doi.org/10.1111/tpj.15610>
7. D'Apice, G.*, S. Moschin*, S. Nigris, R. Ciarle, A. Muto, L. Bruno, and B. Baldan, 2022. Identification of key regulatory genes involved in the sporophyte and gametophyte development in *Ginkgo biloba* ovules revealed by in situ expression analyses. *American Journal of Botany* 109(6): 1–12. <https://doi.org/10.1002/ajb2.1862>
8. Tondello A, Fasolo A, Marcato S, Treu L, Bonato T, Zanardi W, Concheri G, Squartini A, Baldan B (2021). Characterization of bacterial communities isolated from municipal waste compost and screening of their plant-interactive phenotypes. *Science of the Total Environment*, accepted <https://doi.org/10.1016/j.scitotenv.2021.150592>
9. D'Apice, G*, Moschin, S*, Araniti, F, Nigris, S, Di Marzo, M, Muto, A, Banfi, C, Bruno, L, Colombo, L, Baldan, B (2021) The role of pollination in controlling *Ginkgo biloba* ovule development. *New Phytologist* 232 (6), 2353-2368. Article DOI: 10.1111/nph.17753
10. Moschin S, Nigris S, Ezquer I, Masiero S, Cagnin S, Cortese E, Colombo L, Casadoro G, Baldan B (2021) Expression and functional analyses of *Nymphaea caerulea* MADS-box genes contribute to clarify the complex flower patterning of water lilies. *Frontiers in Plant Science* DOI: 10.3389/fpls.2021.730270
11. Nigris, S, D'Apice, G, Moschin, S, Ciarle R, Baldan B (2021) Fleshy Structures Associated with Ovule Protection and Seed Dispersal in Gymnosperms: A Systematic and Evolutionary Overview. *Critical Reviews in Plant Sciences* 40 (4), 285-302 <https://doi.org/10.1080/07352689.2021.1938397>
12. Forin, N.; Vizzini, A.; Fainelli, F.; Ercole, E.; Baldan, B. (2021) Taxonomic Re-Examination of Nine Rosellinia Types (Ascomycota, Xylariales) Stored in the Saccardo Mycological Collection" *Microorganisms* 2021, 9, 666. <https://doi.org/10.3390/microorganisms9030666>
13. Li, M., Xu, J., Lyu, F., Khomeiko I, Biasioli F, Villani M, Baldan, B., Varotto, C. (2021) Evolution of isoprene emission in Arecaceae (palms). *Evolutionary Applications*, 14:902–914 DOI: 10.1111/eva.13169
14. Forin N, Vizzini A*, Nigris S, Ercole E, Voyron S, Girlanda M, Baldan B* (2020) Illuminating type collections of nectriaceous fungi in Saccardo's fungarium. *Persoonia* 45, 2020: 221–249 doi.org/10.3767/persoonia.2020.45.09
15. Segal, D., Baldan, B., Zamboni, A., Varanini, Z. (2020). FePO₄ NPs Are an Efficient Nutritional Source for Plants: Combination of Nano-Material Properties and Metabolic Responses to Nutritional Deficiencies. *Frontiers in Plant Science*, 2020, 11, 586470
16. Sello S, Meneghesso A, Alboresi A, Baldan B, Morosinotto T (2019) Plant biodiversity and regulation of photosynthesis in the natural environment, *Planta* DOI: 10.1007/s00425-018-03077-z
17. Nigris S, Baldan E, Tondello A, Zanella F, Vitulo N, Favaro G, Guidolin V, Bordin N,

- Telatin A, Barizza E, Marcato S, Zottini M, Squartini A, Valle G, Baldan B* (2018) Biocontrol traits of *Bacillus licheniformis* GL174, a culturable endophyte of *Vitis vinifera* cv. Glera. *BMC Microbiology* , 18:133
18. Forin N, Nigris S, Voyron S, Giralda M, Vizzini A, Casadoro G and Baldan B* (2018). Next Generation Sequencing of Ancient Fungal Specimens: The Case of the Saccardo Mycological Herbarium. *Frontiers in ecology and evolution* 6: 129. doi: 10.3389/fevo.2018.00129
 19. Sello S, Moscatiello R, Mehlmer N, Leonardelli M, Carraretto L, Zanella F.G, Baldan B, Szabò I, Vothknecht U, Navazio L. (2018). Thylakoid-targeted aequorin probes uncover an integrated role for thylakoids in Ca²⁺ homeostasis and modulation of chloroplast Ca²⁺ signals. *Plant Physiol* 177: 38-51
 20. Palocci C, Valletta A, Chronopoulou L, Donati L, Bramosanti M, Brasili E, Baldan B, Pasqua G. (2017) Endocytic pathways involved in PLGA nanoparticle uptake by grapevine cells and role of cell wall and membrane in size selection. *Plant Cell Rep* 36: 1917-1928

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Padova, 1 Luglio 2025

Signature