

Part A. PERSONAL INFORMATION

CV date **25/03/2025**

First, Mid and Family name	PEDRO PABLO GALLEG0		
ID number		Age	
Google Scholar: EtP8yBUAAAJ	Orcid code	0000-0002-4622-1728	

A.1. Current position

Name of University	UNIVERSITY OF VIGO		
Department	PLANT BIOLOGY AND SOIL SCIENCES		
Address and Country	CAMPUS UNIVERSITARIO. VIGO. Spain		
Phone number		E-mail	
Current position	FULL PROFESSOR	From	11/11/2013
Espec. cód.UNESCO	2407.05// 2417.17 // 2417.19 // 2511.02 // 3103.09 // 3107.04		
Palabras clave	PLANT & FUNGAL BIOLOGY, BIOTECHNOLOGY, SUSTAINABLE PRODUCTION, VALORIZATION & CONSERVATION; ARTIFICIAL INTELLIGENCE		

A.2. Education

Degree	University	Year
BSc in Biology (5 years)	León	1986
MSc in Biology With Distinction (1 year)	León	1987
Ph.D. in Biology (4 years)	Santiago de Compostela	1992

A.3. JCR articles, h Index, thesis supervised

Research Six-Year Terms Merits:	5
Teaching Five-Year Terms Merits:	7
Total citations (Google Scholar):	3.456
H Index (Google Scholar):	31 (i10=67)

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Full Professor and leader of the "Agrobiotech for Health" R&D Group at the University of Vigo. Holds a BSc and MSc with Distinction from León University and a PhD from Santiago de Compostela University in Biology. Completed pre-doctoral and post-doctoral research stages at the University of Florida (1990 & 1992), University of Nottingham (1993-1994), University of Sheffield (1996), and Utrecht University (Sabbatical Year 2010-2011). Additionally, conducted short stages at the University of Copenhagen (2009), University of Toulouse (2012), and CSIC – IBMCP (Valencia, 2012). Research expertise includes plant biology, biotechnology (*in vitro* culture) and hydroponics, ecosystems, and agroforestry systems. Specializes in plant mineral nutrition, biostimulants, abiotic and biotic stress, sustainable production, conservation, recuperation, and valorization of plants with commercial, ecological, nutraceutical, and medicinal value. Pioneered the application of machine learning approaches such as artificial neural networks, fuzzy logic, and genetic algorithms. Secured funding through 28 national and international grants and 19 R&D contracts with private companies and institutions, totaling over 3.0 million euros. Co-authored over 100 publications, proceedings, and chapters, and presented 135 communications at conferences, meetings, and symposia. Holds co-inventorship of 1 international and 1 national patent. Supervised 30 BSc, 25 MSc, and 16 PhD theses (including 3 Iranian PhD students). Organized (6) international and (3) national conferences. A member of 6 international societies (SEBIOT, SECITV, IAPTCB, ISHS, SEBP, and FESPP), evaluated research projects for 5 National Research Agencies: Canada (NSERC), Israel (MST), Netherlands (NWO), Poland (NCN), and Spain (AEI). Served as a referee for JCR journals since 1995. Awarded the International Society for Horticultural Science (ISHS) medal.

Part C. RELEVANT MERITS (Last 5 years)

C.1. Publications (2021-2025)

1. Nezami E, Maleki S, Khiabani N, Bouzani N & **Gallego PP**. 2025. *In vitro* mutagénesis as promising approach for vigorous growth controlling of MxM60 (*Prunus mahaleb* x *P. avium*) a cherry rootstock. **Scientia Horticulturae** (submitted)
2. García-Pérez P, Losada-Barreiro S, Bravo-Díaz C, **Gallego PP** & Lucini, L. 2025. The multilayered involvement of specialized metabolites in plant oxidative stress response: a physico-chemical and metabolomics perspective. **Plant Physiology & Biochemistry** (submitted).
3. Santolamazza-Carbone S, Iglesias-Bernabé L, Benito E, Barreal ME & **Gallego PP**. 2025. Metabarcoding of *Quercus robur* soil unveils different impact of soil microbiota on *Boletus edulis* and *B. reticulatus* mycelium concentration. **Fungal Ecology** (submitted).
4. Vieira C, Trigo M, Dias CJ, Bartolomeu M, **Gallego PP**, Neves MGP, Iglesias R, Aubourg DP, Faustino MAF & Almeida A. 2025. A comparative study of TMPyP and methylene blue efficacy during photodynamic inactivation of seabass fillet contamination. **Innovative Food Science and Emerging Technologies** (submitted).
5. Vieira C, Bartolomeu M, Monteiro CJP, Romalde JL, **Gallego PP**, Graça M, Neves MGP, Faustino MAF & Almeida A. 2025. Cationic photosensitizers and potassium iodide: an innovative approach for enhanced photodynamic inactivation of pathogenic bacteria in aquaculture. **Aquaculture** 596, 741882. DOI: 10.1016/j.aquaculture.2024.741882.
6. González-Cespón JL, Alonso-Rodríguez JA., Rodríguez-Barcia S, **Gallego PP** & Pino-Juste MR. 2024. Enhancing Employability Skills of Biology Graduates through an Interdisciplinary Project-Based Service Learning Experience with Engineering and Translation Undergraduate Students. **Education Sciences** 14(1), 95. DOI: .
7. Santolamazza-Carbone S, Iglesias-Bernabé L, Landin M, Benito Rueda E, Barreal ME & **Gallego PP**. 2023. Artificial intelligence unveils key interactions between soil properties and climate factors on *Boletus edulis* and *B. reticulatus* mycelium in chestnut orchards of different ages. **Frontiers in Soil Sciences** 3:1159793. DOI: 10.3389/fsoil.2023.1159793.
8. Shahzad R, Harlina PW, Khan SU, Fiaz S, Leiwen X, Ewas M, Zhenyuane P, Flexas J & **Gallego PP**. 2023. The seaweed *Ascophyllum nodosum*-based biostimulant improves plant growth and induces salinity tolerance in rice (*Oryza sativa* L.). **Journal of Plant Interactions**, 18:1. DOI: 10.1080/17429145.2023.2266514.
9. Nezami E & **Gallego PP**. 2023. History, phylogeny, biodiversity, and new computer-based tools for efficient micropropagation and conservation of pistachio (*Pistacia* spp.) germplasm. **Plants** 12: 323. DOI: 10.3390/plants12020323.
10. Santolamazza-Carbone S, Iglesias-Bernabé L, Sinde-Stompel E & **Gallego PP**. 2023. Soil microbiota impact on *Boletus edulis* mycelium in chestnut orchards of different ages. **Applied Soil Ecology** 185: 104790. DOI: 10.1016/j.apsoil.2022.104790.
11. Lozano-Milo E, Landin M, Gallego PP, García-Pérez P. 2022. Machine learning deciphers genotype and ammonium as key factors for the micropropagation of *Bryophyllum* sp. medicinal plants. **Horticulturae** ,8(11):987. DOI: 10.3390/horticulturae8110987
12. García-Pérez P, Lozano-Milo E, Zhang L, Miras-Moreno B, Landin M, Lucini L & **Gallego PP**. 2022. Neurofuzzy logic predicts a fine-tuning metabolic reprogramming on elicited bryophyllum PCSCs guided by salicylic acid. **Frontiers in Plant Sciences**, 13:991557. Doi: 10.3389/fpls.2022.991557.
13. Alcalde MA, Müller M, Munné-Bosch S, Landin M, **Gallego PP**, Bonfill M, Palazon J & Hidalgo-Martinez D. 2022. Using machine learning to link the influence of transferred *Agrobacterium rhizogenes* genes to the hormone profile and morphological traits in *Centella asiatica* hairy roots. **Frontiers in Plant Sciences**, 13:1001023. DOI: 10.3389/fpls.2022.1001023
14. Arteta TA, Hameg R, Landín M, **Gallego PP** & Barreal ME. 2022. Artificial neural networks elucidated the essential role of mineral nutrients versus vitamins and plant growth regulators in achieving healthy micropropagated plants. **Plants**, 11: 1284. DOI: 10.3390/plants11101284.

15. Ewas M, Harlina PW, Shahzad R, Khames E, Ali F, Nishawy E, Elsafty N, Ibrahim HM & **Gallego PP**. 2022. Constitutive expression of SIMX1 gene improves fruit yield and quality, health-promoting compounds, and fungal resistance, and delays ripening in transgenic tomato plants. **Journal of Plant Interactions**, 17: 517-536. DOI: 10.1080/17429145.2022.2066730
16. Santolamazza-Carbone S, Iglesias-Bernabé L, Sinde-Stompel E & **Gallego PP**. 2021. Ectomycorrhizal fungal community structure in a young orchard of grafted and ungrafted hybrid chestnut saplings. **Mycorrhiza** 31, 189-201. DOI: 10.1007/s00572-020-01015-0
17. Shahzad R, Harlina PW, Ewas M, Zhenyuane P, Niece X, **Gallego PP**, Khan SU, Nishawy E, Khanb AH & Jiag H. 2021. Foliar applied 24-epibrassinolide alleviates salt stress in rice (*Oryza sativa* L.) by suppression of ABA levels and upregulation of secondary metabolites. **Journal of Plant Interactions** 16 (1): 533-549. DOI: 10.1080/17429145.2021.2002444.
18. Maleki S, Maleki-Zanjani, B, Kohnhrouz BB, Landín M & **Gallego PP**. 2021. Computer-based tools unmask critical mineral nutrient interactions in Hoagland solution for healthy kiwiberry plant acclimatization. **Frontiers in Plant Science**, 12:723992. DOI: 10.3389/fpls.2021.723992.
19. García-Pérez P, Zhang L, Miras-Moreno B, Lozano-Milo E, Landin M, Lucini L & **Gallego PP**. 2021. The combination of untargeted metabolomics with machine learning predicts the biosynthesis of phenolic compounds on bryophyllum medicinal plants. **Plants** 10, 2430. DOI: 10.3390/plants10112430.
20. García-Pérez P, Miras-Moreno B, Lucini L & **Gallego, PP**. 2021. The metabolomics reveals intraspecies variability of bioactive compounds in elicited suspension cell cultures of three *Bryophyllum* species. **Industrial Crops and Products**, 163: 113322. DOI: 10.1016/j.indcrop.2021.113322
21. García-Pérez P, Ayuso M, Lozano-Milo E, Pereira C, Dias MI, Ivanov M, Calhelha RC, Sokovic M, Ferreira ICFR, Barros L & **Gallego PP**. 2021. Phenolic profiling and *in vitro* bioactivities of three medicinal Bryophyllum plants. **Industrial Crops and Products**, 162: 113241. doi: 10.1016/j.indcrop.2021.113241.

C.2. Research projects and grants (2019-2022)

1. Phytotron UVIGO- Set of 5 walk-in Growth Chambers for Plant. **MINECO** (EQC2019-006178-P). Duration: 2019-20. **IP: PP Gallego**. 248.000 €.
2. Cultivo de *Boletus edulis* complex en *Castanea sativa* asegurando los requerimientos para una micossilvicultura sostenible. **MINECO** (RTI2018-095568-B-I00). Duration: 2019-2022. **IP: PP Gallego**. 121.000 €.
3. AGRUPACIÓN ESTRATÉGICA CITACA. **XUNTA DE GALICIA** (ED431E 2018/07). Duration:2018-2020. **IP: Ana Torrado Agrasar**. 424.084 €.

C.2. Research & Develop Contracts with enterprises (2019-2022)

4. Servicio de obtención de vástagos para la reproducción vegetativa y cultivo in vitro de especies vegetales características de hábitats prioritarios en el ámbito del proyecto LIFE GLOBAL (LIFE23-NAT-ES-LIFE GLOBAL). UNIVERSIDAD DE VIGO & IBADER-USC. Duration: 30-01-2025 to 31-12-2025. **IP: PP Gallego**. 59.290 €.
5. Micropropagación para el cultivo *in vitro* de especies vegetales características de los hábitats insulares en el ámbito del proyecto LIFE INSULAR (LIFE20 NAT/ES/001007)". UNIVERSIDAD DE VIGO & IBADER-USC. Duration: 04-01-2023 to 31-12-2024. **IP: PP Gallego**. 121.000 €.
6. Recuperación de plantas de Camariña en el PNMTIAG mediante técnicas biotecnológicas (recogida y tratamiento de las semillas de camariña recogidas en el PNMTIAG, para la preparación de nuevas plantas). UNIVERSIDAD DE VIGO & IBADER-USC. Duration: 31-03-2023 to 30-09-2023. **IP: PP Gallego**. 14.950 €.

7. GREENCASTANEA- Producción de castaño micorrizado mediante cultivo *in vitro* y selección intra-varietal de variedades ixp. UNIVERSIDAD DE VIGO & HIFAS FORESTA (CO-0065-2021). Duration: 02-09-2021 to 31-07-2023. IP: **PP Gallego**. 28.500 €.
8. Optimización de parámetros de cultivos: composición solución nutritiva y condiciones lumínicas (tipo y calidad). UNIVERSIDAD DE VIGO & NÉBODA FARMS (CO-0078-2021). Duration: 21-10-2021 to 30-09-2022. IP: **ME BARREAL**. 28.000 €.
9. Optimización do cultivo en medios líquidos de fungos micorrícicos e saprófitos mediante biorreactor. UNIVERSIDAD DE VIGO & HIFAS FORESTA (CO-0014-2021). Duration: 01-10-2020 to 31-11-2021. IP: **PP Gallego**. 10.280 €.

C.4. Patents

1. Abu-Bakar UK, Barton S.L., **Gallego PP**, Gray JE, Grierson D, Lowe AL, Picton S & Whotton LC. (1999). DNA encoding fruit-ripening-related proteins, DNA constructs, cells, and plants derived therefrom. U.S. Patent No. 5,908,973. Washington, DC: U.S. Patent and Trademark Office. Application filed by: ZENECA Limited. Assigned to: ZENECA Limited.
2. **Gallego PP**, Rodríguez R, de la Torre F & Villar B. (2009). Procedimiento para transformar material vegetal procedente de árboles adultos. Patent No. ES2299285 (A1). Application filed by: Universidade de Vigo, Spain.

C5. Management Experience:

Management Positions at Vigo University:

2021-Present: Coordinator of the Interuniversity MSc in Advanced Biotechnology (Awarded with the Excellence Mention for Xunta de Galicia). Vigo & Coruña Universities

2020-Present: Member of Quality Commission of International School of Doctorate.

2009-2012: Coordinator of the BSc in Biology, Vigo University.

2004-2010: Dean of Biology Faculty, Vigo University.